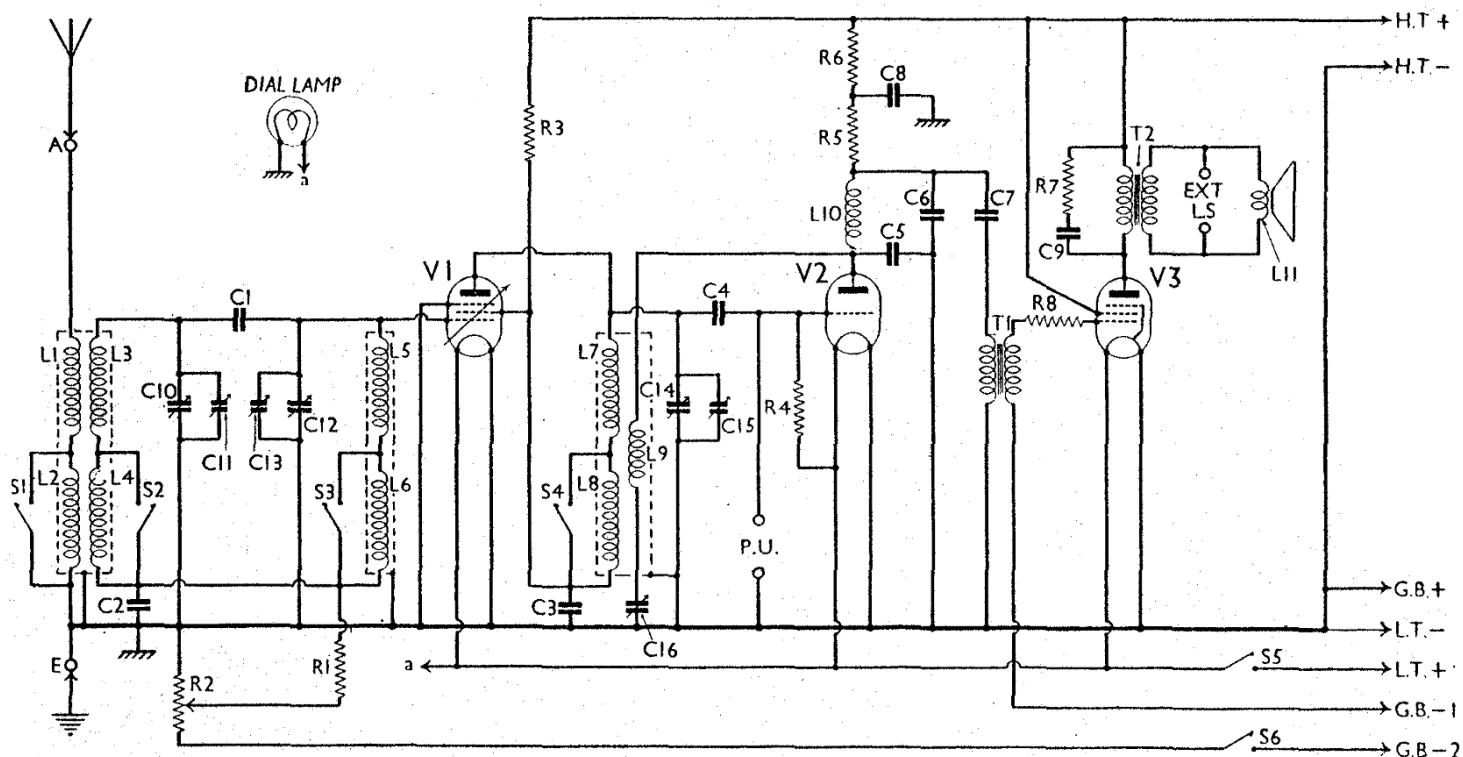


AERODYNE - Merlin



The circuit diagram of the Aerodyne Merlin receiver. C1 is a very small condenser formed of twisted wires. Although separate H.T. — and G.B. + leads are shown, the battery cable only contains a single lead, since a combined H.T. and G.B. battery is employed.

Resistances		Values (ohms)
R1	V1 cont. grid decoupling ..	20,000
R2	V1 gain control, variable ..	8,000
R3	V1 anode and S.G. decoupling ..	8,000
R4	V2 grid leak ..	500,000
R5	V2 anode resistance ..	30,000
R6	V2 anode decoupling ..	10,000
R7	Part of V3 anode filter ..	30,000
R8	V3 grid H.F. stopper ..	250,000

VALVE ANALYSIS

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 VP2	115	1.85	115	0.75
V2 PM1HL	65	1.75	—	—
V3 PM22A	130	7.0	140	1.7

Other Components		Values (ohms)
L1	Aerial coupling coils ..	0.75
L2		14.25
L3		3.75
L4		13.5
L5	Band-pass primary coils	3.75
L6		15.5
L7	Band-pass secondary coils	3.75
L8		14.5
L9	Reaction coil ..	6.5
L10	V2 anode H.F. choke ..	260
L11	Speaker speech coil ..	2.0
T1	Intervalve transformer	Pri. 1,350 Sec. 4,000
T2	Speaker input trans. ..	Pri. 1,000 Sec. 0.2
S1-S4	Waveband switches, ganged ..	—
S5	Filament switch ..	—
S6	G.B. switch ..	—

CIRCUIT ALIGNMENT

Connect signal generator via a suitable dummy aerial to A and E sockets, turn volume control to maximum, and reaction control to minimum.

Switch set to MW, tune to 214 m on scale, feed in a 214 m (1,400 KC/S) signal, and adjust C11, C13 and C15 for maximum output. Now advance the reaction to a point just short of oscillation, and readjust C15 and the reaction control in turn for maximum output. Readjust C11 and C13.

Check the performance and calibration at several points on the MW band, then on the LW band, and if necessary adjust the pointer for the best compromise at all scale settings.