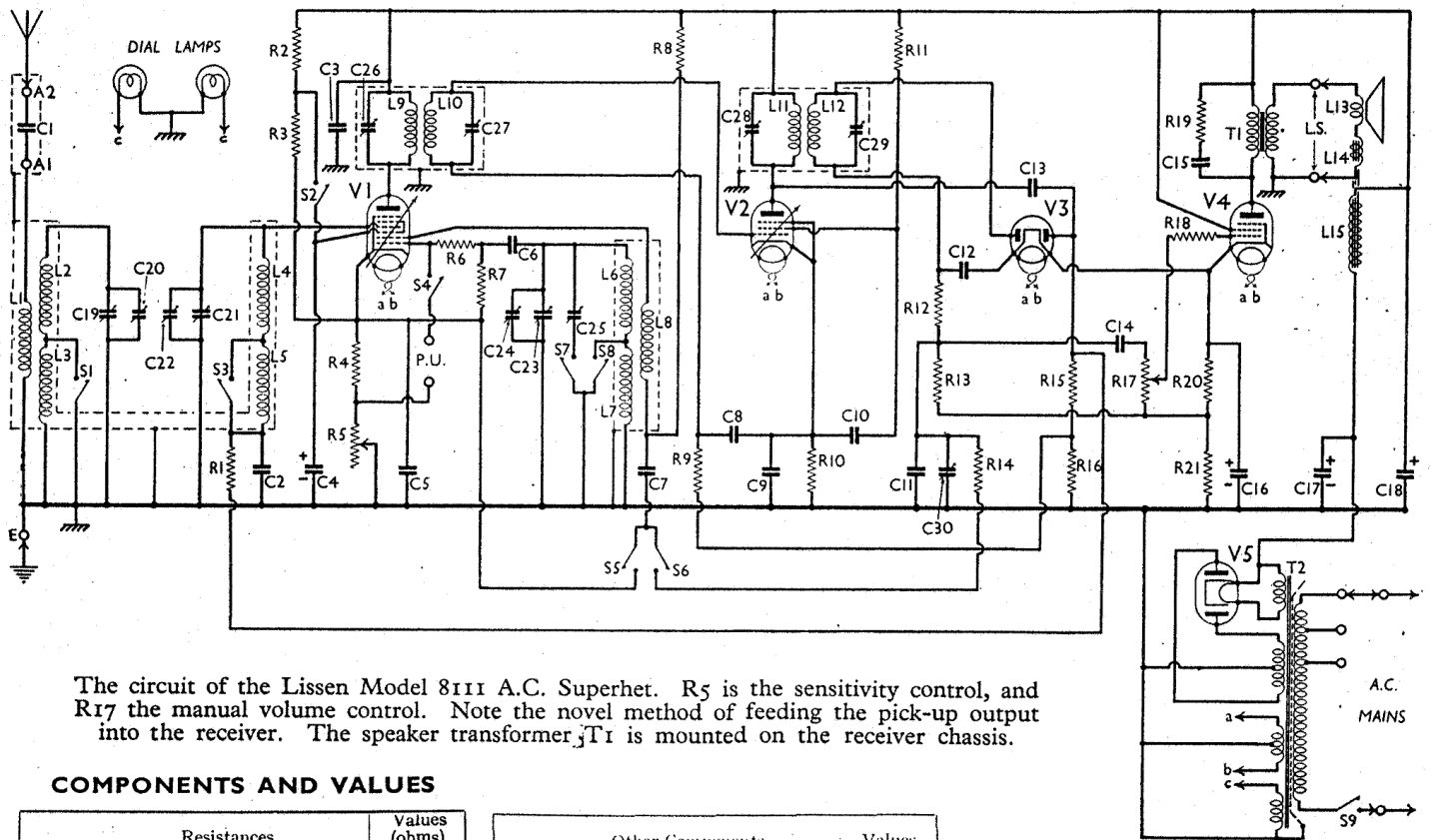


# LISSEN - 8111



The circuit of the Lissen Model 8111 A.C. Superhet. R5 is the sensitivity control, and R17 the manual volume control. Note the novel method of feeding the pick-up output into the receiver. The speaker transformer T1 is mounted on the receiver chassis.

