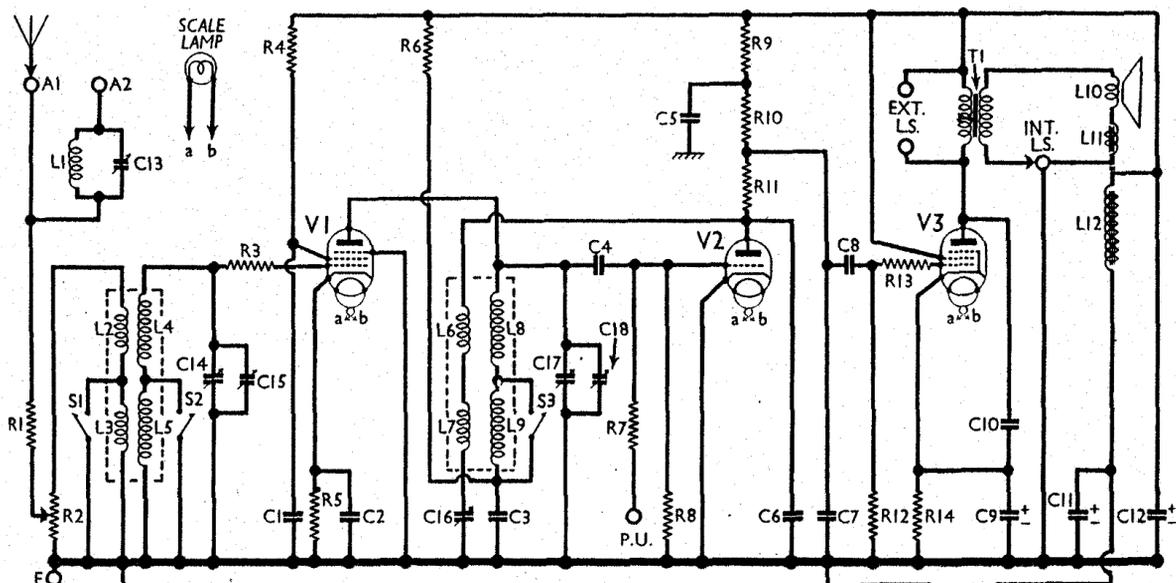
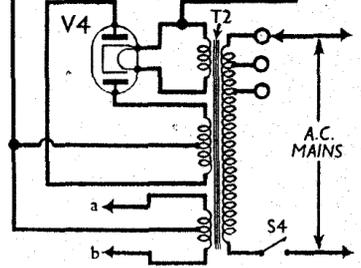


BUSH - AC 23



Circuit diagram of the Bush AC23 receiver. Note that there is only one pick-up socket, earth being used for the second connection. L1 and C13 form a Droitwich rejector.



COMPONENTS AND VALUES

Resistances		Values (ohms)
R1	Aerial series resistance	5,000
R2	Aerial input control (volume)	75,000
R3	V1 cont. grid circuit stabiliser	250
R4	V1 S.G. H.T. feed	100,000
R5	V1 G.B. resistance	250
R6	V1 anode decoupling	30,000
R7	Gram. pick-up series resistance	1,000,000
R8	V2 grid leak	1,000,000
R9	V2 anode decoupling	50,000
R10	V2 anode load	50,000
R11	V2 anode H.F. stopper	20,000
R12	V3 grid resistance	500,000
R13	V3 grid H.F. stopper	100,000
R14	V3 G.B. resistance	180

Condensers		Values (μF)
C1	V1 S.G. by-pass	0.1
C2	V1 cathode by-pass	0.1
C3	V1 anode decoupling	0.5
C4	V2 grid condenser	0.0001
C5	V2 anode decoupling	0.5
C6	V2 anode H.F. by-passes	0.0003
C7		0.002
C8	L.F. coupling to V3	0.01
C9*	V3 cathode by-pass	25.0
C10	Tone corrector	0.005
C11*	H.T. smoothing	8.0
C12*		8.0
C13†	Droitwich rejector tuning	0.0003
C14†	Aerial circuit tuning	—
C15†	Aerial circuit trimmer	—
C16†	Reaction control	0.0003
C17†	V1 anode circuit tuning	—
C18†	V1 anode circuit trimmer	—

* Electrolytic † Variable ‡ Pre-set.

Other Components		Approx. Values (ohms)
L1	Droitwich rejector coil	15.0
L2	Aerial coupling coils	1.5
L3		6.4
L4		3.5
L5	Aerial tuning coils	14.5
L6	Reaction coils, total	2.7
L7		—
L8	V1 anode tuning coils	3.5
L9		14.5
L10	Speaker speech coil	1.8
L11	Hum neutralising coil	0.1
L12	Speaker field coil	2,000.0
T1	Speaker input trans.	Pri. 500.0
		Sec. 0.25
		25.0
	Mains trans.	Heater sec. 0.05
		Rect. heat. sec. 0.1
		H.T. sec. total 600.0
S1-S3	Waveband switches	—
S4	Mains switch, ganged R2	—

VALVE ANALYSIS

Valve voltages and currents given in the table below were measured with the receiver operating on mains of 220 V, using the 220 V tapping. The volume control was at maximum and the reaction control was at minimum, but 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 VP4	150	4.2	80	2.1
V2 354V	60	1.9	—	—
V3 Pen4VB	275	34.0	300	4.1
V4 IW3	330†	—	—	—

† Each anode, A.C.

GENERAL NOTES

Switches.—The waveband switches, S1-S3, are ganged in a single unit beneath the chassis, and are all closed on the M.W. band, and open on the L.W. band.

S4 is the Q.M.B. mains switch, ganged with the volume control R2.

Coils.—L1, the Droitwich rejector coil, is unshielded, and is beneath the chassis. The remaining coils are in two screened units mounted horizontally, also beneath the chassis. Note that the second of these also contains the fixed condenser C4.

The screens are held in position by "bayonet" catches, and can be removed fairly easily.