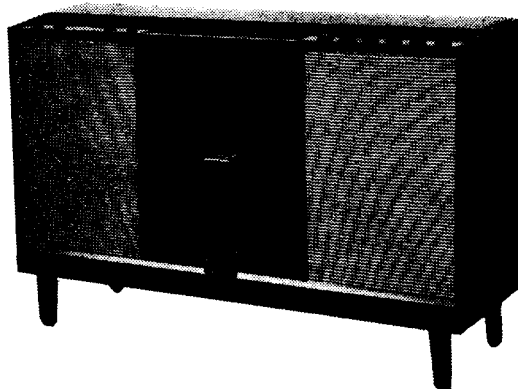


PHILIPS *Service* notes

MODEL RF8 *Music Studio*



SPECIFICATIONS

Power supply	.....	.....	.....	.....	200-250V, 50 c/s
Power Consumption	.....	.....	.....	.....	70W
Tuning range	.....	.....	.....	.....	525-1620 kc/s
Intermediate frequency	.....	.....	.....	.....	455 kc/s
Record changer	.....	.....	.....	.....	AG1025
Pick-up head	.....	.....	.....	.....	AG3228 (stereo, ceramic)
Stylus	.....	.....	.....	.....	946/DS51 (18 μ diamond, 75 μ sapphire)
Lamps (2 dial scale | record changer compartment, 1 "Music Studio" panel)					8045D (6.3V, 0.32A tub. screw)

CHASSIS REMOVAL

Remove power plug from the A.C. supply socket and remove appropriate cabinet back panel.

Remove six control knobs (push fit), two hexagonal bushes and the dial window. At the chassis terminal block, disconnect the external aerial internal aerial, speaker leads, 240V A.C. changer supply leads, changer compartment and "Music Studio" lamp supply leads.

Remove octal plug carrying leads for "Music Studio" panel from socket at chassis.

Remove four-pin plug with pick-up leads from socket at chassis. Unscrew six chassis retaining screws—two under dial window and four from chassis mounting frame. Carefully withdraw complete chassis through top aperture.

Re-install in the reverse order.

NOTE: Extreme care must be taken to avoid marking silver decorative strip when removing or replacing chassis, dial glass or "Music Studio" glass. It is recommended that a protective covering of suitable material be used particularly when chassis is being re-installed.

LAMP REPLACEMENT

Dial Lamp

Remove dial window glass (refer "Chassis Removal"). At the appropriate end of the dial scale, back off the screws holding the clamping bracket and the rubber dial scale support. The dial lamp in its holder may now be withdrawn from the moulding.

Changer Compartment

The removal of the dome light cover held by two screws will provide access to the lamp in this compartment.

Music Studio

Remove cabinet back panel. Withdraw rubber grommet complete with socket and globe from metal bracket.

NOTE: Lamp type throughout is 8045D—6.3V, 0.32A, tubular screw.

RECORD CHANGER REMOVAL

Remove power plug from mains supply socket. Remove cabinet back panel on chassis side. Disconnect A.C. supply leads at connection block on chassis. Unplug pick-up leads. Two holes in turntable beneath mat provide access to two locking screws, one securing each changer retaining bracket. Unscrew locking screw securing front retainer, slide bracket toward centre and manoeuvre changer complete with mounting springs and cups from mounting board. Refitting the changer is a reversal of the foregoing.

ALIGNMENT

Put switch to radio, volume control to maximum, balance control to central position and both tone controls to their central positions.

I.F. Alignment

Set permeability tuner fully out. Apply a modulated 455 kc/s signal, via an 0.01 μ F capacitor as dummy, to control grid (pin 2) of V1. Peak I.F.T. coils in the following sequence:

Secondary 2nd I.F.T.

Primary 2nd I.F.T.

Secondary 1st I.F.T.

Primary 1st I.F.T.

Repeat these adjustments.

R.F. Alignment

Use a standard dummy aerial and apply a modulated R.F. signal to receiver aerial and earth leads.

