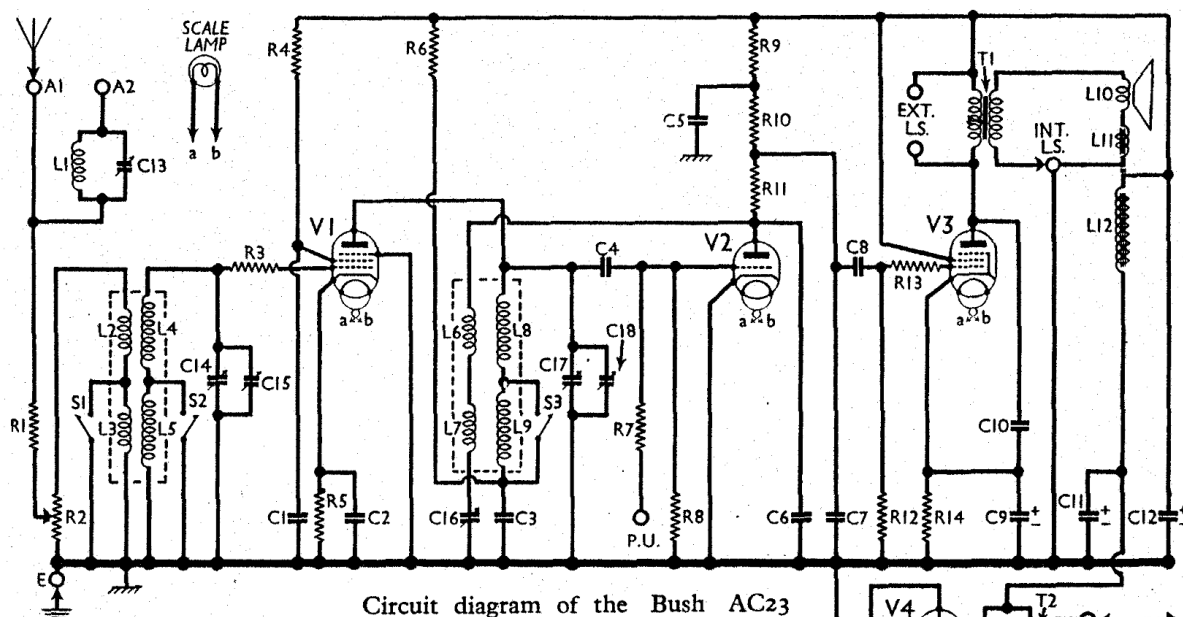


# BUSH - AC 23



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 Drotwich 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	V2 anode H.F. by-passes .. 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*	H.T. smoothing .. 8.0
C13†	Drotwich 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	Drotwich rejector coil .. 15.0
L2	Aerial coupling coils .. 1.5
L3	Aerial coupling coils .. 6.4
L4	Aerial tuning coils .. 3.5
L5	Aerial tuning coils .. 14.5
L6	Reaction coils, total .. 2.7
L7	Reaction coils, total .. 2.7
L8	V1 anode tuning coils .. 3.5
L9	V1 anode tuning coils .. 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 }
T2	Mains trans. { Pri. total 25.0 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 Drotwich rejector coil, is unscreened, 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.