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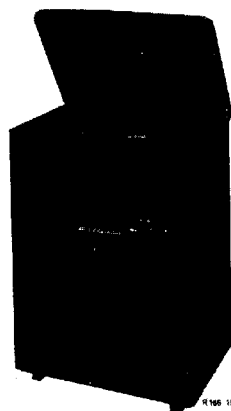
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SERVICE NOTES

for the radio-gramophone

F5X67A-01-61



1956.

For use on A.C. mains.

Knobs:

From left to right:

1. Bass-control.
- 2) Volume control and
- 3) mains switch
4. Tuning
5. Aerial tuning.
6. Treble control.

Push buttons

From left to right:

Pick-up

L.W.	: 746.3 - 2000 m	{ 402 - 150	kc/s
M.W.	: 185 - 580 m	{ 1622 - 517	kc/s
S.W.3	: 59 - 187 m	{ 5.1 - 1.6	Mc/s
S.W.2b	: 20 - 59 m	{ 15 - 5.05	Mc/s
S.W.2a	: 11.4 - 20 m	{ 26.3 - 15	Mc/s

Valves

B1 - ECH81	F5X67A-01	AG 1003-75	(50 c/s)
B2 - EBF80	F5X67A-61	AG 1003-46	(60 c/s)
B3 - ECC83			
B4 - EL86			
B5 - EL84			
B6 - EZ80			
B7 - EM80			
B8 - EFB4			

Bandwidth.

The I.F. bandwidth (1:10) measured from g1B1 is approx. 10 kc/s.
The "overall" bandwidth (1:10) measured with the signal on the aerial socket is about $9\frac{1}{2}$ kc/s, at 1000 kc/s.

I.F. : 452 kc/s.

Mains voltages

90-110-127-145-190-220V.

Power consumption

Approx. 60 Watt (220 V).

Loudspeaker

AD 3800 AM

Dial lamps

L1 - 8024 N - 778
L2 - 8024 N - 778

Dimensions

Width : 605 mm
Height : 870 mm
Depth : 400 mm

Trimming the receiver.General

Volume control to maximum.

Tone controls to maximum high and maximum low.

Connect a voltmeter across the external loudspeaker connections.

Unless otherwise stated, all signals are applied to the aerial socket via a dummy aerial.

When adjusting one makes use of trimming points on the dial.

Trimming point 1 is situated entirely at the left on the dial.

Trimming point 2 is situated entirely at the right on the dial.

Before trimming, adjust the pointer at minimum position of the variable capacitor to trimming point 1.

Before trimming the I.F. bandfilters, unscrew the cores of S22, S21,

S19, S20, S17, S17a as far as possible.

	Wave-range	Trimming point	Signal	Trim	Indication	
I.F. bandfilters	M.W.	1	452 kc/s via 33000 pF to g ¹ -B1	S22 S21 S19 S20 S21	Max. output voltage	
Series tuned I.F. filter and wavetrap	M.W.	2	452 kc/s	S17 S17a	Min. output voltage	
R.F. and oscillator circuits.	L.W.	2	172 kc/s	S33 S29-S29a	Repeat	Max. output voltage
		1	405 kc/s	C44 C38		
	M.W.	2	600 kc/s	S31 S28-S28a	Repeat	Max. output voltage
		1	1630 kc/s	C14 C10		
	S.W.3	2	1.9 Mc/s	S16 S9	Repeat	Max. output voltage
		1	5.15 Mc/s	C13 C9		
	S.W.2b	2	6 Mc/s	S14 S7	Repeat	Max. output voltage
		1	15.1 Mc/s	C12 C8		
	S.W.2a	2	15.66 Mc/s	S12 S5	Repeat	Max. output voltage
		1	26.4 Mc/s	C11 C7		

Driving cables.

The path and the length of the driving cables are given in fig. 2. The variable capacitor has been drawn here in maximum position, the ferroceptor in middle position.

