

PHILIPS

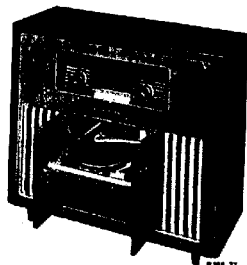
SERVICE NOTES

for the radio-grammophone

F6X67A-01

1956.

For A.C. mains supply.



Push Buttons

From left to right :

Mains switch

P.U.

M.W. : 185 - 580 m (1622 - 517 kc/s)

S.W.3 : 59 - 187 m (5,1 - 1,6 Mc/s)

S.W.2c : 25 - 60 m (12 - 5 Mc/s)

S.W.2b : 16,75 - 25,6m (17,9 - 11,7Mc/s)

S.W.2a : 11,4 - 16,94m (26,2 - 17,7Mc/s)

Controls

From left to right :

Small knob - low tone control.

Large knob - } volume control.

Small knob - }

Small knob - tuning

Large knob - aerial tuning +
S.W. vernier tuning

Small knob - high tone control

Valves

B1 : EF89 B5 : EL84

B2 : ECH81 B6 : EM80

B3 : BBF80 B7 : EZ81

B4 : ECC83 B8 : EL84

B20 : EF86

I.F. : 452 kc/s

Mains voltages

90- 110 - 127 - 145 -
180 - 200 - 220 V.

Consumption

95 Watt approx.

Loudspeakers

2x AD3700M (Z = 5Ω)

1x 9710M (Z = 7Ω)

Record changer

AG 1006-88

Dimensions

Length : 920 mm.

Width : 385 mm.

Height : 790 mm.

Lamps

2x 8024N-91

1x 8045D-00

93 988 17.1.05

General

The apparatus has a vernier tuning on S.W.2a and S.W.2b. This vernier tuning is mechanically coupled with the ferroceptor control. In extreme left position of this control the core of S40 is completely drawn in.

Cord-drive

The length and the path of the cables are indicated in fig.1. Here the variable condenser is drawn in maximum position.

Transformers

If the original transformers become defective, they should be replaced by the service standard transformers, the code numbers of which are given in the electrical parts list. For connections see fig. 2.

Trimming of the receiver

For trimming the general rule is :

Volume control to maximum.

Tone control to "quality".

Connect a voltmeter via a trimming transformer to the additional loud-speaker sockets. Unless otherwise stated all signals are applied to the aerial sockets via a dummy aerial.

Trimming point 1 refers to the left, trimming point 2 to the right side of the dial.

Previously the cores of the I.F. bandfilters has to be turned outward as far as possible and the core of S40 in medium position.

	Wave-range	Pointer at trimming point	Apply a signal of	Trim at max.output	Directions
I.F. band-filters	M.W.	1	452 kc/s to g1B2 via 33000 pF	S28, S27, S25, S26, S28	
R.F. and oscillator circuits	S.W.2a	2	17,8 Mc/s	S17, S11, S6	Repeat
		1	16,4 Mc/s	C39, C20, C8	
	S.W.2b	2	11,75 Mc/s	S19, S12, S5	Repeat
		1	18 Mc/s	C40, C21, C66, C10	
	S.W.2c	2	5,26 Mc/s	S20b, S13, S7	Repeat
		1	12,1 Mc/s	C62	
	S.W.3	2	1,72 Mc/s	S22, S14-14a, S9	Repeat
		1	5,15 Mc/s	C35, C23, C12	
	M.W.	2	550 kc/s	S24, S15, S10-10a	Repeat
		1	1630 kc/s	C26, C24, C14	

LIST OF PARTS

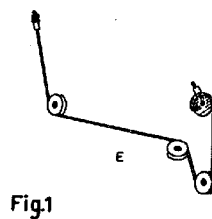
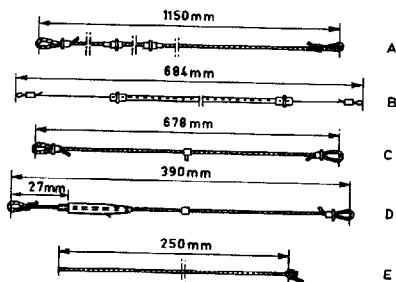
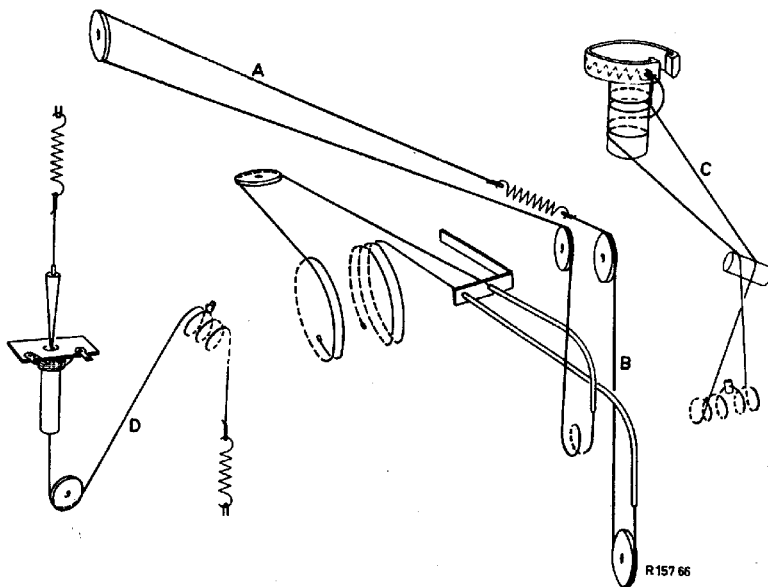
When ordering always quote :

1. Code number
2. Description and colour
3. Type number of the set

	Description	Code number
	Push button	A3 417 70.0
	Knob (tuning and volume control)	A3 739 12.0
	Knob (volume control)	A3 752 37.0
	Knob (ferroceptor)	A3 739 26.0
	Knob (tone control)	A3 752 69.0
	Spring in knob ferroceptor	A3 650 18.0
	Spring in other knobs	A3 522 08.0
	Strip for wave-range switches	A3 664 27.0
	Variable capacitor	49 001 97.0
	Ferroceptor drum	P4 380 53.0
	Strip for P.U. switch	A3 663 99.0
	Mains switch	A3 182 78.0
	Voltage adaptor	A3 229 76.0
	Cover for mains switch	P5 280 25/08
	Grommet for fixing dial	P5 420 03/08
	Ring for 45 r.p.m. records	P4 380 39/17
	Box	P5 190 03/01
	Cover	P5 190 02/01
	Spring in mains switch	A3 646 26.0
	Spring in driving cord	89 312 10.3
	Spring in ferroceptor drum	A3 646 80.0
	Spring in S.W. vernier tuning	A3 646 34.0
	Dial (oversea)	A3 808 71.0
		vG/MK