## COMPONENTS AND VALUES

Resistances	Values (ohms)
R1 V1 pent. cont. grid decoupling	510,000
R2 V1 S.G.'s pot. divider	40,000
R3 V1 fixed G.B. resistance	40,000
R4 Sensitivity control	300
R5 V1 osc. grid series resistance	2,000
R6 V1 osc. grid resistance	1,000
R7 V1 osc. anode decoupling	100,000
R8 V2 cont. grid decoupling	100,000
R9 V2 fixed G.B. resistance	510,000
R10 V2 S.G. H.T. feed	200
R11 V2 S.G. H.T. feed	80,000
R12 V1 L.F. stopper	100,000
R13 V3 rectifier diode load	260,000
R14 Stopper in pick-up circuit	100,000
R15 V3 A.V.C. diode load	510,000
R16 V3 A.V.C. diode load	510,000
R17 Manual volume control	500,000
R18 V4 grid L.F. stopper	25,000
R19 Part of V4 impedance corrector	10,000
R20 V4 G.B. and A.V.C. delay	150
R21 voltage resistances	500

Other Components	Values (ohms)
L1 Aerial coupling coil	24.0
L2 Band-pass primary coils	2.3
L3 Band-pass primary coils	15.0
L4 Band-pass secondary coils	2.3
L5 Band-pass secondary coils	15.0
L6 Oscillator tuning coils	1.74
L7 Oscillator anode coil	1.52
L8 1st I.F. trans. Pri.	45.0
L9 1st I.F. trans. Sec.	93.0
L10 2nd I.F. trans. Pri.	93.0
L11 2nd I.F. trans. Sec.	42.0
L12 Speaker speech coil	42.0
L13 Hum neutralising coil	1.5
L14 Speaker field coil	0.3
L15 Output trans. Pri.	3,000
T1 Output trans. Sec.	700
	0.32

Other Components (contd.)	Values (ohms)
T2 Mains trans. Pri. total	43.0
	Heater sec. 0.07
	Dial lamp sec. 0.35
	Rect. heater sec. 0.13
	H.T. sec. 340
S1, S3 Wave-band switches, gauged	—
S2, S4 Gram. pick-up switches, gauged	—
S5, S6 Mains switch, gauged R17	—
S9	—

Condensers	Values (μF)
C1 Aerial series condenser	0.000015
C2 V1 pent. cont. grid decoupling	0.25
C3 V1 pent. anode decoupling	0.1
C4 V1 S.G.'s by-pass	2.0
C5 V1 cathode by-pass	0.1
C6 V1 osc. grid condenser	0.001
C7 V1 osc. anode decoupling	0.1
C8 V2 cont. grid decoupling	0.1
C9 V2 cathode by-pass	0.1
C10 V2 S.G. by-pass	0.1
C11 L.F. by-pass	0.0001
C12 L.F. by-pass	0.0001
C13 Coupling to A.V.C. diode	0.0001
C14 L.F. coupling to V4	0.05
C15 Part of V4 impedance corrector	0.01
C16 V4 cathode by-pass	20.0
C17 H.T. smoothing	8.0
C18 H.T. smoothing	8.0
C19 Band-pass primary tuning	—
C20 Band-pass primary trimmer	—
C21 Band-pass secondary tuning	—
C22 Band-pass secondary trimmer	—
C23 Oscillator tuning	—
C24 Oscillator main trimmer	—
C25 Oscillator L.W. trimmer	—
C26 1st I.F. trans. pri. tuning	—
C27 1st I.F. trans. sec. tuning	—
C28 2nd I.F. trans. pri. tuning	—
C29 2nd I.F. trans. sec. tuning	—
C30 Tone control condenser, variable	0.0005

## GENERAL NOTES

**Switches.**—S1-S8 are the waveband switches, which are in one unit, seen in the under-chassis view. Of these, S5 and S6, and S7 and S8, really form two single-pole change-over switches, but they are shown separately in our circuit diagram for clarity. The table (col. 2) gives the switch positions for the various settings. "O" indicates open, and "C," closed.

Switch	M.W.	L.W.	Gram.
S1	C	O	C
S2	C	C	O
S3	C	O	C
S4	O	O	C
S5	C	C	O
S6	O	O	C
S7	O	C	O
S8	C	O	C

S9 is the Q.M.B. mains switch which is gauged with the volume control, R17.

## VALVE ANALYSIS

The voltage and current readings listed in the table are those given by Lissen for an average chassis working with the sensitivity control (R5) at maximum (minimum resistance), and with no signal input.

All voltages were measured with a high resistance voltmeter, chassis being negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 A80A*	275	1.2	72	4.0
V2 A50N	275	6.0	105	2.5
V3 A20B	258	27.0	275	3.1
V4 A70C	350†	—	—	—
V5 A11B	—	—	—	—

\* Osc. anode (G2) 77V, 2.2 mA.  
† A.C., each anode.