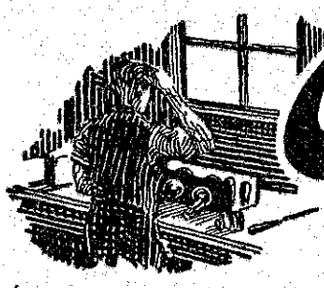


Questions and Answers

(Written during the absence of the Technical Editor.)

CRYSTAL (Wellington): Yes, you can reach Christchurch with a crystal set by boarding the ferry steamer.

BACHELOR (Petone): No, marcelle or permanent waves cannot be received on this circuit.

SHORT-WAVER (Auckland): To see short-wavers in action go to any of our beaches on a fine day and you will see plenty.

ACCIDENT (Lower Hutt): We have questioned several dealers, and they inform us that they do not buy burnt-out valves.

ONE-VALVER (Otago): You cannot get the set out of oscillation; your neighbours confirm this; have you tried dropping bricks on it?

CLASSICA (Dunedin): What, haven't you heard the Broadcast Band performing. Well, listen-in on any silent night.

SAY SO (N. Auckland): How is an ordinary valve r.f. added to the "Night Hawk" receiver?

A.: When we bring out the "Kestrel" and Differential Three we shall explain how this extra valve is added. We will then give you the coil specifications you require.

2. Which value differential condenser would you recommend for smoothest reaction in an all-wave set?

A.: We have found .0002 to be of very suitable value.

ANGUS (Wanganui): What do you think of the enclosed four-valve short-wave receiver?

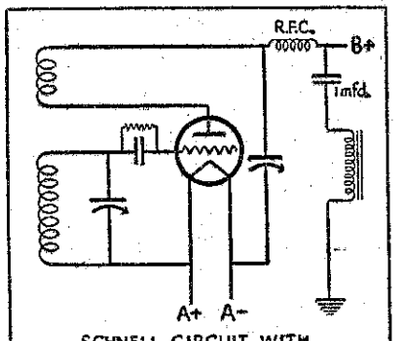
A.: The diagram seems quite satisfactory, but in the 1931 Guide you will find all the information you require on this subject, for we are bringing out a four-valve a.c. receiver with special power pack.

Z.L.D.X. (P.N.): Could you supply me with a shunt-feed method of coupling the audio to the detector of a Schnell circuit?

A.: See the accompanying diagram.

2. Is there any other method of eliminating audio howl except reversing the leads, etc.?

A.: Yes, it can be eliminated by doing away with all stray capacity and coupling between the leads and with the generous use of chokes and condensers.



SCHNELL CIRCUIT WITH PARALLEL FEED.

3. Would it be possible to include a list of the Australian "Hams" in the 1931 "Guide"?

A.: We are afraid not; such a list would occupy far too much space. They can be obtained from the "Radio Amateur Call Book Magazine."

4. Would any of the receivers described in the "Guide" use other valves than screen grid for r.f. amplifier?

A.: Probably not. Such circuits have received a good thrashing in previous "Guides."

RADI OFAN (Cambridge): I am having difficulty with the L.W. The plate current is about 50 amps, but the plate becomes red hot. Is this in order?

A.: There is something radically wrong as by running the plate red hot you will soon melt it off. See that none of the resistors are earthing where they should not, and try another grid leak (same value), resistance in the bias chain.

2. I cannot reduce the hum, although I have used 8 extra mfds. in smoothing.

A.: This again points to a shorted resistance or a defective resistance in the bias chain. It should not be necessary to have to purchase the extra by-passing condensers, as all the smoothing is brought about in the circuit as we published it.

3. I am using a choke condenser output. The speaker return is connected to the centre tap of the filament.

A.: That connection seems to be wrong. The centre tap of the filament should connect with the main chain of resistances and bias resistance only. The speaker return should go to earth. From the plate of the valve the current should pass through the blocking condenser (used in the choke condenser output), and then through the speaker. The high voltage current should come up through the choke and blocked by the condenser from getting to the speaker, should go to the plate of the valve.

4. Any interference with the grid circuit of the 224 results in a violent crashing in the speaker.

A.: This is in order.

H.B. (Woodville).—Some time ago I built a screen grid all-wave set, but now want to use differential reaction. Can I do so?

A.: Yes, in a very short time we will be publishing the "Kestrel three." This will be the circuit your are requiring.

EGMONT (Taranaki).—We regret we cannot do anything for you. Yours is clearly a case where a service agent should be consulted.

NOVICE (Wellington).—Could I increase the length of my aerial by 25 feet and make it into the "T" type?

A.: You would me gaining nothing.

2. I am troubled with fringe and audio howl, and the set is going in and out of oscillation.

A.: This is due probably to the method of reaction you are using. The Schoell type type of circuit,of which the moving plates of the condenser are connected to earth, is better. Your batteries are far too low (25 volts instead of 60), and this alone would introduce considerable amount of noise and howl.

COUNTERPOISE (Christchurch).—Which is the better type of wire for a counterpoise earth single or stranded?

—Stranded.

2. I had a wavetrap constructed by a competent man from your last publication, but it is no good.

A.: That is different from our experience and the experience of many of our readers. A wavetrap usually needs careful tuning, and must be made very carefully. We are bringing out an excellent one in the "Guide," and perhaps you might get this one to work better.

TUBBY (Auckland): Would a four or five sets give me the chief New Zealand and Australian stations?

A.: If it were of good design, yes.

2. Could you name such a set, preferably super-heterodyne?

A.: Super-heterodynes have more valves than this. We have tested only one super-het., and that is the "Majestic." It is an excellent type of machine.

3. Could you give me some hints about picking out a reliable machine?

A.: The first thing that anyone buying a set must consider is the price. You will have to sort out several in the vicinity of the sum you are willing to pay. The first test is for tone. Satisfy yourself that you really like the music and speech that comes from the set. Above all, do not be guided by an overpreponderance of bass. A listener very soon tires of this. Hear it on the very notes, such as violin and piccolo, and of the very deep drum notes. These latter should be very clearly defined and not a jumbled mass. Hear what the set can do in the way of bringing in the main New Zealand and Australian stations. On a good evening, say, at about 10 o'clock, they should all come in very well, although much depends upon atmospheric conditions. For this reason you will require to hear the set under different conditions. Do not strive to get the very distant stations, such as the American, as these certainly depend upon your locality. A set that can be relied upon to bring in the main Australian stations is all that is required. For selectivity your set should be able to eliminate the local station and bring in one close by. In Auckland you should be able to get 2BL with only a slight background of the local. In Wellington 4YA and 4QG.

EUTERPE (Reefton): I am having trouble with my reflex set. I cannot properly neutralise it and I have put the trouble down to the disappearance of grid bias owing to the valve being a six-volt one.

A.: This is probably incorrect. We think a more likely cause of your trouble to the crystal detector being at fault. In any case, reflex sets are very much out of date, so why not use your parts to make the "Kestrel Three" or any other type of modern set?

2. I require 9 volts "C" battery on the last valve even with 75 volts on the plate.

A.: This is probably in order as you have a power valve of the 171A type, which requires a good deal of biasing.

3. I can get only 75 volts from my d.c. eliminator.

A.: There may be a leak through one of the condensers or a defective resistance. It is only a case of examining it carefully or having it tested by an expert.

WHISTLE (Masterton): My set when turned on develops a whistle, which gradually disappears. Sometimes I notice a slight fading in reception. Would shortening the aerial or placing a fixed

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 Vales .....

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.