S1)			C6	330 pF	A9 999 04/330E
S2)		A3 141 39.1	C8	30 pF	A9 999 08/30E
S3)			C9	33 pF	A9 999 04/33E
S5		A3 119 41.0	C11	100 pF	A9 999 07/20E- 100E
S6		A3 119 42.0	C12	22 pF	A9 999 08/22E
S7		A3 119 43.0	C13	3000 pF	A9 999 05/3K
S9		A3 119 50.0	C14	22 pF	A9 999 08/22E
S10)			C15	100 pF	A9 999 04/100E
S10a)		A3 118 86.0	C16	10000 pF	A9 999 04/10K
S11		A3 119 53.0	C17	106 pF	A9 999 04/100E-
S12		A3 119 49.0		par(A9 999 04/5E6
S13		A3 119 44.0	C18	150 pF	A9 999 04/150E
S14)			C19	10000 pF	A9 999 04/10K
S14a)		A3 119 45.0	C20	22 pF	A9 999 08/22E
S15		A3 125 49.0	C21	30 pF	A9 999 08/30E
S16)			C22	3000 pF	A9 999 05/3K
S17)		A3 119 77.0	C23	22 pF	A9 999 08/22E
S18)			C24	22 pF	A9 999 08/22E
S19)		A3 119 51.0	C25	65 pF	A9 999 04/47E+ par(
S20		A3 118 45.0	C26	120 pF	A9 999 04/120E
S10a)			C27	100 pF	A9 999 04/100E
S10b)		A3 119 51.0	C28	390 pF	A9 999 04/390E
S21)			C29	68 pF	A9 999 04/68E
S22)		A3 119 48.0	C30	120 pF	A9 999 05/120E
S23)			C31	10000 pF	A9 999 04/10K
S24)		A3 125 93.0	C32	22 pF	A9 999 04/22E
S25)			C33	455 pF	A9 999 05/910E (2xpar)
S26)			C34	56 pF	A9 999 05/56E
C37)	110 pF	A9 999 25/452	C35	22 pF	A9 999 08/22E
C38)	195 pF		C36	30 pF	A9 999 08/30E
S27)			C37	110 pF	zie spoelen
S28)			C38	195 pF	voir bobines see coils
C43)	110 pF	A9 999 25/452	C39	30 pF	veanse bobinas
C44)	195 pF		C40	30 pF	A9 999 08/30E
S30)			C41	33000 pF	A9 999 06/33K
S31)			C42	10 pF	A9 999 04/10E
S33)		A9 999 18/03	C43	110 pF	zie spoelen
S34)			C44	195 pF	voir bobines see coils
S36)					veanse bobinas
S37)		A9 999 18/03	C45	47 pF	A9 999 04/47E
S40		A3 117 43.0	C46	3000 pF	A9 999 05/3K
C1	50 μF	A9 999 13/150+ 50+50	C47	120 pF	A9 999 04/120E
C1a	50 μF		C48	12000 pF	A9 999 06/12K
C2	50 μF		C49	22000 pF	A9 999 06/22K
C3)			C50	10000 pF	A9 999 04/10K
C4)			C51	4700 pF	A9 999 06/4K7
C5)		A9 001 97.0	C52	2200 pF	A9 999 06/2K2
			C53	1800 pF	A9 999 06/1K8
			C54	3900 pF	A9 999 06/3K9
			C55	100 μF	A9 999 10/C100
			C56	220 pF	A9 999 04/220E