Waverange switch wafer	Function
SK1	Pick-up
SK2	L.W.
SK3	M.W.
SK4	S.W.3
SK5	S.W.2b
SK6	S.W.2a

All waverange switch wafers are drawn in position "off".

Power transformer

If the original supply transformer becomes defective, it should be replaced by the respective service transformer mentioned in the electrical parts list.

LIST OF PARTS

When ordering, always quote:

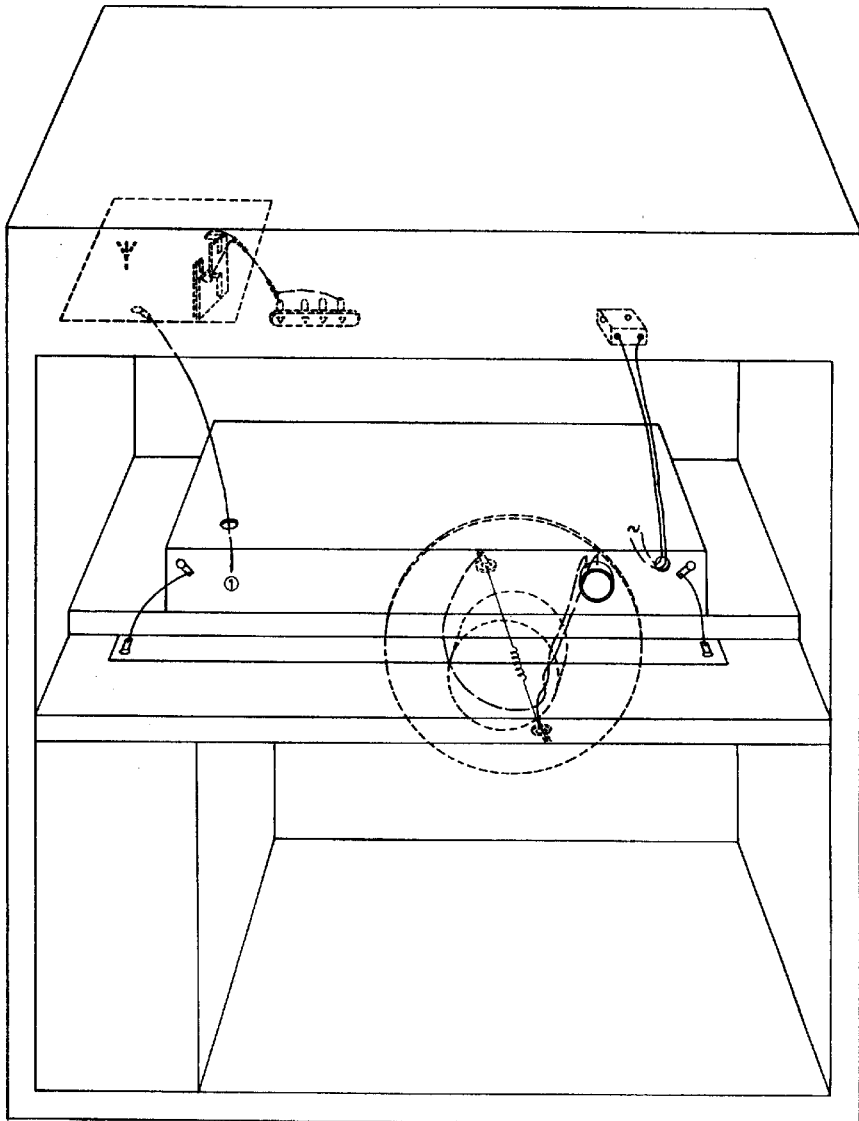
1. Code number.
2. Description and colour.
3. Type number of the receiver.

