SERVICE ENGINEER

LISSEN MODEL 8168 SUITCASE PORTABLE

CIRCUIT.—A four-valve portable battery receiver for operation on medium and long wave bands.

The input to V1, an H.F. pentode, is *via* a tuned frame aerial. Signals then pass to V2, a triode, through an inductively-coupled H.F. coil, reaction being employed in the orthodox manner. The reaction condenser is ganged with the volume control, which operates by varying the bias on the grid of V1.

The output of V2 is fed to V3, a triode, *via* a resistance and capacity stage and through a further R.C. stage to the output pentode V4.

High tension and grid bias are derived from a single combined battery, and low tension from a jelly-acid accumulator.

Removing Chassis.—Remove the batteries and valves and the four leads from the frame aerial which are secured by bolts to a terminal board on the right hand side of the chassis. The leads to

(*Continued on next page.*)

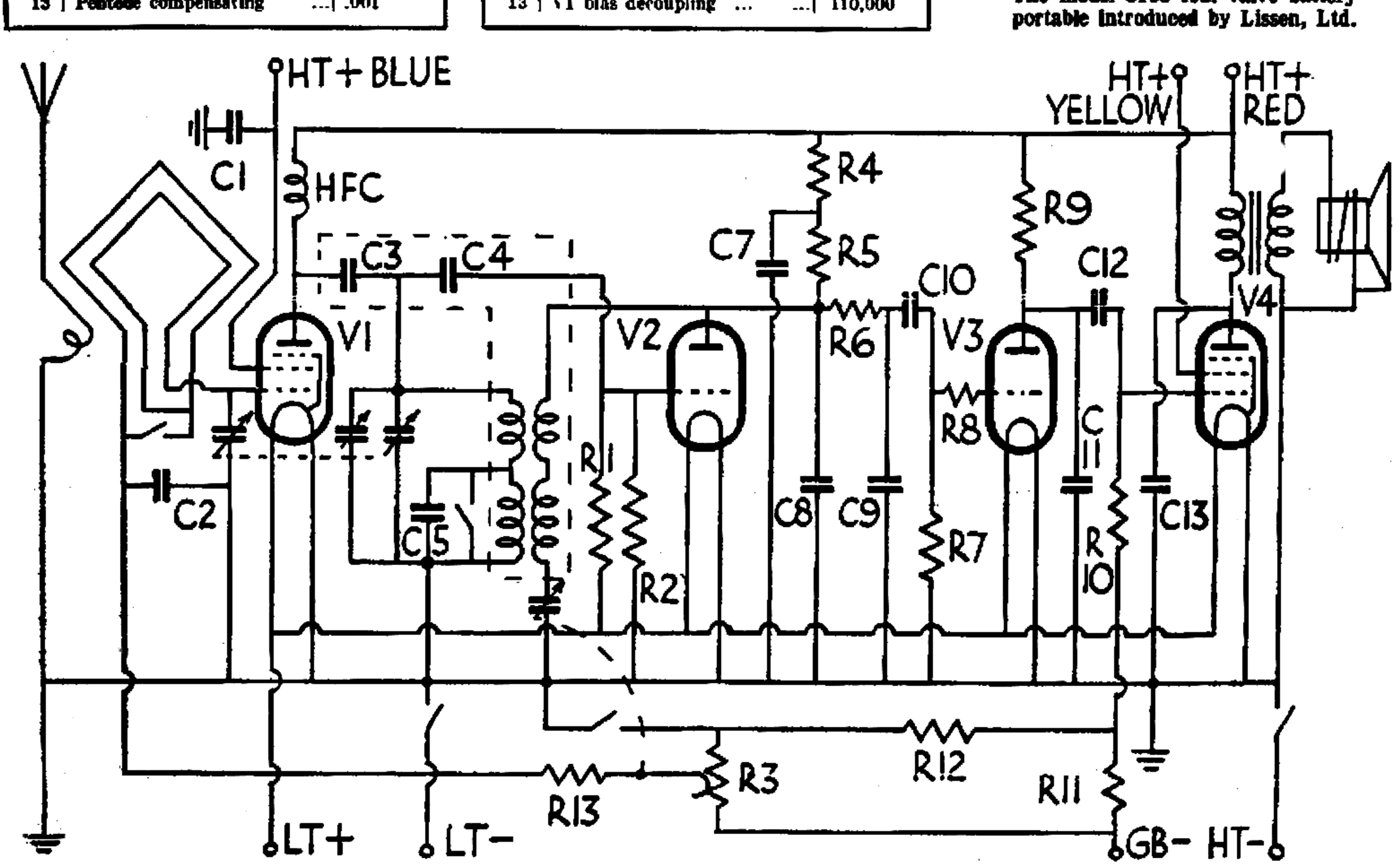
CONDENSERS

C.	Purpose.	Mfd.
1	V1 screen decoupling... ...	.1
2	V1 bias decoupling	.1
3	V1 anode coupling	.00005
4	V2 grid...	.00005
5	Medium wave trimmer ...	—
6	Reaction	—
7	V2 anode decoupling... ...	2
8	H.F. filter	.0002
9	H.F. filter	.001
10	L.F. coupling	.025
11	Anode shunt	.001
12	L.F. coupling	.025
13	Pentode compensating ...	.001

RESISTANCES

R.	Purpose.	Ohms.
1	V2 grid leak	2.1 meg.
2	V2 grid leak	2.1 meg.
3	Volume control	—
4	V2 anode decoupling... ...	80,000
5	V2 anode load	30,000
6	H.F. filter	50,000
7	V3 grid leak	51,000
8	V3 grid stopper	50,000
9	V3 anode load	50,000
10	V4 grid leak	200,000
11	Bias potentiometer	1,400
12	Bias potentiometer	3,000
13	V1 bias decoupling	110,000

The model 8168 four-valve battery portable introduced by Lissen, Ltd.



This theoretic circuit diagram of the Lissen portable reveals an orthodox H.F., detector and 2 L.F. arrangement. A winding coupled to the frame aerial provides connections for an external aerial and earth. L.F. coupling is by resistance and capacity.