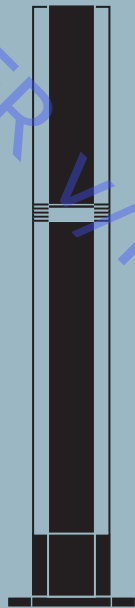


## Beolab Penta

Type 6601, 6602, 6603, 6604, 6605

## Beovox Penta

Type 6611



ABO-CENTER  
V. HENRIKSENS  
ELEKTRONIK

## INDHOLD

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## DIAGRAMFORKLARING

På diagrammet er der angivet typenumre på transistorer og IC'er i de tilfælde hvor typenummeret er entydigt for komponenters placering i kredsløbet – f.eks. TR20/BC 557B

Hvis positionsnummeret er efterfulgt af en stjerne skal reservedelsnummeret benyttes, da denne komponent er specielt udvalgt – f.eks. TR102\*.

## Koordinatsystem

De største printplader er forsynet med et koordinatsystem. Komponenterne på disse printplader er på diagrammet forsynet med en koordinatbetegnelse, som fortæller i hvilket felt på printpladen de er placeret (mindre skrifttype end positionsnummeret – f.eks. B3).

## Ledningsforbindelser

Ledningsforbindelser på diagrammet er samlet i »bundter«. De enkelte ledninger er forsynet med koder, der fortæller hvortil de går.

INTERN FORBINDELSE  
PÅ EN DIAGRAMSIDE

Interne forbindelser på en diagramside angives med et tal. Knækket på ledningen viser i hvilken retning den anden ende af ledningen findes.

## EXPLANATION OF DIAGRAM

Type numbers of transistors and IC's have been indicated on the diagram in those cases where the type number is unambiguous for the position of the component in a circuitry – e.g. TR20/BC 557B.

If the position number is followed by an asterisk the spare part number **must be used** because this component has been especially selected – e.g. TR102\*.

## System of Co-ordinates

The largest PC-boards have been provided with a coordinate system. The components on these PC-boards are provided with a grid reference on the diagram indicating in what grid they are positioned on the PC-board (smaller typing than position numbers – e.g. B3).

## Wiring Connections

The wiring connections on the diagram are assembled in »bundles«. The individual wires are coded to indicate to where they are leading.

INTERNAL CONNECTION  
ON ONE DIAGRAM PAGE

Internal connections on a diagram page are indicated by a number. The bend of the wire indicates in which direction the other end of the wire may be found.

## Forsyningsspændinger

En pil og spændingen viser, hvor forsyningsspændingerne går ind i et print.

Eksempel: (7 CON.) feks. ved siden af forsyningsspændingen angiver det antal stedet, spændingen går ind på denne diagramside.

## Supply Voltage

An arrow and the voltage show where the supply voltages are fed to a PCB.

Example: (7 CON.) next to the supply voltage indicates the number of places where to find the voltages in this diagram.

## Symbol for sikkerhedskomponenter

Ved udskiftning af komponenter med dette symbol skal der anvendes komponenter med samme reservedelsnummer. Den nye komponent skal monteres på samme måde som den udskiftede.

## MÅLEBETINGELSER

Alle DC spændinger er målt i forhold til stel, med voltmeter med en indgangsmodstand på 10 Mohm.

Spændingerne er målt uden signaltilføring.

## Symbol for Safety Components



When replacing components with this symbol components with identical part numbers are to be used. The new component must be fitted in the same way as the one replaced.

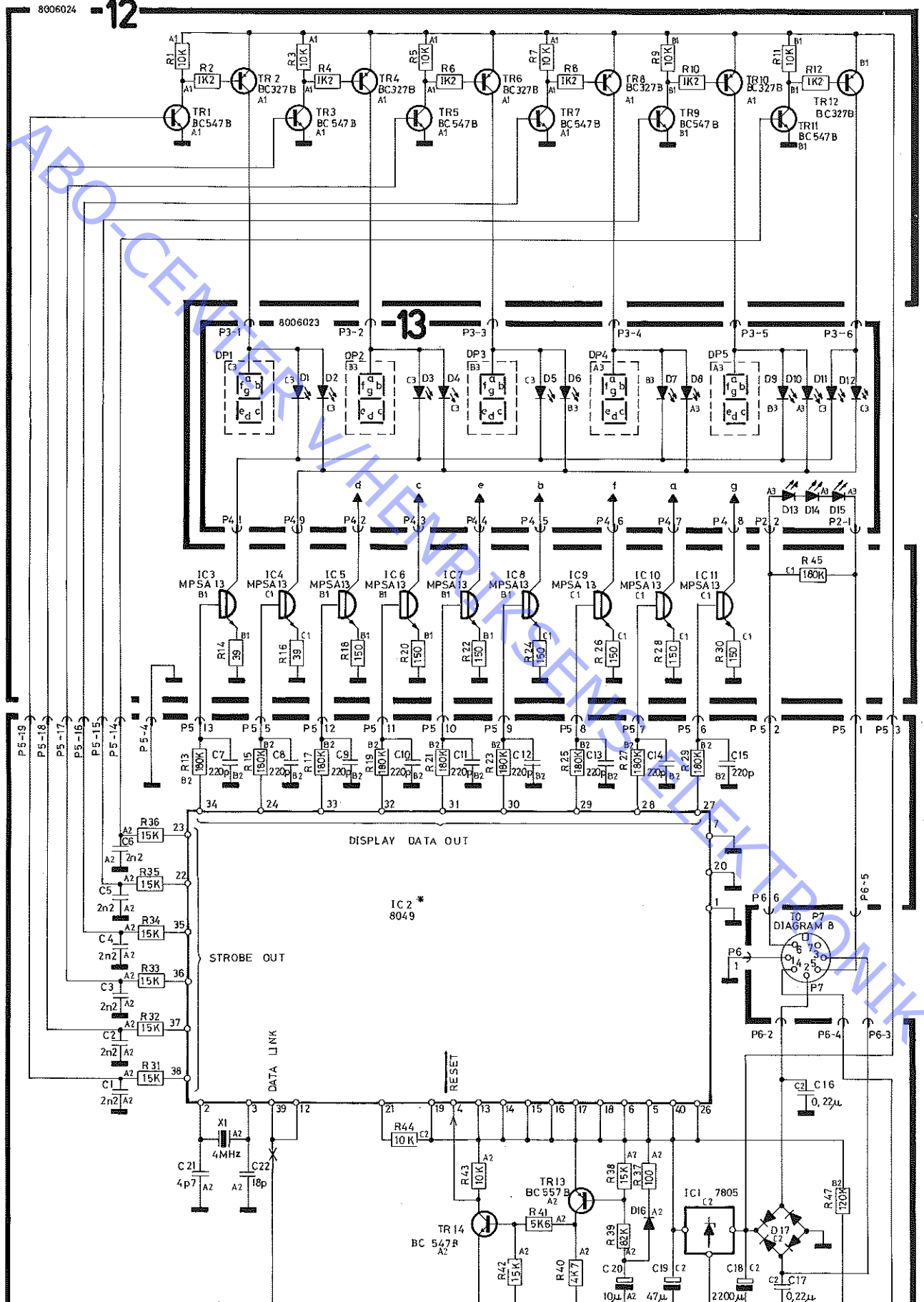
## MEASURING CONDITIONS

All DC voltages have been measured in relation to ground with voltmeter with an input resistance of 10 Mohms.

