

It's Performance and Value that Sells the "Ultimate"

Hear the wonderful performance of this "Ultimate" Consolette Broadcast Receiver—knife-edge selectivity; glorious tone; power and volume that will bring in every broadcast station it is possible to receive. Examine its construction and quality of components—7-Valve Superheterodyne Chassis with the new Arcturus Multi-Mu and Pentode Valves; Local-distance Switch; Tone Control; Static modifier; and a beautiful matched walnut cabinet. Then compare it for value, at its price of £33, with any other receiver on the market, and you will see why performance and value sell the "Ultimate."

"ULTIMATE"

Broadcast Superheterodyne CONSOLETTTE

Price :
Broadcast model, as
illustrated.

£33

Shortwave and Broad-
cast model

£39/10/-

The "Ultimate" is made in New Zealand, too, to suit New Zealand conditions. You would probably buy a British receiver if it were superior to a foreign-made set; but you would most assuredly decide on a New Zealand-made radio if it were superior to both. We claim that the "Ultimate" IS superior—prove it for yourself by actual test. There is an "Ultimate" Distributor in every part of New Zealand. If any difficulty in arranging a demonstration, communicate with the Manufacturers, C.P.O. Box 1773, Auckland.

run a lead of 7/22 wire by the shortest route to the ground.

KIWI (Waikato).—Can you refer me to an "R.R." with instructions for building a simple four or five-valve superheterodyne set?

A.: Such has not yet been described. One will be described in the very near future.

2. Could you recommend suitable valves, with four-volt filaments, that would suit my present set? They must be suitable for a super-het. later on.

A.: Screen grid valve E442S, for ordinary a.c. valves, B409. Output valve, B443.

KENTY (Kopaki): Must "B" accumulators be discharged before adding new acid? What is the specific gravity of the new acid?

A.: On the contrary they must be fully charged before doing anything to them. You add new acid until the specific gravity reaches 1250.

2. My cells show full hydrometer test, but no meter test and they discharge very quickly.

A.: There is a defect in the battery itself. The fact that the specific gravity is correct does away with any trouble arising from the solution. Your best plan would be to have the "B" accumulator overhauled by an expert.

3. The plates have blistered. Do these need replacing?

A.: We think that your accumulator is coming to the end of its useful life. When the plates begin to blister it is nearly time the accumulator had new plates or was relegated to the scrap-heap.

HILLTOP (Wellington): My four-valve A.C. set is humming badly. Could this be overcome by smoothing condensers? If so, of what value and where should they be inserted?

A.: Hum may be due to several causes—i.e., see the article in the "R.R." on April 10 on tracing hum in A.C. receivers. We advise you to read this article and make the tests suggested. If you cannot trace the source of the hum the best plan will be to take your set to an expert.

J.P.U. (Auckland): How many turns of J. 28 d.s.c. on a 2-inch former will be necessary for the r.f. coil of the "Ranger Three" if a .0005 condenser is used?

A.: If you will refer to the article in question you will see the information given there. The tapping for the aerial will be brought in three turns lower than for the .00035 condenser. The usual value for a neutralising condenser is about .00003. Just ask your dealer for a neutralising condenser and you will get the right thing.

PIRINOA (Kaikoura): My telephone picks up signals from a wireless set even when the receiver is down. Can you explain?

A.: The signals are being picked up either from your aerial (a type of re-radiation) or from the earth. Altering the direction of the aerial and installing a different earth would probably have the effect of overcoming the trouble.

2. Your combination of valves is good. You might, however, use the 221 type of valve instead of the first 201A.

3. Would an extension of 70 feet with earphones to a whare have any detrimental effect?

A.: No; but it would be advisable to install an output filter comprising an output transformer or a choke and condenser between the set and the lead to the whare.

STATIC (Westport).—We regret we do not have blue prints of the "Outspan Five." Full details were published in our issue of February 20, and have not been repeated or elaborated in any way.

