



Questions and Answers



A.R.P. (Masterton): I wish to change the extra long-wave arrangement on my set to short-wave. How is the wiring to be altered?

A.: Had you supplied us with a theoretical diagram, we might have been able to help you. We are sorry that you have taken so much time to make very careful lay-out diagrams, but we cannot do much to assist you. Possibly you will have to rebuild the radio section.

LUND (Westport): I have a five-valve set, and I am desirous of using all possible fixed condensers across the "B" batteries. Where shall I use them?

A.: Connect the 1 mfd. condenser between B+ r.f. and B-. Also the same capacity between B+ detector and B-.

RADIO FAN (Wadestown): In your description of the Outspan Five you specify three .00035 condensers. As this is hopelessly out of fashion I wish to use a ganged condenser and one separate dial controlling a .0005 condenser. Using 2in. coils, how many turns must I use with 24 d.s.c. wire to match these?

A.: Do not presume that because the Outspan Five was published with three dials it is hopelessly out of fashion and that we brought it out thus knowing full well that we were old-fashioned. We endeavoured to match the coils, but as we explained in the article the task of lining up coils when using reaction is a very difficult one indeed. For this reason 80 turns are specified on the second coil against 75 for the others. Another set we built with redesigned coils necessitated an alteration in the number of detector turns. Very much depends upon the valve and lay-out employed. In your case if you put 100 turns on the .00035 coils and 82 turns on the other coil, with primaries of 35 in the case of the former and 30 in the case of the latter, with 45 turns reaction, you should be somewhere near the mark. We would like to know if you are successful in getting fullest efficiency out of the two dials.

A.: It is not at all easy to test for interaction. You will soon know if it is present because of uncontrollable oscillation.

AMBITIOUS (Dunedin): Where can I obtain apparatus to make a television set? I want to pick up the transmission from 3BD and 3UZ.

A.: We think you are unwise to attempt to receive television, though if you are very keen write to Hartle and Gray, Auckland, who, we believe, carry stocks of television apparatus.

E.A.B. (Hastings): I have a wet "B" battery. How can I stop leakage round the terminals?

A.: By a sealing compound run into the spaces.

2. At present I am using a 32 c.p. lamp for resistance. Would any damage be

2. How can I connect a pair of headphones to my set?

A.: If you have the output filter you could connect them at the same points as the speaker. If, however, your set uses push-pull you would need to have the job done by an electrician.

3. I have two pipes about 6ft. in the ground. Would it be better if I used 3 separated by 3 feet?

A.: It is a debatable point. At the present time we are conducting a very interesting examination. According to measurements recently taken there will be no improvement unless the pipes are separated by 6ft., but many readers state definitely that their reception has been improved by the installation of such an earth.

4. There are three wires from the set, but only two go to the power point. Is the third for an extra earth?

A.: It is an earth connection to be used with a three-point wiring system.

TUT (Kurov): We cannot tell you much about your adapter unless you tell us the name of it. It appears to be a commercial set and we are somewhat in the dark.

BATCUP (Wellington): I wish to fit a remote volume control, but am deterred by the necessity of extending the three leads of a potentiometer.

A.: Your best plan is to use a variable resistance of about 500,000 ohms across the aerial and earth terminals. This is quite a satisfactory means of controlling volume.

2. How can I overcome the motor-boating when the detector is followed by an r.c.g. unit?

A.: It is due to the resistance in the grid circuit not matching the valve or

OWING to the increasingly large number of queries that our Technical Department is called upon to answer, we have found it necessary to make some slight alterations in our system. Commencing with our issue dated April 10, each correspondent will be restricted to three questions. Those who wish to have more questions answered, or who desire a reply through the post, must enclose stamps or postal note to the value of 1/-.

We regret that this has been necessary, but to a large extent it has been brought upon by some correspondents "overstepping the mark." Letters containing from 12 to 20 queries are not uncommon, and many of these could have been answered had the correspondent looked up either back numbers of the "Radio Record" or the "Radio Guide."

Here are some interesting facts concerning the numbers of queries we have handled during the last six months: There have been approximately 1,500 letters, representing 5,000 to 10,000 questions. This entails a great deal of work, but where we are helping a correspondent genuinely in difficulty we are pleased to be able to do it.

N.W. (Dunedin): See last week's issue, page 30.

O.W.L. (Greymouth): Your question was fairly fully answered by the table in the week before last's Questions and Answers.

K.M. (Dunedin): See the R.R. October 3, 1930, or the "Guide," for a full description of the Beverage aerial.

CURIOUS (Timaru): How can I make a .00025 condenser into a .0002?

A.: Remove one fixed and one moving plate or switch in series with the condenser a .002 condenser.

2. Will a shortwave adapter give as good results as a separate three-valve set?

A.: Not quite; there is usually a choke in the detector circuit that is specially designed for broadcast.

3. Are UX valve bases satisfactory for an adapter?—Yes.

4. What plate voltage is necessary on the detector?—22½ to 45 volts.

AERIAL (Hokitika): When the primary connections of my set are round a certain way the set will oscillate only when the condenser is screwed right down, but if they are reversed oscillation is difficult to control.

A.: Try by-pass condensers between B plus r.f. B plus detector and earth. The correct number of primary turns for a 2½in. coil to suit your valve is 10 (using 24 d.s.c. wire with a .00035 condenser).

2. If I use the tickler coil with the set in a stable condition, will the set radiate?

A.: Not to any extent. It will not interfere with anyone's programme.

3. How many turns should there be on a primary coil for split primary neutralisation?—About 25, not slot wound.

4. How can one test for interaction between coils or grid and plate leads?

done in an attempt to charge the batteries faster if I used a 48 c.p. bulb?

A.: If you had told us the rating of your lamps in watts as is marked on the lamps themselves instead of in c.p. we should have been more in a position to help you.

A.B.C. (Waitemata): Is my commercial set suitable for N.Z. conditions?

A.: Unfortunately we do not know anything about it. In all probability it is quite suitable although if fitted with a long wave switch that will be quite useless.

ANCHOR (Matamata): I can log only 27 stations on my 6-valve all-electric commercial set. What are the reasons?

A.: Your set is a first-class one, and unless you have a dud valve your location must be hopelessly bad. Daylight reception is in the best of places very uncertain, but you should get better results at night. Your best plan would be to communicate with the New Zealand agents.

T.R.A. (Wellington): Would the Kestrel Three be suitable for short-wave work, as I shall have to use a counterpoise earth?

A.: Yes, it should be quite a good receiver for the purpose.

2. What outside broadcast stations could I receive?

A.: Having never tried the Kestrel Three under such conditions, we cannot tell you.

3. What would be the price of the receiver to build?—A.: About £6.

A.M.H. (Tirau): A small wire in my loudspeaker has twice broken. Would it be a faulty wire or the vibration of the set?

A.: It is due probably to the current of your last valve passing through the speaker. If you use an output filter the wire should not burn out.

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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 valves

Name

Address

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