C57	22000 pF	A9 999 06/22K	R23	1,6 MΩ	A9 999 00/27K
C58	4700 pF	A9 999 06/4K7	R24	27000 Ω	A9 999 00/270K
C59	1500 pF	A9 999 06/1K5	R25	0,27 MΩ	A9 999 00/270K
C60	12 pF	A9 999 04/12E	R26	0,68 MΩ	A9 999 00/680K
C61	10 pF	A9 999 04/10E	R27	0,47 MΩ	A9 999 00/470K
C62	30 pF	28 212 36.4	R28	0,1 MΩ	A9 999 00/100K
C63	2100 pF	A9 999 05/1K+	R29	0,47 MΩ	A9 999 00/470K
	par	A9 999 05/1K1	R30	470 Ω	A9 999 00/470E
C65	10 pF	A9 999 04/10E	R31	0,1 MΩ	A9 999 00/100K
C66	30 pF	28 212 36.4	R32	0,1 MΩ	A9 999 00/100K
C67	10 pF	A9 999 04/10E	R33	0,47 MΩ	A9 999 00/470K
C68	680 pF	A9 999 04/680E	R34	18 Ω	A9 999 00/18E
C69	0,47 μF	A9 999 06/470K	R35	47000 Ω	A9 999 00/47K
C70	4700 pF	A9 999 06/4K7	R36	0,5 MΩ	A9 999 16/
C71	22000 pF	A9 999 06/22K			GL50K
C72	10000 pF	A9 999 04/10K			+450K
C73	8 μF	A9 999 11/L8	R37	0,39 MΩ	A9 999 00/390K
C74	0,1 μF	A9 999 06/100K	R38	0,82 MΩ	A9 999 00/820K
C75	56000 pF	A9 999 06/56K	R39	1000 Ω	A9 999 00/1K
C150	100 pF	A9 999 04/100E	R40	1000 Ω	A9 999 00/1K
C151	100 μF	A9 999 09/B100	R41	0,33 MΩ	A9 999 00/330K
C152	8 μF	A9 999 11/L8	R42	220 Ω	A9 999 00/220E
C153	22 pF	A9 999 04/22E	R43	150 Ω	A9 999 00/150E
C154	10000 pF	A9 999 06/10K	R44	820 Ω	A9 999 00/820E
C155	8 μF	A9 999 11/L8	R45	68000 Ω	A9 999 00/68K
			R47	100 Ω	A9 999 00/100E
R1	1000 Ω	A9 999 00/470E+	R49	0,12 MΩ	A9 999 00/120K
		560E	R50	2200 Ω	A9 999 00/2K2
R1a	100 Ω	A9 999 00/47E+	R51	100 Ω	A9 999 00/100E
		56E	R52	1500 Ω	A9 999 00/1K5
R2	10000 Ω	A9 999 00/10K	R53	1500 Ω	A9 999 00/1K5
R3	1 MΩ	A9 999 00/1M	R54	10000 Ω	A9 999 00/10K
R4	0,1 MΩ	A9 999 00/100K	R55	1 MΩ	A9 999 00/1M
R5	22000 Ω	A9 999 00/22K	R56	0,27 MΩ	A9 999 00/270K
R6	150 Ω	A9 999 00/150E	R57	10 Ω	A9 999 00/10E
R7	1 MΩ	A9 999 00/1M	R58	0,15 MΩ	A9 999 00/150K
R8	39000 Ω	A9 999 00/39K	R60	100 Ω	A9 999 00/100E
R9	39000 Ω	A9 999 00/39K	R70	0,33 MΩ	A9 999 00/330K
R10	47000 Ω	A9 999 00/47K			
R11	1 MΩ	A9 999 00/1M	R150	68000 Ω	A9 999 00/68K
R12	1,2 MΩ	A9 999 00/1M2	R151	0,47 MΩ	A9 999 00/470K
R13	0,18 MΩ	A9 999 00/180K	R152	2200 Ω	A9 999 00/2K2
R14	2,7 MΩ	A9 999 00/2M7	R153	0,33 MΩ	A9 999 00/330K
R15	33000 Ω	A9 999 00/33K	R154	2,2 MΩ	A9 999 00/2M2
R16	0,8 MΩ		R155	1,5 MΩ	A9 999 00/1M5
R17	0,1 MΩ	B1 638 19	R156	0,22 MΩ	A9 999 00/200K
R17a	0,12 MΩ		R157	0,68 MΩ	A9 999 00/680K
R18	0,12 MΩ	A9 999 00/120K	R158	0,33 MΩ	A9 999 00/300K
R19	6800 Ω	A9 999 00/68K	R159	0,1 MΩ	A9 999 00/100K
R20	0,47 MΩ	A9 999 00/470K			
R21	0,33 MΩ	A9 999 00/330K			
R22	0,4 MΩ	A9 999 16/			
		GL40CK+1M6			



R 16555

I

F6 X 67A- 01

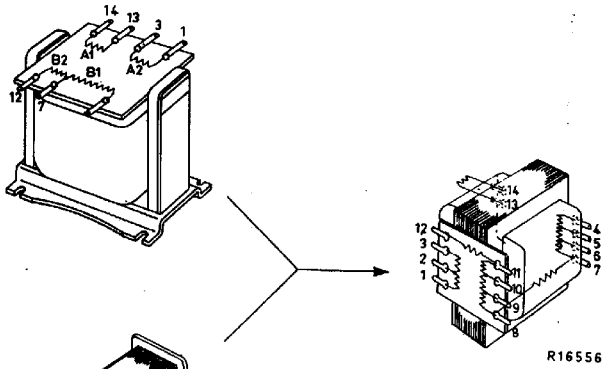
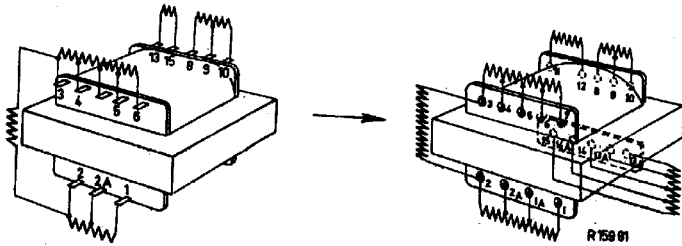


Fig.2

F6 X 67A - 01

II

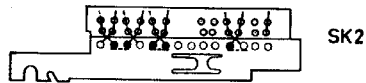
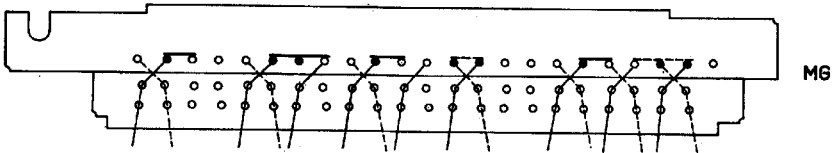
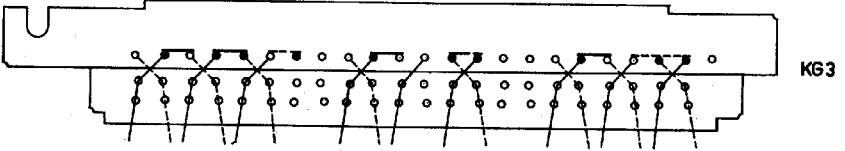
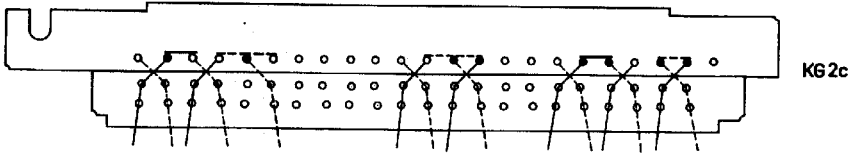
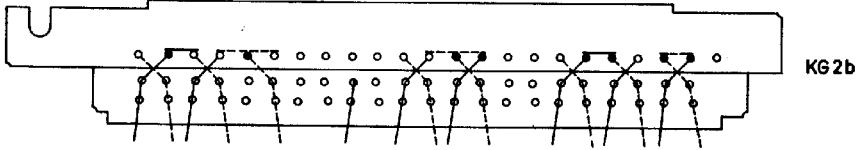
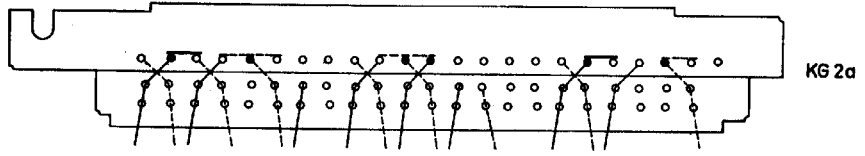