WIRELESS (Oamaru).—Where could I obtain a short-wave adapter for my six-valve battery set?

A.: A suitable short-wave adapter was described in the 1929-30 "Radio Guide." You could have this made up or you could obtain a commercially-made short-wave adapter. Of these, the Add-phone is the only one tested, and it has been found entirely satisfactory.

2. What are the particulars of the DX Club?

A.: We are sending on to you a circular telling you all about it.

3. Could you tell me how to fit earphones to my set without disconnecting the speaker?

A.: You connect them to the two terminals now going to the speaker and use a small spring to grip the phone terminals, or you can just wire them on in some way.

MATEUR (Auckland): Would A415 be suitable for detector and B405 for power-valve in the "Night Hawk Two"?

A.: A415 will be quite suitable for detector. B405 would make a good second valve. You could, however, use A409, if you wished.

2. Could you give specifications for one broadcast and three shortwave coils for this set?

A.: They have all been given in the "Radio Guide."

3. Is it preferable to have the lower end of a sloping aerial toward or away from a station one wishes to receive?

A.: It is immaterial.

H.M. (Dunedin): Are the coils for the "Sparrow Hawk" one the same as for the Differential series?—Yes.

2. How would I add an extra stage to the "Sparrow Hawk" one?

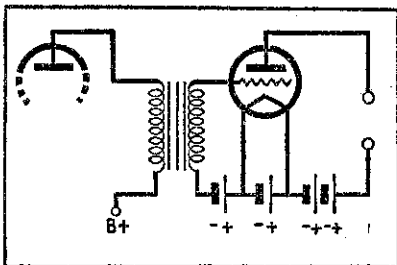
A.: An extra stage to the "Sparrow Hawk" one would be the same as the "Differential" or "Night Hawk" two.

K.A.D. (Kelburn): If I added a second stage of audio amplification to my crystal and valve (with three-valve performance) would the result be old-fashioned as compared with the "Differential Two" and "Night Hawk Two," etc.?

A.: No; you would have a really satisfactory set. Certainly the swinging coil method of obtaining reaction has gone out of date, but it has yet very many good points.

2. How would I connect up the extra transformer, 33-1 and valve?

A.: You take a wire from the plate terminal of the valve now in the set to "P" of the transformer. "B plus" of the transformer you take to the detector voltage.



whatever that might be, or to the voltage that was originally applied to the other phone terminal. "G" of the valve is carried to the grid of the extra valve and "G.B." to the negative of a suitable "B" battery. "B plus" is connected to "A minus"; you take "A minus" and "A plus" to the valve socket; take the plate to one terminal of the phones. The other terminal you connect to the highest "B plus" voltage available. A diagram illustrates these connections.

2. Could I use a screen-grid valve for my second valve?

A.: It would not be satisfactory to do so. You would have to employ resistance capacity coupling, and this would offset any gain due to the extra lift in the screen-grid valve.

199 (DUNEDIN): Could I use the new 230 valve with 231 in the last stage of the Radiola 20?

A.: You may have some trouble with the neutralisation, but once it was balanced up it would certainly be an improvement.

2. Would these valves operate on an eliminator successfully?—Yes.

3. Is it necessary to make any additional alterations to the set?

A.: No, only incorporating the six volts "A" battery and the re-neutralisation. In last week's issue we described in Questions and Answers column how to neutralise a Radiola 20.

OSCILLATOR (Caversham).—By employing a .0001 mfd. double spaced tuning condenser in the "Sparrow Hawk" one, how many turns will be required for the short-wave coils?

A.: The same as specified.

2. I have a 30 ohms rheostat on hand. Could I use this instead of a switch in the "Sparrow Hawk" One?—Yes.

REBEL (Christchurch).—My power pack delivers 90 milliamps at 300 volts. Could I use a speaker drawing 110 mls at 190 volts d.c.?

A.: We would not recommend attempting to use this speaker with your power pack. You will burn something out. Your better plan would be to use one of the type that will operate direct from the mains.