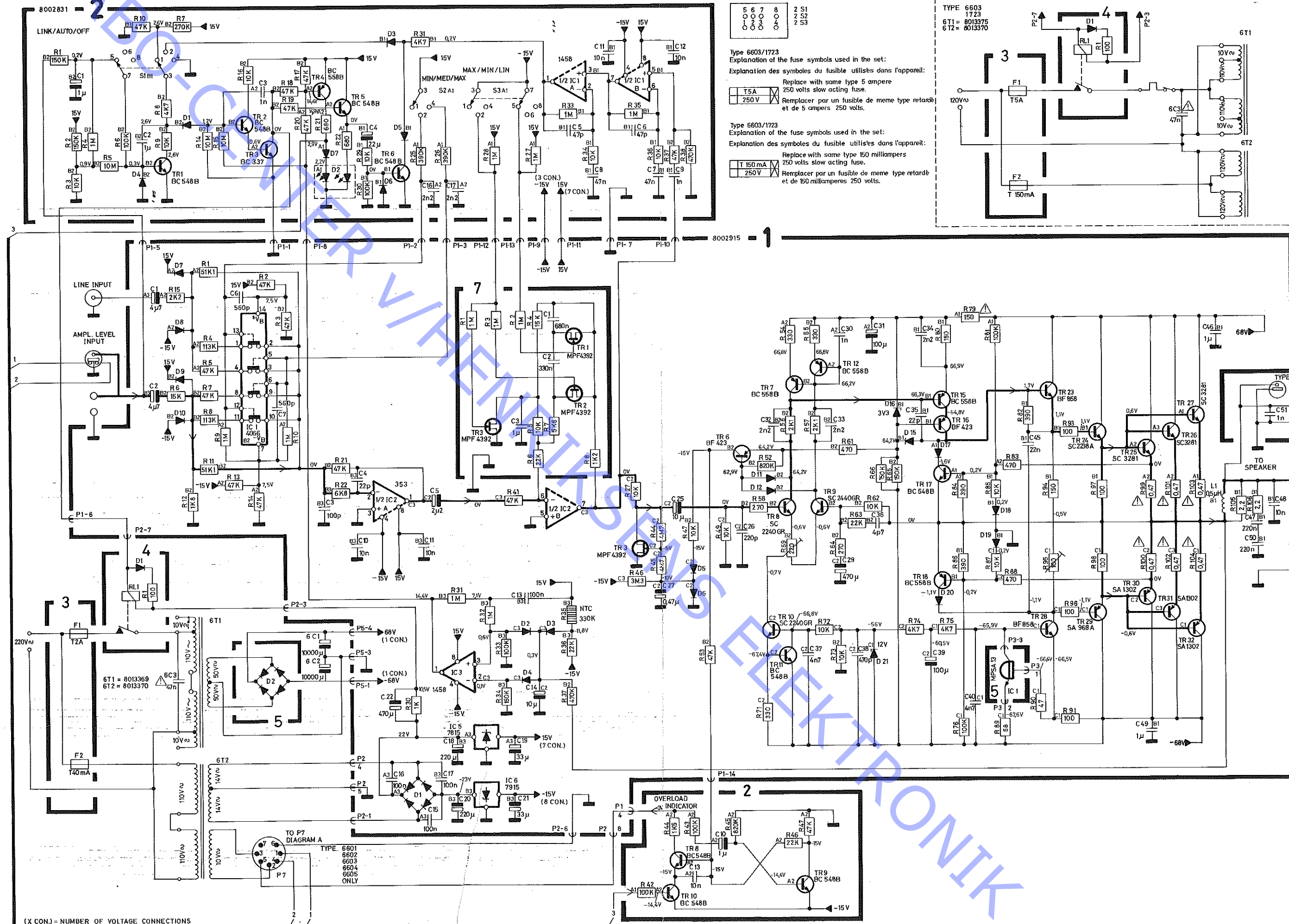
The voltages have been measured without any supply of signal.

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DIAGRAM A, Display



### DIAGRAM B, Amplifier and Power Supply



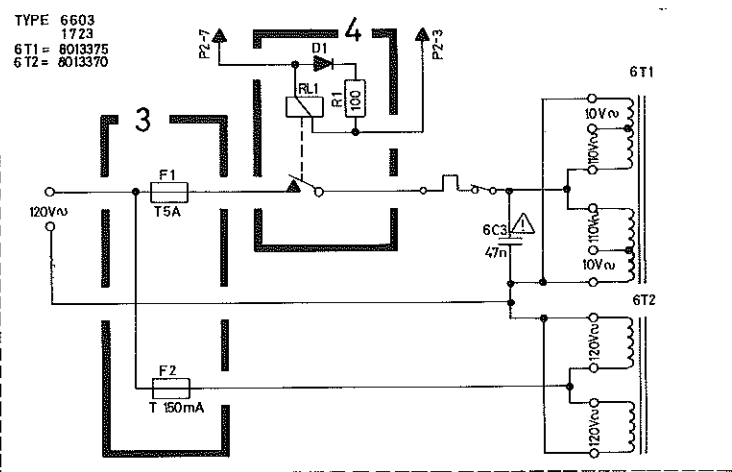
5	6	7	8	2	51
0	0	0	0	2	52
0	0	0	0	2	53

Type 6603/1723  
Explanation of the fuse symbols used in the set:  
Explanation des symboles du fusible utilisés dans l'appareil:

Replace with same type 5 ampere  
250 volts slow acting fuse.  
Remplacer par un fusible de meme type retardé  
et de 5 ampères 250 volts.

Type 6603/1723  
Explanation of the fuse symbols used in the set:  
Explanation des symboles du fusible utilisés dans l'appareil:

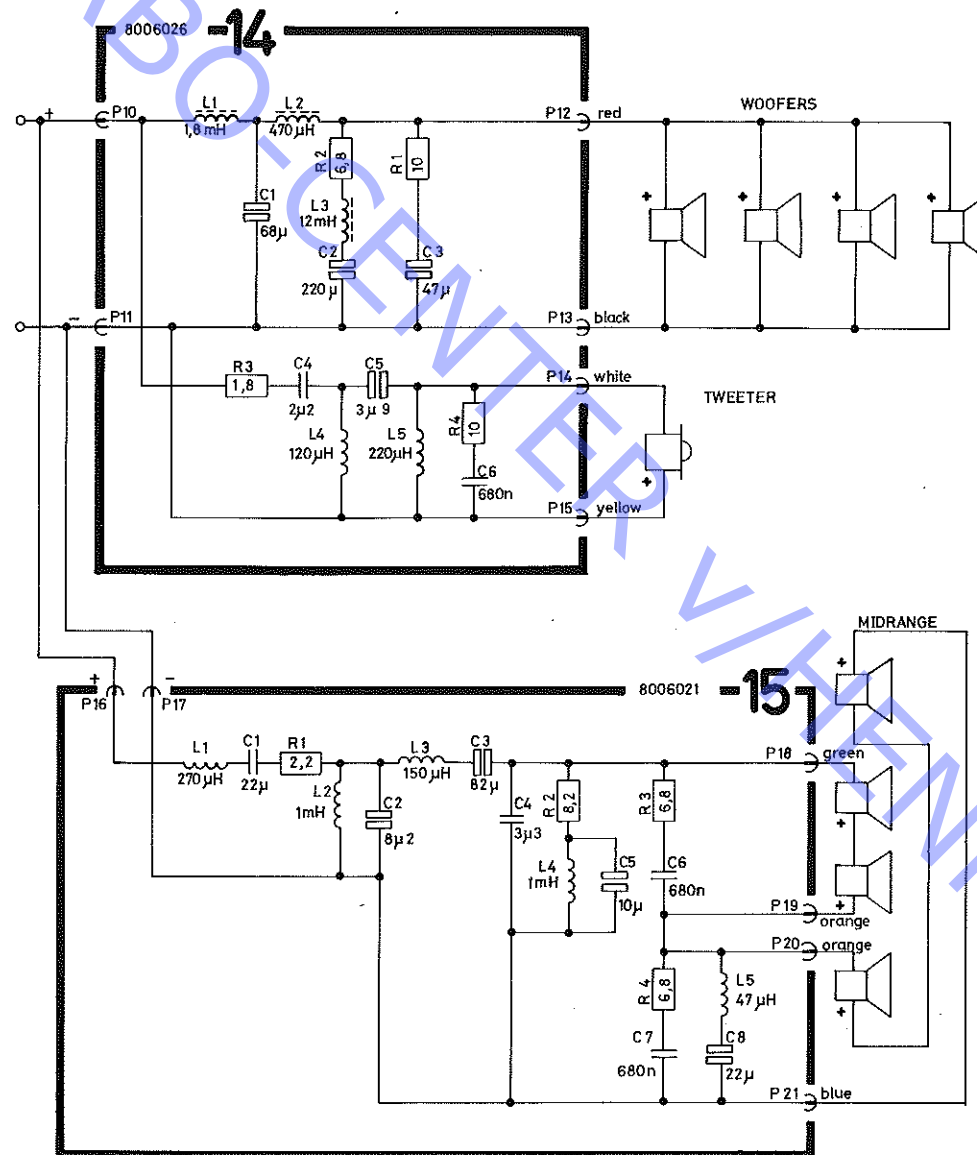
Replace with same type 150 milliamperes  
250 volts slow acting fuse.  
Remplacer par un fusible de meme type retardé  
et de 150 milliamperes 250 volts.



