

Questions and Answers



M. M. (Mount Eden): When will you publish the a.c. version of the Outspan Five?

A.: We shall not make any rash promises, but it will appear in the near future.

XYZ (Otago): Can I add another 45 volts "B" battery without making any alterations to the set or using different valves? I use four already.

A.: It would not be wise; four is ample "B" battery for any set, as it represents 180 volts. It would not place any extra drain on an "A" battery.

LOFTY (Linwood): There is an audible hum in the transformer of my L.W. Would this cause a hum in the speaker?

A.: It is possible that the hum may be picked up by the amplifier, but it is unlikely.

2. If I connect the earth to the sub panel it causes loss of volume and distortion.

A.: This is due probably to some slight mistake in the set. However, so long as you get better results by leaving it off, continue to do so. You are not likely to do any damage.

3. I have two transformers of good make, 4-1 ratio. Is this too high to use with push-pull transformers?

A.: No, they are quite satisfactory.

SCREEN GRID (Ngaio): I use a switch to connect my L.W. to the tuner. When I break the contact when changing over from radio the set becomes unstable.

A.: Do you mean that the set is unstable while the switch is in neither position? If so, it is quite understandable as the L.W. is most unstable when

there is no load on the grid circuit. If not, could you make your question a little clearer?

D. E. C. (Waikato): What is the best valve to use in the "Sparrow Hawk" One?

A.: Any two-volt valve, though one of the new 230 type would fill the bill excellently.

2. Would the 2-valve a.c. amplifier described in the "Guide" be suitable to use in the "Sparrow Hawk" One?—Yes.

3. I have been troubled with static for the past two weeks. What is the best device to reduce this?

A.: If you connect a .025 or thereabouts condenser in series with a 50,000 ohms variable resistance and connect this combination across the phones, you can by-pass much of the higher frequency signal, and as static is of high frequency it also will be by-passed to a large extent.

OWL (Greymouth): Could the Radio gram Five described in the 1931 "Guide" be successfully changed over for shortwave work?

A.: Yes, by adapting it along the lines described for the Differential Three a few weeks back. You would make the same coils and couple the set up in the same way. We have not tried this arrangement, but no doubt it would work.

2. What ratio of push-pull transformer do you recommend?—About 3-1.

H. W. Y. (Awanui N.): What briefly is the difference between 66R and 66K speakers, and which is the more suitable for a battery set using 90 volts "B"?

A.: 66R will take 50 mamps of d.c. current against 66K 30. It is a heavier

speaker which will take greater volume, without distorting. A 66R would be the better speaker for your purpose.

2. Which is the better combination of valve for my five-valve American set—the 119 type or ordinary four-volt valves?

A.: The ordinary four-volt would be the better, but do not use A425 as first audio. Use A409. This valve is totally unsuited for the work you are requiring it to do.

3. Which combination is the most economical on "B" batteries?

A.: There is little difference. The possibility is in favour of the first-mentioned combination.

A. DE 'DUFFER (Dunedin): I have a five-valve set, the first audio of which is B605, followed by two 256's in push-pull. I use the set only 12 hours a week and the valves went out in three or four months.

A.: You should not use B605 in the first stage. This valve draws far too much anode current to be passed through an ordinary transformer, and when operated with only 4½ volts grid bias you are shortening the life of the valve considerably.

2. I have 22½ volts in the push-pull stage. Is that right?

A.: Try increasing it to 45 volts, with an idea of double bias (as explained fully in the "Radio Guide"). This will reduce anode current and possibly lengthen the life of your valve.

3. My six-volt accumulator is charged by an old type tuncar 2-amp. charger. It has never been fully charged, and I have never run it down below the red figures (1200). Is this good practice or should it be run down occasionally?

A.: It is very good practice. If everyone did this their accumulators would last twice as long as they normally do.

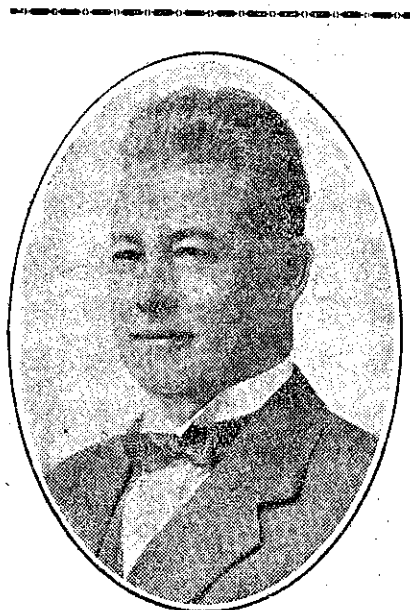
4. On one or two occasions I have left the "B" supply on for some time with the "A" switched off. Would that shorten the life of the valves?

A.: Most decidedly, yes. It is very bad practice, and tends to ruin not only the valves but the eliminator. It is a wonder you have not had a flash over before now.

WESTER (Westport): Could 26 d.c.c. wire be used in the 100 watt transformer described in the "Radio Guide"?

A.: Not without very seriously increasing the bulk of the transformer and possibly spoiling its efficiency. The number of turns would be the same.

2. How does one calculate the length of wire used in these power transformers?



J. T. Paul.

A prominent New Zealand journalist, who broadcasts talks during the international programmes from 4YA.
—Steffano Webb Photo.

A.: Take the average diameter of the winding, the length of which is to be calculated. If it is the primary and you are winding on a 1½ in. square bobbin, the mean diameter will be about 1½. Multiply this by 3.14 and multiply this by the number of turns. This will give the length of wire required in inches.

SERVICE (Waitaki): What is the standard colour code for resistance and wiring as adopted by the R.M.A.?

A.: Drake's Handbook gives the following:—

"A definite scheme of colours for receiver wiring has been adopted and should be followed wherever possible. Wires are made either with covering of a single solid colour or are made with a cover mainly of one colour but with a tracer



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