Dunedin "owing to its tremendous sale," as one stationer told me?

A.: We really cannot tell you. Perhaps some dealer or bookseller in other parts of New Zealand may be able to supply you. If ayone can locate a few 1930 "Guides" they will find a ready sale for them by writing us.

4. On most stations the set has a sharp whistle and sometimes oscillates though it should not. If I shift the neutralising condensers the squeal stops, but I cannot get the distant stations.

A.: You should adjust your neutralising condensers so that the set is on the verge of oscillation on the highest frequencies. If you cannot get the results you expect look for the cause in other parts of the set.

F. W.A. (Christchurch): Originally my eliminator was fitted with a rectifier which worked silently, but has now failed. I obtained another of a different make, but it set up an objectionable hum. I have tried the usual methods of eliminating this but failed. The only method to overcome the difficulty has been to connect the A battery across the terminal.

A.: You have not given enough particulars. Do you have an A, B, and C eliminator, and is this trouble present in only the A? What are smoothing arrangements? If you shunted an electrolytic condenser of 2000 mfd. across the A terminals the trouble would probably disappear.

KILLINCHY (Killinchy): I enclose two audio circuits—one using parallel feed audio and the other using a transformer in a choke capacity circuit. Which is the better and what is the percentage of volume reduction?

A.: The parallel feed transformer coupling is the better with certain alterations It may be better to take the B+ terminal of your transformer to earth and the "F" terminal to the C—, though there is very little difference between this and the method suggested in your sketch. It would be worth while trying both. Number 2, while producing a better tone, has a very marked lack of volume in comparison with the transformer coupled, unless an extra stage is used.

2. Which would reduce a.c. hum the most?

A.: There would be little or no difference.

3. How would either circuit compare with "Megohm's" double impedance coupling?

A.: The double impedance coupling would deliver better quality than either unless the highest grade transformers were used in circuit number one, though it would not have the volume possessed by the transformer coupled.

4. Why does music sound from a pick-up and come through the speaker at the same time?

A.: It is due to parts of the pick-up responding mechanically to the frequencies generated in the coils. It is rarely overcome, though in good pick-ups it is reduced to a bare minimum. The pick-up you mention, although not quite free, is as near so as the writer has heard.

5. Is there much advantage in cranked tone arm?

A.: It has certain theoretical advantages, but most high-grade instruments do not use it.

6. Do you consider that fibre gramophone needles reproduce as well as do steel needles?

A.: Not quite, as some of the higher frequencies are cut off. However, they are almost as good, especially if electrically recorded records are used. It certainly pays to use them if the pick-up shows any tendency to damage the records.

J. G. (Auckland).—Where could I obtain a blue print for "Round the World Two"?

A.: We have not published one, but the description in the diagrams published with the article should give you all the assistance you require.

MAC (Christchurch): Results on the broadcast band of the "Round the World Two" are good, and on short-wave I have picked up several stations on the speaker. I have now added another stage as described later, but find that the set will not oscillate on short-wave, and even then it is rough, with the result that so far I have only picked up Morse stations.

A.: Try the effect of altering the capacity of the condenser in the aerial, altering the voltages and the grid leak, and the grid condenser if need be. Try the use of an output filter. About a month ago in these columns some hints on this point were given.

2. I have tried voltages higher than 45, but the set will not carry it without screeching.

A.: The output filter should improve this.

3. Do you advise me to shield the set because I cannot get a wavetrap to work in the usual way?

A.: Shielding would be an improvement, but you say in an earlier part of the letter that you can cut out 2YA to receive 3YA at a distance of half a mile. Why talk about shielding the set if you can do this?

4. What are the correct voltages for each lead?

A.: B +, detector 22½, first audio 45, last valve 90 or more.

FOXY (Hokitika).—A hum, something like the roaring of the sea in the distance, has developed in my set. How can I stop this?

A.: As it is an electric commercially-made set, we would advise you to contact your district agent.

2. If I raise my aerial to 60 feet high and to 450 feet long, would my reception be improved?

A.: The noise background would outweigh any advantages gained. The best aerial would be 60 feet high and about

MISS CHRISSIE FOSTER, Soprano, and a member of the 1YA Broadcasting Choir.
—S. P. Andrew, photo.

50 feet long. Perhaps you could try the Beverage aerial. It is about 500 yards long, 10 feet high, and earthed at the distant end to .00025 condenser.

STATIC (Christchurch).—I wish to change my seven-valve a.c. receiver to a short-wave set. What would be the cost?

A.: It would not be practicable to do it. You should obtain a short-wave adaptor, such as the Addaphone.

F. G. (Kelso).—I found the amplification in the "L.W." much louder and clearer than the transformer coupling. At present I am using DE5 as a power valve, and do not know whether to use the 224 or 245 as last audio?

A.: The only practicable combination for the L.W. is a 224, followed by a 245. Other valves can be used if they are the same or of similar type, though, if you depart from specifications, you must do the experimenting yourself.

2. In constructing a transformer I could fit only 62 lammations through the centre. Is this satisfactory?

A.: Yes, if they are tightly packed.

3. I have been using the tuner of the 2 r.f. B.D. in connection with this amplifier, but I need a variable grid leak for the plate and grid return of the amplifier valve instead of a .5 meg. resistance, but I find this more or less unsatisfactory?

A.: Take the leads of the L.W. from the audio side of the first audio transformer—that is, you must use a detector and transformer if you wish to get good results from a tuner of the nature indicated.

4. The heater element of the screen grid valve seems to vary. Does this affect the amplifier?

A.: Most certainly, either your valve is defective or there is a defect in that filament circuit.

"HAZEL" (Christchurch): Is a log of 21 stations poor for an 8-valve a.c. set?

A.: It is not too good, but of course your locality may be bad. Your aerial is not a good one. If you wish to use a "T" aerial the lead in must come from the exact centre, otherwise you will have to use an "L" aerial, taking the lead-in from one end.

2. If I am surrounded by other aerials does this affect reception?

A.: Other aerials will screen yours to a certain extent, especially if yours is a poor one.

3. Does the fact that the speaker is by the set make any difference?—No.

4. I cannot receive any American stations. Why?

A.: It is due probably to the poor aerial you appear to have. For DX reception the first qualification is a faultless aerial and earth system.

5. What is the average life of valves? My set has been in use for a year with an average use of four hours daily.

A.: About 1000 hours. Yours appear to have had well over that, so probably a new set would strengthen up reception.

"H. Z." (Napier): Would you supply details of broadcast coils for PCJ four?

A.: Coil No. 1: Secondary 195 turns No. 32 D.S.C. tunes 320-550 metres. Reaction coil 50 turns 36 to 40 ga., D.S.C. jumble wound in a pile. Coil No. 2: Secondary 96 turns of 28 D.S.C. tunes 205-350 metres. Reaction 30 turns 36