

M.J.H. (N. Auckland): What is the necessary coil circuit data for the 234 valve as distinct from the 232?

A.: The 234 is a super control r.f. pentode having a lower impedance and a higher mutual conductance than the 232. The circuit requirements are little different from the 232 except that for optimum operation the number of turns on the primary coil should be slightly less. The plate voltage on the 234 can be reduced to 67½, and at this figure the plate current is 2.7 volts, the screen current 1.1, grid bias, minimum —3. A stage shielding enclosing all the components is generally necessary for multi-stage amplifier circuits. The volume control in a receiver fitted with this valve can be accomplished effectively by varying the grid-bias. It is desirable that the circuit be designed so that under no conditions will the minimum screen bias fall below 87.5 volts when 180 are applied to the plate.

NILREM (Dunedin): I understand that it is possible to use a screen-grid r.f. valve in the "Neutron Four." Will you tell me how to connect this?

A.: The accompanying diagram explains itself.

2. Would alternatively another stage of r.f. be more suitable?

A.: This would necessitate the use of another dial and would mean a larger panel, also greater current. We think that a screen-grid valve would be the better proposition. L1 remains the same, B1 will possibly need to be less. You could make an admirable volume control by using the new American 234 in this position and using a potentiometer across your "C" battery as is shown. This, however, would place a continual drain on your "C" battery and it would be better to install a three-point switch (shown) and do away with the switch already shown in the set. Under these circumstances you would need an 18-volt "C" battery in the position. L3 is as before, with the primary disregarded and the plate circuit of the 234 connected into the centre point of the secondary. It is possible that in the "Radio Times" we shall more fully discuss this amendment to the circuit.

L.P.H. (Dunedin): My dial does not read correctly. Can I make a correct one?

A.: No, it would be a difficult task to calibrate your own dial. You could

Questions and Answers

get another that would fit the space and get it into position by tuning in a station, say 2YA, and adjusting it so that the pointer is exactly at 720 k.c. It should then be right for the other stations if the set is tuning correctly.

G.E.S. (Hamilton): Two different sets I have had in my home have caught fire on different occasions. Is this an internal fault, and what is your opinion of the set?

A.: We do not know anything about this particular set, nor have we heard of certain models catching on fire. However, it would be quite easy if great protection were not taken in insulation.

2. Once having occurred, is it more likely to reoccur?

A.: If the fault is in the transformer and it is not entirely replaced, yes.

3. Does it injure the valves when it happens that one or more of them take on a blue or green shade from the gas formed inside?

A.: In all probability, yes, although we cannot say definitely until we know what is the cause of the fire. You certainly should register a very strong complaint against this type of trouble.

N.E. (Waimate): I have been offered several foundation kits for your superheterodyne, but some of them are different from your layout. Which one was used in the "Times"?

A.: You can use any one providing the coil circuits are the same, no matter how the set is laid out or what alterations are made in the set. The Kriesler kit was used in the "Times" set.

OPTION (Invercargill): Pitch oozes from beneath the transformer after the set has been used for an hour. Is this trouble serious?

A.: Decidedly so. You have a short-circuit within the transformer and it may cause the set to fire. Send it to an expert.

FEED BACK (Hora Hora): The account in the "Radio News" is merely a skeleton description of a commercial product and even if we were to give you

what we think to be the coil particulars, we may be a long way from being correct and may possibly cause you more worry than enough.

X. (Hastings): Do you consider the "Neutron Four" the more economical and generally better performer than the "H.R. Four"?—Yes.

2. Have you had many favourable reports from constructors of the "Neutron Four"?

A.: We have had several.

3. Could you suggest better valves for use in the "H.R. 4" than I am using now?

A.: No, they are quite satisfactory. You could, however, use a 2 volts series for economy of "A" battery.

141A (Kingsland): Using a .0001 condenser in series with your .0005 use the coil particulars given for the "Night Hawk Two"; 24 gauge is quite satisfactory for use as wiring material.

G.E.S. (Dunedin):—There is no need to make any alterations. If reaction is a little violent take off a very few turns from the reaction coil.

97A (Remuera):—Your combination of valves is satisfactory, and we cannot suggest a better.

RAD (N. Invercargill): I cannot receive 3YA on my eight-valve superhet, but it comes in very strongly on disconnecting the aerial without adjusting the volume control. Why is this?

A.: It may be that you are overloading your set with the aerial. Have you tried turning back your volume control with the aerial on?

WIRELESS (Oamarn): Would a 6-volt car generator be harmed in any way if the negative and positive ends are connected together?

A.: If set in operation in that condition, most decidedly yes.

2. We cannot answer this question unless we know the number of watts taken by the various candle-powers

3. What size volume control would suit an extension speaker for my set?

A.: 50,000 ohms should be quite satisfactory.

RADIO (Wellington): What you have been told is quite sound, but if it is fairly general your are either unfortunate in that your model is not a good one or it is out of adjustment. If it has a separate a.v.c. valve pull this out of the socket and then try. If the muffled reception disappears, then the trouble is undoubtedly in the a.v.c. adjustment.

2. The stay wires attached to my pole have rusted. Would this affect reception?—No.

3. Which would be the best way to bring my aerial to the set, between the pole and the house, or the other side of the pole?

A.: We think the other side of the pole would be the better.

TRURO (Auckland): You should have seen our report on the "Pix." The patent antenna we have not tested.

LINWOOD (Christchurch): I have to advance the volume control more than I had to at first to get the local stations. Does this mean a lack of power or some defect?

A.: Probably one or more of your valves is defective. Certainly there is a fault.

YOUNG 'UN (Auckland): Probably .000075.

2. Primary 5, secondary 5, tickler 4. 26 d.s.c. wire will be somewhere near the mark.

3. I have received 35 broadcasting stations on one valve. Does this compare favourably with any other one-valve dx?

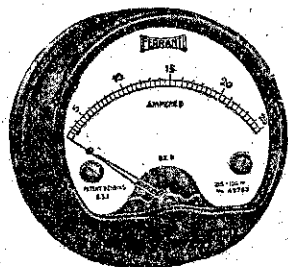
A.: Yes, it is a good record.

E.H.S. (Waikato):—How does A.V.C. Super compare with the commercial seven, if both were built by a reputable firm?

A.: They are really very similar. We would be inclined to have the "A.V.C. Super" constructed.

2. We would not say that results obtained by an amateur were always inferior to those received on commercially-made sets. Our models have always compared well with the commercial products.

3. We have never made comparisons between the two sets, and consequently do not wish to advance an opinion.



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