

Our Correspondents Suggest

R.F. Booster--Neutralising the Two R.F.

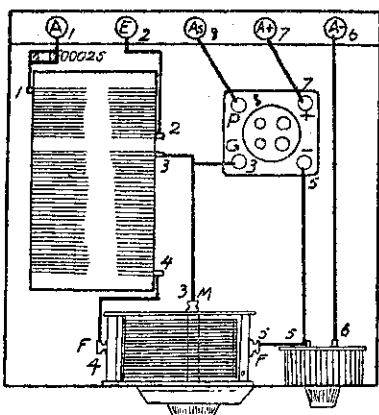
QUITE frequently correspondents write in with suggestions. Where these have been tried out and proven we shall be pleased to publish them. They may help others, and what is radio when one cannot do that?

An Efficient Booster.

A Correspondent ("J.H."), sends the following description of a booster: "I have enclosed a rough sketch, with explanatory notes, re wiring, etc., of a booster I am using with my three-valve set. This little piece of apparatus is surprisingly efficient, and I thought it might be of use to quite a number of your readers.

The coil is a coupler type plug in coil (spacewound), range 200 to 550. The basket coils on sale in town for about

Very few circuits are clear enough to follow (to the man that knows more about a wheel-barrow than radio sets), as the theoretical signs and drawings are not clear enough for him; and so, after studying the circuit, as published by the majority of papers, he says to himself, "I am afraid I cannot build that, as I am not certain of two or three parts, or clear on a couple of points," and reluctantly lets it slide, and he is still making do with his little old set.



2s. 3d. are also efficient for this booster. I use general purpose valves for set, and the booster. I have tried a power valve in booster, but find it is not so satisfactory as the general purpose valve. The surprising effect of this booster on my machine is that it is easy to cut out 2YA and get either Auckland or Christchurch stations (without wavetrap). I could not do that before, in fact, I could not get Auckland at any strength on the speaker, although I could get 2BL and 2FC on loudspeaker without the booster.

With the booster attached I get 2BL, 2OE, 8LO, 2FC, 3AR, 4QG, 2GB, one Japanese station when 4QG has closed down (JOAK), and, of course, all main New Zealand stations, all on the loudspeaker, and good volume. I have heard also the small Dunedin, 4ZL, station, at loudspeaker strength.

No doubt this simple booster is well-known, but I have never seen it published.

MY rough drawings have been done as plainly as possible, and the explanations re wiring have been given in a style that will, I think, be the easiest understood by the amateur who has not any technical knowledge of radio.

This style of explaining how to build a set would, I am sure, be appreciated by others who, like myself, know practically nothing about radio, but want to build a set themselves as a hobby, but get tangled up with the diagrams, etc., published in nearly all radio papers.

COMPONENTS FOR BOOSTER:

- Variable Condenser .0005.
- Coil Made or Bought.
- Rheostat.
- Valve and Valve Base.
- 5 Terminals.
- 2 Pieces of 6ft. x 6ft. x 1/4 in. Timber.
- 1 Fixed Condenser (1 mfd.)
- 1 15 ohm. Resistance.
- Approximate Cost, £1 16s.

Note on the Requirements.

The constructor need not purchase a coil. Wind 50 turns of 18 double cotton covered wire round a three-inch former. Wind a piece of empire cloth or greased brown paper twice round the end of this, and wind on 18 turns. This is the primary and the former the secondary. The end of the secondary overlaid by the primary passes to the condenser and to the grid.

A resistance has been placed between filament and the condenser, but it has been omitted in the layout diagram.

In effect a stage of unbalanced radio frequency is being added, and this should give every satisfaction with small sets using detector and two or one audio. Care must be exercised in its operation, for if the rheostat is turned too high the set will oscillate and cause disturbance.

Wiring Directions.