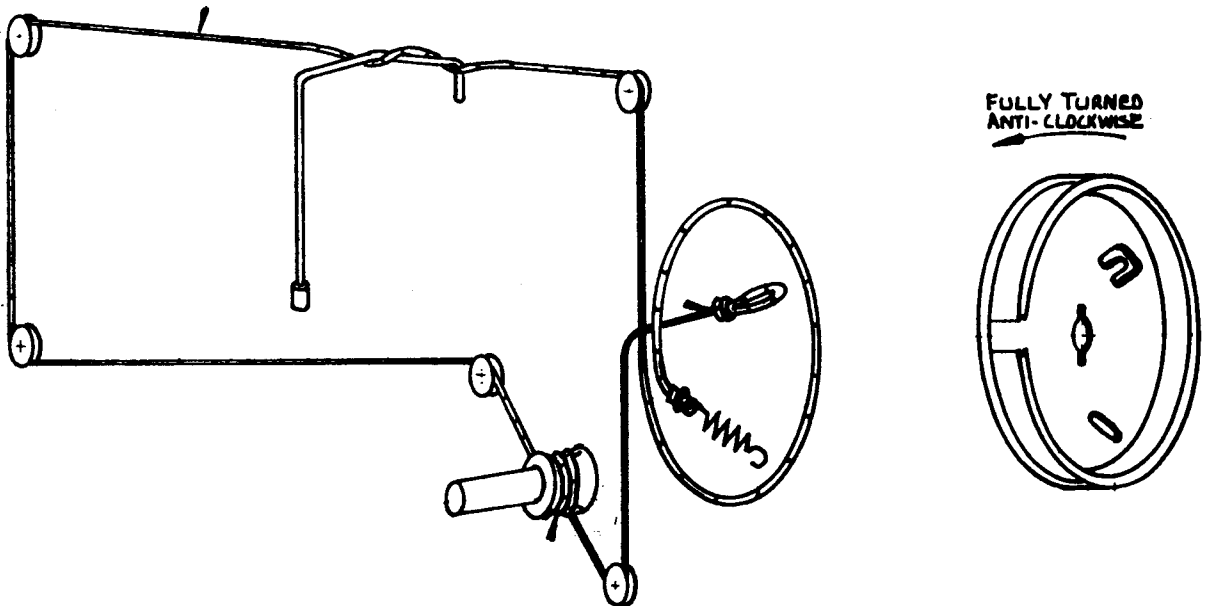
Set tuner fully in peak oscillator trimmer C8 to a 525 kc/s signal.

Tune to a 1,500 kc/s signal (3AK) and peak aerial trimmer C3. Adjust cursor to correspond as near as possible over the range of major stations.

MECHANICAL PARTS LIST

Description	Code No.	Description	Code No.
Badge—MS	CS.436.555	Leg assy.—walnut, 4x	CR.700.604
Baffle cloth	CE.083.51	Lid stay—record compt. door	CR.285.818
	Colan CS.1485	“Music Studio” escutcheon	CS.430.168
Bezel—record compartment lamp	CS.430.167	Nut—dial escutcheon mtg., 2x	CS.274.426
Cover—on “Music Studio” panel sockets, 4x	CS.463.169	Plug—4 pin, P/U lead	CZ.365.320
Changer mounting spring assy., 4x	CR.240.202		McMurdo B4CP
Dial cord, 47” required	965/JBI	Plug—octal (“Music Studio” panel leads to pre-amp.)	CZ.365.436
Dial cord spring	CS.200.030	Socket—extension speaker	CZ.369.942
Dial cursor assy.	CR.480.698		type SG1003
Dial drum assy.	CR.382.211	Socket—guitar	CZ.369.949
Dial escutcheon	CS.430.169	Socket—4 pin, P/U lead	CZ.370.512
Dial scale	CS.412.500		McMurdo 4QMS/C
Dollken mould, bottom—bulk	CD.906.461	Socket—5 pin, “Music Studio” panel, 3x	979/5x180
	Colan 460	Socket—octal, pre-amp.	CZ.369.525
Dollken mould, top—bulk	CD.906.460		C/F733-2-30
Dollken mould, top centre	CS.430.297	Socket—valve, noval, P/W, 6x	CZ.370.718
Domed mirror fixing cap and screw assy. (mtg. “Music Studio” panel)	CR.313.200	Socket—valve, noval, pre-amp.	C/F733-2-65
Glide—nylon, for sliding top, 2x	CS.365.655		CZ.369.718
Grommet—dial escutcheon mtg., 2x	CS.422.519		C/F733-2-25
Grommet—“Music Studio” panel mtg., 2x	CS.422.525	Spacer (in “Music Studio” panel mtg. grommet), 2x	CS.284.085
Handle—record compartment	CS.432.509	Switch assy.—rec. compt. lamp	CZ.210.115
	Turner H537-3”	Switch assy.—on/off, gram, radio	CZ.220.401
Knob—control, 6x	CR.523.599	Tuning spindle assy.	CR.371.343
Lampholder, 4x	A3.311.15	Wordmark—“Philips”	CS.436.552
Leg assy.—maple, 4x	CR.700.603		