Description	Code number
Push button	A3 417 61.0
Knob (tuning)	A3 751 59.0
Knob (volume control, small)	A3 751 59.0
Knob (volume control, large)	A3 752 27.0
Knob (aerial tuning)	A3 751 61.0
Leaf spring (in large knob, right)	A3 650 18.0
Leaf spring (in small knob)	A3 522 08.0
Knob (tone control)	A3 752 69.0
Voltage adaptor	A3 228 85
Pression spring (push button unit)	A3 644 85.0
Driving drum (ferroceptor)	P4 380 53.0
Connection for external loudspeaker (800 Ω)	A3 410 65.0
Dial	A3 808 07
Var. capacitor	49 001 940
Spring (changer)	A3 758 40
Rubber tulle (dial fixing)	P5 420 05/08
Ring (45 r.p.m. records)	P4 380 39/17
	FW/HDK

S1)			C13	22 pF	A9 999 08/22E
S2)		A3 141 37.5	C14	22 pF	A9 999 08/22E
S3)			C16	270 pF	A9 999 04/270E
S4)			C17	150 pF	A9 999 04/150E
S5)		A3 118 40.0	C18	10 pF	A9 999 04/10E
S6)			C19	68 pF	A9 999 04/68E
S7)		A3 118 41.0	G20	56 pF	A9 999 04/56E
S8)		A9 999 21/	G21	39000 pF	A9 999 06/39K
S9)		60-187m	G22	470 pF	A9 999 04/470E
S10)			G23)	See coils	
S11)		A3 127 58.0	G24)	voir bobines	
S12)				Veanse bobinas	
S13)			G25	10000 pF	A9 999 04/10K
S13a)		A3 125 58.0	G26)	See coils	
S14)			G27)	voir bobines	
S15)		A9 999 23/60-		Veanse bobinas	
S16)		187m	C28	82 pF	A9 999 04/82E
S17)			C30	12000 pF	A9 999 06/12K
S17a)		A3 118 80.0	C31	10000 pF	A9 999 04/10K
S19)			C32	22000 pF	A9 999 06/22K
S20)			C33	2700 pF	A9 999 06/2K7
G23)	110 pF	A9 999 25/452	C34	2200 pF	A9 999 06/2K2
G24)	195 pF		C35	4700 pF	A9 999 06/4K7
S21)			C36	2200 pF	A9 999 06/2K2
S22)		A9 999 25/452	C37	680 pF	A9 999 04/680E
S26)	110 pF		C38	22 pF	A9 999 08/22E
S27)	195 pF		C39	68 pF	A9 999 04/68E
S28)		A3 118 35.0	C40	120 pF	A9 999 04/120E
S28a)			C41	2200 pF	A9 999 05/2K2
S29)			C42	455 pF	A9 999 05/430E
S29a)		A3 118 54.0		par	A9 999 05/24E
S30)			C43	180 pF	A9 999 05/180E
S31)		A3 125 93.0	C44	22 pF	A9 999 08/22E
S32)		A9 999 23/	C45	56 pF	A9 999 04/56E
S33)		780-2000m	C46	12000 pF	A9 999 06/12K
C1)	50 μF		C47	22000 pF	A9 999 04/22K
C1a)	50 μF	A9 999 13/M	C48	200 pF	A9 999 05/200E
C2)	50 μF	50+50+50	C49	15 pF	A9 999 04/15E
C3)			C50	18 pF	A9 999 04/18E
C4)		A9 001 94.0	C51	10 pF	A9 999 04/10E
C5	3000 pF	A9 999 05/3K	C52	1000 pF	A9 999 06/1K
C6	12 pF	A9 999 04/12E	C53	4700 pF	A9 999 06/4K7
C7	22 pF	A9 999 08/22E	C54	10 μF	A9 999 09/E10
C8	22 pF	A9 999 08/22E	C55	8 μF	A9 999 11/L8
C9	22 pF	A9 999 08/22E	C56	10000 pF	A9 999 04/10K
C10	12 pF	XU 052 16	C57	5.6 pF	A9 999 04/5E6
C11	30 pF	A9 999 08/30E	C150	100 pF	A9 999 04/100E
C12	30 pF	A9 999 08/30E	C151	100 μF	A9 999 09/B100
			C152	8 μF	A9 999 11/L8
			C153	22 pF	A9 999 04/22E
			C154	10000 pF	A9 999 04/10K
			C155	8 μF	A9 999 11/L8
			R1	400 Ω 3x	49 379 78 par.

