

PHILIPS

Model 712A

General Description : Nine-valve (including rectifier and tuning indicator), seven-waveband auto-radiogramophone with push-pull output stage, and special version of the Philips type AG1000 record-changer unit.

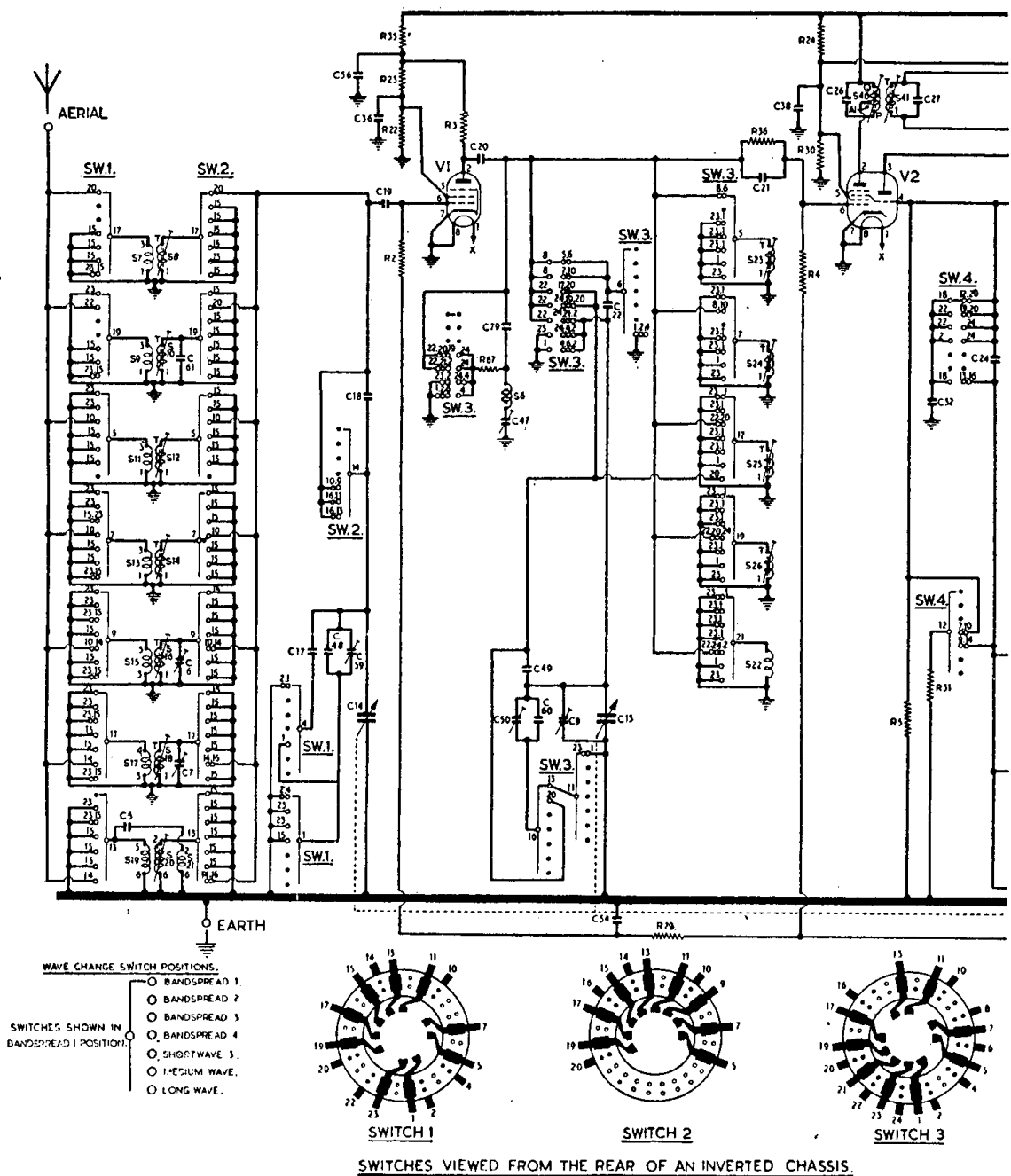
Power Supply : A.C. mains, 110-150 and 200-250 volts (six adjustment positions), 50 c/s. Consumption (radio) with an input of 245 volts applied to 245 volts, tapping, 380 mA.

Wavebands : L.W. 150-400 kc/s.; M.W. 512-1622 kc/s.; S.W.3, 2.65-7.0 Mc/s.; B.S.4, 7.0-10.14 Mc/s.; B.S.3, 10.14-14.63 Mc/s.; B.S.2, 14.63-20.98 Mc/s.; B.S.1, 20.69-26.55 Mc/s.

