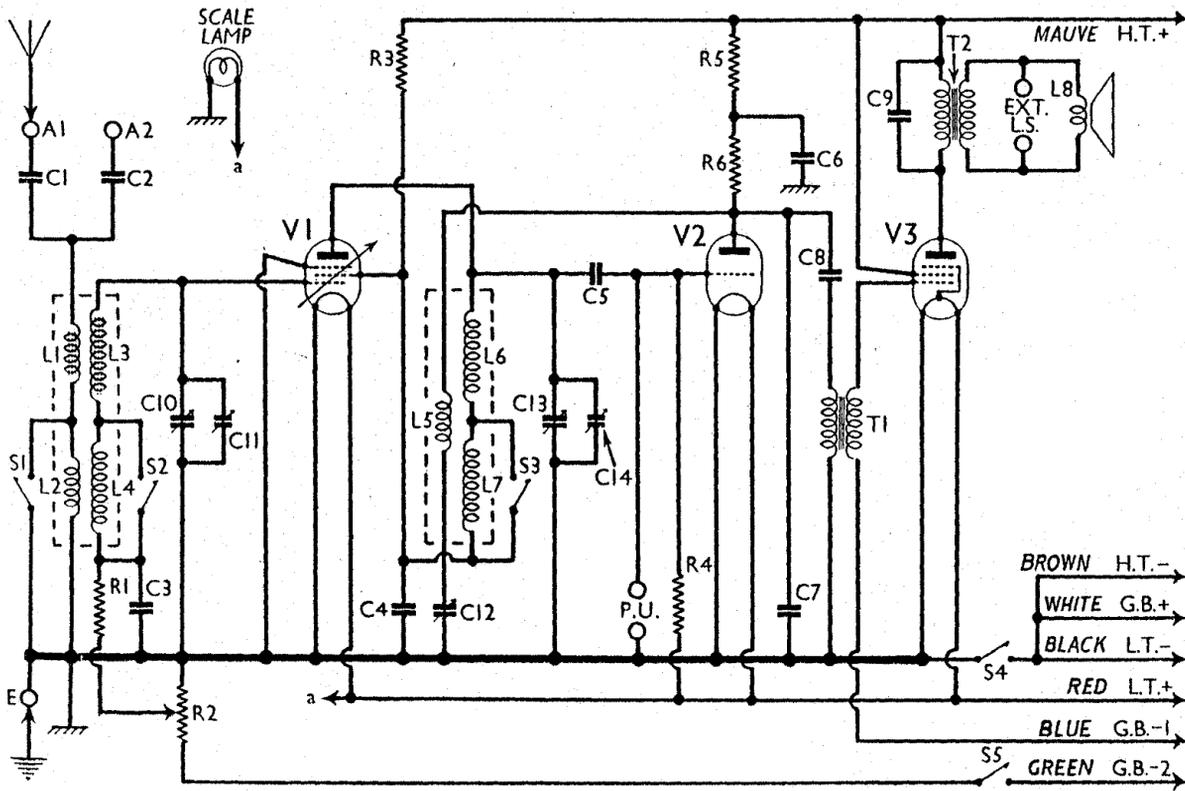


# AERODYNE - THRUSH



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Circuit diagram of the Aerodyne "Thrush" receiver. Note that S<sub>5</sub> disconnects the potentiometer R<sub>2</sub> when the set is not in use, preventing leakage of the G.B. battery. The colours of the various battery leads are indicated.

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## COMPONENTS AND VALUES

Resistances		Values (ohms)
R1	V <sub>1</sub> C.G. decoupling .. ..	50,000
R2	V <sub>1</sub> gain control .. ..	8,000
R3	V <sub>1</sub> S.G. and anode decoupling	3,000
R4	V <sub>2</sub> grid leak .. ..	1,000,000
R5	V <sub>2</sub> anode decoupling .. ..	20,000
R6	V <sub>2</sub> anode load .. ..	30,000

Condensers		Values (μF)
C1	Aerial series condensers {	0.0002
C2		0.00005
C3	V <sub>1</sub> C.G. decoupling .. ..	0.1
C4	V <sub>1</sub> S.G. and anode decoupling	1.0
C5	V <sub>2</sub> grid condenser .. ..	0.0001
C6	V <sub>2</sub> anode decoupling .. ..	1.0
C7	V <sub>2</sub> anode H.F. by-pass .. ..	0.0003
C8	L.F. coupling to T <sub>1</sub> .. ..	0.1
C9	Tone corrector .. ..	0.01
C10†	Aerial circuit tuning .. ..	0.0005
C11†	Aerial circuit trimmer .. ..	—
C12†	Reaction control .. ..	0.0005
C13†	V <sub>1</sub> anode circuit tuning .. ..	0.0005
C14†	V <sub>1</sub> anode circuit trimmer .. ..	—

† Variable ‡ Pre-set.

Other Components		Approx. Values (ohms)
L1	Aerial coupling coils ..	0.25
L2		38.0
L3		1.2
L4		13.0
L5	Reaction coil .. ..	6.5
L6	V <sub>1</sub> anode tuning coils..	3.5
L7		14.5
L8	Speaker speech coil .. ..	2.2
T <sub>1</sub>	Intervalve trans. { Pri. ..	1,200.0
	{ Sec. ..	3,800.0
T <sub>2</sub>	Speaker input trans. { Pri. ..	650.0
	{ Sec. ..	0.3
Sr-S3	Waveband switches .. ..	—
S4	L.T. switch .. ..	—
S5	G.B. switch .. ..	—

## GENERAL NOTES

**Switches.**—S<sub>1</sub>-S<sub>5</sub> are the waveband and battery switches, ganged in a single unit, and seen in the under-chassis view. S<sub>1</sub>-S<sub>3</sub>, the waveband switches, are all *closed* on the M.W. band and *open* on the L.W. band. S<sub>4</sub> and S<sub>5</sub>, the battery switches, are *open* in the "off" position, and *closed* in the M.W. and L.W. positions.

**Coils.**—L<sub>1</sub>-L<sub>4</sub> and L<sub>5</sub>-L<sub>7</sub> are in two screened units on the chassis deck, and are indicated in the plan chassis view.

**Scale Lamp.**—This is an Osram M.E.S. type, rated at 3.5 V, 0.15 A.

## VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating from a new H.T. battery reading 128 V on load. The volume control was at maximum but the reaction control 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)
V <sub>1</sub> VP2	118	2.0	118	0.7
V <sub>2</sub> PM1HL	56	1.3	—	—
V <sub>3</sub> PM22A	122	5.8	128	1.5