Fig.3

R 166 56

F6 X67A-01

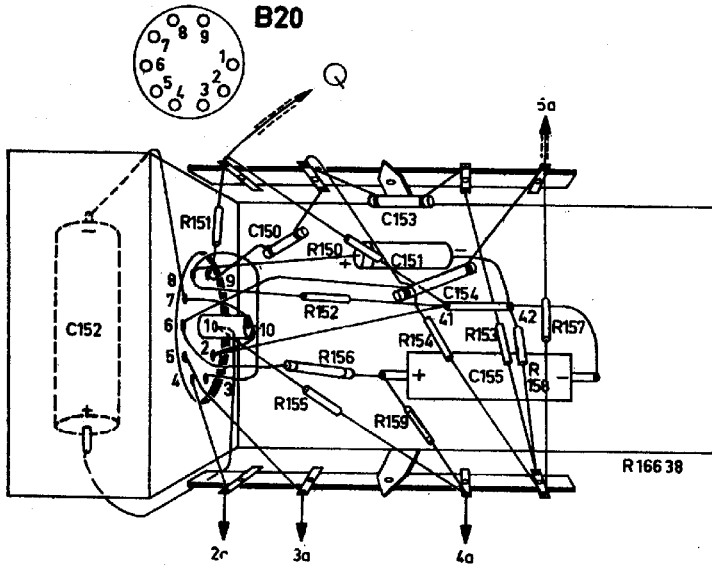
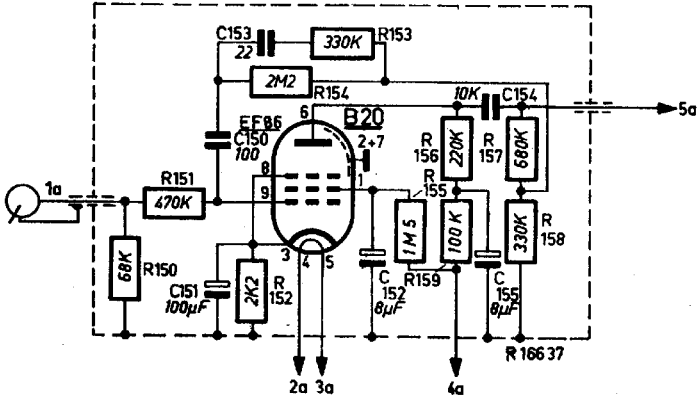