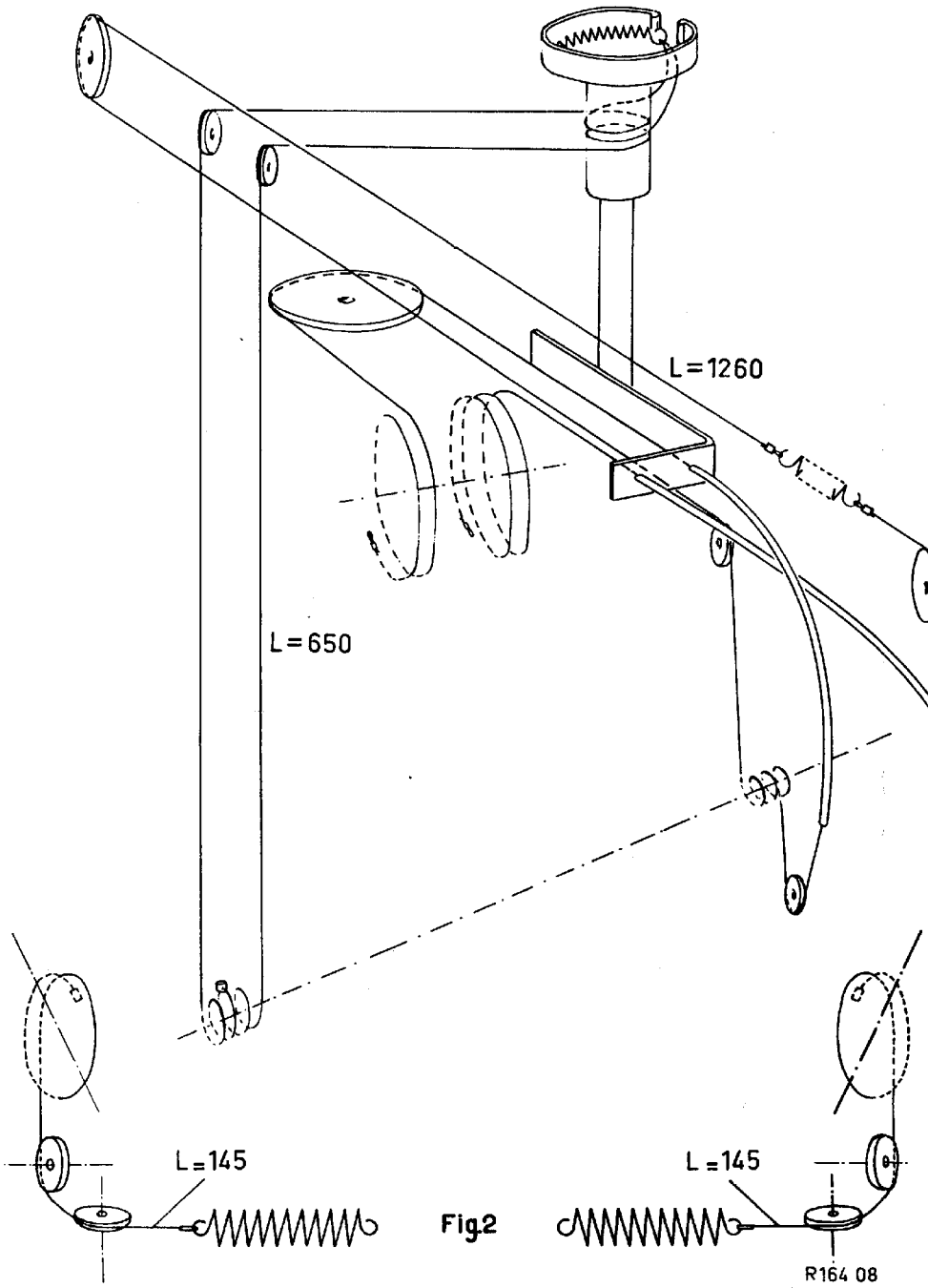
R2	33000	Ω	A9 999 00/33K	R31	47000	MΩ	A9 999 00/47K
R3	10	MΩ	A9 999 00/10M	R32	0.45	kΩ	B1 639 49.0
R4	39000	Ω	A9 999 00/39K	R33	0.05	MΩ	
R5	33000	Ω	A9 999 00/33K	R35	0.47	MΩ	A9 999 00/470K
R6	0.1	MΩ	A9 999 00/100K	R36	3.9	MΩ	A9 999 00/3M9
R7	2.7	MΩ	A9 999 00/2M7	R37	1000	Ω	A9 999 00/1K
R8	0.18	MΩ	A9 999 00/180K	R38	1000	Ω	A9 999 00/1K
R9	0.27	MΩ	A9 999 00/270K	R39	390	Ω	A9 999 00/390K
R10	22000	Ω	A9 999 00/22K	R40	180	Ω	A9 999 00/180K
R11	6800	Ω	A9 999 00/6K8	R41	1800	Ω	49 380 26
R12	0.8	MΩ	B1 513 57	R42	100	Ω	B1 636 25
R13	0.1	MΩ					
R14	0.1	MΩ					
R15	1	MΩ					
R16	1000	Ω	A9 999 00/1M	R44	0.47	MΩ	A9 999 00/470K
R17	1000	Ω	A9 999 00/1K	R45	47000	Ω	A9 999 00/47K
R18	0.1	MΩ	A9 999 00/100K	R50	100000	Ω	A9 999 00/100K
R19	0.1	MΩ	A9 999 00/100K	R150	68	kΩ	A9 999 00/68K
R20	0.33	MΩ	A9 999 00/330K	R151	470	kΩ	A9 999 00/470K
R21	0.47	MΩ	A9 999 00/470K	R152	2.2	kΩ	A9 999 00/2K2
R22	1.6	MΩ	B1 639 48.0	R153	330	kΩ	A9 999 00/330K
R23	0.4	MΩ					
R24	39000	Ω	A9 999 00/220K	R154	2.2	MΩ	A9 999 00/2M2
		par(A9 999 00/47K	R155	100	kΩ	A9 999 00/100K
R25	3.9	MΩ	A9 999 00/3M9	R156	220	kΩ	A9 999 00/220K
R26	1500	Ω	A9 999 00/1K5	R157	680	kΩ	A9 999 00/680K
R27	12000	Ω	A9 999 00/12K	R158	330	kΩ	A9 999 00/330K
R28	0.68	MΩ	A9 999 00/680K	R159	1.5	MΩ	A9 999 00/1M5
R29	0.22	MΩ	A9 999 00/220K				
R30	0.27	MΩ	A9 999 00/270K				

