

PHILIPS

Model F5G86A

General Description: Eight-valve (including rectifier and tuning indicator), three-waveband, A.M./F.M. auto-radiogram with provision for connecting second-channel amplifier for stereo reproduction. The chassis is basically similar to Model G63A, for which full servicing information is given in the 1957-58 volume, but, apart from the stereo facilities, has a tuning indicator and additional loudspeaker.

Power Supply: A.C. mains, 200-250 volts, 50 c/s.

Wavebands: M.W. 527-1604 kc/s.; L.W. 150-255 kc/s.; V.H.F. 87.5-100 Mc/s.

Valves: (V₁) EF80 (R.F. amplifier, F.M. only); (V₂) EF80 (additive mixer, F.M. only); (V₃) ECH81; (V₄) EF85; (V₅) EABC80; (V₆) EL84; (V₇) EZ80; (V₈) EM81. Valve voltages, measured with 20,000 ohms/volt testmeter, are shown on the circuit diagram.

Intermediate Frequencies: A.M. 470 kc/s.; F.M. 10.7 Mc/s.

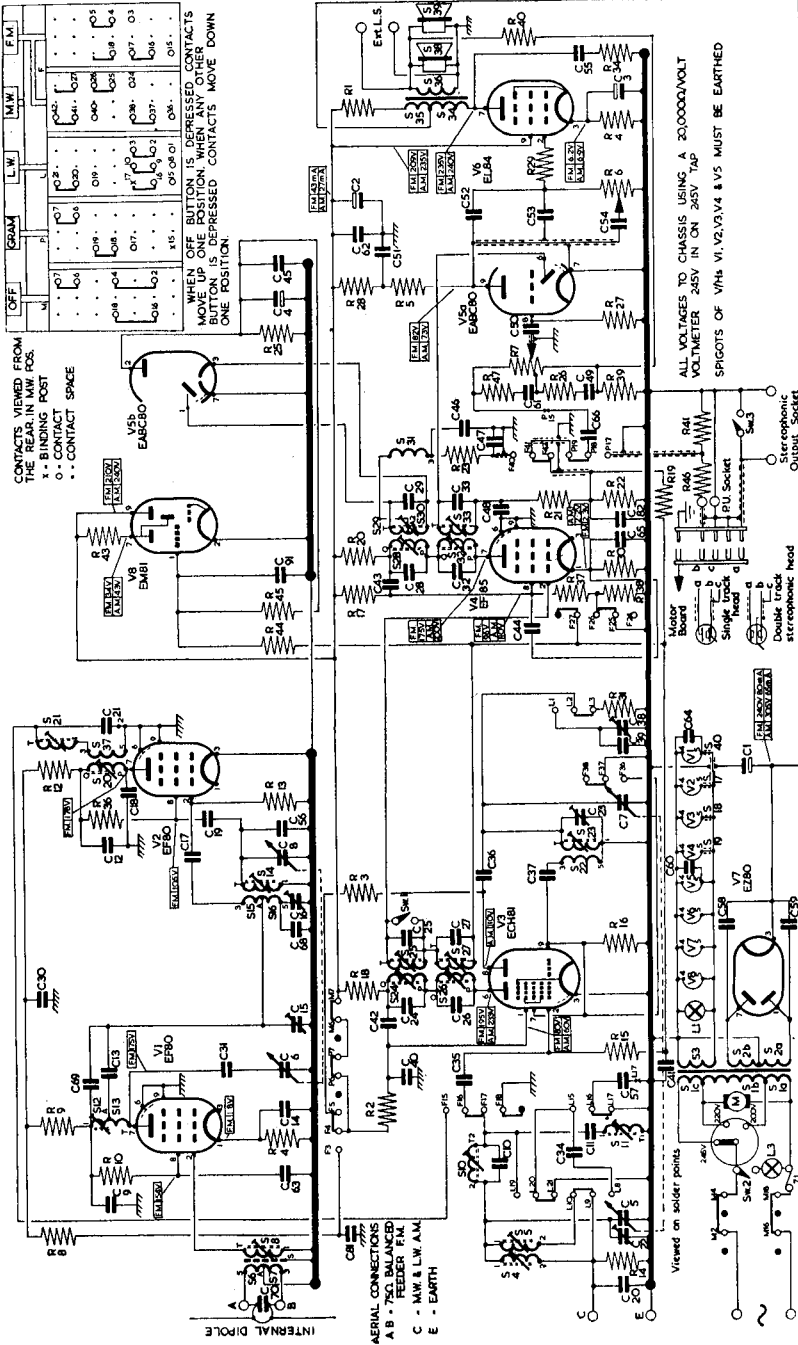
Pilot Lamps: 6.5 volts, 0.3 amp.; 240 volts, 15 watts.