Fig.4

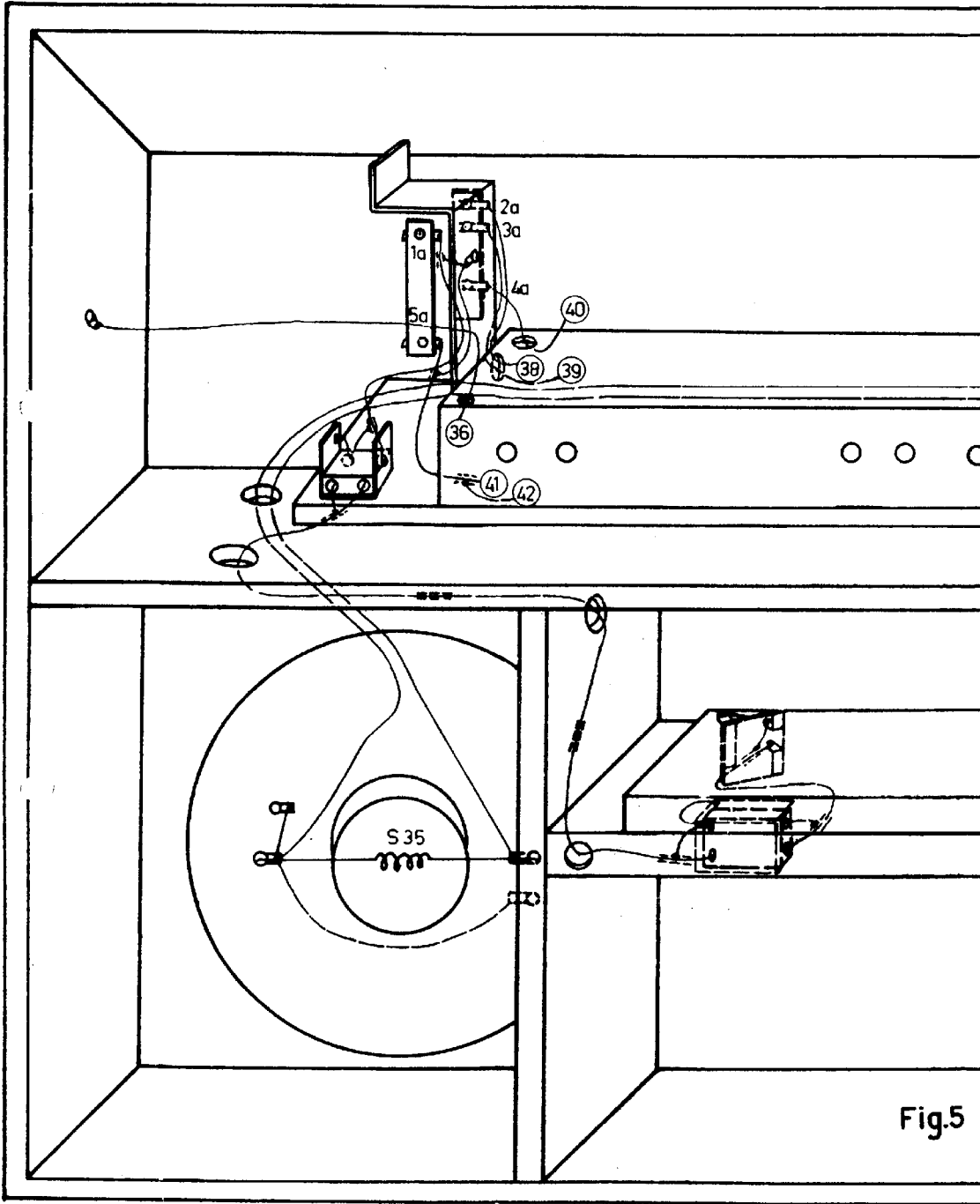
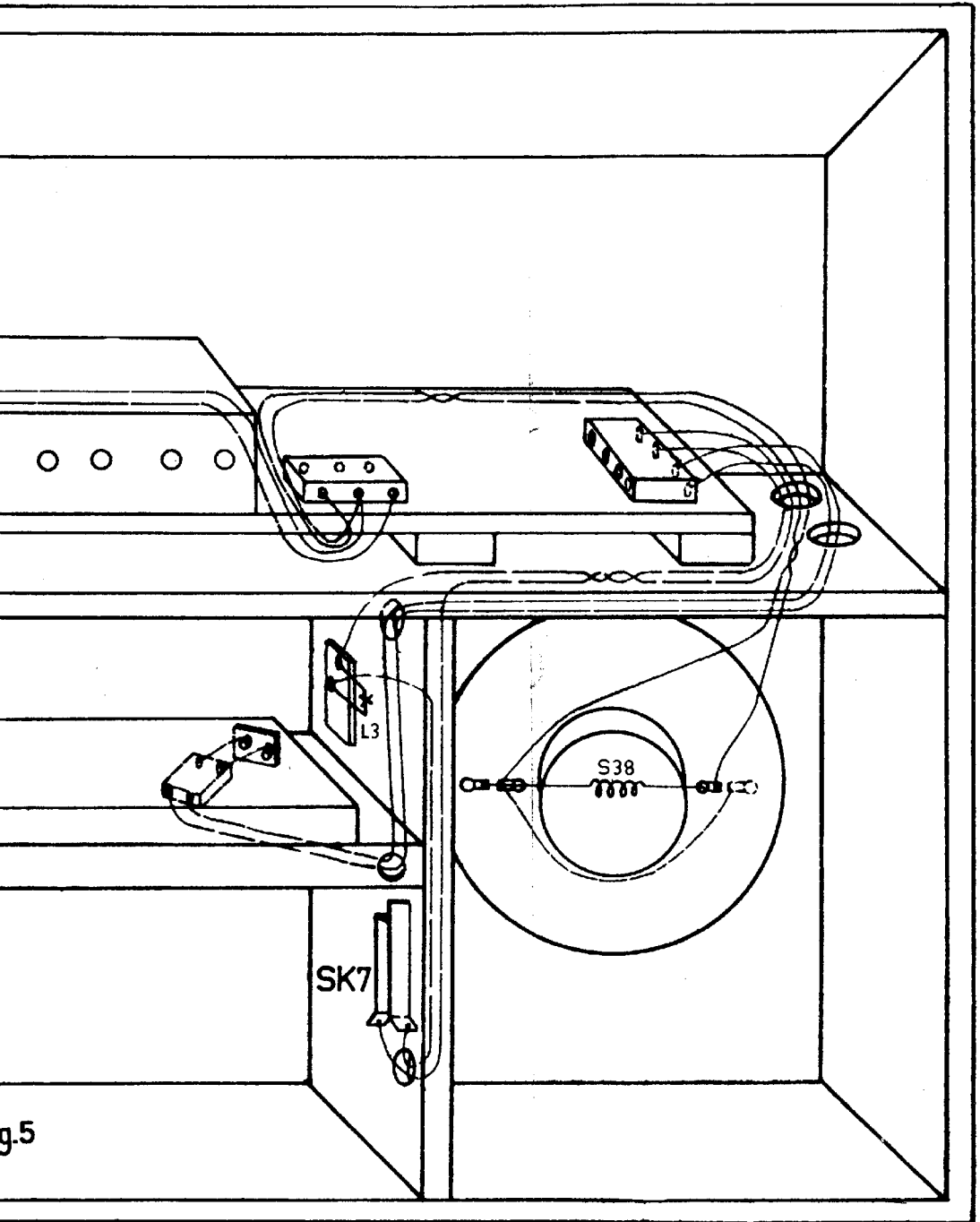


Fig.5



g.5

S															J. O. R. D.H.N.				C.G.F.L.M.																			
C	73	75,69	48	58	58	59	49,57	56	55	51	53	54	52	63	46	47	33	12	14	24	22	45	10	60	23	35	65	42	82	50								
R	22	23	15	51	42	54	50	43	41	17	16	37	40	35	38	31	39	26	33	28	25	21	56	27	49	29	30	70	13	14	44	18	58	45	34	24	12	11

