



Questions and Answers



"LIGHT" (Christchurch): The primary of my L.W. power transformer has a break in it, but the secondary and filament wires are intact. Could I wind another primary on the outside?

A.: Another primary on the outside will in all probability not be satisfactory. In our laboratory experiments burnt out

primaries are quite common, and we find the best way is to remove all iron and lift off the spool end. It will be found that if care is taken they will come away quite easily without wires dropping. The primary then can be pulled out; another one can be carefully wound and slipped back in the place of the defective one. It is not necessary to place the spool ends back on the transformer again. Battery compound or wax can be run over the wires to protect them. This operation is not a delicate one, although it requires a reasonable amount of care. We have done it many times, and never had a failure.

2. Can the secondary of the transformer be used as an output choke?

A.: It could, but it would have a low inductance.

"DIE-HARD" (Seddonville): What is the best valve combination for my set?

A.: Four 221's or 201A's, and one semi-high gain power valve of the B605 or UX 112A type.

2. I cannot get any station before 8 p.m., and there is a continuous crackling in the set.

A.: This sounds like a defective transformer. Have these tested (you could do it yourself by the phones and cell method, so frequently described in these columns). Try another grid-leak and tug the joints for dry or loose connections.

M. E. (Nelson): I have connected the wire from the Daniells cell charger and the lead to the set to the same battery clip. Am I not putting excess voltage on my valves?

A.: There should be two wires from the charger and two from the battery. As we pointed out before, this excess voltage is cut down by the parallel battery. However, if you do not feel too sure about the connections take an ordinary torch bulb and connect one wire to the screw thread and one to the soldered tip. Place these across the filament terminals of one of the sockets and remove all the valves. Now turn on your set. If the torch bulb is the same voltage as your valves on 4-volt below, it should light brightly, but if you have excess voltage it will burn out. In practice we have found that the charger does not affect the voltage of the set. However, it will be an easy matter to borrow a voltmeter.

2. If I have to connect the wire from the charger separately how am I to connect it to the terminals? There is no room for another battery clip so far as I can see.

A.: There is no need for the extra room if you want to connect the battery charger when the set is not operating. Take off the clips from the set and put the clips of the charger on the terminals to which the set clips were attached.

3. Would it keep my 30 amp. accumulator fully charged if I disconnected it when the set is working? It consumes just over one-fourth of an amp.—Yes.

4. When I turn the set on there is a loud roaring noise which continues when the aerial was disconnected. In a short time this cleared up. Would this be the result of adding fresh bluestone to the charger?

A.: It is most unlikely that that was the cause, but without further particulars it would be impossible to say. If it has stopped the cause is now immaterial.

O. C. (Mataura): Can a pick-up and short-wave adapter be added to my six-valve set?

A.: Yes; the pick-up can be taken in at the detector valve by using a special adapter, if special pick-up terminals are not provided. Short-wave adapter either of the super-het. type described a little time back or the type that is going to be described in the 1931 "Guide" would be suitable.

G. M. (Auckland): My four-valve B.D. works better by reversing the wiring to B— and A+ and by placing a .001 condenser across the primary of the first audio and the by-pass condenser of .1 mfd. from B+ r.f. to A+.

Does the set use more B battery this way? A.: Providing your set is working well you are not bringing any trouble upon yourself. It will not use more B battery by making the alterations you suggest, as they are quite in order.

Note: We looked in your letter quite a long time for a coupon, but could not find one. We presume it dropped out in the post.

"SIMPLEX" (N. Auckland): What is the number of r.p.m. of talkie sound discs?—33.1/3.

2. What is the correct film footage per minute per revolution of the disc?

A.: There cannot be a film footage per minute per revolution. The normal speed is 90 feet per minute. Film footage per revolution would be this number divided by 33.1-3.

3. What is the correct gear ratio to give me correct disc speed?

A.: There are too many factors, depending on your equipment, for us to discuss this. Your best plan would be to study the periodical "Projection Engineering." You should be able to obtain a copy from the Te Aro Book Depot.

F. W. (Hamilton): I have an electric receiver which uses the mains for an aerial. Every time a switch is turned on or the automatic telephone rings a buzz comes through. What can I do?

A.: The best plan would be to use a separate aerial and earth. This would probably get over most of your trouble. Probably a very impromptu aerial, such as the spring mattress of a bed, would be sufficient.

2. There is a welding plant in the vicinity. Would this cause a continual click followed every two or three minutes by a harsh grating sound?

A.: It sounds very much like it, and it would not be a bad idea to see if anyone in that vicinity suffers with it. If anyone in the locality of the Waikato Hospital, Hamilton, should read this note and has any comments to pass about any similar interference we would be only too pleased to publish it for your benefit.

W. M. (Otorohanga): Tuning in my six-valve set is very flat. Could I use a better valve combination? I am using a 201A in all stages except detector, in which I am using a PM.6.

A.: Are you sure your PM.6 is not in the power stage, for that is where it should be? Trace out the wiring from the plate and it should go to the speaker, or, better still, if you cannot recognise the plate wire, trace back from your speaker terminals and you will find one goes to the B battery and one goes to the power valve. This should be PM.6, with a bias of about 9 volts. How-

CORRESPONDENTS must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington). Questions arriving without it are likely to go astray or be delayed.

Name of set

Number of Valves

Name

Address

.....

.....

Nom de plume

To be kept in subsequent inquiries.

Date

Please Note:—

- (1) Be specific and brief, tabulating, if possible.
- (2) Write legibly, and on one side of the paper.
- (3) We do not design circuits, but accept suggestions for feature articles.

Solving trouble, as different from advice, is difficult by correspondence and while letters are given every consideration, answers are not necessarily correct—they are only our opinion based on the matter supplied, which may be quite inadequate. Intricate and involved specifications cannot be supplied without a specialist's fee.

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