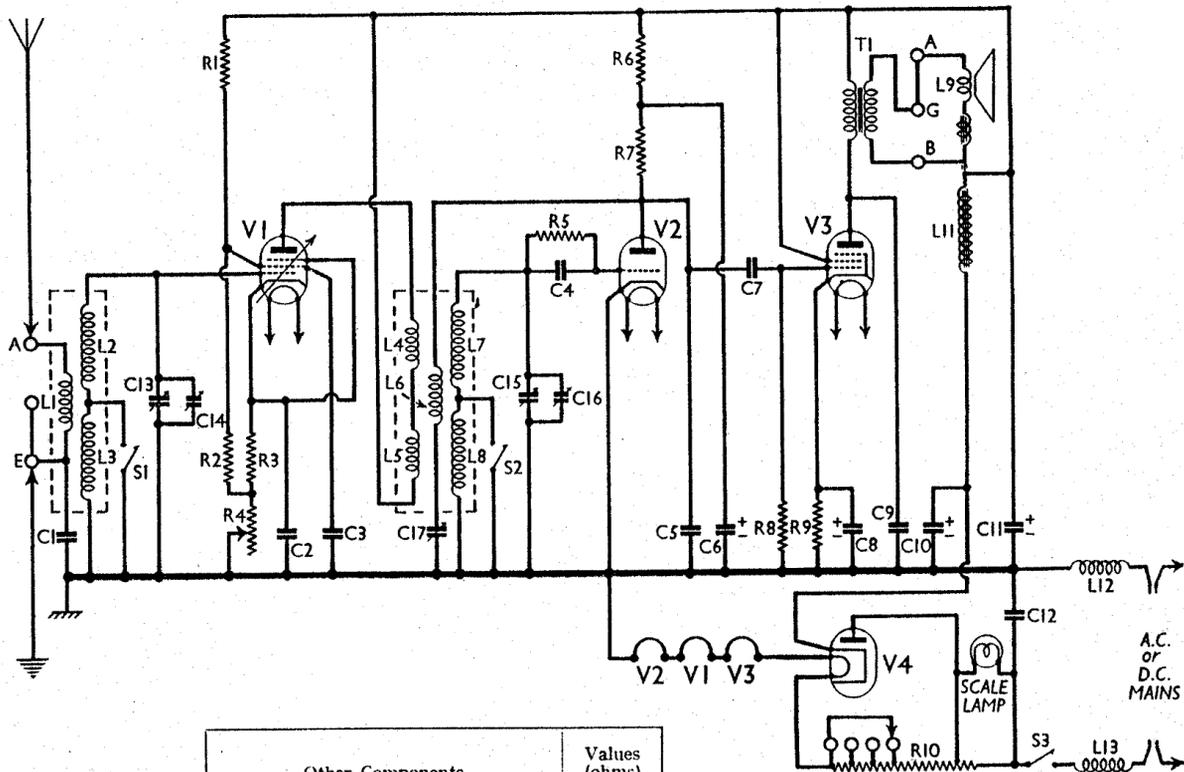


KOLSTER-BRANDES 430

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 Circuit diagram of the K-B 430 A.C./D.C. receiver. The mains supply passes to the chokes L12, L13 via special safety devices, which open when the cabinet back is removed. A low resistance external speaker may be connected across G and B on the speaker transformer. A simple switch, replacing the link between A and G, may be added to cut out the internal speaker if required.
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COMPONENTS AND VALUES

Condensers		Values (μF)
C1	Earth blocking	0.01
C2	V1 cathode by-pass	0.1
C3	V1 S.G. by-pass	0.1
C4	V2 grid condenser	0.0001
C5	V2 anode H.F. by-pass	0.001
C6*	V2 anode decoupling	2.0
C7	L.F. coupling to V3	0.02
C8*	V3 cathode by-pass	25.0
C9	Tone compensator	0.01
C10*	H.T. smoothing	8.0
C11*		8.0
C12	Part of mains filter	0.01
C13†	Aerial circuit tuning	0.0005
C14†	Aerial circuit trimmer	—
C15†	H.F. transformer tuning	0.0005
C16†	H.F. transformer trimmer	—
C17†	Reaction control	—

* Electrolytic. † Variable. ‡ Pre-set.

Other Components		Values (ohms)
L1	Aerial coupling coil	12.0
L2	Aerial tuning coils	5.0
L3		10.0
L4	H.F. transformer primary coils	15.0
L5		4.5
L6	Reaction coil	5.0
L7	H.F. transformer secondary coils	10.0
L8		2.0
L9	Speaker speech coil	0.1
L10	Hum neutralising coil	1,500.0
L11	Speaker field winding	4.0
L12	Mains filter chokes	3.5
L13		400.0
T1	Speaker input trans. { Pri.	0.4
	{ Sec.	—
S1, S2	Waveband switches	—
S3	Mains switch, ganged R4	—

VALVE ANALYSIS

Valve voltages and currents given in the table below were measured with the receiver operating on 230 V A.C. mains, using the 225 V tapping on the mains resistance. The gain control was at maximum, reaction was at minimum and there was no signal input. Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 6D2	190	5.3	85	1.4
V2 6AV6	85	3.3	—	—
V3 6X4	180	24.0	190	4.4
V4 6X5	265†	—	—	—

† Cathode to chassis.

Resistances		Values (ohms)
R1	V1 S.G. H.T. supply potential divider	15,000
R2		15,000
R3	V1 fixed G.B. resistance	300
R4	V1 gain control	10,000
R5	V2 grid leak	2,000,000
R6	V2 anode decoupling	5,000
R7	V2 anode load	25,000
R8	V3 grid resistance	250,000
R9	V3 G.B. resistance	150
R10	Heater circuit ballast, total	880

GENERAL NOTES

Switches.—There are only two wave-band switches, S1 and S2, and these are in a single unit operated by a spindle at the side of the chassis. Both are *closed* on the M.W. band and *open* on the L.W. band.

S3 is the Q.M.B. mains switch, ganged with the volume control R4.