

plate voltage to compensate for the loss in the 25,00 ohm resistance used in it?

A.: Yes, use a high-impedance valve, and increase the plate voltage.

Transformer Trouble.

I HAVE built the power transformer from the "Radio Listeners' Guide," but the primary heats up to such an extent that the cotton smokes, the humming is terrific, and the core is highly magnetised.—"D.McW." (Westport).

A.: It seems very probable that the shellac between the laminations is either poorly applied or of an unsatisfactory quality. The only solution we can offer is to pull the whole transformer down and re-shellac the laminations then built strictly according to specifications. You have probably left off a large number of turns on the primary.

Anode Bend Detector.

I WISH to bias my detector, but do not know how this is done. Could you inform me? asks "W.H.B." (Mata-mata).

A.: The detector, of course, must be biased only when the grid leak and condenser is not used. See an article on this subject in the "Radio Records" dated August 16 and 23, 1929.

2. I have just added a stage of R.C.C. amplification, and it is working very well. The resistances are 100,000 ohms and 1 megohm. Could I improve reception by substituting for other valves? I am using DEL610.

A.: You should use DEH610 for a stage of R.C.C. amplification, and O.C. coupling condenser.

Short-wave Problem.

WHICH is the most satisfactory circuit for a 3-valve short-wave set? asks "Shorty" (Tuna).

A.: Build the "Round-the-World" Two redescribed in this issue, with another stage of audio frequency amplification.

2. Is the screen-grid an advantage in short-wave work?

A.: Yes, we hope to give a suitable circuit in the new "Radio Listeners' Guide and Call Book."

3. Where can I get the details of a Schnell circuit?

A.: The Schnell circuit is fully described in the "Radio Amateur's Handbook," obtainable from Te Aro Book Depot, Wellington, for 5/6.

Are You the Kind of Chap who wants to get about and SEE PLACES?

Qualified Radio Operators see the world under ideal conditions. Start learning to-day. For full particulars

JOHNSON'S WIRELESS SCHOOL
BRANDON STREET, WELLINGTON.

Radio Literature

Largest Stocks South of the Line for Amateurs and Broadcasters. "Radio Manual," published price 25/-, postage 1/-, "Radio Amateur's Handbook," latest edition, 5/3 posted. Write us.

TE ARO BOOK DEPOT
62 Courtenay Place, Wellington.

A Two-Valve Circuit.

WHERE can I obtain the particulars of a two-valve broadcast receiver? asks "H.A.G." (Nelson).

A.: Build up "Round-the-World" Two following the modifications mentioned for broadcast reception.

A Wave Trap.

WHERE can I procure a reliable wave-trap for a factory-built receiver? asks "M. McG." (Nelson).

A.: You can either build yourself one from the description in the "Radio Listeners' Guide" or you can have one built by any radio dealer.

Eliminator Problems.

WOULD you answer the following points regarding an eliminator? asks "A.W." (Auckland).

1. I am using variable resistances for the detector and R.F. Would it be O.K. to use a wire-wound fixed resistor for bias?

As the bias value is more critical than the anode voltage it is almost imperative to have the bias variable, so that we should advise the use of the potentiometer used as a resistance. The value should be 0-3000 ohms.

2. Allowing for the voltage drop in the chokes, and 40 volts for grid bias, would I get about 180 volts from a transformer built to give 260 volts? —Yes.

3. Should B minus be connected to earth when taking grid bias from the eliminator?

A.: B minus is earthed at all times, when there is no bias. When there is bias the centre tap is not earthed, for if this were done, the voltage drop could not be obtained.

4. Is there any advantage in using the larger Rathenon valve?

A.: For ordinary purposes, no.

5. Is it necessary to have a three-wire connector to the power point?

A.: The case of the transformer must be earthed to comply with the regulations, and this is most easily done through the third connection of the power point. However, it is not essential to do it this way, and it may be earthed merely by running a connection from the case to the ground.