47" CORD



2 FULL TURNS

VIEW FROM FRONT SHOWING
 PERM. TUNER IN OPEN POSITION (FULLY TURNED ANTI-CLOCKWISE)

ELECTRICAL PARTS LIST

CAPACITORS

C. No.	Description	V.W.	Tol ±%	Type or Code No.
1	100E Styroseal	125	10	Ducon DFB
2	330E Styroseal	125	10	Ducon DFB
3	60E air trimmer	—	—	C.005.CA/60E
4	47K Polyester	160	10	C.296.AA/A47K
5	10K Polyester	160	10	C.296.AA/A10K
6	1K Styroseal	125	10	Ducon DFB
7	270E Styroseal	125	10	Ducon DFB
8	60E air trimmer	—	—	C.005.CA/60E
9	Part of 1st I.F.T.	—	—	—
10	47K Polyester	160	10	C.296.AA/A47K
11	47K Polyester	400	10	C.296.AC/A47K
12	Part of 1st I.F.T.	—	—	—
13	33E Styroseal	600	10	Ducon DFB
14	47K Polyester	160	10	C.296.AA/A47K
15	100E Styroseal	125	10	Ducon DFB
16	Part of 2nd I.F.T.	—	—	—
17	100E Styroseal	125	10	Ducon DFB
18	1K8 Polyester	400	10	C.296.AC/A1K8
19	Part of 2nd I.F.T.	—	—	—
21	3K9 Polyester	400	10	C.296.AC/A3K9
22	3K9 Polyester	400	10	C.296.AC/A3K9
23	47K Polyester	160	10	C.296.AA/A47K
24	47K Polyester	160	10	C.296.AA/A47K
25	27K Polyester	160	10	C.296.AA/A27K
26	27K Polyester	160	10	C.296.AA/A27K
27	27K Polyester	160	10	C.296.AA/A27K
28	27K Polyester	160	10	C.296.AA/A27K
29	27K Polyester	400	10	C.296.AC/A27K
30	27K Polyester	400	10	C.296.AC/A27K
31	5K6 Polyester	400	10	C.296.AC/A5K6
32	5K6 Polyester	400	10	C.296.AC/A5K6
33	22K Polyester	400	10	C.296.AC/A22K
34	22K Polyester	400	10	C.296.AC/A22K
35	100K Polyester	160	10	C.296.AA/A100K
36	100K Polyester	160	10	C.296.AA/A100K
37	64M electrolytic	10	—	C.426.AR/D64
38	64M electrolytic	10	—	C.426.AR/D64
39	2K2 Polyester	400	10	C.296.AC/A2K2
40	2K2 Polyester	400	10	C.296.AC/A2K2
41	10M electrolytic	16	—	C.426.AR/E10
42	10M electrolytic	16	—	C.426.AR/E10
43	47K Polyester	400	10	C.296.AC/A47K
44	47K Polyester	400	10	C.296.AC/A47K
45	3K9 Polyester	400	10	C.296.AC/A3K9
46	3K9 Polyester	400	10	C.296.AC/A3K9
47	2x50M electrolytic	300	—	Ducon ECD404
48	dual electrolytic	300	—	CZ.099.917
49	2x50M dual electrolytic	300	—	Ducon ECD404
50	390E Styroseal	125	10	Ducon DFB
51	390E Styroseal	125	10	Ducon DFB
52	150E Styroseal	125	10	Ducon DFB
53	150E Styroseal	125	10	Ducon DFB
54	150E Styroseal	125	10	Ducon DFB
57	2K2 Polyester	400	10	C.296.AC/A2K2
58	1K Polyester	400	10	C.296.AC/A1K
59	390E Styroseal	125	10	Ducon DFB
60	32M electrolytic	4	—	C.426.AR/B32

CAPACITORS (cont.)