(X CON.) = NUMBER OF VOLTAGE CONNECTIONS

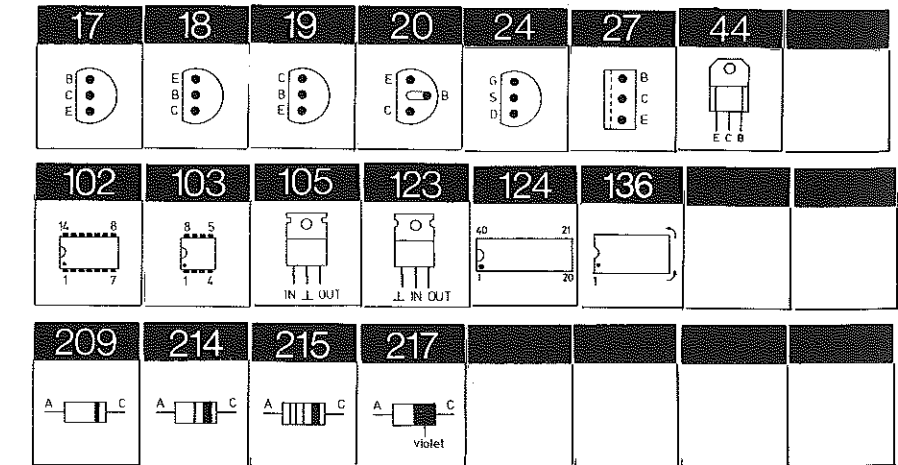


Crossover Network



SEMI CONDUCTORS

Transistors



17	18	19	20	24	27	44	
102	103	105	123	124	136		
209	214	215	217				
1TR3	*Δ 8320396	24	MPF 4392	1TR28	8320646	44	BF 858
		24	2N 4392				
		24	2N 5639	1TR29	8320642	33	2SA 968A
1TR6	8320454	17	BF 423	1TR30-	8320644		2SA 1302
				1TR32			
1TR7	8320152	20	BC 212B/BK				
		17	BC 212BL				
		20	BC 251B	2TR1	8320108	20	BC 548B
		18	BC 307B	2TR2			
		20	BC 557B				
		27	2SA 844	2TR3	8320595	20	BC 337-40
1TR8-	8320641		SC 2240 GR	2TR4	8320152	20	BC 212B/BK
1TR10						17	BC 212BL
						20	BC 251B
1TR11	8320108	20	BC 548B			18	BC 307B
						20	BC 557B
1TR12	8320152	20	BC 212B/BK			27	2SA 844
1TR15		17	BC 212BL	2TR5	8320108	20	BC 548B
		20	BC 251B	2TR6			
		18	BC 307B	2TR8-			
		20	BC 557B	2TR10			
		27	2SA 844				
1TR16	8320454	17	BF 423				
1TR17	8320108	20	BC 548B	7TR1-	*Δ 8320396	24	MPF 4392
				7TR3		24	2N 4392
						24	2N 5639
1TR18	8320152	20	BC 212B/BK				
		17	BC 212BL				
		20	BC 251B	11TR13	8320152	20	BC 212B/BK
		18	BC 307B			17	BC 212BL
		20	BC 557B			20	BC 251B
		27	2SA 844			18	BC 307B
						20	BC 557B
1TR23	8320646	44	BF 858			27	2SA 844
1TR24	8320643	33	2SC 2238A	11TR14	8320097	20	BC 182B/BK
1TR25-	8320645		2SC 3281	11TR15		17	BC 182BL
1TR27						20	BC 237B
						20	BC 547B

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12TR1	8320097	20	BC 182B/BK
		17	BC 182BL
		20	BC 237B
		20	BC 547B

12TR7	8320097	20	BC 182B/BK
		17	BC 182BL
		20	BC 237B
		20	BC 547B

12TR2	8320331	20	BC 328-25/18
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12TR8	8320331	20	BC 328-25/18
-------	---------	----	--------------

12TR3	8320097	20	BC 182B/BK
		17	BC 182BL
		20	BC 237B
		20	BC 547B

12TR9	8320097	20	BC 182B/BK
		17	BC 182BL
		20	BC 237B
		20	BC 547B

12TR4	8320331	20	BC 328-25/18
-------	---------	----	--------------

12TR10	8320331	20	BC 328-25/18
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12TR5	8320097	20	BC 182B/BK
		17	BC 182BL
		20	BC 237B
		20	BC 547B

12TR11	8320097	20	BC 182B/BK
		17	BC 182BL
		20	BC 237B
		20	BC 547B

12TR6	8320331	20	BC 328-25/18
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12TR12	8320331	20	BC 328-25/18
--------	---------	----	--------------

## IC's

11C1	△ 8340202	102	CD 4066 BCN
		102	HEF 4066 BP
		102	MC 14066 BCP
		102	MSM 4066 RS

21C1	8340048	103	MC 1458 CP1
		103	MC 1458 N
		103	MC 1458 P
		103	SFC 2458 DC

11C2	8340763	136	LF353-TL072
------	---------	-----	-------------

51C1	8340054	19	MPS A13
		19	TPS A13

11C3	8340048	103	MC 1458 CP1
		103	MC 1458 N
		103	MC 1458 P
		103	SFC 2458 DC

111C1	8340212	105	7805
-------	---------	-----	------

11C5	8340064	105	UA 7815
		105	UA 7815 UC
		105	LM 340 T-15

111C2	8340836	124	UP 8049
-------	---------	-----	---------

11C6	8340240	123	LM 320 T-15
		123	MC 7915 CT
		123	UA 7915 UC

121C3-	8340054	19	MPS A13
121C11		19	TPS A13

## Diodes

1D1	8300466	B125	C1500
1D2-	8300058	217	SFD 184
1D12		209	1N 4148
		215	1N 4148

1D21	8300407	209	BZX79B 12
		209	BZX83B 12
		209	ZPD 12V

1D15	8300409	214	BAV 20-25
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2D1	8300058	217	SFD 184
2D3-		209	1N 4148
2D7		215	1N 4148

1D16	8300541	Z	3V3
------	---------	---	-----

1D17-	8300058	217	SFD 184
-------	---------	-----	---------

4D1	8300058	217	SFD 184
-----	---------	-----	---------

5D2	8300497	KBU 6D	13D1-	8330162	LED yellow
			13D15		--
11D16	8300058	217 SFD 184			
		209 1N 4148	13DP1-	8330163	Display
		215 1N 4148	13DP5		7-segm. yellow
11D17	8300466	B125 C1500			
11D18	8300407	209 BZX79B 12			
		209 BZX83B 12			
		209 ZPD 12V			

- △ betyder at statisk elektricitet kan ødelægge komponenten.  
 △ indicates that static electricity may destroy the component.  
 △ bedeutet, daß statische Elektrizität die Komponente zerstören kann.  
 △ signifi que électricité statique peut detruire le composant.

- \* Speciel udvalgt eller bearbejdet eksemplar.  
 \* Specially selected or adapted sample.  
 \* Speziell ausgewähltes und bearbeitets Exemplar.



## LIST OF ELECTRICAL PARTS

Resistors not mentioned are standard resistors

### Standard resistors:

Resistors 5% 1/2 W

	X1	X10	X100	X1K	X10K	X100K	X1M	X10M
1.0		5011000	5011013	5011028	5011044	5010313	5011069	5011083
1.2	5011406	5011001	5011014	5011030	5011045	5011058	5010421	
1.5	5010727	5011002	5011015	5011031	5011046	5011059	5011071	
1.8	5010857	5010787	5011016	5011033	5011047		5011072	
2.2	5011335	5010708	5010815	5011034	5011048	5011061	5011074	
2.7		5010803	5011018	5011035	5011049	5011062	5011075	
3.3	5010255	5011007	5011019	5011037		5011063	5010381	
3.9		5010782	5011021	5010700	5011051		5010392	
4.7	5010765	5011009	5011022	5010035	5010036	5011065	5011078	
5.6		5011010	5011023	5011041		5011066	5011079	
6.8	5010874	5011011	5011024	5011042	5010810	5011067	5011080	
8.2		5011012	5011026	5011043	5010038	5011068	5011081	

Resistors 5% 1/4 W

	X1	X10	X100	X1K	X10K	X100K	X1M	X10M
1.0	5010592	5010506	5010065	5010040	5010059	5010049	5010054	5010638
1.2		5010595	5010128	5010153	5010046	5010047	5010665	
1.5		5010468	5010057	5010247	5010053	5010063	5010093	
1.8		5010822	5010362	5010066	5010135	5010072	5010791	
2.2	5010682	5010448	5010092	5010064	5010079	5010120	5010245	
2.7	5010925	5010403	5010000	5010298	5010141	5010083	5010431	
3.3		5010253	5010044	5010076	5010075	5010117	5010848	
3.9		5010622	5010070	5010069	5010060	5010073	5010714	
4.7	5010888	5010411	5010058	5010048	5010045	5010077		
5.6	5010706	5010151	5010067	5010041	5010061	5010071	5010658	
6.8	5010904	5010039	5010144	5010052	5010062	5010074		
8.2	5010880	5010056	5010068	5010154	5010091	5010505		

