

Questions and Answers



CUL-DE-SAC (Auckland): I have the Loftin Four about half-built, but I was put off completing it by very competent authority, it being said that it was almost impossible to keep the h.f. out of the audio.

A.: While admitting that the Loftin Four is not foolproof and should be undertaken only by those who have had constructional experience, still we maintain that it will work—for the simple reason we had it working. The h.f. can be kept out of the audio by the methods shown. Some of the correspondents have been successful in its construction; others have encountered difficulty.

Our own experiments have shown that difficulty can very easily crop up, and is sometimes very hard to locate.

C. P. (B. of Plenty): I am always interested to read anything in your paper which may help to get good reception from all N.Z. stations and so forth. I would very much like you to send me a clear diagram of a good static eliminator or trap.

A.: We very much wish we could oblige you. If anyone could work out a suitable circuit it would be the last thing he need do, for the invention of that would carry with it a very comfortable income. Engineers have been trying ever since radio was, to find such a circuit, but so far nothing practicable has been devised that will cut down static without cutting down signal strength.

H. W. (Waipiro Bay): A nearby lighting plant badly interferes with reception. How can it be overcome?

A.: In the "Radio Record" dated September 13, 1929, we went very fully into the problem. You should approach the hotelkeeper and suggest the methods outlined in that article. Try first the two condensers across the brushes, then the chokes could be introduced if that was not successful.

SHORTY (Taranaki): I recently completed the four-valve screen grid short-wave set described in the 1930

"Guide," but can not get a sign of a signal.

A.: You did not give us anything to work upon. Will the set oscillate? Have you checked all your connections by the phones and cell method? Have you checked the components, such as transformers and condensers?

2. What is the voltage on the screen and on the audio valves?

A.: The voltage on the screen is half that on the plate of the same valve. The audio stage can carry the full "B" voltage available, but should be suitably biased if it does this.

TRIER (Christchurch): I was to construct a crystal set with a honeycomb coil capable of bringing in our two local stations, the diameter to be 2 1/2 in., and I am using 13 pegs. How many turns of wire should I complete before taking a loop?

A.: If you do not wish to use a condenser, take about 5 loops out altogether, that means one in every 30. This, however, is a very rough way of tuning. It is far better to use condensers shunted across the whole coil. For a .0005 condenser 30 turns will be required.

PROTON (Gisborne): What will be the extra cost of converting my four-valve screen grid set into the Outspan Five?

A.: About £3, but it will depend to a great extent upon the coils used.

2. Will I need to make a new set of coils?

A.: You could use your old ones, but it would be preferable to make a new set. You could use your existing coils as first and third in the Outspan, making a new one for the second, but you would have to be very careful about the way you connected it up.

3. Can an ordinary condenser be ganged?

A.: If it has a long enough spindle, yes. It need not be hollow.

4. I removed a moving vane from a .0001 moving condenser and as a result there is about 40 per cent. less noise. Why is this?

A.: It was probably touching the fixed vanes. The value of the condenser will not be appreciably altered.

TERRACE (Kelburn): I am making the R. the W. Three. Could a .00025 grid condenser with a .0003 variable condenser be used instead of those specified?—Yes.

2. Does the wire from the aerial terminal go to the fixed or moving plates of the neutralising condenser?

A.: Either, preferably the moving plate.

3. Should I put anti-microphonic valve sockets in every position?

A.: No, only in the detector stage.

L. J. L. (Auckland): What diameter and number of turns are required for the two stage r.f. B.D. with .0005 condensers and .00037, with a .00035 regeneration?

A.: Using 24 gauge d.s.c. wire 57 turns for the .00035 condensers on a 2 1/2 in. former, and 82 turns for the .00037 condenser. Reaction will require about 25 turns and if you are using 200 "A" as detector the grid return must go to the negative.

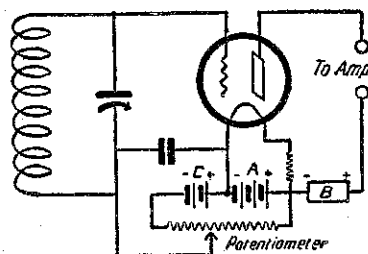
JAKA (Hataitai): What is the best combination of valves to use with an American neutrodyne set?

A.: Four 201A's 2201's or their equivalents and a B605 type power valve in the last stage. This must be suitably biased. Your set can be easily altered to take grid bias.

2. Would 24 or 26 gauge wire be suitable for housewiring to use several speakers?—Yes.

JUMBO (Otago): Are the particulars given in the short-wave tables in the "Record" for aerial and secondary both?

A.: Yes, the same coils can be used in two positions. The primary terminal can be done away with by coupling



Potentiometer across A & C

directly on to the grid terminal. In the case of the aerial transformer a condenser must be used.

3. Can I use a d.s.c. wire instead of enamelled?—Yes.

4. Can I use potentiometer control for grid bias with a detector?

A.: Yes, see the diagram.

G. K. (Wellington): What would be the cost to charge my "A" battery with a 1.3 amp charger?

A.: As near as we can reckon it out you would get 100 hours for 1 unit, which, if over the minimum in the Wellington district costs you a penny.

2. Is there any difference between charging from the hot-point or from the electric light as regards cost?

A.: Unless you have two meters, no.

3. What difference does it make if the field of the moving coil speaker is just run on the bobbin or should the turns be put on in separate layers?

A.: It is quite in order to run them on without layers.

H. P. (Blenheim): I wish to convert my short-wave set to that in the 1930 "Guide." Will the valves be satisfactory?—Yes.

2. Will I need to alter the value of the resistances, fixed condensers, etc.?

A.: That we cannot tell you unless we know the value of the existing ones.

"DAN" (Auckland): Can I use my commercially-made six-valve a.c. set for short-wave?

A.: Yes, by using a sup. het. short-wave adaptor.

2. What alterations would have to be made to the set itself?—None.

3. Would it be better to have a separate set for short-wave?—No.

J. P. (Waihi): On my super. het. I picked up 2YA on a frequency that

was not a harmonic. Can you explain this?

A.: It is not uncommon with short-wave receivers to pick up a strong station on several frequencies. This is what you heard.

WHAT are the best Philips valves for my 5-valve American set?

A.: Four 609's and B605.

2. Are my present batteries correct—90 volts "B" and 9 volts "C"?

A.: It would be better if you could increase the "B" to 135 or more. If you use B605 you must increase the "C" battery to 12.

3. What is the life of my "A" battery—the set is in use for three to four hours a day?

A.: If you use dry cells they will only last a few weeks with the combination you now have in your set. With the combination we have suggested you might get six weeks' service. Your best plan would be, if you cannot use an accumulator, to have 12 batteries arranged in series parallel.

"INCEPTOR" (Tariki): Would you recommend two 7 to 1 transformers in the one set?

A.: Certainly not. When you use two transformers the ratios should not be higher than 3 1/2 to 1.

2. Is there any limit to the weight of copper used for an earth?—No. Area counts, not bulk.

F. A. (Kaipara): Would you send me circuits of the most powerful four and five-valve portable radio?

A.: We recently designed a "Home and Country Three," and you could add another stage to this. We cannot design circuits to order. We believe the Te Aro Book Depot has a few.

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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