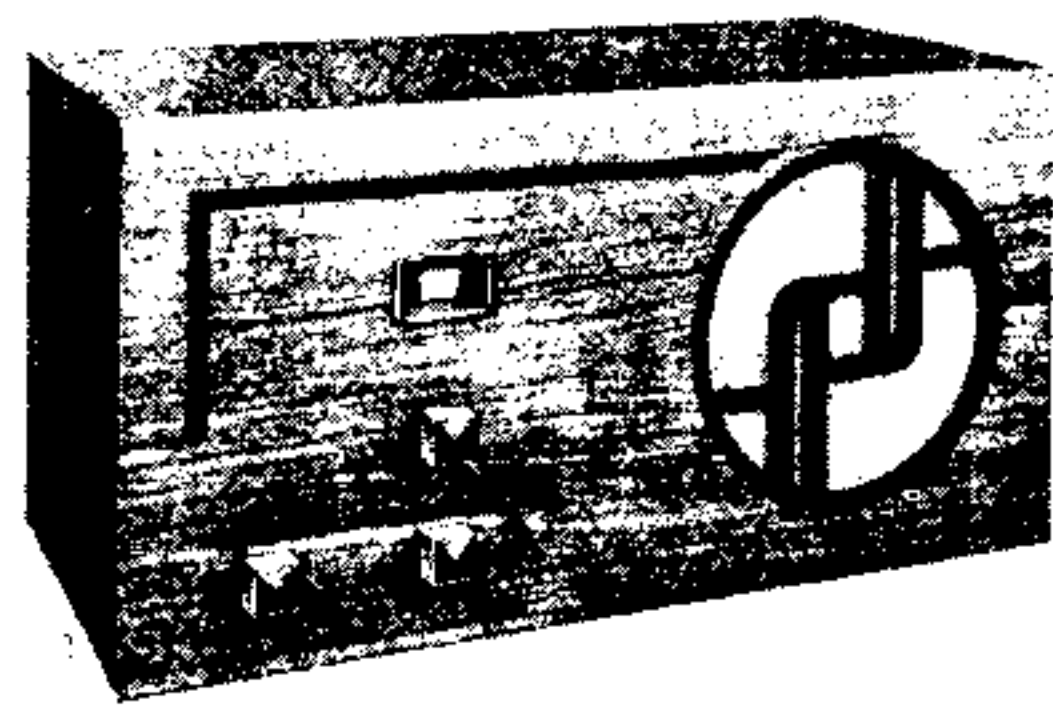


CLASS B "THREE" BY BURGOYNE



Detector, driver and Class B valves, are used in the Burgoyne Class B Three.

Circuit.—A leaky grid detector, H.2 (V1), with reaction, has a single aerial tuner in its grid circuit. One fixed aerial series condenser, and a fixed and variable in series, provide the necessary selectivity. The detector is filter fed to the first L.F. transformer and the driver valve.

The driver valve, L.2 (V2), has a .25 megohm resistance connected across the grid circuit (secondary of L.F. transformer) and is followed by a conventional driver transformer.

The output valve, PD220 (V3), is a class B type, operating without external bias. A tone compensating filter, consisting of a condenser and resistance in series is connected between each anode and HT +.

A large permanent magnet speaker is used and the leads to it are taken from plugs.