### Amplifier, 8002915, PCB 1

R1	5020363	51.1 kΩ 1% 1/4W	R79	5020633	150 Ω 5% 0.35W
R4	5020126	113 kΩ 1% 1/4W	R95	5370341	100 Ω 20% 0.1W
R8	5020126	113 kΩ 1% 1/4W	R99	5100203	0.47 Ω 10% 2W
R11	5020363	51.1 kΩ 1% 1/4W	R100	5100203	0.47 Ω 10% 2W
R35	5220036	330 kΩ 10% 1/2W	R101	5100203	0.47 Ω 10% 2W
R56	5020200	2.1 kΩ 1% 1/4W	R102	5100203	0.47 Ω 10% 2W
R57	5020200	2.1 kΩ 1% 1/4W	R103	5100203	0.47 Ω 10% 2W
R59	5370351	220 Ω 20% 0.1W	R104	5100203	0.47 Ω 10% 2W
R73	5020127	10 kΩ 5% 1W			
<hr/>					
C1	4200477	4.7 μF 20% 25V	C26	4100234	220 pF 5% 63V
C2	4200477	4.7 μF 20% 25V	C27	4200476	0.47 μF 20% 50V
C3	4100232	100 pF 5% 63V	C29	4200665	470 μF 20% 6.3V
C4	4000136	22 pF 5% 63V	C30	4010027	1 nF 10% 63V
C5	4200423	2.2 μF 20% 50V	C31	4200652	100 μF 20% 100V
C6	4010064	560 pF 10% 63V	C32	4010061	2.2 nF 10% 63V
C7	4010064	560 pF 10% 63V	C33	4010061	2.2 nF 10% 63V
C10	4010041	10 nF -20+80% 40V	C34	4010061	2.2 nF 10% 63V
C11	4010041	10 nF -20+80% 40V	C35	4003059	22 pF 5% 500V
C13	4130179	100 nF 20% 63V	C36	4000020	4.7 pF 0.25 pF 63V
C14	4200431	10 μF 20% 16V	C37	4010063	4.7 nF 10% 63V
C15	4130179	100 nF 20% 63V	C38	4010024	470 pF 10% 63V
C16	4130179	100 nF 20% 63V	C39	4200478	100 μF 20% 10V
C17	4130179	100 nF 20% 63V	C40	4010063	4.7 nF 10% 63V
C18	4200311	220 μF -10+100% 40V	C45	4130195	22 nF 5% 250V
C19	4200509	33 μF 20% 25V	C46	4130155	1 μF 10% 100V
C20	4200311	220 μF -20+100% 40V	C47	4130308	220 nF 10% 63V
C21	4200509	33 μF 20% 25V	C48	4012002	10 nF -20+50% 400V
C22	4200704	470 μF 20% 25V	C49	4130155	1 μF 10% 100V
C25	4200431	10 μF 20% 16V	C50	4130308	220 nF 10% 63V

P1	7220143	Plug 14 pol.	P3	7220313	Plug 3 pol.
P2	7220203	Plug 10/9 pol.	P5	7220196	Plug 4/3 pol.

## Control, 8002831, PCB 2

C1	4200333	1 $\mu$ F -10+50% 63V	C9	4010027	1 nF 10% 63V
C2	4130310	1 $\mu$ F 10% 50V	C10	4200333	1 $\mu$ F -10+50% 63V
C3	4010027	1 nF 10% 63V	C11	4010041	10 nF -20+80% 40V
C4	4200016	22 $\mu$ F -10+50% 25V	C12	4010041	10 nF -20+80% 40V
C5	4000057	47 pF 5% 63V	C13	4010041	10 nF -20+80% 40V
C6	4000057	47 pF 5% 63V	C16	4010061	2.2 nF 10% 63V
C7	4130223	47 nF 10% 63V	C17	4010061	2.2 nF 10% 63V
C8	4130223	47 nF 10% 63V			

S1	7400350	Switch	S3	7400350	Switch
S2	7400350	Switch			

Fuses, 6271040, PCB 3  
type 6601/02

## Fuses, 6270343, PCB 3 type 6605

F1	6600009	Fuse 2A 250V
F2	6600070	Fuse 40MA 250V
	7200052	Fuse holder

Fuses, 6270342, PCB 3  
type 6603/04

F1	6600019	Fuse 5A 250V
F2	6600069	Fuse 150MA 250V
	7200052	Fuse holder

## Relay, 8002784, PCB 4

RL1	7600069	Relay
	3917109	Damping material

## Signal level, 8002916, PCB 7

C1	4130311	680 nF 10% 63V	C3	4130310	1 $\mu$ F 10% 50V
C2	4130309	330 nF 10% 63V			

P1	7220544	Plug 5 pol.
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## Display control, 8006025, PCB 11

C1	4010061	2.2 nF 10% 63V	C13	4010155	220 pF 10% 63V
C2	4010061	2.2 nF 10% 63V	C14	4010021	220 pF 10% 63V
C3	4010061	2.2 nF 10% 63V	C15	4010155	220 pF 10% 63V
C4	4010061	2.2 nF 10% 63V	C16	4130215	220 nF 20% 63V
C5	4010061	2.2 nF 10% 63V	C17	4130215	220 nF 20% 63V
C6	4010061	2.2 nF 10% 63V	C18	4200667	2200 $\mu$ F -20+50% 16V
C7	4010021	220 pF 10% 63V	C19	4200617	47 $\mu$ F 20% 10V
C8	4010155	220 pF 10% 63V	C20	4200431	10 $\mu$ F 20% 16V
C9	4010155	220 pF 10% 63V	C21	4000020	4.7 pF $\pm$ 0.25 pF 63V
C10	4010155	220 pF 10% 63V	C22	4000167	18 pF 5% 63V
C11	4010021	220 pF 10% 63V	C23	4010027	1 nF 10% 63V
C12	4010155	220 pF 10% 63V			

P5	7220508	Plug 19 pol.	P6	7220167	Plug 6 pol
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X1	8090036	4 MHz
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## Display drive, 8006024, PCB 12

P2	7210571	Socket 2 pol.	P4	7210284	Socket 9 pol.
P3	7210572	Socket 6 pol	P5	7210573	Socket 19 pol.

## Display, 8006023, PCB 13

P2	7220505	Plug 2 pol.	P4	7220507	Plug 9 pol.
P3	7220506	Plug 6 pol.			

Crossover network, 8006026,  
PCB 14

R1	5100059	10 $\Omega$ 10% 9W	R3	5100235	1.8 $\Omega$ 10% 3W
R2	5100333	6.8 $\Omega$ 10% 17W	R4	5104009	10 $\Omega$ 10% 3W

C1	4200692	68 $\mu$ F 10% 35V	C4	4130152	2.2 $\mu$ F 10% 100V
C2	4200709	220 $\mu$ F 20% 35V	C5	4130385	3.9 $\mu$ F 10% 100V
C3	4200708	47 $\mu$ F 10% 35V	C6	4130312	680 nF 10% 63V

Crossover network, 8006021,  
PCB 15

R1	5100326	2.2 $\Omega$ 10% 9W	R3	5100242	6.8 $\Omega$ 5% 3W
R2	5100339	8.2 $\Omega$ 10% 7W	R4	5100242	6.8 $\Omega$ 5% 3W
<hr/>					
C1	4200683	22 $\mu$ F 10% 35V	C5	4200687	10 $\mu$ F 10% 35V
C2	4200682	8.2 $\mu$ F 10% 35V	C6	4130312	680 nF 10% 63V
C3	4200691	82 $\mu$ F 15% 35V	C7	4130312	680 nF 10% 63V
C4	4130384	3.3 $\mu$ F 10% 100V	C8	4200683	22 $\mu$ F 10% 35V
<hr/>					
L1	6850189	270 $\mu$ H	L4	6850191	1 mH
L2	6850190	1 mH	L5	6850166	47 $\mu$ H
L3	6850168	150 $\mu$ H			

ABO-CENTER V/HENRIKSENS ELEKTRONIK

MEKANISK STYKLISTE  
LIST OF MECHANICAL PARTS

9101	2560224	Pynteliste, lille	Decorative moulding, small
9102	3302407	Kabinetside og -liste, lille	Cabinet side and moulding, small
9103	2560219	Pynteliste, top	Decorative moulding, top
9104	3458407	Kabinettop	Cabinet top
9105	3450668	Stoframme, lille	Front panel, small
9106	8480197	Bashøjtaler	Woofer
9107	8480197	Bashøjtaler	Woofer
9108	2560224	Pynteliste, lille	Decorative moulding, small
9109	3452525	Kabinetliste, kort	Cabinet side, short
9110	3302407	Kabinetside og -liste, lille	Cabinet side and moulding, small
9111	3452524	Kabinetliste, lang	Cabinet moulding, long
9112	3444181	Gitter	Grill
9113	3440092	Baffel for mellemtone	Baffle for midrange
9114	3947202	Skumtape i metermål	Foam tape by the meter
9115	3320103	Dækglas for display, type 6611	Cover glass for display , type 6611
	3320099	Dækglas for display, type 660X	Cover glass for display , type 660X
9116	3131288	Hus for LED, type 660X	LED housing, type 660X
9117	3320100	Bånd	Frame
9118	2576050	Holder for PCB, type 660X	Holder for PCB, type 660X
9119	3132099	Skuffe for PCB	Tray for PCB
9120	8480196	Mellemtonehøjtaler	Midrange speaker
9121	8480196	Mellemtonehøjtaler	Midrange speaker
9122	2630024	Beslag for mellemtonehøjtaler	Fitting for midrange speaker
9123	8480206	Diskanthøjtaler	Tweeter
9124	3031125	Beslag for diskanthøjtaler	Fitting for tweeter
9125	8480197	Bashøjtaler	Woofer
9126	8480196	Mellemtonehøjtaler	Midrange speaker
9127	8480196	Mellemtonehøjtaler	Midrange speaker
9128	3450667	Stoframme, stor	Front panel, big
9129	2630024	Beslag for mellemtonehøjtaler	Fitting for midrange
9130	2630024	Beslag for mellemtonehøjtaler	Fitting for midrange
9131	8480197	Bashøjtaler	Woofer
9132	2560225	Pynteliste højre, stor	Decorative moulding right, big
9133	3302406	Kabinetside og -liste, stor	Cabinet side and moulding, big
9134	6275649	Ledningsbündt med DIN stik	Wire bundle
	7210608	Stikdåse 7 pol. DIN	Socket 7 pole DIN
9135	7500234	Stikben	Pin
9136	3302406	Kabinetside og -liste, stor	Cabinet side and moulding, big
9137	2560226	Pynteliste venstre, stor	Decorative moulding left, big
9138	3454478	Bund med tryk	Bottom with print
9139	3947202	Skumtape i metermål	Foam tape by the meter
9140	7210596	Bøsning, sort	Bushing, black
9141	7210595	Bøsning, rød	Bushing, red
9142	8860250	Glas sokkel	Glass socket
9143	3340064	Pakning	Gasket
9144	3103224	Fod	Foot
9145	3103066	Gummifod	Rubber foot
9146	2732084	O-ring	O-ring
9147	3340070	Pakning for mellemtone	Gasket for midrange
9148	3340070	Pakning for mellemtone	Gasket for midrange
9149	3340070	Pakning for mellemtone	Gasket for midrange
9150	3340070	Pakning for mellemtone	Gasket for midrange