C. No.	Description	V.W.	Tol ±%	Type or Code No.
61	33K Polyester	400	10	C.296.AC/A33K
62	22K Polyester	400	10	C.296.AC/A22K
63	22E ceramic, pin up	500	20	C.322.BD/P22E
64	22E ceramic, pin up	500	20	C.322.BD/P22E
65	10M electrolytic, N.P.	12	—	Ducon ETIX
66	10M electrolytic, N.P.	12	—	CZ.099.881
67	10M electrolytic, N.P.	12	—	Ducon ETIX
68	10M electrolytic, N.P.	12	—	CZ.099.881

RESISTORS

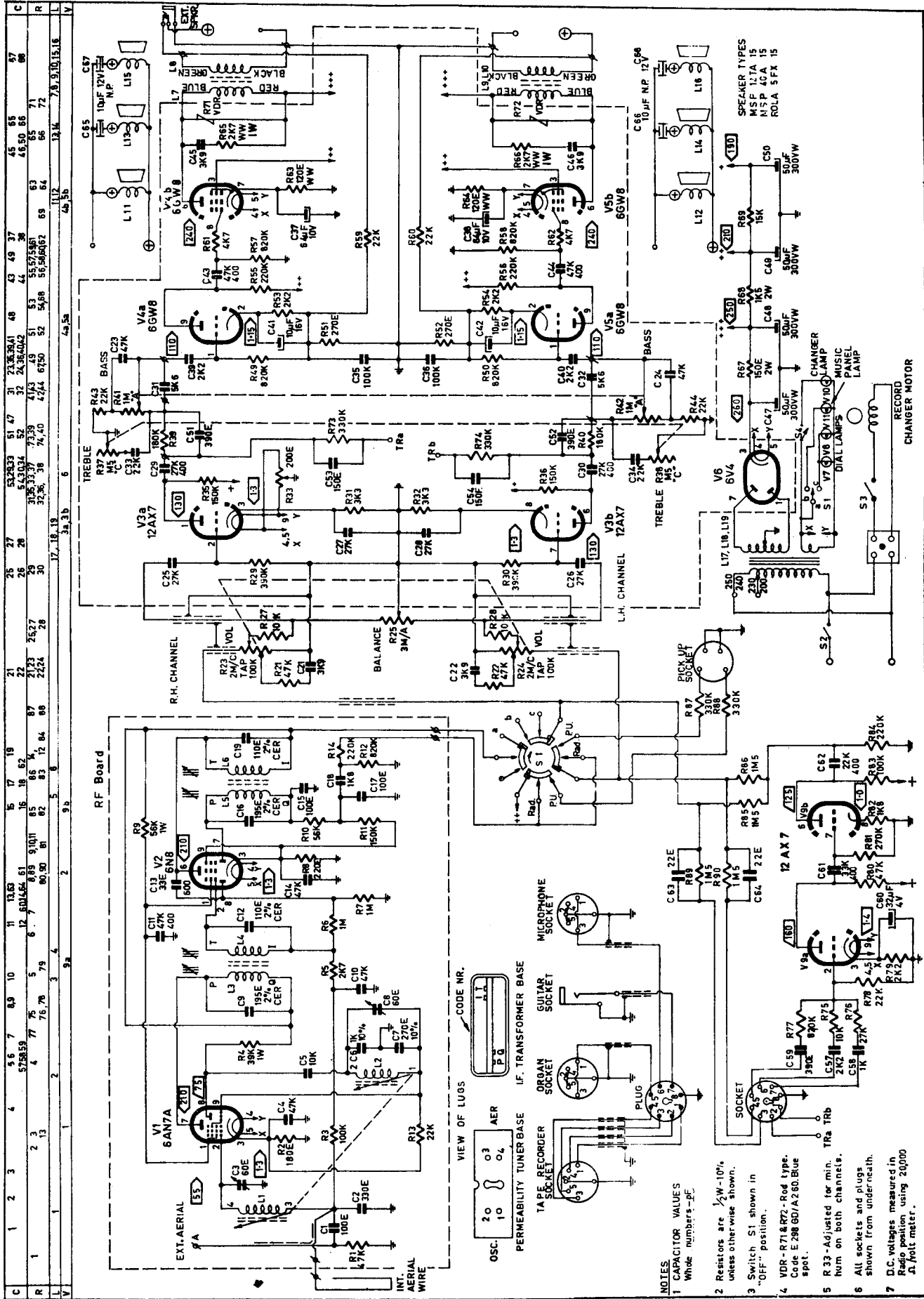
R. No.	Description	W.	Tol ±%	Type or Code No.
1	47K carbon	10	10	IRC BTS
2	180E carbon	10	10	IRC BTS
3	100K carbon	10	10	IRC BTS
4	39K carbon	10	10	IRC BTA
5	2K7 carbon	10	10	IRC BTS
6	1M cracked carbon	10	10	B8.305.05A/1M
7	1M cracked carbon	10	10	B8.305.05A/1M
8	220E carbon	10	10	IRC BTS
9	56K carbon	10	10	IRC BTA
10	56K carbon	10	10	IRC BTS
11	150K carbon	10	10	IRC BTS
12	820K cracked carbon	10	10	B8.305.05A/820K
13	22K carbon	10	10	IRC BTS
14	220K carbon	10	10	IRC BTS
21	47K carbon	10	10	IRC BTS
22	47K carbon	10	10	IRC BTS
23	2x2M, tap 100K, taper C, potentiometer (volume)	10	10	CZ.029.157
24	3M taper A, carbon potentiometer (balance)	10	10	IRC 45, dual ganged
27	10K carbon	10	10	IRC 45
28	10K carbon	10	10	IRC BTS
29	390K carbon	10	10	IRC BTS
30	390K carbon	10	10	IRC BTS
31	3K3 carbon	10	10	IRC BTS
32	3K3 carbon	10	10	IRC BTS
33	200E carbon trim potentiometer, taper A (hum adj.)	10	10	E.097.AC/200E
35	150K carbon	10	10	IRC BTS
36	150K carbon	10	10	IRC BTS