Notes: An additional switch S₂₅ across the 10.7-Mc/s. I.F.T. secondary of V₂ is closed when receiver is switched to A.M. External loudspeaker impedance is 2.5 ohms. Stereo amplifier should have input impedance of 0.5 Megohms. Socket plate with switch at back of receiver should be in position "N" for normal records, "S" for stereo. Record changer unit is Philips Type AG1014. It is important that the connection leads to mains panel on the transformer marked "lamp" and "gram" are not reversed.

Component Values:

<i>Capacitors.</i>			
C1 } 50 + 50 (350 v.)	C34 3.9 pF.	C60 0.0047	R14 33k (10%)
C2 } 50 + 50 (350 v.)	C35 100 pF. (10%)	C61 100 pF. (10%)	R15 1.2M (10%)
C3 100 (12 v.)	C36 470 pF. (10%)	C62 0.0068	R16 47k (10%)
C4 5 (75 v.)	C37 56 pF. (10%)	C63 0.001	R17 56k (10%)
C9 0.001	C38 100 pF.	C64 0.001	R18 2.2k
C10 270 pF. (10%)	C39 270 pF. (10%)	C65 0.01	R19 1.2M (10%)
C11 12 pF. (10%)	C40 0.0039	C66 0.01	R20 4.7k (10%)
C12 0.001	C41 0.01	C68 8.2 pF.	R21 0.18M (10%)
C13 100 pF. (10%)	C42 0.0015	C69 8.2 pF.	R22 0.22M (10%)
C14 0.001	C43 0.0015	C70 33 pF. (10%)	R23 47k (10%)
C15 18 pF.	C44 0.0039	C81 0.001	R25 10k (10%)
C16 10 pF.	C45 0.0047	C82 100 pF. (10%)	R26 0.22M (10%)
C17 33 pF. (10%)	C46 0.0022	C91 0.0047	R27 10M
C18 18 pF. (10%)	C47 0.001 (400 v. 10%)		R28 0.1M
C19 47 pF. (10%)	C48 100 pF. (10%)		R29 1k
C20 0.003 (5%)	C49 0.0015 (400 v. 10%)		R30 220 (10%)
C21 15 pF.	C50 0.018		R31 33k
C22 3-30 pF.	C51 0.1 (400 v.)		R34 18k (1 W. 10%)
C23 3-30 pF.	C52 0.015 (400 v.)		R36 22k (10%)
C24 33 pF.	C53 470 pF. (10%)		R37 10M
C25 33 pF.	C54 0.015 (400 v. 10%)		R38 0.1M (10%)
C26 110 pF.	C55 0.001 (800 v. 10%)		R39 47 (10%)
C27 195 pF.	C56 3.3 pF. (±0.5 pF.)		R40 560 (10%)
C28 22 pF.			R41 220k (10%)
C29 47 pF.			R43 470k
C30 0.001			R44 2.7M
C31 220 pF. (10%)			R45 10M
C32 195 pF.			R46 330k (10%)
C33 195 pF.			R47 470k (10%)

<i>Resistors.</i>		
R1 1.2k (W.W. 3 W. 10%)	R2 39k (1 W. 10%)	R3 33k (1 W. 10%)
R4 150 (1 W. 10%)	R5 0.22M (1 W.)	R6 0.5M (log)
R7 2k (log)	R8 1k (10%)	R9 2.2k (10%)
R10 10k (10%)	R11 180 (10%)	R12 2.2k (10%)
R13 0.1M (10%)		



CIRCUIT DIAGRAM—PHILIPS MODEL F5G86A