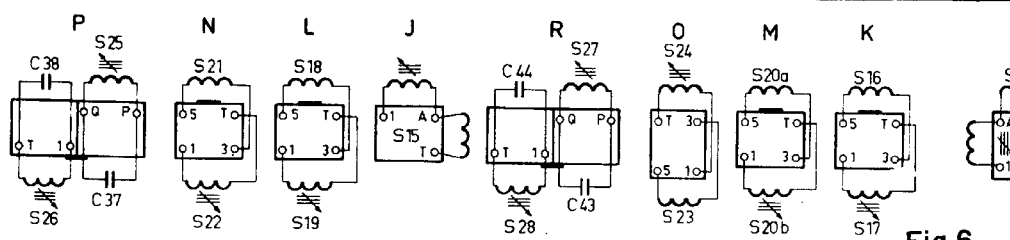
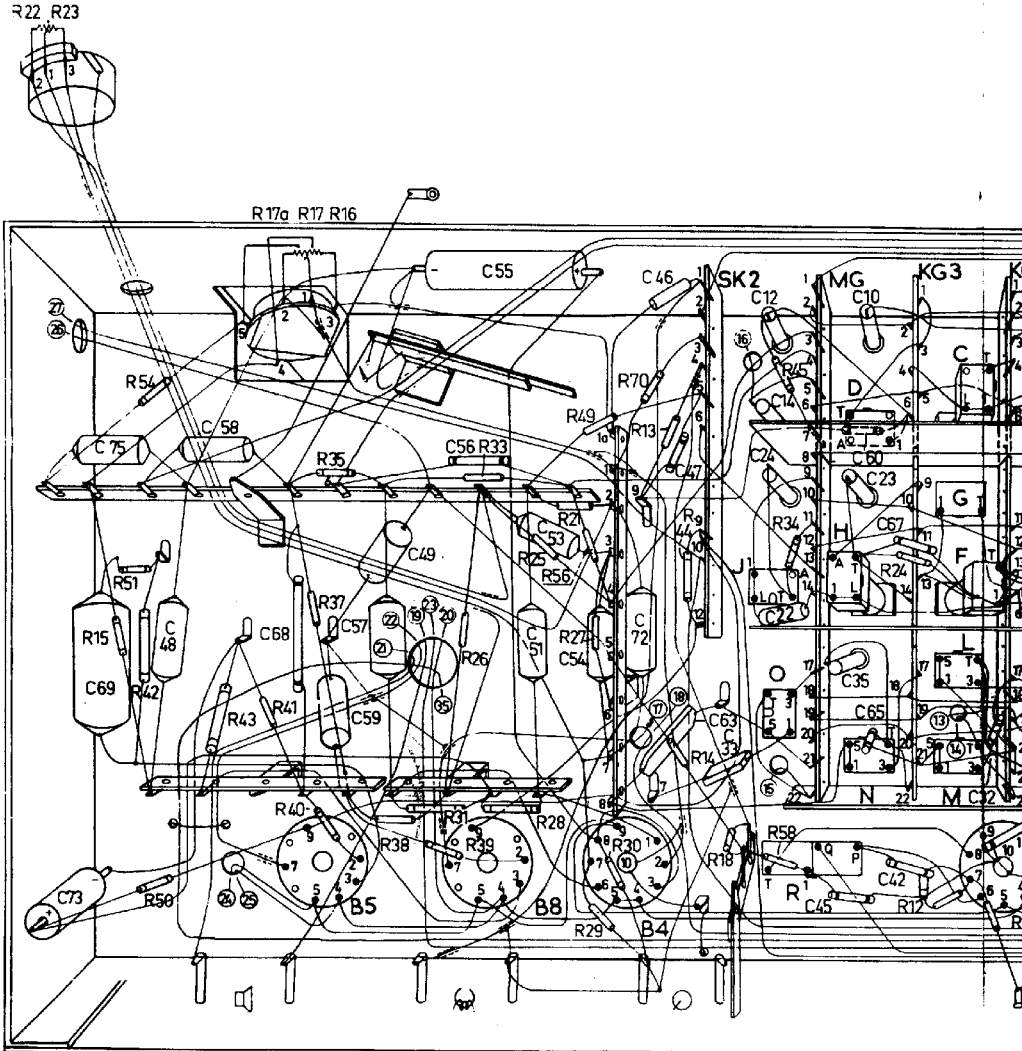
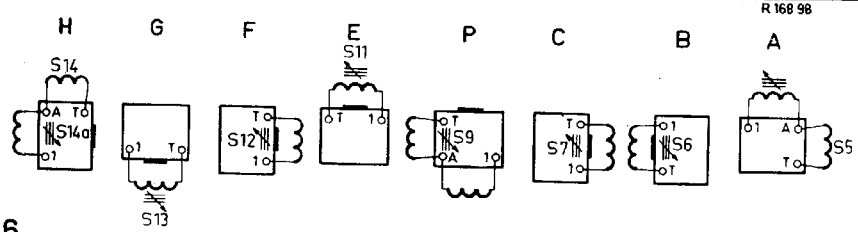
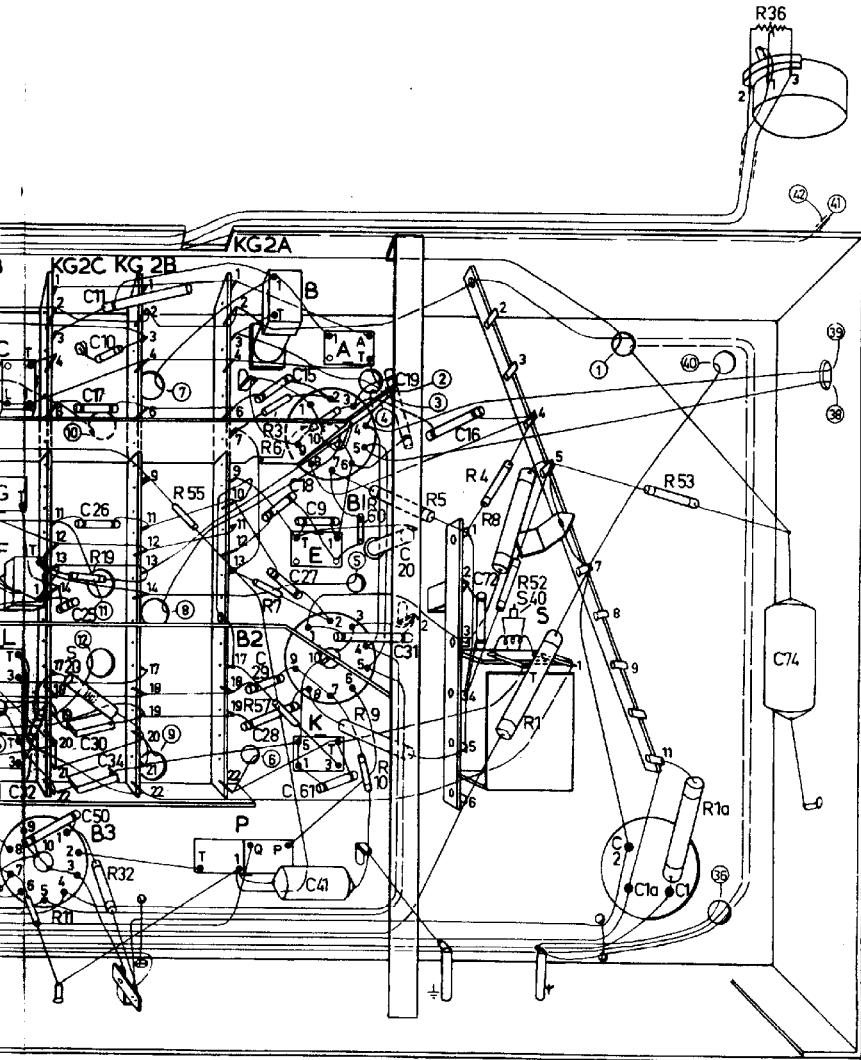