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11 Modul 8006025 PCB Display control, type 660X PCB Display control, type 660X

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12 Modul 8006024 PCB Display drive, type 660X PCB Display drive, type 660X

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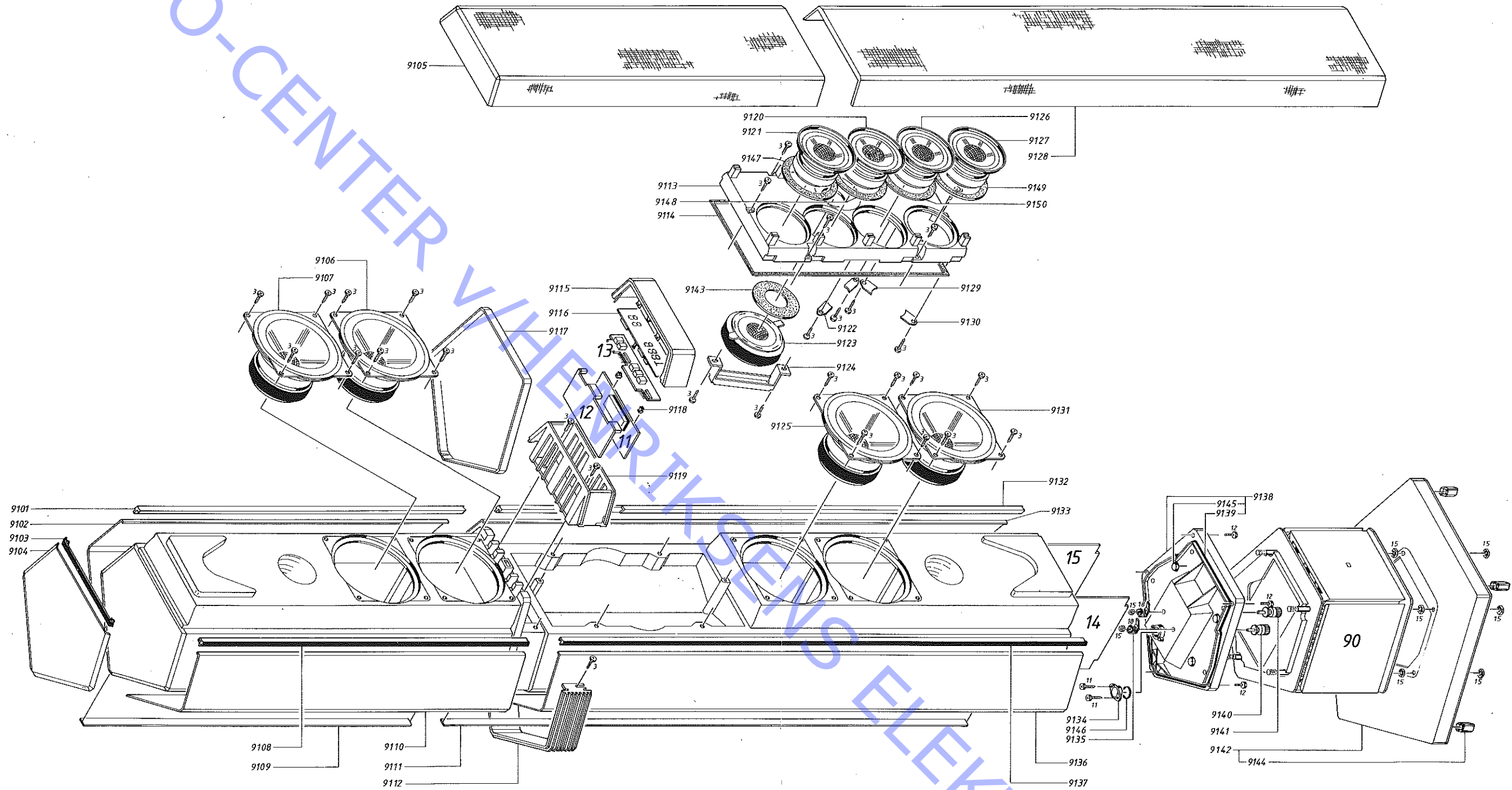
13 Modul 8006023 PCB Display, type 660X PCB Display, type 660X

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14 Modul 8006026 PCB Delefilter PCB Crossover network

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15 Modul 8006021 PCB Delefilter PCB Crossover network

