



Questions and Answers



"S.J.B." (Canvastown) states that he has just installed a receiver, and is using an aerial just under 40ft. high, which passes over portion of an iron roof. There is a clearance of about 12ft. Would there be an advantage to have the aerial higher, and how many feet of clearance must there be in passing under or over another aerial?

A.: The higher the aerial can be erected so as to give greater clearance of the roof, the better. Fifty-feet high would not be excessive in a case such as this. Another aerial can be passed within 10ft. of the existing one.

"HEREKINO" asks the following questions concerning the use of the detector valve of "Round-the-World Two," as an adaptor.

1. Can the detector stage be used as an adaptor?

A.: Yes, quite well.
2. I have a .0005 and .00035 condenser—which is the best to use with the OC2?

A.: Your question is not quite clear. If you mean which is the better to use for reaction we would suggest .00035.

3. What number of turns will be required on the coils?

A.: If you are tuning with a .0002 it would seem that you must use the number of turns given in the article.

4. Would you advise removing some of the plates from the .00035?

A.: If for tuning, it must be brought down to a .0002 by the removal of nine plates.

"UNION" (Pukekohe) asks concerning the design of R.F. chokes.

1. Is it practicable to construct a radio frequency choke for use on all waves in an ordinary all-wave set?

A.: Not without making certain compromises. It is best to make a short-wave choke, and use this. A good short-wave choke consists of 100 turns of 30 gauge wire on a test tube.

2. I have a quantity of 40 gauge wire on hand. Could this be used?

A.: You could try it, but it would not be quite as effective as 30 gauge.

"AMATEUR" (Hawke's Bay) wants to know a few points about his factory-made receiver.

1. The aerial is 30ft. high and 114ft. long; is bare copper wire, while the lead-in is 7036 insulated. He has also a loop antenna and finds that if the two are connected in series he gets about 5 per cent. and upwards more volume from the stations on the dial beyond 35, while on the lower numbers the sensitivity increases.

A.: By seriesing the two aerials you are rarely increasing the length of your outside aerial. This will tend to give greater strength on the lower frequency station, but decreased sensitivity on the others. The aerial is really far too long, and would be improved by the addition of a small series condenser about .00025.

2. There are two small stations about 40 miles distant, and I can get them only at very low volume. Both operate on high frequency.

A.: This is due, no doubt, to the long aerial you are using.

3. I have never been able to receive an American station, but I get the Japanese at good speaker strength. Should I be able to get the American?

A.: Receiving American stations is not always possible. Very much depends upon the locality. Japan, on the other hand, can usually be well received on any set.

4. Would a short-wave adaptor give good results on my machine.

A.: It should do.

"L.R.S." (Invercargill) asks where he might find directions to make a single valve receiver at a minimum cost, and how far will it reach?

A.: We do not consider one-valve receivers to be worth while. They are capable of creating great interference, for their range is really quite small, and when they are pushed to get greater distance, they oscillate and disturb the neighbourhood. A two-valve set would be very much better. Build the radio and detector stages of the Brownings-Drake, and then at any time, you can add one, two, or three valves, and you will have a really good set. Directions of how to make this set were published in the last year's "Radio Listeners' Guide."

"NEW Reader" (North Auckland) asks concerning an accumulator:

1. Do you consider a 4 volt 50 amp. hour sufficient for a 5-valve set using quarter-amp. valves?

A.: If charged regularly, a 50-amp. hour accumulator would be all right. If you are using 4-volt valves. An 80 amp. hour battery would be better.

2. Would an accumulator give better results than dry cells?

A.: Yes, you will not be troubled by rapidly dropping voltages, which are the bane of dry cells.

3. My valves are A409, A425 and UX 120. Is this a good combination?

A.: For dry cells, yes; but A425 is generally speaking not a suitable valve to use in an American set such as this. UX 120 is quite a good valve to use in the last stage with dry cells, but if you get your accumulator, a 4-volt power valve would be better.

"R.G." (Wanganui) asks what batteries connect up to "P" and G+ in our diagram of "Round-the-World" Three.

A.: "P" is the maximum B+ voltage available. We do not know which terminal you are referring to when you say G+, for there is none marked in that manner. The terminals connect as follow:—

A—The negative of the "A" battery.
D B+ 22½.

AMP The next highest tapping, probably 45.

C—Grid Bias negative, 4½-9, according to the valve used in the last stage.

A+ The positive of the "A" battery. The connections of the batteries that do not go to the set are as follow:—A—to B—to C—to earth.

"MONITOR THREE" (Wanganui) encloses a sketch of the position of his aerial, and asks if it might be improved upon. It is 90ft. long and 50ft. high, passing over the corner of a house 20ft. high.

A.: Under the circumstances, you appear to have selected the best position. An alternative would be a "T" aerial running the full length of your section with the lead-in coming from the centre. The effective aerial in a case such as this would be the lead-in plus half the total length of the aerial.

"E.H.B." (Christchurch) asks: (1) Is it necessary to have a separate license for a portable set. He has one for a cabinet set.

A.: If, when the portable is in use away from the location of the other set it will have to have a separate license. If you are using them both in your home, there is no need for another. If your

home set is not portable, the portable is taken away merely notify the District Radio Inspector that you are temporarily shifting the location of your receiving station.

2. Is mill-board suitable for the Bell-ringing transformer after it has been well shellaced?

A.: You do not state for what purpose it is to be used. If it is for spool ends, yes.

3. What weight of presspahn would be required?

A.: Moderately heavy gauge will do excellently, if it is for the spool ends.

Note.—There are certain other questions referring to a bell-ringing transformer. We have not described a transformer under this name. If it is one of our models, would the constructor state the name under which it appeared? If it is not one of ours, would he give us more particulars?

"PREISS" (Southbridge) asks certain questions, which are as follow:—
1. Is there anything worth hearing above 550 metres.

A.: Only commercial morse stations, and there is nothing particularly thrilling in listening to them.

2. How many turns of 28 d.c.c. wire on a 3½ in. former are required when a .00085 condenser is used for tuning?

A.: If you put on about 130 it will bring in all the morse stations you want.

3. In my short-wave set I have connected a .1 mfd. condenser in parallel with the R.F. choke. This improves the volume. Would a .5 mfd. be better?

A.: In effect, you are cutting out the high frequency choke, as the condenser merely gives a shorter passage for the high frequency current which has difficulty in passing through the choke. Try removing the choke and the condenser from the circuit. It seems as though it is slightly defective.

4. I am unable to get any short-wave stations on the speaker except 2ME.

A.: There are not many stations that can be heard on the speaker when a 3-valve set is used. Look to your choke, as this may be suppressing some of the volume.

5. Is a 4-megohm grid leak better than a 6 for short-wave work?

A.: No, as high as 8 megohms is the usual value for short-wave work.

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