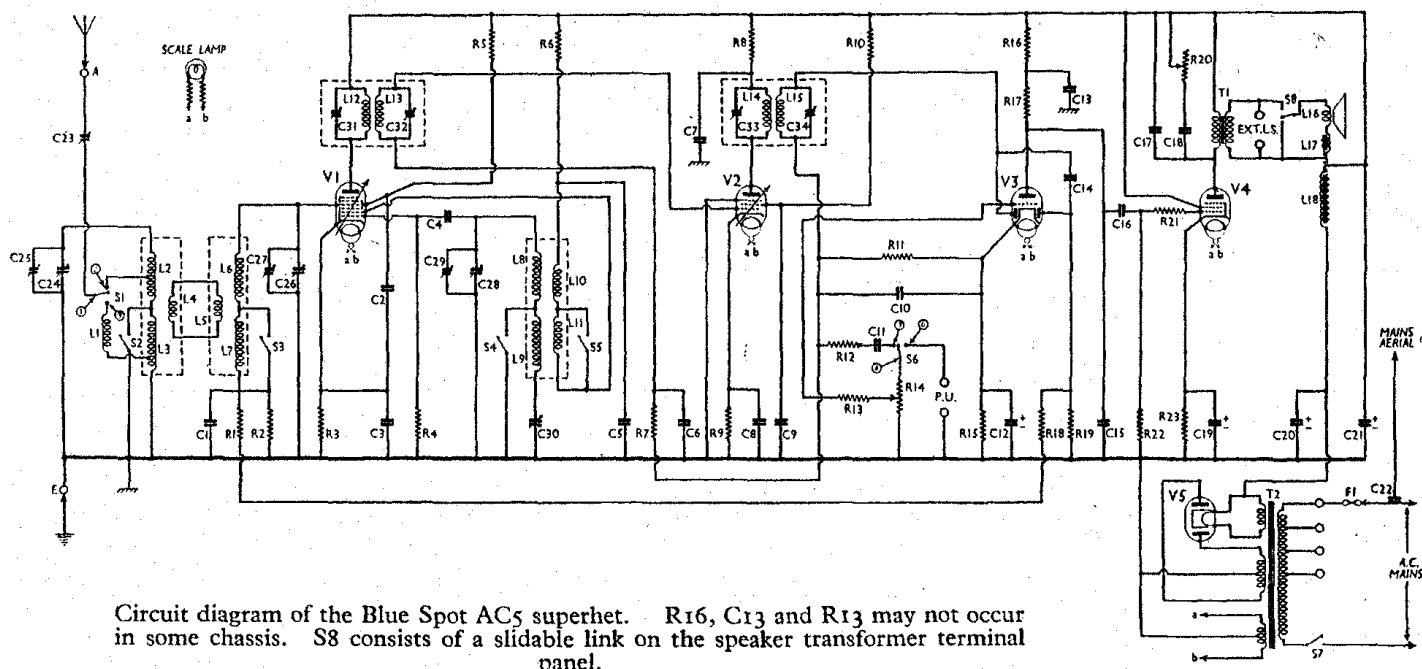


# Blue Spot - AC 5



Circuit diagram of the Blue Spot AC5 superhet. R16, C13 and R13 may not occur in some chassis. S8 consists of a slidable link on the speaker transformer terminal panel.

## COMPONENTS AND VALUES

Resistances	Values (ohms)
R1 } V1 pent. cont. grid decoupling	2,000,000
R2 } V1 pent. cont. grid decoupling	500,000
R3 } V1 fixed G.B. resistance	250
R4 } V1 osc. grid resistance	19,000
R5 } V1 S.G.'s H.T. feed	40,000
R6 } V1 osc. anode decoupling	40,000
R7 } V2 cont. grid decoupling	2,000,000
R8 } V2 anode decoupling	10,000
R9 } V2 fixed G.B. resistance	300
R10 } V2 S.G. H.T. feed	50,000
R11 } V3 rect. diode load	500,000
R12 } I.F. stopper	250,000
R13 } V3 triode grid I.F. stopper	500,000
R14 } Manual volume control	500,000
R15 } V3 auto. G.B. resistance	1,000
R16 } V3 triode anode decoupling	30,000
R17 } V3 triode anode resistance	33,000
R18 } A.V.C. circuit decoupling	250,000
R19 } V3 A.V.C. diode load	1,000,000
R20 } Variable tone control	100,000
R21 } V4 grid I.F. stopper	50,000
R22 } V4 grid resistance	250,000
R23 } V4 auto. G.B. resistance	500