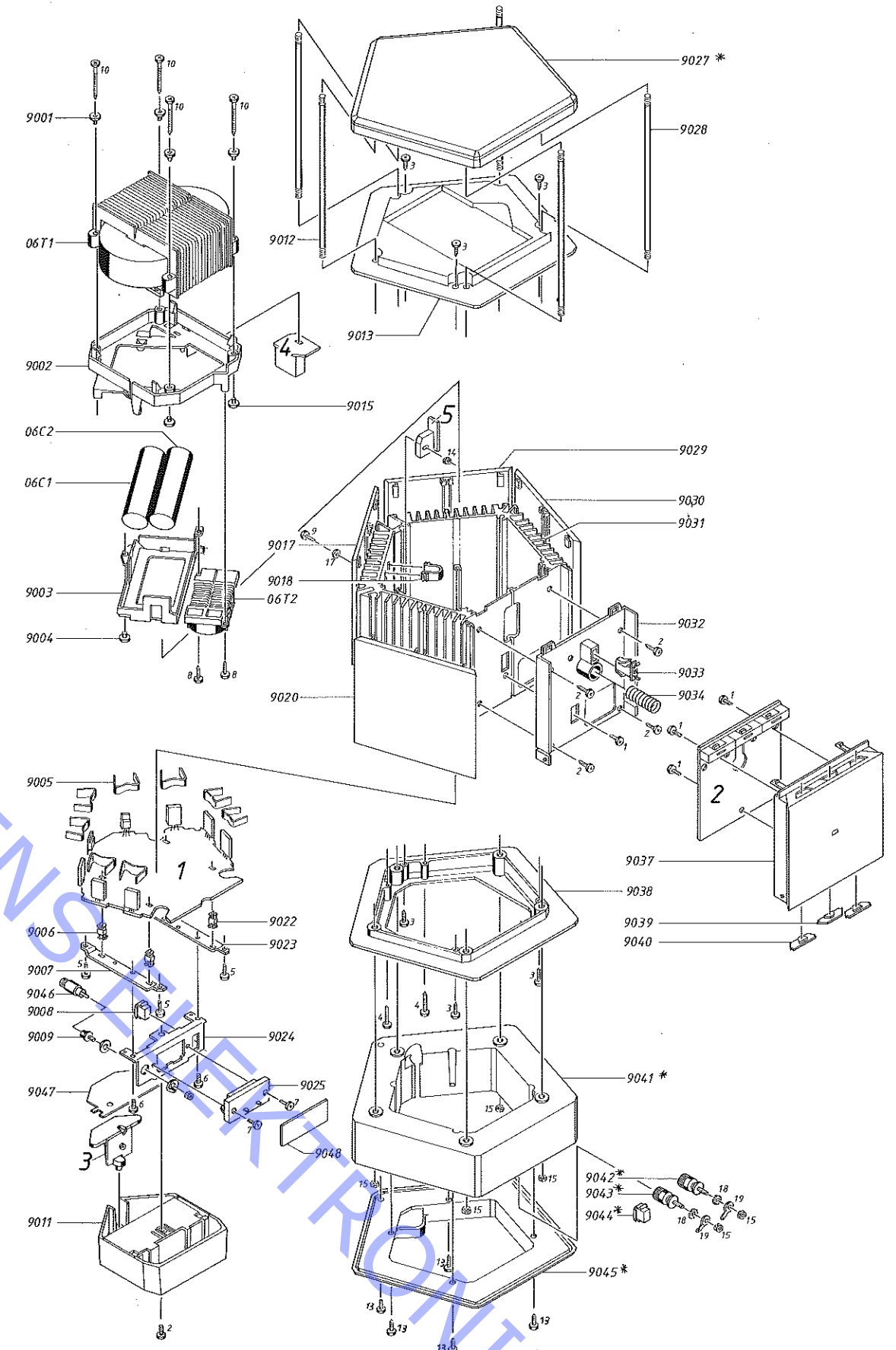




ABO

9001	2938154	Bøsning	Bushing
9002	3152455	Holder f. elektrolytter	Holder for electrolytes
9003	3164608	Låg f. elektrolytter	Cover for electrolytes
9004	2938154	Bøsning	Bushing
9005	2819157	Bøjle	Clamp
9006	3152063	Holder f. PCB 1	Holder for PCB 1
9007	2542669	Vinkel f. PCB 1	Bracket for PCB 1
	3947202	Skumtape i metermål, til vinkel	Foam tape by the meter, for bracket
9008	7210521	Stikdåse 4 pol.	Socket 4 pole
9009	7210567	Stikdåse phono	Phono socket
9011	3164627	Dæksel f. stikbrønd	Cover for socket
9012	2076007	Gevindstykke	Threaded piece
9013	3162266	Sammenspændingsstykke	Assembling piece
9015	2938154	Bøsning	Bushing
9017	3164643	Dækplade m. tryk, type 6601	Cover plate with print, type 6601
	3164642	Dækplade m. tryk, type 6602	Cover plate with print, type 6602
	3164640	Dækplade m. tryk, type 6603	Cover plate with print, type 6603
	3164641	Dækplade m. tryk, type 6604	Cover plate with print, type 6604
	3164639	Dækplade m. tryk, type 6605	Cover plate with print, type 6605
9018	3152507	Ledningsholder	Wire holder
9020	3164602	Dækplade	Cover plate
9022	3152063	Holder f. PCB 1	Holder for PCB 1
9023	2542669	Vinkel f. PCB 1	Bracket for PCB 1
	3947202	Skumtape i metermål, til vinkel	Foam tape by the meter, for bracket
9024	2542668	Vinkel f. stik	Bracket for socket
9025	7210509	Dobbelt stikterminal	Double socket terminal
9028	2076007	Gevindstykke	Threaded piece
9029	3164603	Dækplade	Cover plate
9030	3164602	Dækplade	Cover plate
9031	2568847	Køleprofil	Heat sink
9032	3452527	Bagstykke, betjening	Rear cover, control
9033	3034066	Lås f. låg	Lock for lid
9034	2812113	Trykfjeder	Pressure spring
9037	3168687	Betjeningspanel	Control panel
9038	3162268	Sammenspændingsstykke	Assembling piece
9039	2776037	Knap omskifter	Switch button
9040	2776037	Knap omskifter	Switch button
9046	7220591	Kortslutningsstik	Short-circuit plug
9047	3302426	Isolationsstykke	Insulation piece
	3947202	Skumtape i metermål, til isolationsstk.	Foam tape by the meter for insulation piece
9048	6141199	PCB for stikterminal	PCB for socket terminal

01 Modul 8002915	PCB forstærker	PCB amplifier
02 Modul 8002831	PCB betjening	PCB control
03 Modul 6271040	PCB sikringer, netledning type 6601/02	PCB fuses, mains lead type 6601/02
	6270342 PCB sikringer, netledning type 6603/04	PCB fuses, mains lead type 6603/04
	6270343 PCB sikringer, netledning type 6605	PCB fuses, mains lead type 6605
	7200052 Sikringsholdere	Fuse holders
04 Modul 8002784	PCB relæ	PCB relay
	3917109 Dæmpemateriale	Damping material
05 Modul 8002832	PCB netdel	PCB power supply unit
06T1	8013369 Transformator, type 6601/02/05	Transformer, type 6601/02/05
	8013375 Transformator, type 6603	Transformer, type 6603
	8013376 Transformator, type 6604	Transformer, type 6604
06T2	8013370 Transformator, type 6601/02/03/05	Transformer, type 6601/02/03/05
	8013377 Transformator, type 6604	Transformer, type 6604
06C1	4200653 10000 µF 20% 80V	10000 µF 20% 80V
06C2	4200653 10000 µF 20% 80V 3917109 Dæmpemateriale	10000 µF 20% 80V Damping material



\*Kun i Beolab 150, type 172x

\*Only in Beolab 150, type 172x



**Ikke viste dele**  
**Parts not shown**

6270167	Ledning 4 m, type 6611	Cable 4 m, type 6611
3341059	Blændprop f. DIN stik, type 6611	Sealing plug for DIN socket, type 6611
6270336	4 m skærmet HT ledning 4 pol stik, 660X	4 m shielded loudspeaker cable 4 pole pin, type 660X
6270352	10 m skærmet HT ledning 4 pol stik, 660X	10 m shielded loudspeaker cable 4 pole pin, type 660X
3040026	Topnøgle, type 660X	Socket spanner
3922025	Dæmpemateriale, lille klods	Damping material, small block
3922024	Dæmpemateriale, stor klods	Damping material, big block
3946038	Folie i meter	Foil by the meter
3397604	Skumemballage f. glassokkel	Foam packing for glass socket
3397555	Skumemballage mellemstykker	Foam packing for spacers
3397554	Skumemballage endestykker	Foam packing for end pieces
3391838	Yderæske, type 660X	Outer carton, type 660X
3397601	Skumemballage til bund, type 660X	Foam packing for bottom, type 660X
3391974	Yderæske, type 6611	Outer carton, type 6611
3391975	Indlæg, type 6611	Insert, type 6611
3170169	Glimmerskive	Mica washer
6275627	Ledningsbundt m. DIN stik	Wire bundle with DIN Plug

**Oversigt skruer, skiver m.m.**  
**Survey of screws, washers etc.**

1	2013208	Skrue M 2,9 x 9,5	Screw M 2.9 x 9.5
2	2039027	Skrue AM 3 x 6	Screw AM 3 x 6
3	2015088	Skrue M 3,5 x 16	Screw M 3.5 x 16
4	2015116	Skrue 3,5 x 25	Screw 3.5 x 25
5	2015201	Skrue M 3,5 x 9,5	Screw M 3.5 x 9.5
6	2039026	Skrue AM 3 x 4	Screw AM 3 x 4
7	2039028	Skrue AM 3 x 8	Screw AM 3 x 8
8	2015008	Skrue U 3,5 x 13	Screw U 3.5 x 13
9	2039014	Skrue AM 3 x 20	Screw AM 3 x 20
10	2015115	Skrue M 3,5 x 50	Screw M 3.5 x 50
11	2013107	Skrue M 2,9 x 9,5	Screw M 2.9 x 9.5
12	2043016	Skrue AM 4 x 10	Screw AM 4 x 10
13	2013017	Skrue M 2,9 x 13	Screw M 2.9 x 13
14	2380011	Møtrik M3	Nut M3
15	2380016	Møtrik M4	Nut M4
17	2624013	Skive	Washer
18	2625003	Stjerneskrive	Tooth lock washer
19	7530111	Loddeflig	Solder tag

## JUSTERINGER

**Tomgangsstrøm**

Tomgangsstrøm justeres medens forstærkeren er kold og uden signal tilført.

Højtaler må ikke være tilsluttet.

DC millivoltmeter tilsluttes over 1R103/1R104.

1R95 justeres til 30 mV.

**Offset**

DC voltmeter tilsluttes højtalerudgangen.

1R59 justeres til 0 V.

## ADJUSTMENTS

**No-load current**

Adjust the no-load current while the amplifier is cold and without any supply of signal.

The loudspeakers must not be connected to the amplifier.

Connect the DC millivoltmeter over 1R103/1R104.

Adjust 1R95 to 30 mV.

**Offset**

Connect the CD voltmeter to the loudspeaker output.

Adjust 1R59 to 0 V.

