

### Our Free Technical Service

**READERS** of the "Radio Record" who are in difficulties about reception or set construction are invited to write to our "Questions and Answers" department for help. We particularly wish to assist those who know little about radio, as very often there is some very slight trouble which spoils completely one's enjoyment of the programmes.

Correspondents are asked to observe the following courtesies:—

1. Write legibly.
2. Make your questions brief and to the point; do not make apologies for writing, and, where possible, tabulate.
3. Do not ask for a reply by post unless a stamped and addressed envelope is enclosed. Even in these circumstances we reserve the right to answer any question through our columns.
4. Do not ask us to design circuits or send detailed lay-out diagrams; but we can offer advice regarding circuits.
5. Do not become impatient if replies are held up for a week or so, as frequently space has to be curtailed.
6. Address all technical correspondence: "The Technical Editor, P.O. Box 1032, Wellington."

"J.E.S." (Whangarei) has a standard H.R.4. and asks if he can use parts of this to build a screen grid set. He wants to use the wire from the coil.

A.: This will be quite in order. The gauge usually used in these being No. 22 s.w.g.

2. Can I use the transformers and the two .00035 condensers where .00025 are specified?

A.: The .00035 can be used quite well, but to reduce their capacity to .00025 use a .00375 condenser (or near equivalent) in series. The exact value can be built up by separate condensers paralleled. These should give quite good results.

"J.J.S." (Wellington) asks if a .0005 and .00015 condenser may be used in Round-the-World Two.

A.: .0005 is too large—but .00015 may be used for tuning. It will slightly alter the tuning on the wavebands. It would not be necessary to alter the coils, if anything they must be made slightly larger. You may try to use the .0005 for reaction by using in series with it a .001 condenser.

"R.M.D." (Auckland) has a factory-built A.C. receiver which hums badly. He wants to know how he can stop this.

A.: We do not advise amateurs to interfere with factory-built receivers.

There is always a danger of shock, and furthermore, the regulations do not provide for inexperienced amateurs interfering with receivers. Consult your dealer.

"G.E.W." (North Auckland) has a six-valve factory-made set using batteries, and asks:

1. Can I connect a pair of 'phones in place of the loudspeaker when signals are weak?

A.: No. Besides damaging the phones you would hear a disproportionately great amount of background noise due to the action of the set.

2. The set is placed against an outside wall, and earthed immediately outside. A veranda has now been erected over the wall, and the ground is getting dry. Will it be all right to drive another pipe down outside the veranda in a wet place.

A.: Yes. Where possible, long leads are to be avoided, but in this case it would be better to have one.

"NEW CHUM" (Tauranga) is doubtful about the advantages of low loss coils. he asks:

1. Will low loss coils improve either tone, volume or selectivity?

A.: They will very slightly. It is now considered that they are not worth the trouble they take to construct.

2. Are they worth while in a district noted for its poor daylight reception?—No.

3. In the 2-R.F. B.D. should the coils be vertical?

A.: Placed vertically they take less room than when horizontal, and they do not come so near to the shield as they would in any other position.

4. In the 1930 "Guide" "Valve Equivalents" AC3 and 102T, Mullard are given as equivalents of 226 and 227, but they are missed from the other list. Why?

## RADIO DIRECTORY

### What to Buy and Where

#### CITIES

- AERIAL MASTS ..... Domestic Radio Co., Ltd., 300 Queen Street, Auckland.
- ALTONA & HAMMARLUND-ROBERTS SETS. Johns, Ltd. Chancery Street, Auckland.
- BROWNING DRAKE SPECIALISTS ..... F. J. W. Fear & Co. 63 Willis Street, Wellington.
- BURGESS RADIO BATTERIES, All Radio Dealers.
- KING RADIO RECEIVERS ... F. J. W. Fear & Co., 63 Willis Street, Wellington.
- MAJESTIC RADIO RECEIVERS Kirkcaldie & Stains, Wellington Agents, Lambton Quay.
- MULLARD VALVES ..... All Radio Dealers.
- PILOT 1930 PARTS—PILOT SUPER WASP KITS, GILFILLAN, KELLOGG and ATWATER KENT SETS ..... Harrington's, N.Z., Ltd., 133-140 Queen St., Auckland. 40-42 Willis St., Wellington.
- RADIOLA RECEIVERS and Expert Radiola Service. Farmers' Trading Co., Ltd., Hobson Street, Auckland.
- STEINITE RADIO ..... G. G. Macquarrie, Ltd., 120 Willis St., Wellington.

#### COUNTRY TOWNS

- MAJESTIC, ATWATER-KENT AND RADIOLA ELECTRIC SETS Radio House, Hamilton. G. S. Anchor, Manager.
- PHILIPS VALVES AND APPARATUS All Good Radio Dealers.

# Radio CALLS For More TRAINED MEN

Train at Home by Correspondence or at School

Radio now offers YOU, young man, a wonderful Money-Making Opportunity. Write to-day to Desk A, Druleigh College, Anzac Av., Auckland, for full particulars. THE PREMIER WIRELESS COLLEGE.

## Druleigh College

A.: Any of these methods would do quite well. It is merely a matter to suit your own convenience.

3. My set is a 4-valve regenerative, and the valves 4-volt ones. What capacity accumulator should I buy and about what price should it be?

A.: If you are using valves which are very light on "A" current the system will quite possibly succeed, if you use a 20 amp-hour accumulator. This would cost probably about £2.

4. If I cannot get the Lelanche pots what can I buy in their place?

A.: There are no substitutes for them. They are unglazed pottery jars about the size of cocoa tins.

5. As this system is so effective, cheap and reliable, why has it not always been recommended to country people who cannot get accumulators charged?

A.: It has its limitations. It has not a very great capacity, but is admirably suited as a trickle charger for fairly small sets. It is very messy, and many people will not take the trouble to bestow the constant attention that these cells require. There is a fair upkeep with them, because the zincs may be eaten away fairly rapidly, though the system would be cheaper than dry "A" batteries. Particularly if the cells are neglected does trouble arise.

"R.H.B." (Auckland) is using a 3-valve screen-grid set, and wants particulars of valve-base coils to cover the 20/30 metre band.

A.: Please state the value of condenser used in this kit set.

"M.P.A." (New Plymouth) desires to change 4-volt valves to 6-volt, and asks for the changes in the components of the set.

A.: There will be no need for any changes. Just substitute the valves and the battery.

2. What valves do you recommend?

A.: Radio, 221A or 201A type; detector, 221, 200A, or 201A.; first audio, 221 or 201A; second audio, 112A or intermediate power valves. For more information on this point, see the 1930 "Radio Listeners' Guide," Section 6, and page 101.