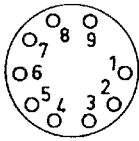
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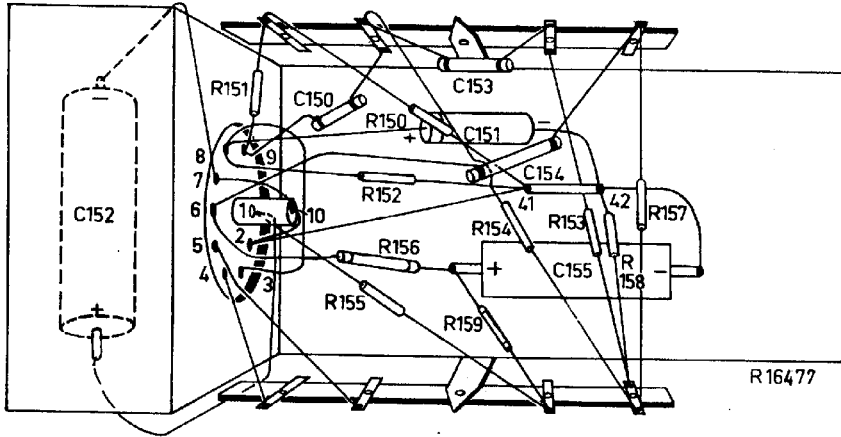
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Fig.1