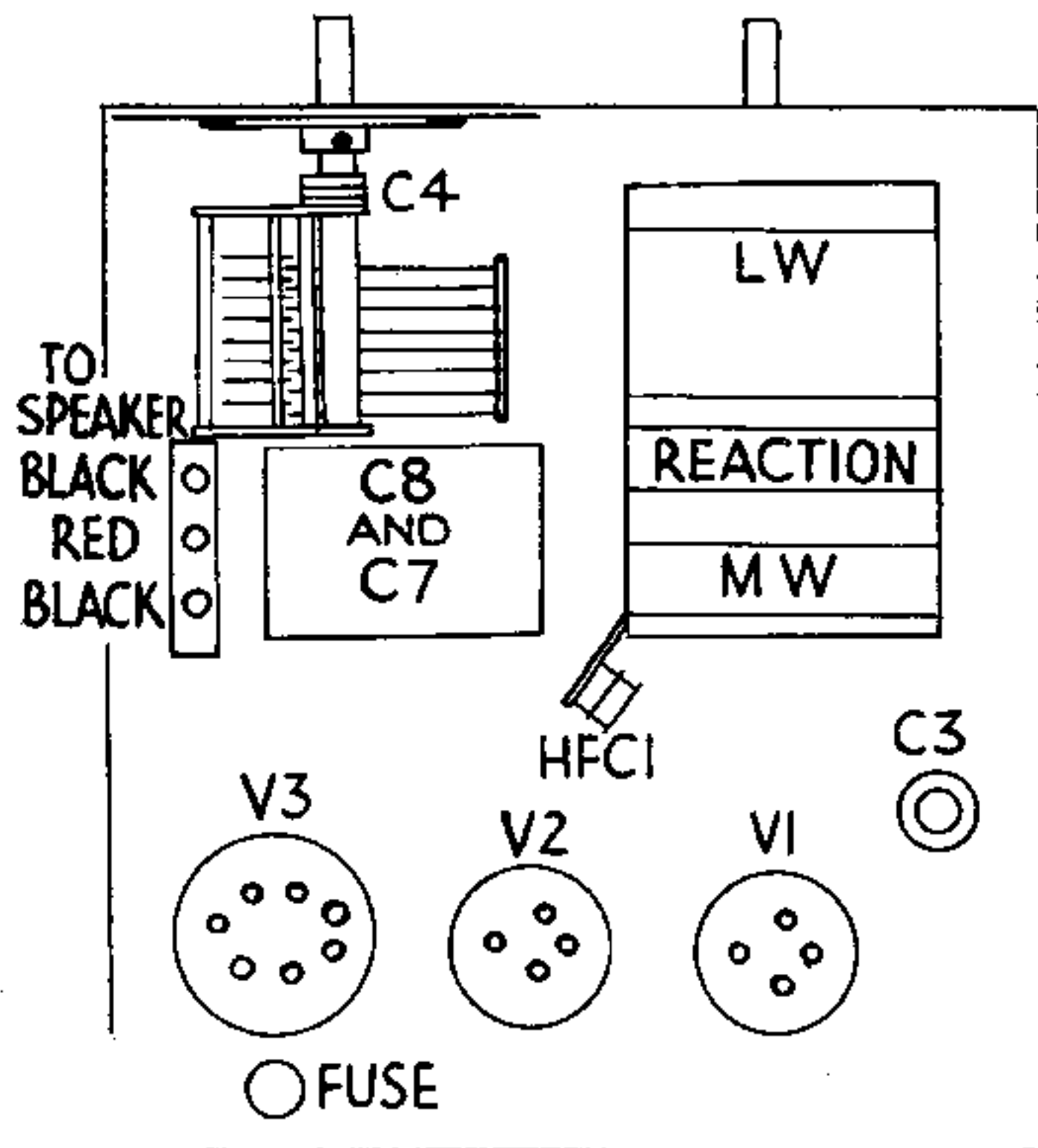
Special Notes.—The aerial circuit is worthy of note. The medium wave winding is in two sections and the long wave winding is connected between them. For use on MW's, the LW winding is short circuited and is not at earth potential.

When the switch is open for long waves, the opposing ends of the coil are together and the aerial is taken to the centre tap.

A small H.F. choke mounted on the coil former (HFC1) prevents the local station breaking through on the long waves.

