

General Description : Five-valve (including rectifier), six-waveband superheterodyne receiver. Released August 1949.

Power Supply : A.C. mains, 100–250 volts, 50–100 c/s. Consumption 60 watts maximum.

Intermediate Frequency : 470 kc/s.

Valve Analysis : Voltages measured on 20,000-ohms/volt meter, 225 volts mains input, no-signal conditions.

	Valve	V_a	I_a	V_{g2}	I_{g2}	V_{at}	I_{at}
B2	ECH ₂₁	250	1.75	75	5.6	150	4.4
B3	EAF ₄₁ or EAF ₄₂	250	5.6	95	1.6	—	—
B4	EAF ₄₁ or EAF ₄₂	20	0.1	17	0.03	—	—
B5	EBL ₂₁	270	30	250	5.0	—	—
B6	AZ ₃₁			Voltage across C ₁ 290 v.			

Pilot Lamps : Two Philips, type 8028 (6.5 volts, 0.3 amp.).

Ext. Loudspeaker : 5–7 ohms impedance.

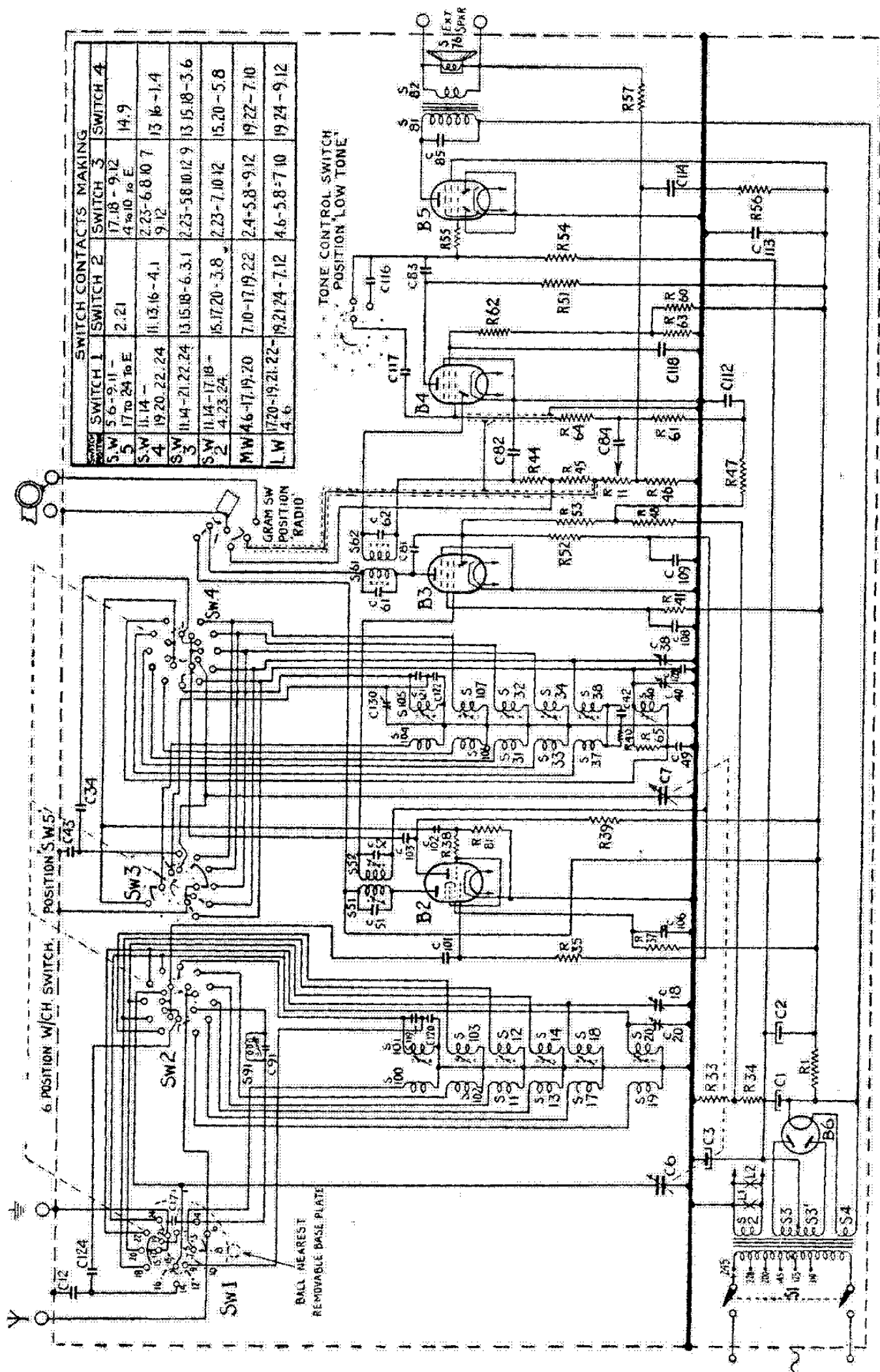
Alignment Procedure : It is essential to use an accurate signal generator for re-alignment. The wax on air trimmers can be broken off with tweezers.

I.F. : With gang in about mid-way position on M.W., inject a 470-kc/s. signal to grid of B2 via a 0.047- μ F. capacitor. Damp and trim circuits as follows (damp circuits by connecting a 100-pF. capacitor across coil indicated) : (1) Trim S₆₂ (top); (2) Damp S₅₁, trim S₅₂ (top) S₆₁ (bottom); (3) Damp S₅₂, trim S₅₁ (bottom).

I.F. filter : Tune to 560 m., apply a 470-kc/s. signal to aerial socket via dummy aerial. Trim S₉₁ for minimum response.

R.F. : With gang fully enmeshed the pointer should coincide with the 250 mark on the logging scale. Pointer can be adjusted by slackening thumb-screw on pointer assembly. The oscillator frequency is higher than the signal frequency on M.W. and L.W. but lower on the S.W. bands.

Waveband	Signal Generator	Logging Scale	Adjustments
L.W.	155 kc/s. 354 kc/s.	206 23	Trim S ₄₀ , then S ₂₀ Trim C ₄₀ , then C ₂₀
M.W.	600 kc/s. 1465 kc/s.	Repeat above procedure as necessary	
		203.5 21.5	Trim S ₃₈ , then S ₁₈ Trim C ₃₈ , then C ₁₈
S.W.	7.2 Mc/s. 10.5 Mc/s. 15.5 Mc/s. 18.4 Mc/s. 27.4 Mc/s.	Repeat above procedure as necessary	
		93	Trim S ₃₄ , then S ₁₄
		92.5	Trim S ₃₂ , then S ₁₂
		93.5	Trim S ₁₀₇ , then S ₁₀₃
		Gang enmeshed Gang open	Trim S ₁₀₅ Trim C ₁₃₀
	22.7 Mc/s.	Repeat above procedure as check	
		94.5	Trim S ₁₀₁



CIRCUIT DIAGRAM—PHILIPS MODEL 581A
For Component Values see page 102.