RESISTORS (cont.)

R. No.	Description	W.	Tol ±%	Type or Code No.
50	820K cracked carbon	10	10	B8.305.05A/820K
51	270E carbon	10	10	IRC BTS
52	270E carbon	10	10	IRC BTS
53	2K2 carbon	10	10	IRC BTS
54	2K2 carbon	10	10	IRC BTS
55	220K carbon	10	10	IRC BTS
56	220K carbon	10	10	IRC BTS
57	820K cracked carbon	10	10	B8.305.05A/820K
58	820K cracked carbon	10	10	B8.305.05A/820K
59	22K carbon	10	10	IRC BTS
60	22K carbon	10	10	IRC BTS
61	4K7 carbon	10	10	IRC BTS
62	4K7 carbon	10	10	IRC BTS
63	120E wire wound	10	10	IRC BW½
64	120E wire wound	10	10	IRC BW½
65	2K7 wire wound	1	1	IRC BW1
66	2K7 wire wound	1	1	IRC BW1
67	150E carbon	2	10	IRC BTB
68	1K5 carbon	2	10	IRC BTB
69	15K carbon	10	10	IRC BTS
71	VDR rod (blue)	0.8	10	E.298.ED/A260
72	VDR rod (blue)	0.8	10	E.298.ED/A260
73	330K carbon	10	10	IRC BTS
74	330K carbon	10	10	IRC BTS
75	10K carbon	10	10	IRC BTS
76	27K carbon	10	10	IRC BTS
77	820K cracked carbon	10	10	B8.305.05A/820K
78	22K carbon	10	10	IRC BTS
79	2K2 carbon	10	10	IRC BTS
80	47K carbon	10	10	IRC BTS
81	270K carbon	10	10	IRC BTS
82	1K8 carbon	10	10	IRC BTS
83	100K carbon	10	10	IRC BTS
84	220K carbon	10	10	IRC BTS
85	1M5 cracked carbon	10	10	B8.305.05A/1M5
86	1M5 cracked carbon	10	10	B8.305.05A/1M5
87	330K carbon	10	10	IRC BTS
88	330K carbon	10	10	IRC BTS
89	1M5 cracked carbon	10	10	B8.305.05A/1M5
90	1M5 cracked carbon	10	10	B8.305.05A/1M5

