Questions and Answers

W. J. W. (Auckland): What one-valve short-waver do you recommend a beginner to build?

A.: The "Sparrow Hawk," described in the 1931 "Radio Guide."

2. What would be the approximate cost?

A.: About £3.

A. M. (Wanganui): I have a Pilot Super Wasp, a.c. four-valve. The highest tapping on my power-pack is 220 volts. Do you recommend a pentode or would pushpull do better?

A.: You will probably find with the power-pack you are using that your maximum B voltage on load is not over 190 and it would drop even further with a pentode. We do not recommend it. Your best plan would probably be to use type 171A valves in pushpull, double biased, and using class B amplification.

141A (Auckland): I have constructed a two-valve short-waver, and I find that while it will oscillate perfectly with the aerial off, as soon as I connect it, the set will not oscillate at all.

A.: Your aerial coupling is too tight. If you are using a separate aerial coil, take several turns off, but if you are taking the aerial straight into the grid coil, either tap it down the coil or insert a .00005 midget condenser in the aerial. You will find on adjusting this that the set will oscillate.

E. R.F. (Invercargill): I wish to substitute a PM4 for an A409 in my output stage. What value bias resistance shall I use?

A.: About 700 ohms.

2. I wish to gang the r.f. and detector condensers, and have a small midget for a trimmer. Which condenser shall I place it across?

A.: The detector condenser. You will find that when using a triode as detector, the application of reaction will throw the two condensers well out of step, and constant adjustment of the trimmer will be necessary. This means that you have just the same number of controls as you had before, so why gang them? If you really want to gang them the best solution is to use a screen-grid detector as used in the 1932 "Outspan Four."

N.B.—The coupling you are using is perhaps the best for maximum signal strength, but you will find that a separate primary would give you much greater selectivity.

192A (Auckland): I am enclosing a diagram of my two-valve short-waver, and am anxious to enlarge it to a four valve, with as little extra expense as possible.

A.: No diagram reached us. However, your suggestion for three stages of audio is definitely ruled out. Your best combination for a four-valve short-waver is screen-grid r.f., detector (if possible s.g.), and two stages of audio. There will be a new short-wave set in the January "Radio Times," though we have not yet decided on the final circuit.

K. S. (Hamilton): I have a six-valve commercial set. Could I alter it to use the new valves?

A.: No, we certainly do not recommend it. The alterations would be too extensive—in fact, the set would have to be rebuilt.

"WRITER" (Oamaru): In my commercial battery short-waver I am using a 222 and three 201A's. Are these the most suitable valves?

A.: You could use a type B605 with advantage in the last stage.

"NOBBY" (Auckland): What value potentiometer can I use in the plate circuit of the last valve as a volume control?

A.: 50,000 ohms. Your circuit is correct.

2. If the secondary of a power transformer gives 250 volts, 60 mils. each side of a centre tap, what will be the total output from a 280 rectifier?

A.: Using condenser input to filter, the drop will be negligible.

"BELBIN C" (Auckland): Can you tell me of a better circuit on an a.c. s.w. converter than that in the 1931 "Radio Guide"?

A.: We have not brought one out since, as home-made converters are rarely satisfactory.

2. Is the s.g. superhet converter better?

A.: Theoretically, and to a certain extent, practically, yes, but we think a simple adaptor is your best plan.

"PUZZLED" (Waikato): I built the radio superhet adaptor, as described in the 1931 "Guide," but cannot get it to work with my commercial set.

A.: Your details are very sparse, but try reversing the connections to the oscillator reaction coil.

G. E.S.: My aerial runs at right angles to an 11,000 volts power line, and the interference from these lines causes annoying background noises in my set. I cannot shift my aerial.

A.: You could try a counterpoise, which has often proved effective in eliminating such disturbances. This is a wire running parallel to your present aerial, about eight feet from the ground, and carefully insulated. It takes the place of the earth wire on your set. Using a metal sheathed cable for lead-in with the sheath earthed might help.

2. Would a Kennedy antenna cut out some noise?

A.: Probably, but you may lose signal strength as well.

W. I. (Lower Hutt): Could you give me the specifications of short-wave coils for the "DX Four," tuned with .00015 condensers and wound on 1½in. formers?

A.:

Band.	Sec.	Tick.
16-30	5	5
29-58	12	9
54-100	22	15

Secondaries are wound with 20 gauge enamel, and ticklers with 26 gauge enamel. All coils are close wound.

"COILS" (Auckland): Since 1YA altered its frequency my wavetrap will not cut it out.

(Continued on page 23.)

Information Coupon

(To be used with all requests for information.)

Name of set .....

Model .....

Name .....

Address .....

.....

.....

Nom de plume .....
To be kept in subsequent inquiries

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.
(4) Limit three questions, unless 1/- is enclosed.
(5) Postal queries limit three questions. Enclose stamped envelope and 1/- fee.