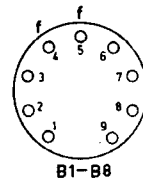
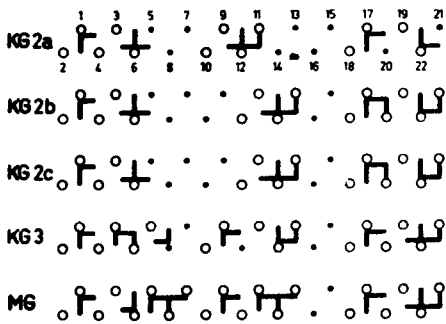
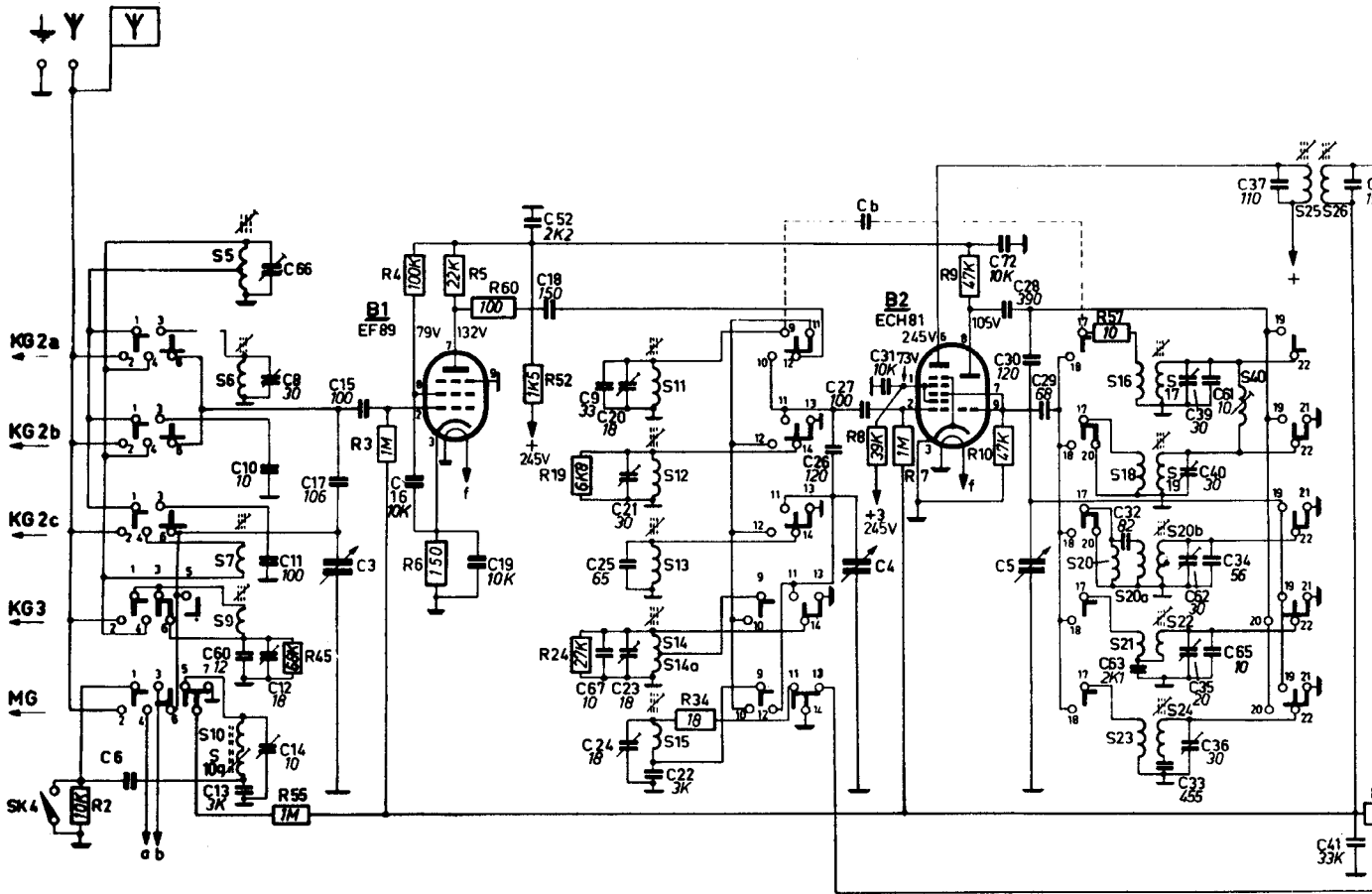