INDUCTORS

L. No.	Description	Type or Code No.
1, 2	Permeability tuner	CZ.109.003
3, 4	1st I.F. transformer	CZ.320.536
5, 6	2nd I.F. transformer	CZ.320.536
7, 8	Output transformer, 6,000/15Ω	CZ.345.085
9, 10	Output transformer, 6,000/15Ω	MSP 2TU/51762A
11	Speaker, M.S.P., 50287/12TA/15	CZ.161.315
12	Speaker, M.S.P., 50287/12TA/15	CZ.161.315
13	Speaker, Rola 5FX, F128 cone, 15Ω	CZ.161.158
14	Speaker, Rola 5FX, F128 cone, 15Ω	CZ.161.158
15	Speaker, M.S.P. 40A-15Ω	CZ.161.016
16	Speaker, M.S.P. 40A-15Ω	CZ.161.016
17, 18, 19	Power transformer	CZ.344.149



C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
V	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

- NOTES**
- 1 CAPACITOR VALUES
Where numbers— μ F
 - 2 Resistors are $\frac{1}{2}$ W-10% unless otherwise shown.
 - 3 Switch S1 shown in "OFF" position.
 - 4 VDR - R71 & R72 - Rod type. Code E 298 6D/A 2.6D. Blue spot.
 - 5 R 33 - Adjusted for min. hum on both channels.
 - 6 All sockets and plugs shown from underneath.
 - 7 D.C. voltages measured in Radio position using 20000 Ω Volt meter.

PHILIPS *Service*

notes

MODEL RF8

SUPPLEMENTARY SHEET

To be used in conjunction with Model RF8 service data sheet.

Several changes in electrical circuitry have been made since publication of the original service data sheet. These changes have been made progressively, so it is possible to find receivers which incorporate only some of the changes. The circuit drawing in its final form is shown overleaf. As a guide to identification of changes, they are listed in order of introduction together with the reasons why they were made. Details of components not quoted on this sheet are given in the original data sheet.

CHANGE DETAILS.

To increase bass response.

C23 and C24 changed to 22K Polyester, 160V, 10%
C.296.AA/A22K.

To avoid grid current in 6GW8 triode.

R53 and R54 changed to 3K3 carbon, $\frac{1}{2}$ W, 10%, 1RC BTS
also note change in V4a/V5a cathode voltage to 1.4V.

Found not to be necessary.

C67 and C68 deleted (note new circuitry).

To modify high frequency response.

added—

R91—100K carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

R92—47K carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

R93—100K carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

C69—150E ceramic, 500V, 10%, C.304.GB/A150E

C70—330E ceramic, 500V, 10%, C.304.GH/A330E

C71—150E ceramic, 500V, 10%, C.304.GB/A150E

C72—150E ceramic, 500V, 10%, C.322.BC/P150E

value changed—

R81 changed to 680K, carbon, $\frac{1}{2}$ W, 10%, 1RC BTS.

To correct frequency response after making high frequency response modification as above.

R75 changed to 39K carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

R76 changed to 15K carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

R77 changed to 1M2 carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

R78 changed to 56K carbon, $\frac{1}{2}$ W, 10%, 1RC BTS

C57 changed to 1K5 Polyester, 400V, 10%, C.296.AC/A1K5

C58 changed to 560E Styroal, 630V, 10%, Ducon DFB
added—

C67—10K Polyester, 400V, 10%, C.296.AC/A10K.

C68—82E ceramic, 500V, 10%, C.304.GB/A82E.

To simplify tape recorder connections.

C53 and C54 changed to 4K7 Polyester, 400V, 10%,
(also changed position). C.296.AC/A4K7

C63 and C64 changed to 150E ceramic, 500V, 20%,
(also changed position). C.322.BC/P150E

R89 and R90 deleted.

R73 and R74 changed position.

To reduce hum.

C62 changed to 10K Polyester, 400V, 10%, C.296.AC/A10K.

