



Questions and Answers



DETECTOR (Auckland).—I recently changed my set from a metal cabinet to a wooden one, and whereas the coils would once tune between 200 metres and 650, they will now not cover the band. I rewound the primary of the regenerative, slightly spacing it, as advised in "Design of R.F. Transformers."

A.: Your trouble does not appear to be an obvious one, and it can be explained only if you have made some slight alteration in the wiring. It is possible that you have brought about certain capacity changes. These could be the result of closed loops in the filament winding, a different relationship between the plate and grid wires or some similar changes. Metal near the coils will have the effect of altering the tuning range.

PUZZLED (New Plymouth).—I have a 5-valve commercial neutrodyne, the valves of which have been in use about 12 months. Could you tell me if they are the right type? Four are 201A and the last valve is C603.

A.: We recommend for the last stage B605, and instead of the 201A, the new 221 type.

2. What is the correct value of the grid-leak?

A.: In a broadcast set the best results can be generally obtained by a 2 megohms leak.

SHORTY (Stratford): How many grid and regeneration turns have to be wound on a valve base former using 30 gauge d.s.c. wire to cover the 80 metres' band using a .00005 midget condenser?

A.: 24 on the grid and 17 on the regeneration coils.

2. Some time ago Q.R.L. wrote a series of articles describing a low-powered transmitter. Would it be possible at some

future time to describe a Heising modulator for this transmitter?

A.: We have approached Q.R.L. on the subject, and it is possible that at some future time an article such as you desire will be published.

SHYLOCK (Hokianga).—Would my aerial be better strung from a 300ft. hill than in its present slightly-shielded position?

A.: From what we can gauge from your letter, it would be an improvement to put the aerial on the 300ft. hill. It is impossible, however, to lay down anything definite until we saw a sketch of the neighbourhood.

2. Would the aerial be better on a piece of reclaimed mudflat, where there are no trees and few surrounding hills?

A.: Where has that 300ft. hill gone to if it is nowhere near the mudflat? Surely you must have to use a very long lead in for one of the positions. Certainly an aerial should be erected away from trees and hills. These have a definite screening effect.

3. Which of the two positions would be the better?

A.: We think the former

A.W.M. (Dunedin): My set tunes very broadly, and I get the Dunedin "B" class stations and 4YA all over the dial. I have tried a s.g. booster described in the "Radio Record," but it makes volume much weaker.

A.: There is something wrong with the booster. Generally boosters have gone out of date. It is far better to use a s.g. valve in a modern transformer-coupled hook-up than as a separate unit. It would be far better to use your parts to reconstruct the set along modern lines using a circuit such as the Outspan Five. Although these are not as selective as the very modern receivers, still they are a vast improvement on the ordinary two triode r.f. stage sets or the single screen-grid type. They are reasonably selective and should be quite satisfactory for your purpose.

2. Could the set be made selective without much alteration?

A.: The easiest way to make a set selective is to vary the coupling between the primary and the secondary of the aerial coil. By making the coupling looser the stations can be separated much easier, but, of course, a certain amount of sensitivity is lost.

3. I use B406 in the first audio stage and B405 in the second. Is this correct?

A.: It would be better if you used A409 in the first audio stage instead of B406, which is a power valve. This, however, would not affect selectivity.

SCREEN GRID (Ngaio): I have made the Loftin Four, but cannot work it well from the gramophone. When I switch over the set gives a steady slow beat and is unworkable.

A.: This is due in all probability to pick-up on the gramophone leads. Try placing the pick-up in the cathode of the detector valve, that is, between the junction of the 50,000 ohms resistance and the connection to the 200 ohms potentiometer and the cathode itself. A switch could be provided to short-circuit this connection.

2. When the set is tuned on 2YA and 2ZW there is a dead spot spreading over

about three points on the dial in each case. It does not occur with outside stations.

A.: It appears to be due to overloading the detector, and you can overcome it by using an aerial consisting of a piece of wire a few feet long.

X.Y.Z. (Wellington): I have a "Trinadyne" set, described by "Cathode" some time ago, and I can just hear 2ZW. Would another valve give me more volume?

A.: Yes, you would get much better results if you built up the circuit de-

scribed by "Cathode" some time ago under the heading of the "Trinadyne Two." You could use the method of regeneration employed in your present circuit, in other words, just add the extra valve as shown. You may have to wind a special coil to separate 2YA and 2ZW. This coil might well take the form of that described for the "Rejecta II" crystal set. In fact it would not be a bad plan to incorporate the "Rejecta II."

2. I have a battery made up of three two-volt 20-ampere hour cells. The charging rate according to the label is 5 amps. I have access to a battery

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- "Radio," U.S.A. National Trade Magazine. 1/9.
- "Cameron's Cinematographic Annual," 1930. 26/-.
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- "Wireless: The Magic Carpet," 5/-. (Technical Editor "Radio Record" says no set owner should be without it.)
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Name of set
Number of valves
Name
Address
.....
Nom de plume
To be kept in subsequent inquiries.
Date

Please Note:—

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- (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.