

# Breville Model 79

(Circuit Diagram of this model will be found on Page 260.)

Breville model 79 is a six-valve receiver designed for dual-wave coverage and operation from battery power supplies. This receiver is of the console type and is fitted with five controls—volume, tone (continuous), tuning, wave-change, and battery switch (with extra position for dial-lamp control). The loudspeaker is an 8-inch permanent magnet unit. Power supply for this receiver is obtained from a 2-volt accumulator ("A"), three series-connected 45 v. dry batteries ("B") and a tapped 4.5 v. dry battery ("C"). In accordance with standard "Breville" practice, the leads for "B" battery connection are coupled to the receiver through the speaker plug and socket, the connections being as shown in the group drawing on page 256. "A" and "C" connections are made separately.

There are several points of interest in this receiver, the most important being the circuit and operating voltage changes which are effected as the wave-change switch is rotated from one wave-band to the other. These changes are confined to the frequency

converter circuits but have a small reaction on the voltages applied to the screens of the R.F. and I.F. valves. First point of interest in this respect is that the screen of the 1C6 is switched over to an independent dropping resistor when the receiver is switched to short waves. At the same time, the 1C6 control grid is taken off the A.V.C. line, and the arrangement thus provides an appreciable increase in voltage stabilisation, as well as an actual increase in the screen voltages applied to all three valves. It will also be noted that the oscillator circuit is changed from the shunt-fed arrangement, used on broadcast, to a series-fed modified Colpitt's arrangement on short-waves and, at the same time, another dropping resistor of lower value is brought into operation, thus increasing the actual applied anode grid voltage.

The remainder of the circuit is fairly straightforward although the diode-biasing system used for the 1B5 is by no means usual. However, it is quite effective, but it should be noted

(Continued on Page 259.)

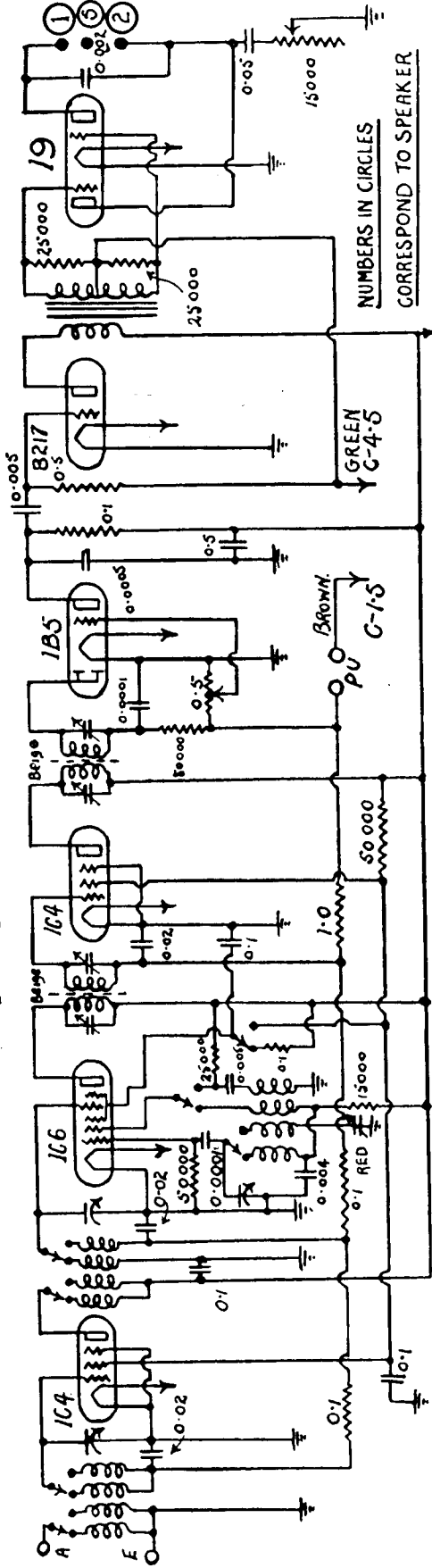
# Breville Model 79

(Cont. from page 257)

that the low-potential pick-up terminal is returned to the 1.5 v. "C" battery tapping in order to bias the 1B5 triode section when the receiver is being used for gramo. reproduction.

Subject to the variations noted above, the voltage distribution system in this receiver is fairly simple and there is no necessity to completely tabulate the various electrode potentials. Under "broadcast" conditions, the R.F., converter, and I.F. screens receive about 45 volts, while on short waves this figure goes up to a little over 50 volts. Similarly, the oscillator anode grid potential is approximately 80 volts on broadcast, and increases to about 95 volts on short waves. Finally, the first four valves in the receiver operate on zero bias under "no signal" conditions.

# "Breville" Battery-operated Dual-wave Model 79



NUMBERS IN CIRCLES  
CORRESPOND TO SPEAKER

5

IF. 446 K.C.

MODEL 79.

SOCKET CONTACTS.

Descriptive matter and operating voltages for this model will be found on Page 257.