

# QUESTIONS: ANSWERS

FRANK KEE.

The Technical Editor will, through these columns, be pleased to help readers experiencing trouble with their sets. Queries are limited to three—for more than this a shilling fee is charged, and a similar fee is payable for queries answered by post. Supplying layouts, circuits and solutions of intricate theoretical problems is beyond the scope of this service.

A coupon must accompany all requests for information. Non-appearance of the coupon in any issue cannot be regarded as a reason for its not being used.

Address all queries, The Technical Editor, Box 1032, Wellington.

**DX46W (Wanganui):** What is the approximate life of an eliminator and what is the difference in cost between running an electric set and a battery set; also the cost of an eliminator?

**A.:** A good battery eliminator may be had for sums varying between £5 and £7/10/-. Its life is almost indefinite, although the rectifying valve may want renewing after about two years, while occasionally a resistance or a condenser breaks down, but the chance of any of these happening is very small and an eliminator can be regarded as something permanent. The cost of running an eliminator is almost negligible. It takes very little more electricity than a 20 or a 30 watt lamp. It will probably run 50 hours on a unit, which usually costs about 4d. The cost of a battery, say you provided two batteries to give 90 volts, would work out at approximately 4d an hour.

**IM PAT (Rangiora):** Place the Ferranti transformer first.

2. What is the average life of my 108 volts battery?

**A.:** That depends upon how much current your set is taking. It will probably last from six to eight months.

**C. G. F. (Woodville):** I constructed the shortwave adapter described in the Radio Handbook, but on connecting it to my a.c. set it will not work.

**A.:** Have you been trying to use a screen-grid valve as detector where a 227 is specified? It seems you have, and have been causing complications thereby. First of all see if your set will work on phones. You make the filament connection as shown in the diagram, that is the filament of the valve sockets in your set. Take the plate leads instead to one tag of a pair of phones,

take the other tag to the plate socket of the detector valve in your set. You should then be able to get the set working. If you cannot under the circumstances, it will be impossible to do so when connecting the adapter up to the set. The adapter could not work in the first audio, which is designed for a 226-valve, and there are only 1.5 volts on the filament. You are using a 227 detector requiring 2.5 volts. Your best plan would be to construct a super. het. type of adapter. One of these was described in the 1931 "Radio Guide." Of the two coils, L1 is the tuning coil, and is the larger, L2 is the reaction coil, and is smaller.

**BEGINNER (Auckland):** Without further details we cannot say if any harm is being done to your set by the alterations mentioned. However, if a radio serviceman has done the job, and the set now works satisfactorily, you can rest assured that everything is quite in order.

**E. W. (Christchurch):** Short-wave sets are generally better when two separate coils are used for reaction. You are using the Reinartz circuit as different from the Schnell, which is generally considered to be the better. The "Night Owl Two" recently described in the "R.R." utilises a Schnell circuit. If you change your circuit round to this we think you would get better results.

**A. V. B. (Petone):** Could you tell me if enamelled-covered wire is suitable for the secondary winding of a 150-watt transformer?—Yes.

**CRONA (Napier):** Would you tell me where to fit a milliammeter in my set, so as to obtain the total consumption that the set is using in mamps?

**A.:** Break the "B—" connection to the "B" battery and insert your milliammeter there. The positive will be toward the set, and the negative to the battery.

**KIWI (Arapuni):** My power transformer is 2½ volts out of balance, there being 197½ on one side of the centre tap and 200 on the other. Will this be detrimental to its performance?

**A.:** A small difference such as that will be negligible, particularly as the power pack will have ample smoothing.

2. Could you supply the output curve for the 1560 valve?

**A.:** We are afraid we cannot. Unless you can get it direct from the New Zealand agent you will have to do without it. The valves will not deliver a higher voltage than the power pack voltage even under light load.

**OMSK (Bay of Plenty):** What would be the cost of a four-valve a.c. set, and will it have to have a rectifying valve?

**A.:** We do not happen to know of a commercial four-valve a.c. s.w. set, although Johns Ltd., Radio Ltd., or Silver

Marshall may have one. We think, however, you could get one built up for about from £15 to £20; maybe less. However, a dealer could tell you better than we could. If you have already a good commercial set, why not use an adapter? A suitable short-wave super-het. converter could be obtained for about half the sum previously mentioned.

**A. C. (Manurewa):** How can I find out wavelength in metres from kilocycles?

**A.:** Divide the number of kilocycles into 300,000.

2. My "B" eliminator takes some time to get into stride; the signals are very weak to start with.

**A.:** There is something wrong with

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"Collins's Wireless Diary, 1932," 4/6. (A mine of information.)

"The How and Why of Radio, 1931," by Hunter. Illustrated—Recommended, 3/8.

"Radio Engineering Principles," by Lauer and Brown, 19/- (A general text-book on radio).

"Drake's Radio Encyclopedia, 1931" (practical reference work), 45/-.

"The Microphone," (U.S.A. monthly for amateur radiophone), 1/-.

"401 Hook-ups" ("Radio news"), 2/11.

"Modern Sets 1932," 1/8.

"Radio Call Book and Technical Review" (formerly Citizen's Call Book Quarterly), Dec. issue, 1/11.

"Break-In" December (N.Z. Amateur's publication), 4d.

"Radio Questions and Answers" ("Radio Record"), 1/8.

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