## TECHNICAL SPECIFICATIONS

**Loudspeaker**

Type no.	6601/6602/6604/6605
RMS power handling capacity	150 watts
Music power handling capacity	200 watts
Frequency range +4 -8 dB	40-20,000 Hz
Power at 96 dB SPL	2.5 watts
Sensitivity 1 W	92 dB
Distortion 250-1000 Hz	<0.5%
Distortion >1000 Hz	<0.5%
Cabinet principle	Bass reflex
Woofer	4 units 13 cm (5")
Midrange	4 units 8 cm (3")
Tweeter	2.5 cm (1")
Crossover frequency	700/5000 Hz 18 dB/octave
Net volume	32 litres

**Power amplifier**

Power output 20-20,000 Hz IHF	1 x 150 watts/8 ohms
LINE input	80 mV/1 W, 1 V/150 W, 22 kohms, phono plugs
Power input	800 mV/1 W, 10 V/150 W, 15 kohms 4-pin DIN or spring loaded contacts
Bass level switch	Linear, +3 dB/40 Hz, +6 dB/40 Hz
Sensitivity switch	0 dB, -3 dB, -6 dB
Power supply	6601: 220 V 6602/6605: 240 V 6603: 120 V 6604: 100 V
Power frequency	50-60 Hz
Power consumption	Max. 300 watts
Stand-by	2 watts
Dimensions WxHxD	5-13.5 x 165 cm incl. stand

<b>Type no.</b>	<b>6611</b>
RMS power handling capacity	150 watts
Music power handling capacity	200 watts
Impedance	8 ohms
Frequency range +4 -8 dB	40-20,000 Hz
Power at 96 dB SPL	2.5 watts
Sensitivity 1 W	92 dB
Distortion 250-1000 Hz	<0.5%
Distortion >1000 Hz	<0.5%
Cabinet principle	Bass reflex
Woofers	4 units 13 cm (5")
Midrange	4 units 8 cm (3")
Tweeter	2.5 cm (1")
Crossover frequency	700/5000 Hz 18 dB/octave
Net volume	32 litres
Dimensions WxHxD	5-13.5 cm x 150 cm incl. stand
Weight	17 kg

**Subject to change without notice**

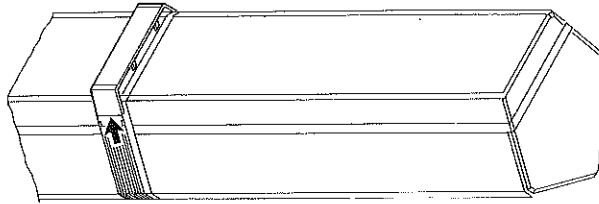
Sensitivity switch	Input for 150 W output	Amplifier for 4 ohms output	Amplifier for 8 ohms output
MAX.	10 V	- 25 W	- 12 W
MED.	14.1 V	25 W - 50 W	12 W - 25 W
MIN.	20 V	50 W - 100 W	25 W - 50 W

## ADSKILLELSE

## DISMANTLING

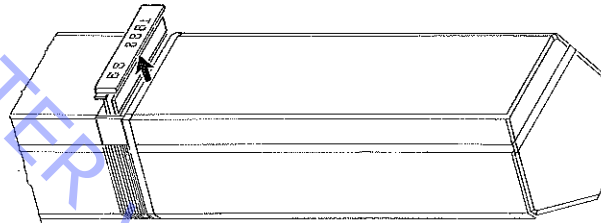
Display

Display



Dækslet afmonteres ved at rykke i pilens retning.

Dismantle the cover by pulling it in the direction indicated by the arrow.



Displayenheden er nu tilgængelig, og kan løftes ud i serviceposition.

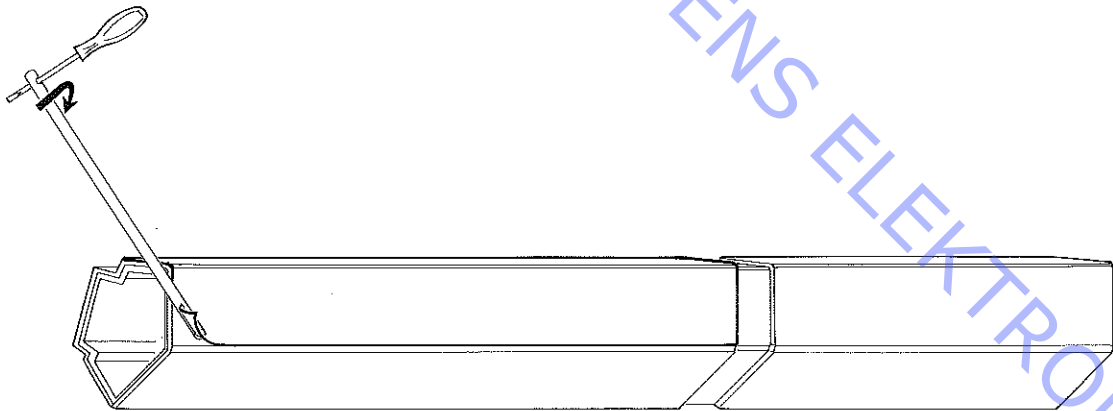
The display unit is now accessible and free to be lifted up in service position.

## SERVICETIPS

## SERVICE TIPS

Udskiftning af aluminiumsfolie

Replacement of aluminium foil



Aluminiumsfolien løsnes forsigtig i et hjørne.

Loosen the aluminium foil carefully in one corner.

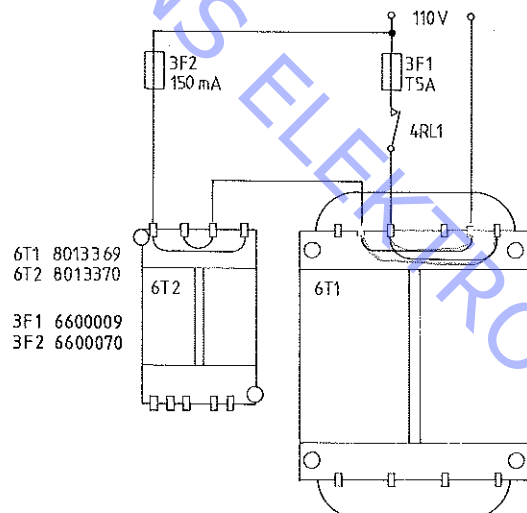
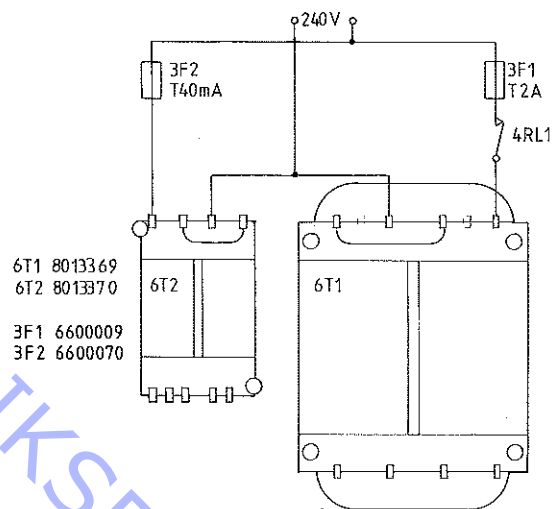
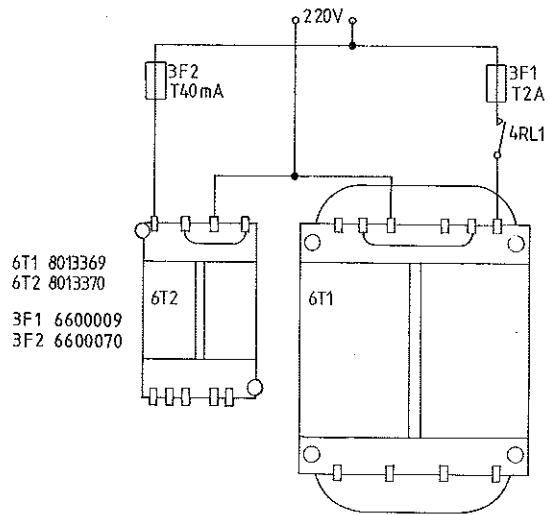
Hjælpeværktøj bestillingsnr. 3629116 benyttes som vist på tegningen.

Use the auxiliary tool, part no 3629116 as shown on the drawing.

## Ledningsmontering på nettransformatorer

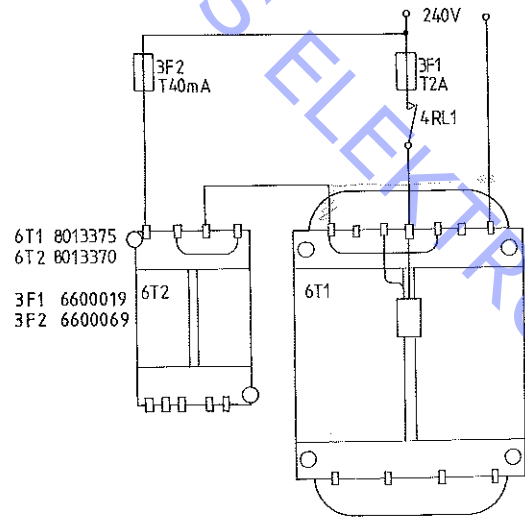
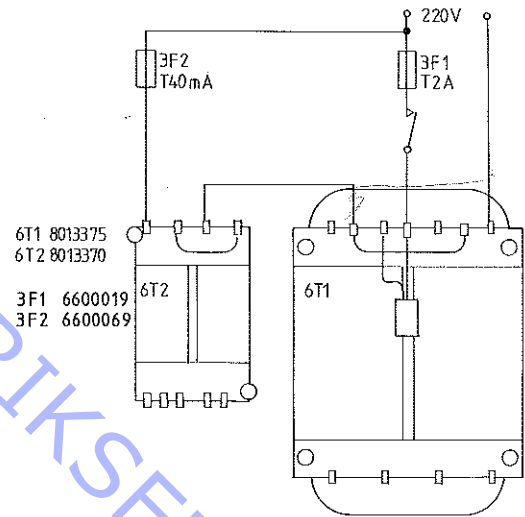
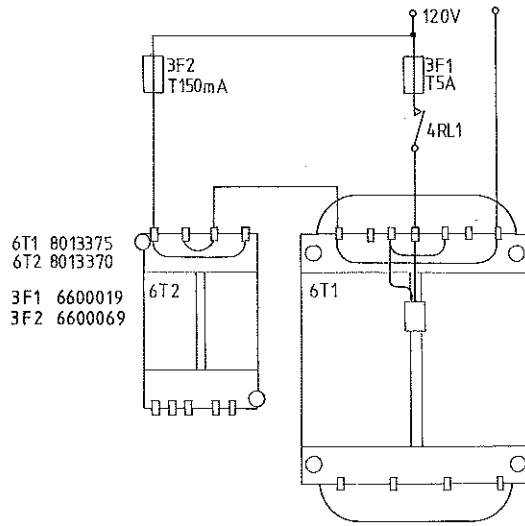
### Wiring of Mains Transformers