B8



L=635

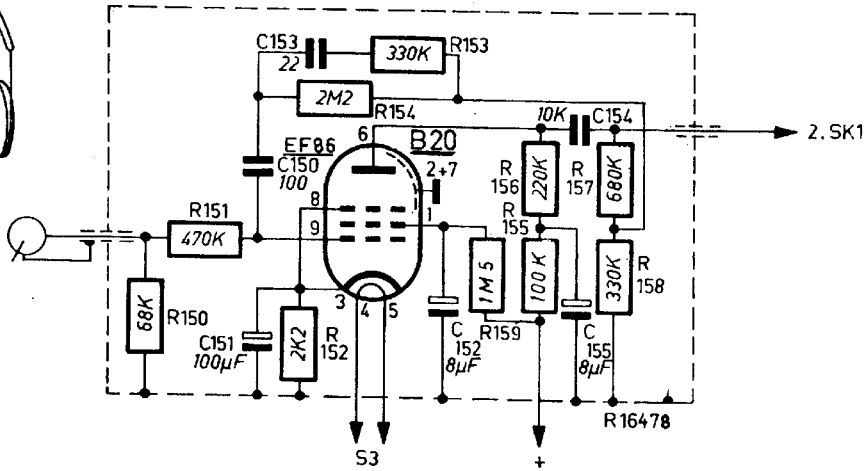
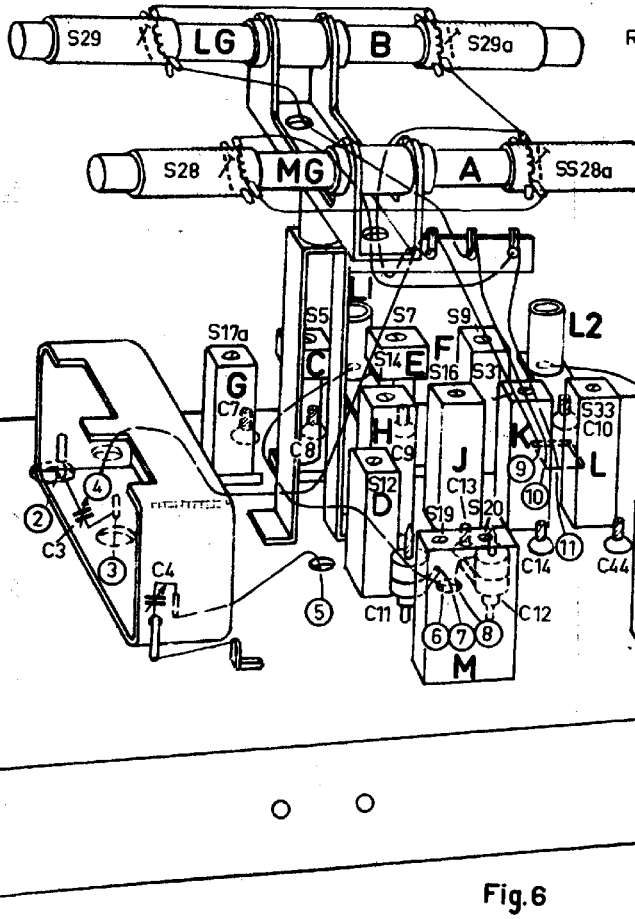
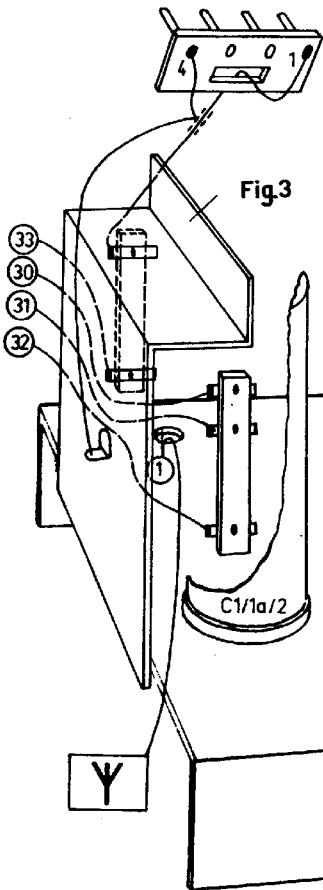
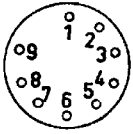
