

A.: The only short-wave adaptor we have tested is the "Addaphone" (Mack's Radio, Wellington). You can obtain more particulars by writing to the proprietors.

F.A.E. (Napier).—My "T" aerial is 100 feet long, with a lead-in of 50 feet. What size condenser will I need to help clear things up?

A.: The effective length of your aerial is only 100 feet, and is consequently the right size.

MARCONI (Nelson).—Who are the agents for my set?

A.: A.W.A., Nimmo's Buildings, Wellington.

2. Length of aerial to use?

A.: 100 to 125 feet, including lead in.

3. Can a shortwave adaptor be used with my set?—Yes.

4. Where can I purchase extra coils?

A.: If you want shortwaves coils you will probably have to make them yourself, but try A. W. A. first.

DAISY BELLE (Invercargill).—How can I add an extra stage to my two-valve set?

A.: It is almost identical with "R. the W2." See the description of "R. the W3," published on March 7.

JUNK BOX (Christchurch).—What are the number of turns for secondary and tickler on valve base coils, using .00032 tuning condensers?

A.: 200 turns of 30 d.s.c. secondary, tickler 50 turns.

QUO VADIS (Wellington).—What is the best combination of valves for my American set?

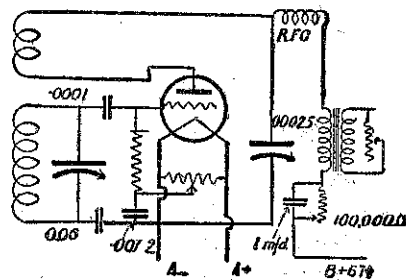
A.: 5-221's, and a 171A type power valve.

2. W. type of speaker would you suggest for the above combination?

A.: You could use a mains operated dynamic cone speaker.

HAMISH (Ch.ch.).—The short-wave set described in the 1930 "Guide" is working indifferently. I cannot control oscillation except by the use of wander plugs in the "B" battery. Can I make alterations suggested by my diagram?

A.: No. If you wish to alter the circuit the one given herewith is what you are aiming at. If you are using a variable high resistance across the "A" battery and grid leak, place a resistance of 100,000 ohms in the detector "B+" lead and shunt it with a 1 m.f.d. condenser. Use the 500,000 ohms resistance across the secondary of the first audio transformer. Place your .001 condenser between the sliding arm of the potentiometer and A—; do not use a reaction condenser greater than .00025.



RADIO (Christchurch): I am more than pleased with the results obtained on "R. the W. 3." I wish to substitute a variable resistance for the condenser control regeneration. Would you give me a suitable diagram?

A.: Yes, the idea can be seen in the sketch on this page. The moving condenser becomes a fixed one.

2. Would the resisto-grid be suitable for a resistance?

A.: We have not tried it, but would imagine it to be satisfactory.

3. To what lead is the grid return connected for a 615?—The positive.

4. Which do you consider to be the best combination for "R. the W. 3." using Philips 6-volt valve?

A.: 615 detector, 609 first audio, and for quality B609, second audio.

5. I have constructed the lead accumulator described in the R.R. Some of the plates are being eaten away. Is this due to impurities in the lead?

A.: It may be due to that or to the strength of the solution not being correct.

J. L.S. (Waipukurau).—As I sent you a stamped and addressed envelope it is only by a "fluke" that I saw your reply in the "Record." I was expecting one by post, as I have never previously read that page. I intend installing a lighting plant, with 80 amp. hour storage batteries. Can my five-valve set be operated from one of the lighting plugs using an "A" battery eliminator?

A.: If all our correspondents were like you we would be all the week dealing with queries. We cannot undertake to reply personally, even though a stamped and addressed envelope is enclosed. Thanks for the compliment about not

reading the page. You may operate your wireless set from your lighting plant by breaking down the voltage with resistances. Another plan would be to lead directly from the accumulator, taking off the six volts required for the set. This would need neither resistances nor smoothing. If there was any noise a choke such as that to be described in the "Record" or an electrolytic condenser would cure the trouble.

DYNAMIC (Dunedin): What is the correct gauge of wire for a high-resistance dynamic speaker, and the approximate number of turns for a B405 output valve?

A.: About 2000 turns of 40 gauge wire, and you must use a 1-1 output filter as well. Why not make a low-resistance speaker coil and operate with a 25-1 step-down transformer?

J. E. (Wellington): Can I receive Auckland and Chirstchurch on silent nights on my local station receiver?

A.: No. The particular set you mention will only receive the local station.

PICK-UP (Gore): My pick-up reproduces too much base. How can I remedy this?

A.: Try the effect of a series condenser of about .00025 mfd. in series with the leads from the pick-up.

2. What is the best combination of valves for my American machine?

A.: Use four 221's and B605, or its equivalent.

ELIMINATOR (Dunedin): I have made spools for the eliminator described in the "Record" in December, 1929. I now am unable to build up to the full 400 volts. Can the spool be used for a 200-volt winding?

A.: Yes; when it is finished, lift all the spool-ends and cut your stalloid accordingly. The wire will not fall down if it is kept back an eighth of an inch from the ends.

2. What should be the size of the primary and where the tap for surging mains?

A.: The primary would remain the same, but another 200 turns should be wound on for surging mains.

3. What would be the average voltage for a.c. valve with 180 to 200 on the last?

A.: 120 to 150 with 12 volts grid bias.

4. Which is the most economical rectifier, filament or filamentless?

A.: There is little difference, but you stand less chance of burning out the filamentless.

5. Would one stalloid choke as described in the "Record" do for say 200 volts?

A.: No, you need two.

If you have several loudspeakers in series working together, remember that any one can be switched out at will by connecting an ordinary on-off filament switch across its terminals.

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RADIO DIRECTORY

What to Buy and Where

CITIES

- ACE and HAMMARLUND SETS,** Johns, Ltd.
WESTINGHOUSE Rectifiers Chancery Street, Auckland.
- BROWNING DRAKE SPECIALISTS** 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, GILFILAN, 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.,
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