

Questions and Answers



Concerning a Portable.

I AM shifting about quite a great deal. Would it be advisable to get a license for a portable set? asks "B.W." (Waipawa).—Yes.

Tightening Valve Bases.

"RADIO" (Hawke's Bay) asks how he might tighten the glass of the valve to its ebonite base.

A.: Run a liberal quantity of seccotine between the glass and the valve base. (See Notes by "Switch.")

Deep Notes Predominate.

CAN you suggest a remedy for the over-preponderance of the base from an amplifier connected with a gramophone pick-up? asks "W.W." (Wanganui).

A.: Between the pick-up and the amplifier connect a series condenser ranging in capacity from .0005 to .001 mfd.

Browning Drake Receiver.

"W.F.T." (Christchurch) asks concerning the Browning-Drake. Is A435 suitable for the R.F. stage?—No, use A409, with 17 turns on the primary.

Charging "B" Batteries.

"J.F." (Norfolk Island) asks if a "B" battery may be arranged in series parallel so that it may be charged at 6 volts like an "A" battery.

A.: Yes, it would be quite feasible if the charger will deliver 5 amps.

Cone For Dynamic Speaker.

WHAT is the advantage of a 10 $\frac{1}{2}$ in. cone used with a dynamic cone speaker? writes "W.D." (Korori).

A.: A 10 $\frac{1}{2}$ in. cone emphasises the lower notes, and unless carefully constructed

will make these predominate. It is then not suitable for amateur construction. For this purpose the most efficient size is 7 to 9 inches.

Concerning Headphones.

THE magnet in the earphones seems to have lost its magnetism, writes "A.R.P." (Christchurch). Could it be remagnetised?

A.: Not without a great deal of trouble. This is a task for a radio dealer; even then it may not be satisfactory.

Use of a High Resistance Valve.

HOW many turns shall I put on the primary to match a 435 high resistance valve? asks "D.O.T." (Kati Kati).

A.: 435 is not a suitable valve for transformer-coupled R.F. stages. It is suitable only when used in tuned anode circuits. However, about 30 turns on the primary will suffice.

Battery Charger Problem.

"J. McM." (Arapuni) has been advised to alter the type of valve (328) used in his home-constructed "A" battery charger. He asks if this change to 461 is necessary? The charger appears to be working quite satisfactorily.

A.: No, there is nothing to be gained by making the change. The valves are almost identical, with the exception that 328 will deliver a slightly higher voltage.

Valve Efficiency.

"NEW CHUM" (no address) asks whether a PM1 could be replaced with a PM3 to obtain greater volume.

A.: A 4-volt valve (PM3) gives slightly stronger signals than a 2-volt valve (PM1), the amplification factor of the former being greater than that of the latter. However, the difference is slight, and unless the 2-volt valve is to be discarded through inefficiency or breakage it is not worth making the change.

Valve Rectifying.

"E.A.F." (Wellington) complains that while using the "Crystal and Valve with Three-valve Performance," signal strength is improved when the crystal is removed from the transformer.

A.: The valve is rectifying. Bias it with about 5 volts. Connect the negative terminal of this "C" battery to "T" or "GB" of this transformer, and the positive to "A—."

2. I am using PM2. Would any other 2-volt valves give better results?

A.: PM 1LF would give slightly louder signals.

Short-wave Difficulties.

"R.O.S." (Wellington) complains that he cannot get his short-wave set to bring in outside stations. The set will oscillate satisfactorily only on one band, while on another it oscillates too fiercely.

A.: Reduce the size of the series condenser in the aerial lead by removing some of the plates. Increase the capacity of the reaction condenser to at least .00035. Use a higher value grid leak—6, 7, or 8 megohms. Reduce the number of turns on the tickler coil of the frequency band that oscillates too violently. Put separate voltage on the detector and the audio valve, keeping the detector at about 22 $\frac{1}{2}$ and the audio at least at 45. Disconnect the earth.

Whistling in the Speaker.

COMPLAINING of a continuous whistle in the speaker, "Enquirer" (Rockville) asks for advice.

A.: It appears that the set is not neutralised. Try re-neutralisation on the methods laid down in previous issues of the "Record," and in the "Radio Listeners' Guide." Another cause may be feedback due to run-down batteries. Try a by-pass condenser between "B plus" R.F. and earth, or "B minus." The speaker cords may be too near the input, while the "C" battery is inadequate. At least, 18 volts are required for the valve in the last stage.

A Characteristic of the Detector.

WHEN I remove the grid leak reception improves very noticeably. Is this unusual? writes G.I.L. (Waipukurau).

A.: This is a characteristic of your detector. Unless you suspect reception to be bad with the grid leak removed, leave the grid leak out permanently.

2. I am using a power valve requiring 18 $\frac{1}{2}$ volts, but my set is wired to provide the same grid voltage for the three audio valves. How can I put separate voltage on this power valve?

A.: Disconnect the lead between "GB" — and the GB terminal of the last transformer, and take the lead from the 18 $\frac{1}{2}$ volt negative tapping to this.

3. Could you supply a circuit for a shortwave adaptor not using a tickler coil?

A.: This would not be worth while. The adaptor described in the "Listeners' Guide."

Position For Valves.

I HAVE the following valves, writes "H.W.B." (Lower Hutt). Could you tell me their position in a 5-valve battery set? DE 8 LF (Two), DE 5, UX 201 A, PM 5X.

A.: Radio-frequency DE 5 and 201 A, detector PM 5X, audio-frequency, DE 8 LF. The set could be improved by the use of a power-valve in the last stage. It is difficult to recommend any one make of power-valve with a combination such as is used. DEF 610 Osram, Radiotron 171A, PM 256, are all suitable in the makes already used.

2. Would it be of any advantage to selectivity or strength to increase my battery voltage to 155?

A.: If a power-valve is used in the last stage, tone will be improved, and sensitivity slightly increased.

3. My battery charger shows 5 amps. when on charge. Is this too high for a 6-volt battery?—No.

4. When charging an additional two cells, is there any adjustment to the charger required?

A.: Unless the charger has a 10-volt winding, there is no chance of charging an extra two cells, in the usual manner. By connecting the positives of two accumulators and the negatives of these, 6-volt accumulators, each to a separate tapping on the charger, two could be charged quite satisfactorily.

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TWO VALVES IN ONE

V12

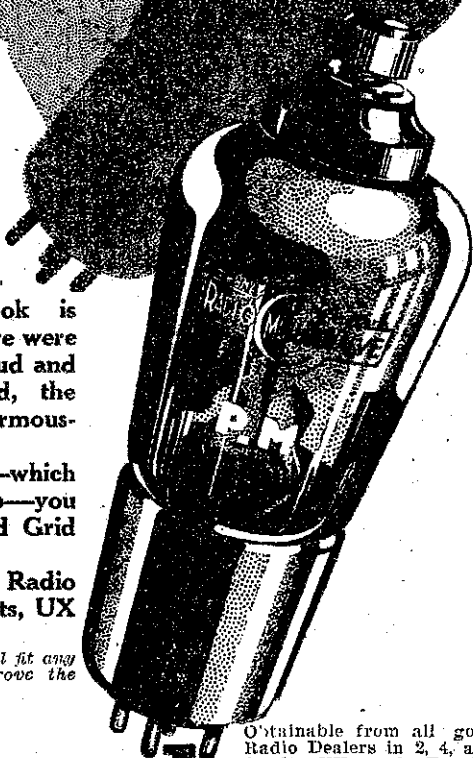
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