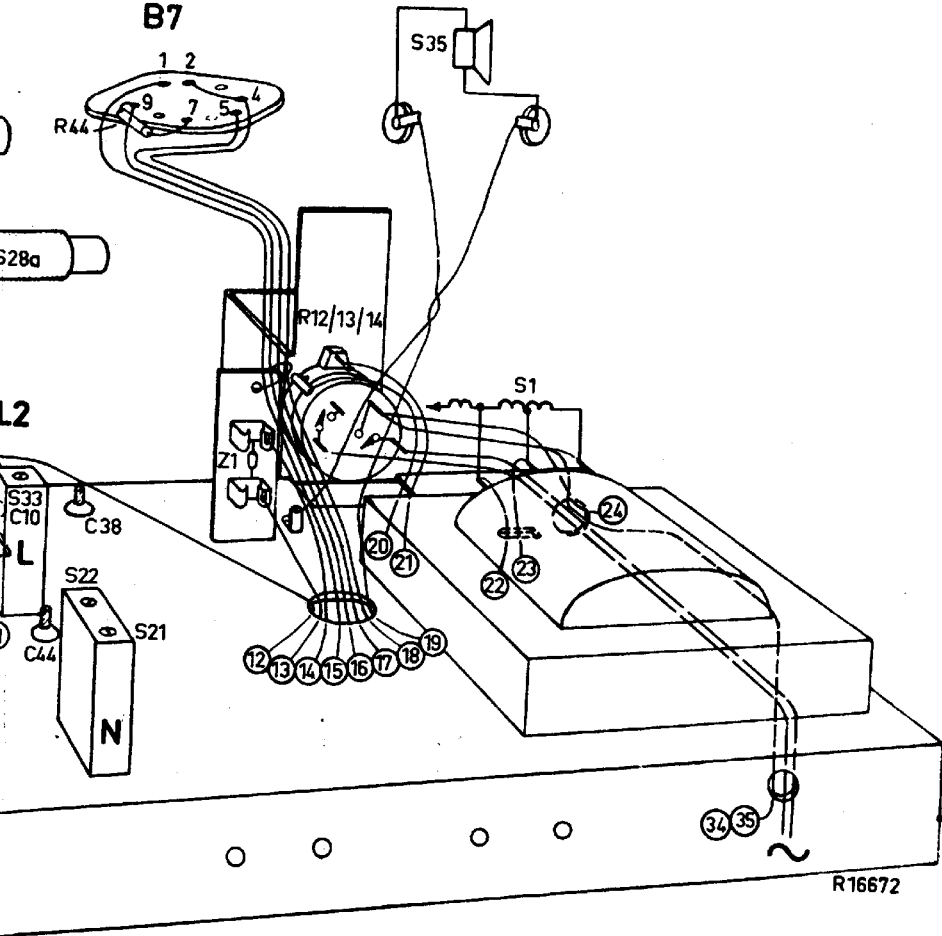


Fig.3





B7



K.	F.	J.	E.A.M.	D.	C.	G.	
28.	42.	13.	25.	41.	57.	9.	51.
	49.	50.	40.	21.	17.	8.	39.
	22.	6.	7.	5.	46.		1a.
							1.2.
							1b.
							1. 42.43.24. 33. 32.