6. When are you describing the dynamic speaker you promised recently?

A.: Owing to the holidays and the reorganisation of the paper, we have not been able to present this as soon as we should have liked, but we shall endeavour to get it under way as soon as possible.

Aerial Problem.

DO you consider a vertical aerial of, say, 35ft. more efficient of one of the horizontal type and of 70ft. in length? writes "Ace" (Wanganui).

A.: 30ft. high and 70ft. in length would be the far better aerial. See our article next week.

2. How do these two aerials compare for selectivity volume, and directional effects?

A.: The horizontal aerial will deliver greater signal strength, and will be more directional than the vertical, which will have the advantage when selectivity is concerned.

Set not Up to Expectations.

I HAVE just bought a new 6-valve receiver, and cannot get anything like the results I have heard with other sets. I have a good aerial, while my speaker and valves are good. The set will not oscillate.

A.: You are leaving us rather in the dark when you do not state the main type of receiver, for we have no standard to which we can compare it. If you are not satisfied, consult the agent who sold it to you. If it is a neutrodyne it should not oscillate.

Aerial Efficiency.

PRECISELY what effect do neighbouring earth objects, especially

trees, have upon an aerial?—"H." (Wellington).

A.: They considerably weaken signal strength by diminishing the effective height, but see our article next week.

Note: Please supply us with your name and address as soon as possible.

(Continued on page 39.)

RADIO DIRECTORY

What to Buy and Where

CITIES

AERIAL MASTS	Domestic Radio Co., Ltd., 300 Queen Street, Auckland.
ALTONA & HAMMARLUND-ROBERTS SETS.	Johns, Ltd. Chancery Street, Auckland.
AMPLION LOUDSPEAKERS .	All Radio Dealers.
BURGESS RADIO BATTERIES,	All Radio Dealers.
CROSLEY RADIO RECEIVERS	G. G. Macquarrie, Ltd., 120 Willis Street, Wellington.
CROSLEY RADIO	Abel, Smeeton, Ltd. Rep.: G. MOSE James Street, Mangere.
CROSLEY RADIO	Abel, Smeeton, Ltd., 27-29 Customs St. E., Auckland.
EMMCO RADIO PRODUCTS	Johns, Ltd., Chancery St., Auckland.
EMMCO RADIO PRODUCTS	Thos. Ballinger & Co., Ltd., Victoria St., Wellington.
EMMCO RADIO PRODUCTS	L. B. Scott, Ltd., Worcester St., Christchurch.
KING RADIO RECEIVERS ...	F. J. W. Fear & Co., 63 Willis Street, Wellington.
MAJESTIC RADIO RECEIVERS	Kirkcaldie & Stains, Chief Wellington Agents, Lambton Quay.
MULLARD VALVES	All Radio Dealers.
PILOT 1930 PARTS AND KITS, ETC.	Abel, Smeeton, Ltd., 27-29 Customs Street East, Auckland.
PILOT 1930 PARTS—PILOT SUPER WASP KITS, GILFILLAN, KELLOGG and ATWATER KENT SETS	Harrington's, N.Z., Ltd., 138-140 Queen St., Auckland. 40-42 Willis St., Wellington.

RADIOLA RECEIVERS and Farmers' Trading Co., Ltd.,
Expert Radiola Service. Hobson Street Auckland.

COUNTRY TOWNS

CROSLEY RADIO	J. C. Davidson, Main Street, Pahiatua.
CROSLEY SETS	Abel, Smeeton, Ltd. Rep.: C. EYRE 409 Devon Street New Plymouth.
CROSLEY RADIO	D. A. Morrison & Co., Victoria Avenue Wanganui
MAJESTIC, ATWATER-KENT AND RADIOLA ELECTRIC SETS	Radio House, Hamilton. G. S. Anchor Manager.
PHILIPS VALVES AND APPARATUS	All Good Radio Dealers.