Condensers	Values (μF)
C1 } V1 pent. cont. grid decoupling	0.25
C2 } V1 S.G.'s by-pass	0.1
C3 } V1 cathode by-pass	0.1
C4 } V1 osc. grid condenser	0.001
C5 } V1 osc. anode decoupling	0.1
C6 } V2 cont. grid decoupling	0.1
C7 } V2 anode decoupling	0.1
C8 } V2 cathode by-pass	0.1
C9 } V2 S.G. by-pass	0.1
C10 } I.F. by-pass	0.0001
C11 } L.F. coupling to V3 triode	0.01
C12* } V3 cathode by-pass	12.0
C13 } V3 anode decoupling	0.25
C14 } Coupling to V3 A.V.C. diode	0.0001
C15 } V3 anode I.F. by-pass	0.0001
C16 } L.F. coupling to V4	0.01
C17 } Fixed tone compensator	0.005
C18 } Part of variable T.C. circuit	0.05

Condensers (Contd.)	Values (μF)
C19* } V4 cathode by-pass	30.0
C20* } H.T. smoothing	4.0
C21* } H.T. smoothing	8.0
C22† } Mains aerial condenser	—
C23† } Aerial series condenser	0.0003
C24 } Band-pass primary tuning	0.0005
C25† } Band-pass primary trimmer	—
C26 } Band-pass secondary tuning	0.0005
C27† } Band-pass secondary trimmer	—
C28 } Oscillator tuning	—
C29† } Oscillator main trimmer	—
C30† } Oscillator L.W. tracker	0.001
C31† } 1st I.F. trans. pri. tuning	—
C32† } 1st I.F. trans. sec. tuning	—
C33† } 2nd I.F. trans. pri. tuning	—
C34† } 2nd I.F. trans. sec. tuning	—

† Formed by extra wire in mains lead.

\* Electrolytic. † Pre-set condenser.

Other Components	Values (ohms)
L1 } Aerial L.W. choke coil	22.0
L2 } Band-pass primary coils	2.2
L3 } Band-pass primary coils	33.0
L4 } Band-pass coupling coils	0.25
L5 } Band-pass coupling coils	0.25
L6 } Band-pass secondary coils	3.2
L7 } Band-pass secondary coils	33.0
L8 } Oscillator tuning coils	2.6
L9 } Oscillator tuning coils	25.0
L10 } Oscillator anode coils	3.0
L11 } Oscillator anode coils	7.0
L12 } 1st I.F. trans. { Pri. . . . . 90.0	
L13 } 1st I.F. trans. { Sec. . . . . 90.0	
L14 } 2nd I.F. trans. { Pri. . . . . 90.0	
L15 } 2nd I.F. trans. { Sec. . . . . 90.0	
L16 } Speaker speech coil	2.3
L17 } Hum neutralising coil	0.1
L18 } Speaker field winding	2000.0
T1 } Speaker input trans. { Pri. . . . . 390.0	
T1 } Speaker input trans. { Sec. . . . . 0.35	
T1 } Speaker input trans. { Pri. total . . . . . 30.0	
T1 } Speaker input trans. { Heater sec. . . . . 0.05	
T1 } Speaker input trans. { Rect. heat. sec. . . . . 0.1	
T1 } Speaker input trans. { H.T. sec. . . . . 550.0	
S1-S5 } Waveband switches	—
S6 } Radio-gram switch	—
S7 } Mains switch, ganged R14	—
S8 } Internal speaker switch	—
F1 } Mains circuit fuse	—

## VALVE ANALYSIS

Valve voltage and current readings given in the following table were taken with no aerial and earth connected and the volume control at minimum. All voltages were measured on the 1,200 V scale of an Avometer, with the chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 FC4*	230	0.95	80	3.8
V2 VP4	170	5.25	85	2.5
V3 MHD4	110	1.75	—	—
V4 Pen 4VA	215	33.0	225	2.85
V5 1W3	310†	—	—	—

\* Osc. anode (G2) 80 V, 3.4 mA.

† Each anode, A.C.

## GENERAL NOTES

**Switches.**—The waveband and radio gram switches, S1-S6, are in one unit, seen in the under-chassis view. The individual switches are clearly indicated, and it will be seen that in the case of S1 and S6, there are three contacts to each. These are numbered, both in the chassis view and in the circuit diagram. The table below gives the switch positions, O indicating open, and C closed. In the case of S1 and S6, the table shows the numbers of the contacts which are closed.

Position	S1	S2	S3	S4	S5	S6
M.W.	1,2 C	C	C	C	C	4,5 C
L.W.	1,3 C	O	O	O	O	4,5 C
Gram.	O	C	C	O	O	4,6 C

S7 is the mains switch, ganged with the volume control R14.

S8 is the internal speaker switch, comprising a sliding link held by screws, fitted to the speaker input transformer terminal panel. In one position, this connects the internal speaker, while in the other, it switches it out.