Intermediate Frequency : 470 kc/s.

Capacitors.

C1/2.	50 + 50
C3	50
C4	0.1
C6	3-30 pF.
C7	3-30 pF.
C9	3-30 pF.
C10	3-30 pF.
C11	3-30 pF.
C12	3-30 pF.
C13	3-30 pF.
C14-16	26-528 pF.
C17	39 pF.
C18	115 pF.
C19	100 pF.
C20	220 pF.
C21	100 pF.
C22	95 pF.
C23	470 pF.
C24	56 pF.
C25	27 pF.
C26	115 pF.
C27	115 pF.
C28	115 pF.
C29	115 pF.
C30	100 pF.
C31	100 pF.
C32	100 pF.
C33	263 pF.
C34	4,700 pF.
C35	22,000 pF.
C36	47,000 pF.
C37	27,000 pF.
C38	0.1
C39	0.1
C41	0.1
C42	10,000 pF.
C43	10,000 pF.
C45	100 pF.
C46	56 pF.
C47	3-30 pF.
C48	3-30 pF.
C49	102 pF.
C50	3-30 pF.
C51	504 pF.
C52	2,200 pF.
C53	3-30 pF.
C54	10,000 pF.
C55	100
C56	47,000 pF.
C57	18 pF.
C58	36 pF.
C59	10 pF.



SiA	6·8	S20	5·5
SiB	1·2	S21	31·8
SiC	1·5	S22	1·9
SiD	5·5	S23	<0·1
SiE	2·4	S24	<0·1
SiF	2·8	S25	<0·1
S2	0·12	S26	0·14
S3A	190	S27	<0·1
S3B	195	S28	0·2
S4	0·1	S29	0·12
S47	1·0	S30	0·3
S48	1·0	S31	0·6
S6	35·5	S32	0·27
S7	0·18	S33	0·67
S8	<0·1	S34	8·2
S9	0·18	S35	9·5
Si0	<0·1	S36	35·5
Si1	0·24	S40	7·2
Si2	0·1	S41	7·2
Si3	0·22	S42	7·2
Si4	0·14	S43	7·2
Si5	5·0	S44	} 365
Si6	1·0	S45	
Si7	94·6	S46	<0·1
Si8	5·28	S47	1·0
Si9	131	S48	1·0

Valves : (V₁) EF41; (V₂) ECH42; (V₃) EBF80; (V₄) EF86; (V₅) ECC40; (V₆) EL41; (V₇) EL41; (V₈) GZ32; (V₉) EM34.

Pilot Lamps : Three Philips type 8028-D (6.5 volts, 0.3 amp.). One (L₃) type 8073D-00 (6.3 volts, 0.1 amp.).

Alignment Summary : Note when aligning I.F. transformers, a damping unit (10k resistor in series with a 47,000-pF. capacitor) should be connected across the winding not being adjusted. I.F. signal of 470 kc/s. should be applied via a 47,000-pF. capacitor to the junction of C₇₉/R₆₇. For all R.F. circuits, the signal should be fed to the aerial sockets (via standard dummy aerial for M.W. and L.W. and a 400-ohm dummy aerial for all S.W. bands).

The trimming frequencies are as follows :

L.W.	145 kc/s.	200 kc/s.	425 kc/s.	—
M.W.	510 kc/s.	500 kc/s.	1550 kc/s.	1630 kc/s.
S.W.3.	2.4 Mc/s.	2.8 Mc/s.	6.5 Mc/s.	7.1 Mc/s.
B.S.4.	6.9 Mc/s.	7.2 Mc/s.	—	—
B.S.3.	10.0 Mc/s.	11.8 Mc/s.	—	—
B.S.2.	14.5 Mc/s.	21.1 Mc/s.	—	—
B.S.1.	20.5 Mc/s.	21.5 Mc/s.	26 Mc/s.	27 Mc/s.

Valve Analysis : The following measurements were taken on M.W. with the tuning gang at maximum capacitance. Mains input 245 volts, 50 c/s. to the 245-volt tapping.

Valve		Anode, Volts	Anode Current, mA.	Screen, Volts	Screen Current, mA.
V ₁	EF41	169	3.1	49	1.0
V ₂	ECH42	243	1.71	62	3.3
	(osc.)	110	4.0	—	—
V ₃	EBF80	240	4.3	62	1.3
V ₄	EF86	100	0.7	62	0.1
V ₅	ECC40 (first)	120	1.3	—	—
	(second).	135	1.2	—	—
V ₆ , V ₇	EL41	289	27	275	3.8

Total H.T. current 85 mA., voltage across C₃, 300 volts; C₂, 255 volts; C₁, 285 volts.