1. Aerial post to condenser (C). Condenser to primary coil (the smaller).
2. The other end of this coil to E terminal.
3. Top of secondary coil to moving plates of condenser (to fixed would be preferable.), then to G of valve socket.
4. The bottom of the secondary coil to fixed plates of condenser (moving preferred).
5. The same plates to negative of valve socket and rheostat; this then to A—binding post.
7. From + on (G) socket to A + binding post.
8. From P of valve socket to P post.

Operation.

Remove aerial and earth from set and attach to booster. Attach lead from B battery 45 + to ground post on set. Attach lead from plate post of booster to aerial lead on set.

Neutralising the 2RF B.D.

I SAW your note re neutralising shielded 2RF Browning-Drake. I have done most of the coil-winding and wiring of three of these sets. In each case I found it absolutely impossible to neutralise on the circuit given in last May's "Radio Record," and so have reverted to another method which is much simpler to operate, and as far as I have found quite OK.

I am using a primary aerial coil of 24 turns jumble-wound top-end to earth, bottom to aerial. With this set I have been troubled with too much volume, and when rheostats turned too low then distortion creeps in,

so I have solved the trouble this way and find it very effective and efficient.

I have put a .0005 variable condenser in series in the aerial with a switch across it so as to cut it out for weak stations. This I have tried with a dozen other makes of sets, and found effective with all of them, and may be a help to others suffering from the same trouble.

As for the 2RF B.D., I cannot say enough in praise for it, and with my experience the biggest job is to get an audio to stand up to the output of it. Only one audio circuit, in my opinion, is satisfactory, and that is the push-pull. I have tried eight different types with five different makes of transformers, and they could not take the output without distortion at less than quarter the volume. This can put out

RADIO DIRECTORY

What to Buy and Where

CITIES

- | | |
|--|--|
| ALTONA & HAMMARLUND. | Johns, Ltd. |
| ROBERTS SETS. | Chancery Street. Auckland. |
| ATWATER-KENT RADIO | Frank Wiseman, Ltd. |
| | 170-172 Queen Street. Auckland. |
| BREMER-TULLY RADIO | Superadio, Ltd., |
| | 147 Queen Street. Auckland. |
| BURGESS RADIO BATTERIES, | All Radio Dealers. |
| CROSLLEY RADIO | Abel, Smeeton, Ltd., |
| | 27-29 Customs St. E. Auckland. |
| CROSLLEY SETS | Lewis Eady, Ltd., |
| | Queen Street. Auckland. |
| DOMESTIC VACUUM AND P.R. AERIAL MASTS | Radio Co., Ltd., |
| | Strand Arcade, Auckland. |
| FERRANTI RADIO COMPONENTS | A. D. Riley and Co., Ltd. Anzac |
| | Ave., Auckland, and all leading dealers. |
| GREBE RADIO | Howie's, |
| | Dilworth Building. Custom st., Auckland. |
| MULLARD VALVES | All Radio Dealers. |
| PREST-O-LITE. Car and Radio Battery Service | L. J. Purdie & Co., Ltd. |
| | 97 Dixon Street Wellington. |
| RADIOLA RECEIVERS and Expert Radiola Service. | Farmers' Trading Co., Ltd., |
| | Hobson Street Auckland. |
| T.C.C. CONDENSERS | A. D. Riley and Co., Ltd. Anzac |
| | Ave., Auckland, and all leading dealers. |

COUNTRY TOWNS

- | | |
|---|----------------------------------|
| CROSLLEY RADIO | J. C. Davidson, |
| | Maiva Street. Pahiataua. |
| CROSLLEY SETS | F. H. Jellyman, Ltd., |
| | Devon Street. New Plymouth. |
| CROSLLEY RADIO | D. A. Morrison & Co., |
| | Victoria Avenue. Wanganui. |
| MAJESTIC, ATWATER-KENT AND APEX ELECTRICAL SETS. Also Bremer-Tully, Radiola and Browning-Drake | Radio House, Hamilton. |
| | G. S. Anchor, Manager. |
| PHILIPS VALVES AND APPARATUS | All Good Radio Dealers. |