Fig.6

G.F.L.M.	20.	P. B. E. K. A.	S.
82.50.25.17.26.30.34.11.10.	15.29.28.18.27.9.41.61.20.31.19.	16. 72.	64. 2.1a. 1. 74.
12. 11. 19. 32.	55. 3.7.57.6.60.9. 10. 5.	4. 8.52.1.	53.1a. 36.



S	5679 10100	11-15										16-24	40	25 26										
C	6.64	6013661012	811143174	15	16	19	52.18	9.67	25.24	20.21	22.23	26.4	27.5	27.31	72.28	30.5	29	32.63	33.39	40.62	35.36	61.34	65.37	38.41
R	2	45	3	4.6	5	60.	52.19	24	34			8	7	9	10	57								



25	26	27	28																2.3	30	31	36	33	34	37	35	38																
34	65	37	38	41	42	74	43	50	45	44	49	48	75	46	51	73	47	53	52	54	55	2	57	1a	1	56	58	59	68	69	71												
11	12	32	38	37	58	18	13	14	15	54	16	17	16	70	49	20	21	28	50	22	23	27	31	29	30	1	25	26	33	56	1a	35	36	47	37	38	41	39	40	51	43	42	44

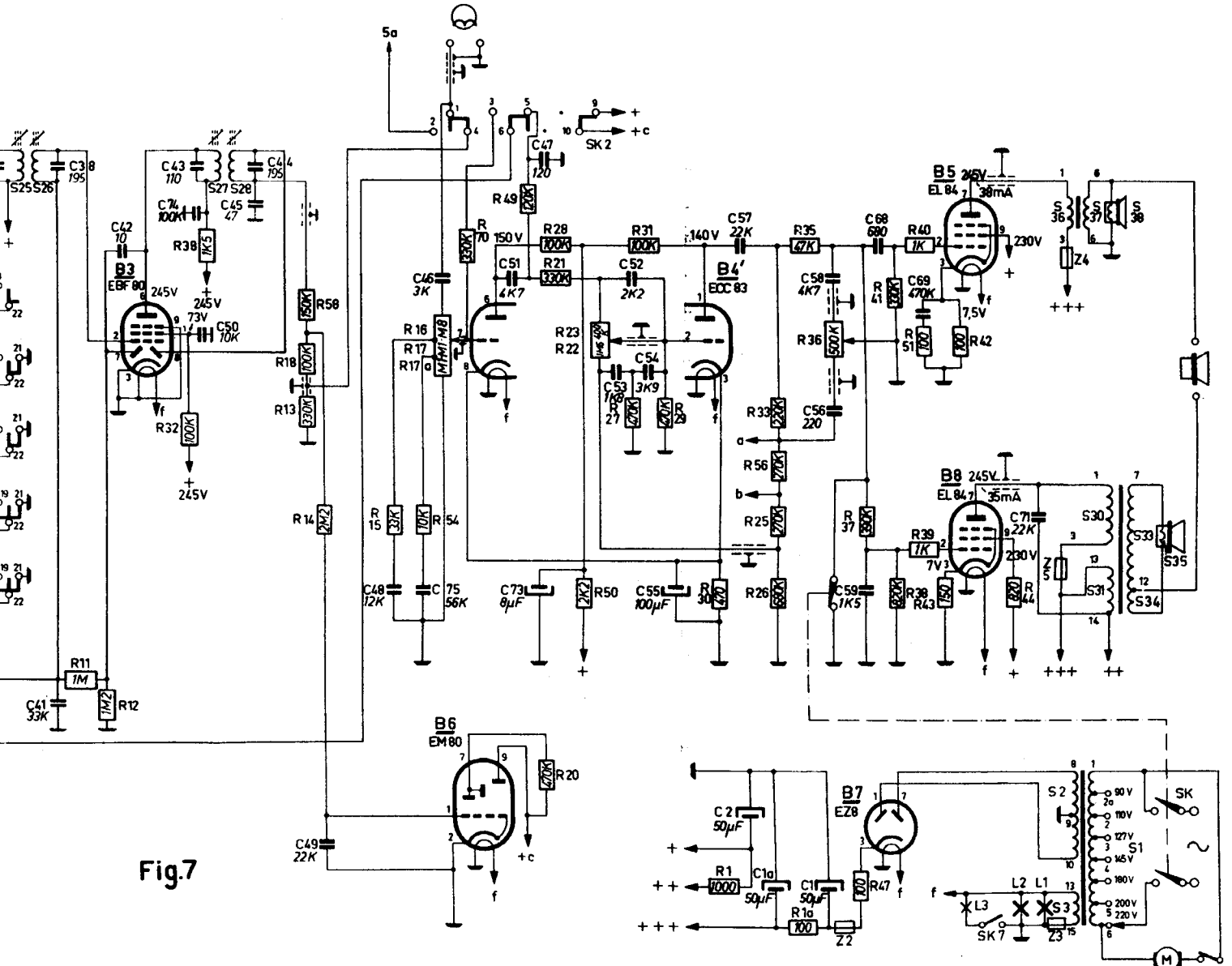


Fig.7

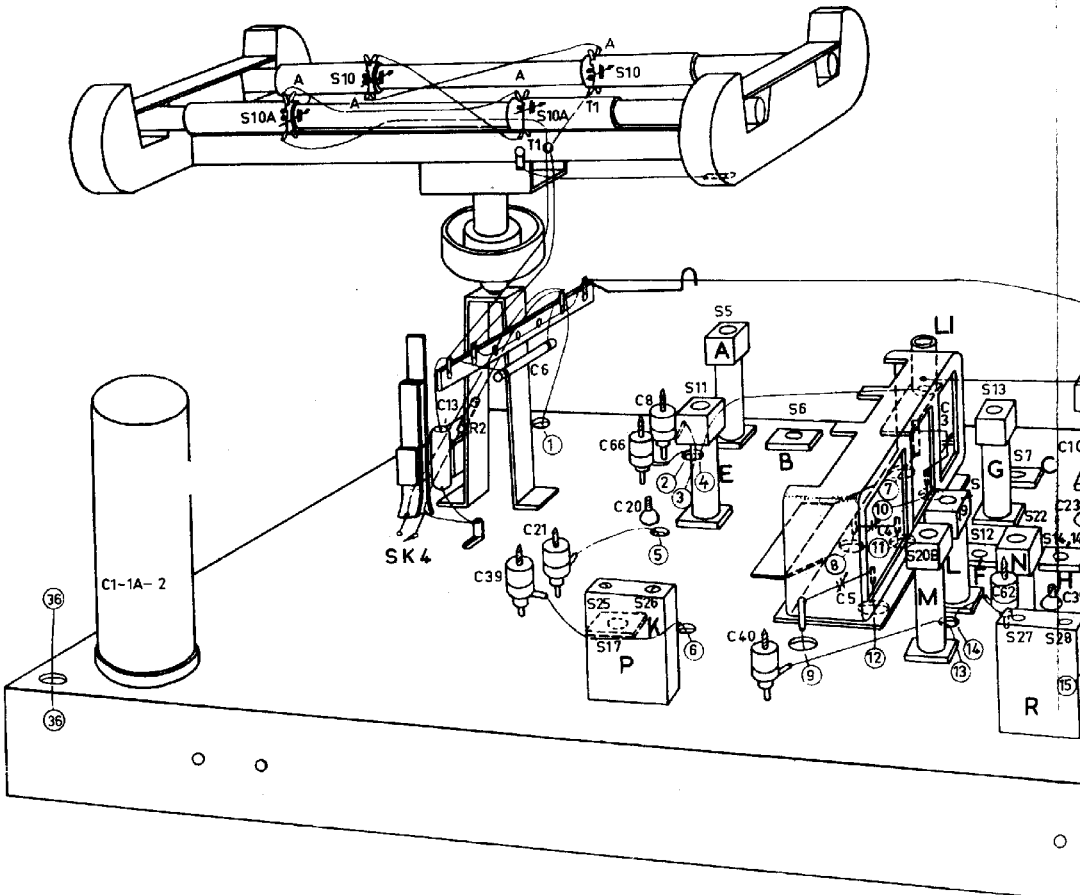


Fig. 8