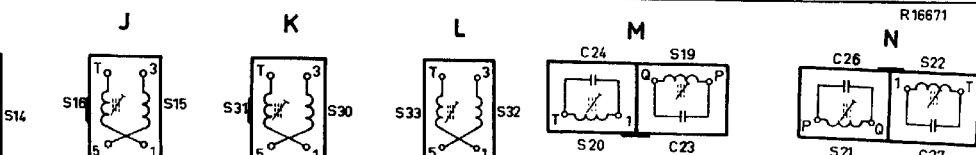
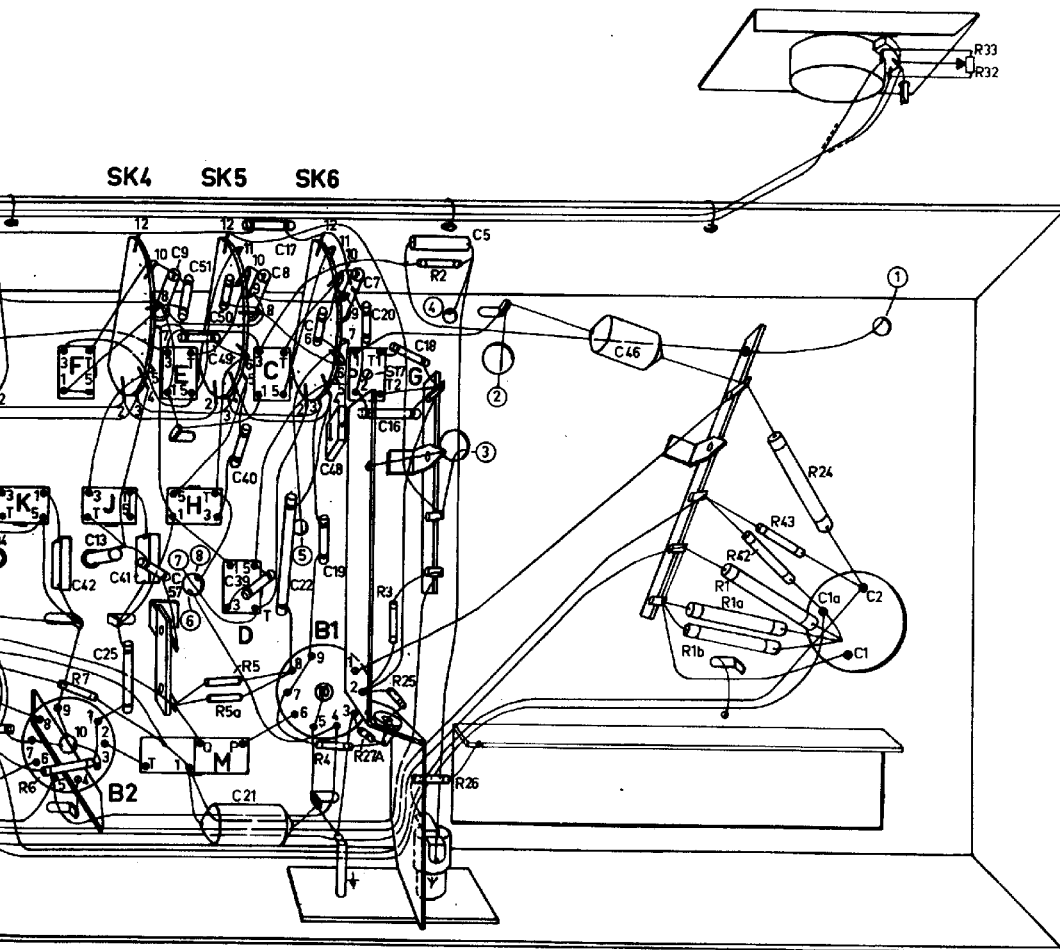


Fig.5