

A.: The best combination may be selected from any makes, using the following types: One 224, two 227's, and one 171 or B605. The indirectly-heated valves are much to be preferred.

3. Are the valves mentioned first-class?—Yes; don't you read our lab. jottings?

4. When adding the fourth stage I had to reverse the leads to the primary of the transformer. Is there a better way of overcoming the difficulty?

A.: No; this is correct.

5. Would there be any difficulty in adding a further push-pull stage of audio?—No.

A. B.O. (Timaru): I enclose a sketch. Which would be the better position for my aerial?

A.: The one marked 2.

L. P. (Wellington): I am contemplating the construction of a small two-valve portable set. Can you recommend a good circuit?

A.: Yes, the "Trampers Two," published in the "R.R." November 29 and December 26.

2. Will a coil assembly from an old two-valve set with condenser control regeneration be satisfactory?

A.: Yes, you must make provision for the regeneration condenser.

3. The set is to be used in Marlborough Sounds at Christmas time, with a makeshift aerial. What results should I get?

A.: The Marlborough Sounds are notoriously bad for reception, but you should get phone strength with an aerial

D. X. (Hawera): I am not getting sufficient distance on my factory-made set. Is an aerial 110 feet long and 80 feet high a good one?—Yes.

2. I am using four 201A valves. Would a power valve make any difference?

A.: A power valve suitably biased would greatly improve the tone, but not the signal strength. Such a power valve should be of the medium type.

3. Is 90 volts sufficient for the amplifier?

A.: 135 volts would be very much better.

4. Do you consider a three-valve s.g. set would be as efficient as the average four-valve set?

A.: The circuit mentioned is nothing extraordinary. It would not be as good as the four-valve Browning Drake.

5. Where can I get the circuit diagram for my receiver?

A.: Try the National Electric Engineering Co., Featherston Street, Wellington.

N. W. (Nelson): I have a five-valve factory-made set which frequently goes dead for some considerable time. If I remove the C battery until the set howls, and then replace it, it goes satisfactory.

A.: It sounds very much like a defective transformer. You can test the windings of these by the phones and cell, or phones and voltmeter test described in the 1929 and 1930 "Guide." Check for a loose connection.

MANGATU (Mangatu): My four-valve set will suddenly stop, perhaps for a few minutes or a week or more, then it will suddenly come in at full strength again. I can always get a whistle when I tune in.

A.: This sounds very much like trouble in the radio stage. During one of the silent periods bring the aerial to the fixed plates of the right-hand condenser and see if the set then goes weakly. If the fixed plates are connected to the ground then bring the aerial into the moving plates. Look in the radio stage for a defective connection. If the set has been built from a kit set with heavy busbar wire it is quite likely that there is a dry connection. Tug all the wires in this part of the set to see if any are loose.

REFLEX (Dargaville): I am using a Daniells cell charger as an "A" battery and it is working satisfactorily. I formerly used it to keep a small accumulator charged, but this has now failed to operate. Will the Daniells cell charger be satisfactory in conjunction with an 80-amp hour battery.

A.: Yes, provided you kept it on continuously; but why go to the expense of an accumulator if the charger is functioning well as an "A" battery?

F.H. (Wellington): Records come through well on my home-made receiver, but studio items very poorly. The upper notes of the cornet have often a very reedy sound, more like a clarinet, while certain speakers appear to have very scratchy voices.

A.: It sounds as though the set is not properly tuned to 2YA. Reduce the volume until the signal can just be heard and move the dial until the exact point is found where the station comes in can be heard. Increase the volume, but do not use the dial as a volume control. Put a variable resistance of 500,000 ohms across the aerial and earth if volume is excessive. Other suggestions are: Reverse the speaker leads and insert a 5000 ohms variable resistance in series with the B+ lead of the second audio transformer.

SERVICEMAN (Hamilton): What do you consider to be the most useful set diagnoser for a serviceman.

A.: If you send us your name and address, as you should have done in the first place, we can put you in touch with one of New Zealand's most prominent radio experts who has one to dispose of. His reason for selling is that he has now to use a bigger and more complicated piece of apparatus. The instrument in question is practically new.

