

QUESTIONS AND ANSWERS

"ANXIOUS NO. 1" (Taioa): There is possibly a defect in the wiring system of your house, but the most probable cause of your set going on and off is a defective valve or a poor connection somewhere which intermittently opens and closes, probably due to the action of heat. A qualified serviceman would soon locate the trouble for you.

"28 M.C." (Timaru): Connecting a .00005 mfd. midget variable condenser in parallel with your present tuning condenser would enable you to band-spread stations and would make tuning much easier. A pre-set condenser in series with the aerial lead would improve selectivity and would help to eliminate dead-spots, if any are encountered. To make the tuning easier, you could take out three of the moving plates in your tuning condenser. Your present coil would then cover the 40-metre band. You would need to wind two additional coils. For the 20-metre band, one, put 7 turns on the secondary and 4 on the reaction; for the 80-metre band, 26 turns would be required, with 12 turns reaction.

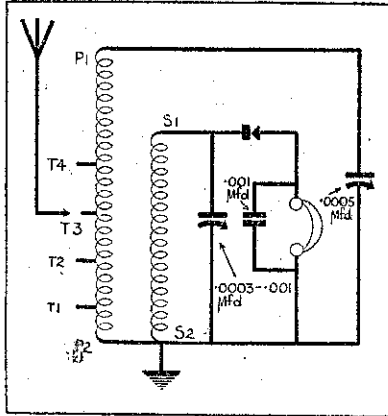
"T.R.F." (Dunedin): I would like to improve the selectivity of my seven-valve battery set, which, though old, is still good. Is there any simple way I can do this?

A.: You could use an aerial tuner such as that described in the November, 1933, "Radio Times." Alternatively, you could try taking several turns off the primary windings of all the coils, say 5 or 6 turns off the aerial primary, and 8 or 9 off the r.f. primaries.

M.E.F. (Dunedin): The valve types used in your set are still as good as any.

M.G.H. (Te Awamutu): There are two serious errors in your circuit which explain why you are not getting results. The first is that the .1 mfd. by-pass condenser in the plate circuit of the r.f. valve is on the wrong side of the r.f. choke—it is, by-passing all signals straight to earth. It should be on the "B+" side.

Secondly, there is no need for the .0001 mfd. fixed condenser in series with your reaction condenser. It is reducing the

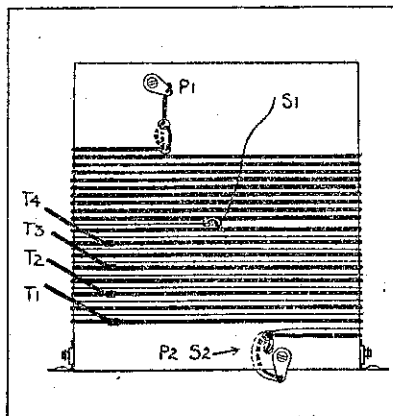


Circuit of the "Selectra" crystal set.

effective capacity of the latter to approximately .00008 mfd., and this explains why you cannot get effective reaction. If you do not wish to insulate the shaft of the reaction condenser, then put a .002 to .005 mfd. condenser in series with it. The additional condenser will only have a negligible effect on the capacity of the reaction condenser, but will isolate the latter from the detector plate voltage. Connect the .0001 mfd. condenser that you take out from either side of the r.f. choke in the detector plate circuit to earth.

J.W. (Wellington): Where could I obtain the circuit of the "Selectra Crystal Set"?

A.: This set was described in the August, 1933, "Radio Times," which is now out of print. However, the circuit and a sketch of the coil is shown on this page. For winding the coil, a 3in. length of cardboard or ebonite former, 3in. in diameter, is required, together with a small quantity of 24 and 30 gauge double silk covered wire. The finer wire is used for the S1S2 winding. The P1P2



winding, which consists of 50 turns, is tapped at the 10th, 15th, 20th and 25th turn. Thirty turns should be put on the S1S2 winding.

G.A. (Christchurch): Your set is evidently operating correctly and merely requires realigning with a calibrated oscillator. Any qualified serviceman will do this for you.

"KIT SET" (Auckland): For all-wave work you would find a correctly designed doublet type of aerial of great advantage. To give complete details of one of these aerials would be outside the scope of these columns. The subject will be very fully covered in the 1935 "Radio Constructor's Guide," which will be published about the end of March. In all cases the flat top should be as high as possible for best DX results.

"ARIEL" (Otago Central): I am using a five-valve battery set which brings in the New Zealand "A" stations quite well, both day and night, but in the evenings the "B" stations are very bad. There is a continual scratching noise all the time, extending from 70 to 150. My set is only seven months old.

A.: As the "B" stations are not nearly as powerful as the "A," you must expect to get a certain amount of noise with them. In other words, if you have to turn the volume control up to tune in the "B" stations you refer to, you must expect to get a little more noise. You can soon tell if the trouble is in the set or not by

(Continued on page 49.)

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Name of set

Model

Name

Address

Nom de plume

To be kept in subsequent inquiries.

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- (2) Write legibly and on one side of the paper.
- (3) We do not design circuits.
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