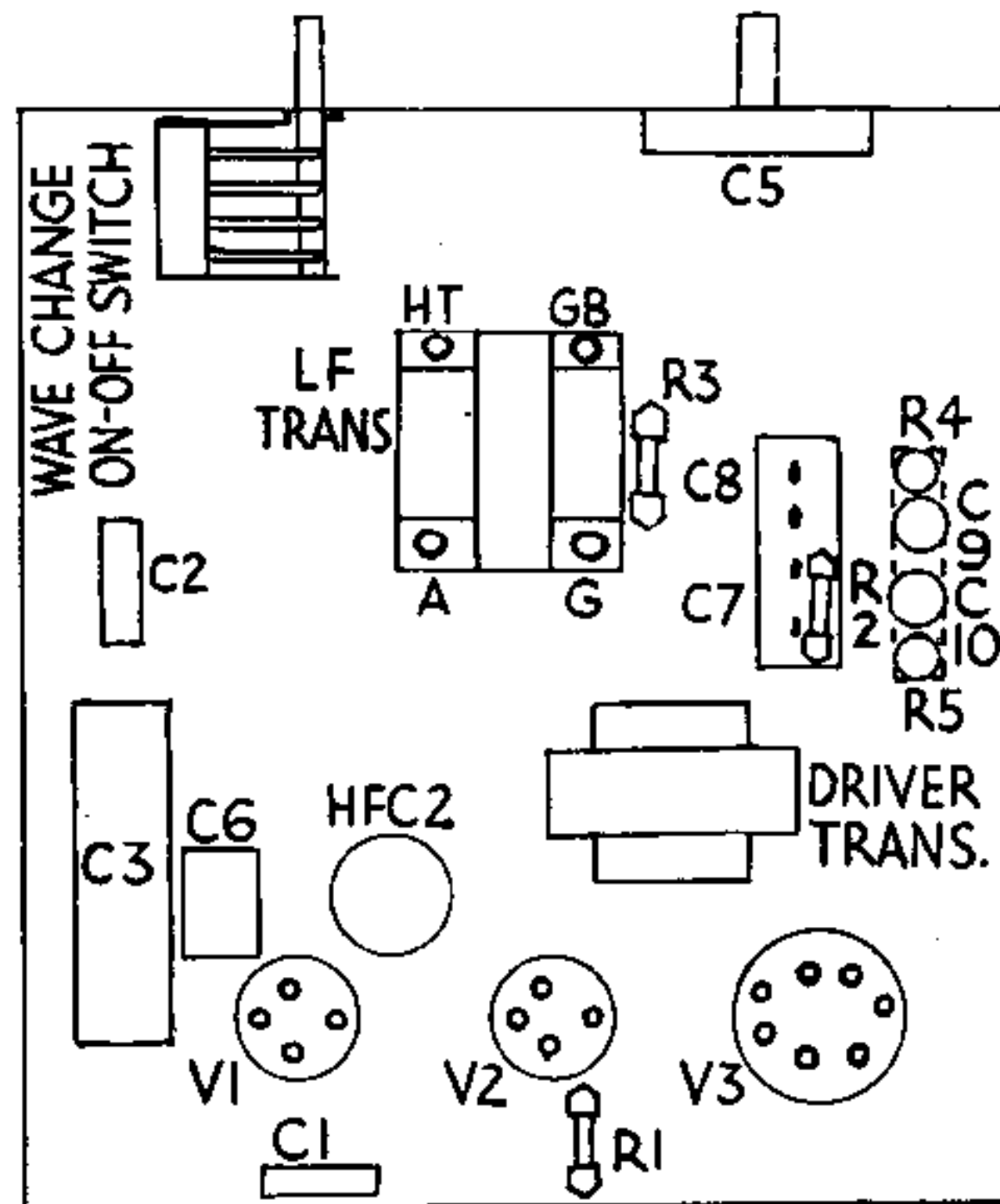
A fuse is inserted in the HT — lead and whenever the set fails to function and the batteries show full voltage the fuse should be tested.

(Continued on next page.)



(Left): The one and only coil in the Burgoyne set is of large size, and is situated on the right-hand side of the chassis when looking from the rear.

(Right): The components in the Class B Three are well spaced, and the small ones are suspended in the wiring. All are standard products which are easily replaceable.



BURGOYNE CLASS B THREE (Cont.)

Quick Tests.—Touch socket labelled "gram" and if a loud whistle is heard the trouble lies in the aerial circuit.

Removing the Chassis.—Turn dial to low reading, as there is danger of damaging it when sliding the chassis out. Disconnect batteries. Undo the knobs (grub screw). Un-

(Continued in column 3.)

VALVE READINGS

With 120v H.T. and GB-1 = 1.5 v, GB-2 = 3v.