LAMBDA (Wellington): Would you give me the specifications for valve base coils for the Pilot A.C. Super Wasp?

A.: Write Harrington's Ltd., Willis Street, Wellington, as they are the Wellington agents.

2. Would you give me the specifications for a wave-trap?

A.: See the 1930 "Radio Guide."

3. What coils would be required for full scale coverage for each amateur band with the Super Wasp?

A.: If the bands are being broken up with your present coils, place a midget

Taken to Task

An Answer That Was No

"LONG-wave" asked how far he should be able to receive with a two-valve set, using 45 volts. Your answer is: "Little more than the local station satisfactorily." Well, Sir, the question is somewhat vague and your answer in my opinion quite as vague. There are sets and sets. I have had my two-valve receiver just five years this month, and I regularly pick up the following stations in very good volume: 2FC, 3LO, 4QG, 2BL, 3AR, 7ZL, 1, 2, 3, and 4YA, and on rare occasions JOAK, 2GB and 5CL, and I have heard, but not satisfactorily, 6WF. My reception coincides almost identical with the list published weekly, 2FC, then 4QG second. 3AR is sometimes as loud as 2BL. If I wish to have loudspeaker volume I connect up one stage of audio, two oftentimes giving too much volume. During the cricket Tests in Australia and during the latest Test matches I was able to pass on the results fairly quickly to 3YA, when the play was in progress. If "Long-wave" ever comes to Christchurch I will be pleased to let him hear my set. Forty-five volts is my maximum on both detector and r.f. valve.—T. P. Sewell (Christchurch).

[Our correspondent must realise that when no particulars are given we could only suggest the minimum to be expected, so that were the set not as good as some, its owner would not be disappointed. What would he do in similar circumstances?—Technical Ed.]

Foot for a Mast

A GOOD stay footing for securing a high mast can be made from a length of 2in. by 4in. timber, with an iron stay bolt firmly secured in the centre, the whole arrangement being buried 2ft. or 3ft. deep, with only the top of the stay bolt projecting above the surface.

condenser in parallel with the tuning condenser, and adjust this until you get the bands to your liking.

Screen Grid Radio £26

8-Valve
245's Push-pull
R.C. 1st Audio
Power Det'n
Triple S.G. R.F.
230-volt A.C.



Write for Details

ROYDS-HOWARD CO.
CHRISTCHURCH

RADIO DIRECTORY

What to Buy and Where

CITIES

- | | |
|---|---|
| AERIAL MASTS | Domestic Radio Co., Ltd.,
300 Queen Street, Auckland. |
| ACE and HAMMERLUND SETS,
WESTINGHOUSE Rectifiers | Johns, Ltd.
Chancery Street, Auckland. |
| BROWNING DRAKE SPECIAL-
ISTS | F. J. W. Fear & Co.
63 Willis Street, Wellington. |
| BURGESS RADIO BATTERIES, | All Radio Dealers. |
| KING RADIO RECEIVERS | F. J. W. Fear & Co.,
63 Willis Street, Wellington. |
| LOFTIN-WHITE AMPLIFIERS | Stewart Hardware Ltd.,
Courtenay Place, Wellington. |
| MAJESTIC RADIO RECEIVERS | Kirkcaldie & Stains,
Wellington Agents, Lambton Quay. |
| MULLARD VALVES | All Radio Dealers. |
| PILOT 1930 PARTS—PILOT
SUPER WASP KITS, GILFIL-
LAN, KELLOGG and AT-
WATER KENT SETS | Harrington's, N.Z., Ltd.,
138-140 Queen St., Auckland.
40-42 Willis St., Wellington. |
| RADIOLA RECEIVERS and
Expert Radiola Service. | Farmers' Trading Co., Ltd.,
Hobson Street, Auckland. |
| STEINITE RADIO | G. G. Macquarrie, Ltd.,
120 Willis St., Wellington. |

COUNTRY TOWNS

- | | |
|---|---|
| MAJESTIC, ATWATER-KENT
AND RADIOLA ELECTRIC
SETS | Radio House, Hamilton.
G. S. Anchor. Manager. |
| PHILIPS VALVES AND
APPARATUS | All Good Radio Dealers. |

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