



Questions and Answers



STARTAGAIN (Napier): Can a .0005 variable condenser be used for the detector stage of the "Kestrel Three?"

A.: Yes; take about 15 turns off the secondary coil and you will find that this combination will keep in resonance with the .00035 used in the r.f.

2. I have a resistance capacity coupler. Where should this be placed?

A.: Use the transformer as specified if you want the best results, otherwise use the unit in place of the first audio transformer.

3. I have a differential condenser of .00013. Would this do for the "Kestrel Three?"

A.: Yes, but add about ten more turns on to your reaction coil.

4. Will there be a blueprint for the "Kestrel Three?"

A.: In all probability, yes.

ANXIOUS (Devonport):—Will the direction of an aerial make any difference to shortwave reception?

A.: No, you need not worry about obtaining direction effect with an ordinary shortwave aerial.

2. I cannot get good results on shortwave stations. I am using a well-known and proved circuit.

A.: Apart from experimenting with different ecodetor valves, grid-leaks, and detector voltage, we can suggest very little. Are you quite certain you have a good pair of phones?

3. Which set of plates do I connect to the aerial when a .0005 variable condenser is used between the aerial and the set?

A.: It is really immaterial, although it is usual to connect the fixed plates to the aerial and the moving plates to the set.

M.C.B. (Christchurch):—I wish to make a gramophone amplifier comprising one stage of audio followed by

two pentodes in push-pull. I have a "B" eliminator to supply 300 volts up to 120 mills, and a transformer with fixed terminals arranged so that variation in transformer ratio can be obtained by different combinations of primary and secondary taps. Can this transformer be used in the push-pull outfit, and how?

A.: As the transformer does not appear to be centre tapped, it can be used only in the preceding stage.

2. Is OP6 (c) suitable?—Yes.

3. Is the diagram correct?
A.: It may be necessary to use decoupling resistances between the two screens to prevent interaction. Note: You quite fail to note our limit of three questions.

R.J.S. (Hastings):—Would you advise me to use an aerial shorter than 40 feet at one end and 60 feet at the set end?

A.: No, your aerial is quite satisfactory. Leave it alone.

SPARKS (Christchurch):—Would the enclosed circuit of a one-valve set be satisfactory? If not, in what book would I find a better one?

A.: The set would not be equal to the "Sparrow Hawk One" described in the 1931 "Radio Guide."

2. I am using a six-valve all-electric set, and I can bring in the New Zealand stations and the Australians faintly. What is wrong?

A.: As there are many things that could be wrong we cannot help you very much. Quite possibly your valves need renewing or the condensers may be out of alignment.

3. My aerial is 40 feet long at one end and 30 feet at the other. It crosses the roof nearly all the way. Would the aerial be improved if I shortened it to 10 or 15 feet and avoided the roof?

A.: You are very unfortunate, because your aerial is particularly poor and this may account for your poor results. If you have to cross the roof we should advise you to do this rather than shorten your aerial. Raise it very much higher, 40, 50 or even 60 would not be out of the way in a case such as yours.

WAYBACK (Hawke's Bay): Could I charge the "B" accumulator as described in the 1930 "Guide" with a six-volt battery, providing the "B" accumulator has first been paralleled?

A.: Yes. Keep your charging rate fairly low, however.

2. Do you think the making of such an accumulator would be a wise investment? The set takes 180 volts at about 30 mamps.

A.: If you are a long way back you would find difficulty in charging the "B" battery. You could not take it round in a lorry as you do your "A" battery because it would not stand the treatment.

3. How many amps would the first and second charge take?

A.: You could not measure the amount of current that the battery would take in amps. It is not safe to charge a single "B" cell at a greater rate than 60 mamps, but if you arranged the cells in series parallel with from six to ten cells in each bank, you could charge them at one or two amps. The resistance you would use would depend entirely upon the rate at which you intend to charge the battery and voltage delivered by the charger.

NEW CHUM (Christchurch): How could I alter my set so that the frequency marked on the dial would correspond with the frequency of the station? All my readings are below what they should be.

A.: Examine the back of your set, noting how the drum is fastened to the condenser shaft. Then tune to a station on a known frequency and slacken the small screw that holds the drum to the shaft. Rotate the drum until the frequency of the station transmitting and the frequency on your dial corresponds. Then tighten up the screw and you will find that the readings will be more or less correct in future. Be careful that the condensers themselves do not slip, otherwise they will be out of alignment, and are rather difficult to line up again.

HOOK-UP (Matamata): Would .25 mds. condensers be satisfactory for by-passing the plate and s.g. valves in the Outspan Five using one condenser in each lead?

A.: In all probability, yes. .25 are usually quite satisfactory for by-passing purposes.

2. I am using .0003 tuning condensers, but there is a dead spot between 275 and 225 metres, the condenser having to be turned out of the mesh to 0 on the dial to obtain resonance with the incoming signal. From 225 to 200 metres the con-

denser has to be turned back about 15 degrees to obtain resonance.

A.: You have not made your meaning quite clear. Probably it is a very difficult thing to describe. Are your dials acting in conjunction with your condensers properly?

3. Can you give me the specifications for an 80 m.h. r.f. choke?

A.: See page 119 of the 1931 "Radio Guide."

G.W.C. (Kurow): We think your proposed aerial will be quite satisfactory. It is no doubt an improvement on the first one.

PROCTOR (Wellington): We regret we cannot supply you with the information you require concerning metal rectifiers. The formula for this is held by a commercial company who, we understand, will not agree to its being made public.

CAMERA (Hastings): I cannot get good results with the Daniels Cells. When the zincs are inserted in the sulphuric acid they fizz and will barely light up a 2.5 torch bulb. The copper strip in the bluestone changed colour.

A.: It seems as though there are impurities in the zinc, and the sulphuric solution is too strong. You must have

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"Radio: A Study of First Principles," by Burns, 13/2.

"Practical Radio Testing Systems" (Rider), 6/6.

1001 Radio Questions and Answers, 1930. "Radio News," 2/9. D.C. to A.C., etc.

"Cameron's Sound Motion Pictures Encyclopedia," 18/6.

"Wireless: The Magic Carpet," 5/- (Technical Editor "Radio Record" says no set owner should be without it.)

"Practical Radio Repairing Hints," by Rider, 13/- (Don't miss it.)

"101 Hook-ups" ("Radio News" Staff), 2/6.

"Mathematics of Radio," by Rider, 11/2.

Practical Radio Testing Systems (Rider), 6/6.

"Radio Amateur Handbook" (Handy's) 8th edition, 5/3.

"Radio Amateur Call Book" (June, 1931), 5/3.

"A.R.R.L. Log of Amateur Stations," 2/-.

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