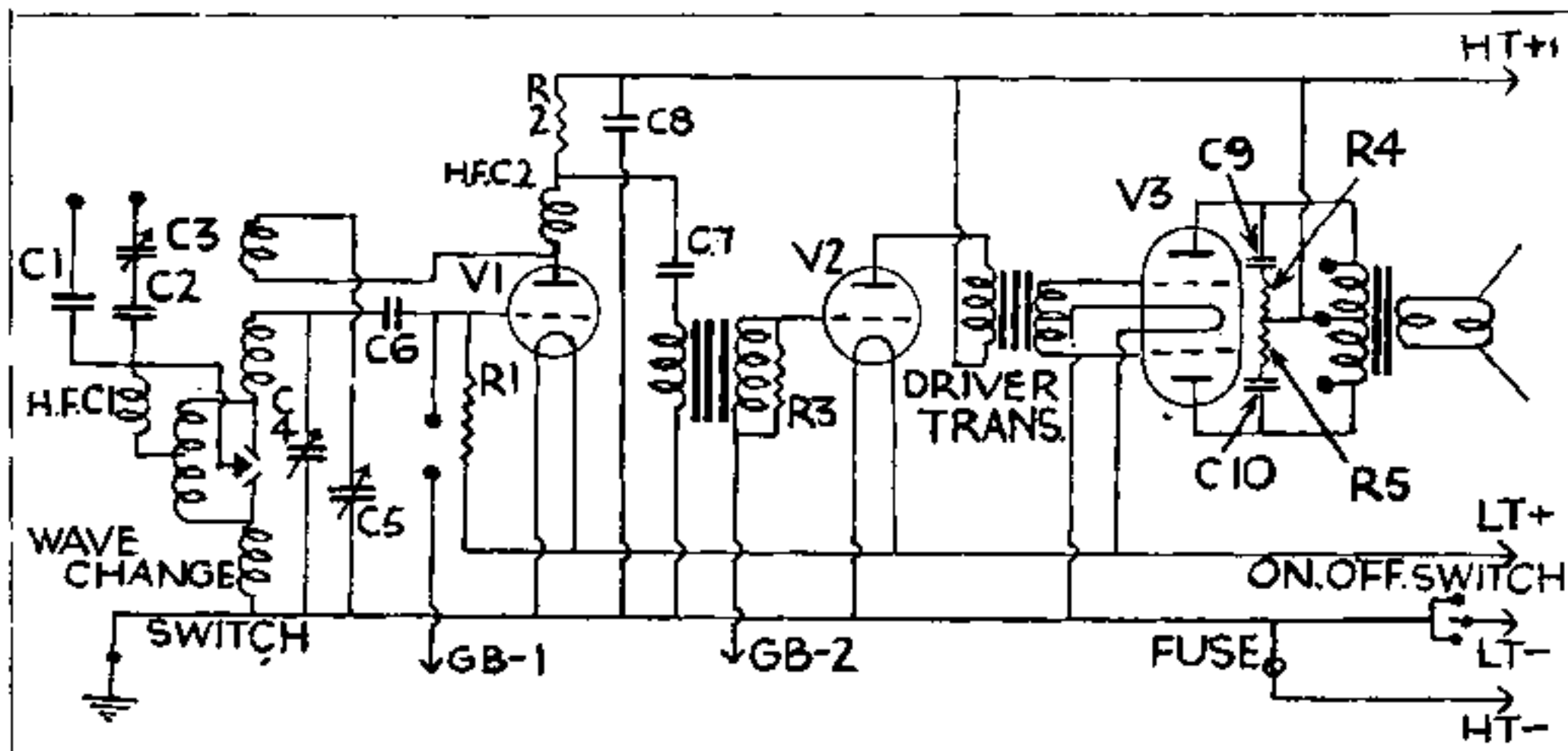
Valve.	Connection.	Volts.	M.A.
V1 H2	anode	82	1.2
V2 L2	anode	118	2.4
V3 PD 220	anode	120*	1 each anode
Set current	...		5.6

* As the resistance of the primary of the output transformer is only 225 ohms, each section the voltage drop below that of the HT+ tapping is negligible.

CONDENSERS

C.	Purpose.	Mfd.
1	Series aerial (long aerial)	.0005
2	Series aerial (medium aerial)	.0003
3	Semi variable (medium aerial)	.0003max
4	Tuning condenser	.0005
5	Reaction condenser	.0005
6	V1 grid condenser	.0003
7	Filter feed to L.F. transformer	1
8	Across H.T. battery	1
9	Tone compensation V3...	.01
10	Tone compensation V3...	.01

In our model an additional condenser (not shown in diagrams) was connected between the anode of V1 and earth.



The aerial coil in the Burgoyne Class B Three has the long wave section interposed between the two sections of the medium wave winding and the aerial lead includes a variable selectivity control.

RESISTANCES

R.	Purpose.	Ohms.
1	V1 grid leak	2 meg.
2	Filter coupling to L.F. transformer.	30,000
3	Across L.F. transformer secondary.	250,000
4	V3 tone compensation	5,000
5	V3 tone compensation	5,000
—	L.F. transformer primary	600
—	L.F. transformer secondary	10,500
—	Driver transformer primary	350
—	Driver transformer secondary	550 each half
—	Output transformer primary	225 each half

(Continued from column 1.)

screw the lock nut on the condenser spindle. Remove speaker plugs from the sockets.

Remove two screws on back plate. (In some cases two additional screws will be found about 2½ inches from the back and at opposite sides of the chassis.)

Slide chassis out.

General Notes.—As the L.F. transformer is filter-fed, it is unlikely that the primary will ever be burnt out, and as the output transformer is substantial, this should not give any trouble.

It is immaterial which way round the L.S. plugs are inserted as long as the red one is in the middle socket.

Replacing the Chassis.—Slide chassis into position. Insert two screws in back plate. Replace lock nut on condenser spindle and replace the knobs.