Type 6601  
Type 6602  
Type 6605



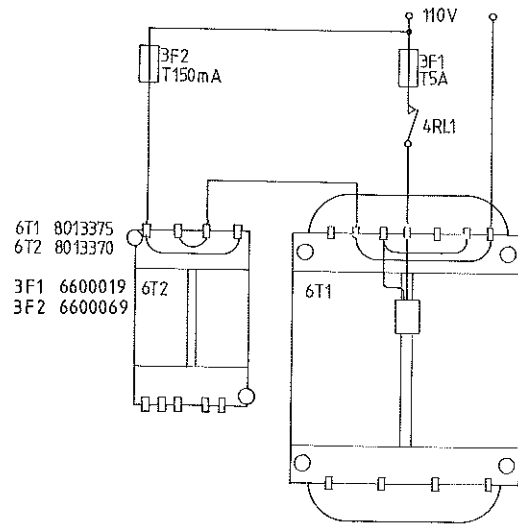
ABO-CENTER V/HENRIKSENS ELEKTRONIK

Type 6603

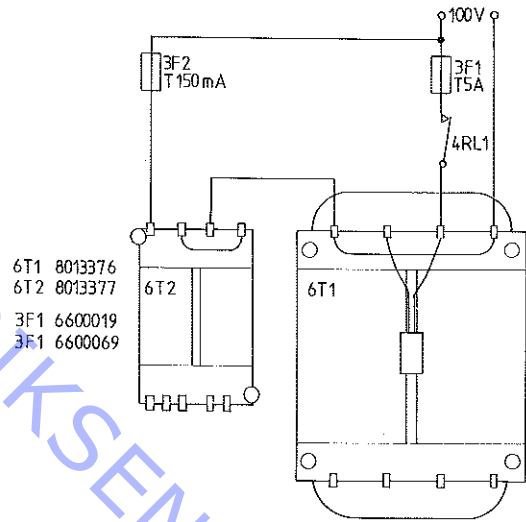


ABO-CENTER V/HENRIKSENS ELEKTRONIK





Type 6604



ABO-CENTER V/HENRIKSENS ELEKTRONIK

**ISOLATIONSTEST**

Ethvert apparat skal isolationstestes efter at det har været adskilt. Testen udføres når apparatet igen er helt samlet og klar til udlevering til kunden.

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes en af terminalerne på isolationstesteren. Den anden terminal fra isolationstesteren tilsluttes den sorte klembøsning i AMP LEVEL INPUT.

**OBS!**

For at undgå beskadigelser på apparatet er det vigtigt, at begge terminaler fra isolationstesteren har virkelig god mekanisk kontakt.

Der drejes nu langsomt med spændingsreguleringen på isolationstesteren indtil en spænding på 1,5 - 2 kV er opnået. Her skal den holdes i 1 sekund, derefter drejes der langsomt ned for spændingen igen.

Der må ikke på noget tidspunkt under testen forekomme overslag.

**INSULATION TEST**

Each set must be insulation tested after dismantling. The test is to be performed when the set has been reassembled and is ready for delivery to the customer.

Make the insulation test as follows:

Short-circuit the two plug pins of the mains plug and connect one of the terminals of the insulation tester. Connect the other terminal of the insulation tester to the black spring loaded contact marked AMP LEVEL INPUT.

**N.B.!**

To avoid ruining the set, it is essential that both insulator test terminals are in really good mechanical contact.

Now turn slowly the voltage control of the insulation tester until a voltage of 1.5 - 2 kV is obtained. Hold it there for 1 second, then turn slowly the voltage down again.

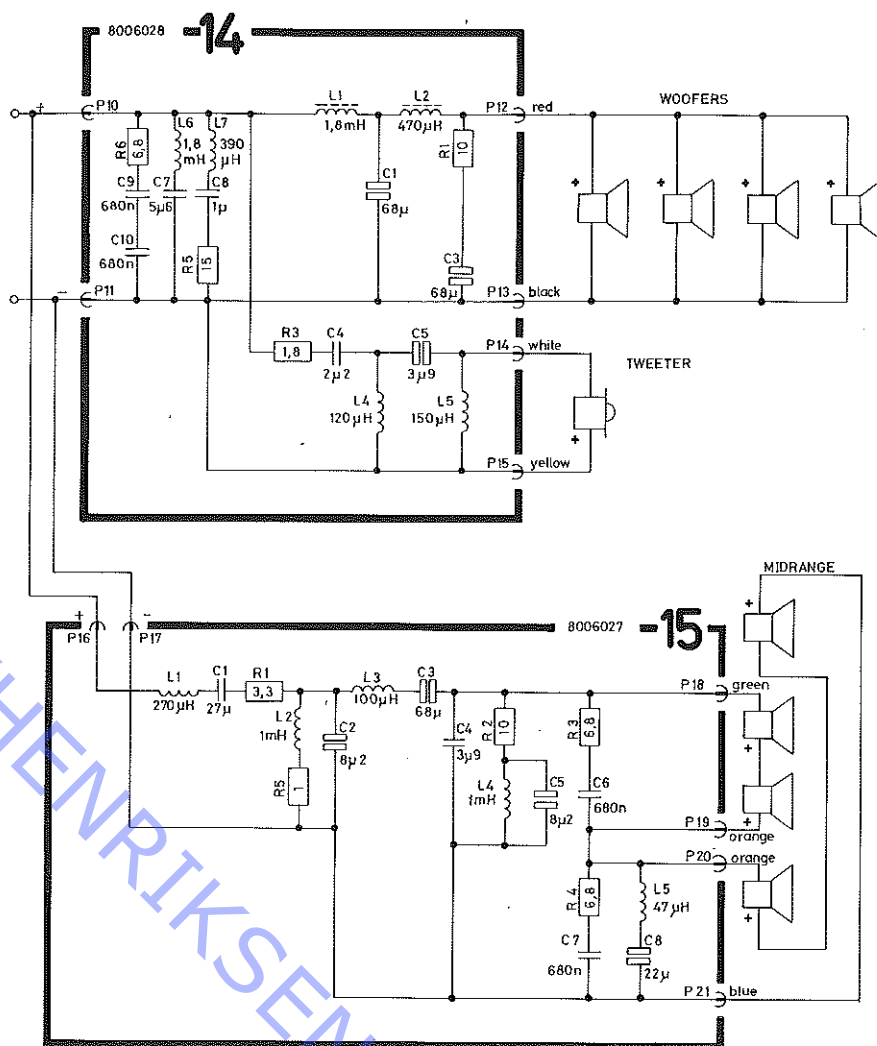
At no point during the testing procedure any flash-overs are permissible.

ABO  
CENTRUM  
V/HENRIKSENS ELEKTRONIK

## Crossover network, Type 660x, 6611

For apparater med højere nr. end 04771089 benyttes dette diagram og stykliste.

For sets with serial nos. higher than 04771089 use this diagram and parts list.



### Crossover network, 8006028, PCB14

R1	5100059	10 Ω 10% 9W	R5	5100200	15 Ω 10% 3W
R3	5100235	1.8 Ω 10% 3W	R6	5100242	6.8 Ω 5% 3W
C1	4200692	68 μF 10% 35V	C7	4200732	5.6 μF 10% 35V
C3	4200692	68 μF 10% 35V	C8	4130155	1 μF 10% 100V
C4	4130152	2.2 μF 10% 100V	C9	4130312	680 nF 10% 63V
C5	4130385	3.9 μF 10% 100V	C10	4130312	680 nF 10% 63V

L1	6850193	1.8 mH	L5	6850142	150 μH
L2	6850192	470 μH	L6	6850200	1.8 mH
L4	6850196	120 μH	L7	6850198	390 μH

### Crossover network, 8006027, PCB15

R1	5100340	3.3 Ω 10% 9W	R4	5100242	6.8 Ω 5% 3W
R2	5104009	10 Ω 10% 3W	R5	5104020	1 Ω 10% 3W
R3	5100242	6.8 Ω 5% 3W	C5	4200682	8.2 μF 10% 35V
C1	4200731	27 μF 10% 35V	C6	4130312	680 nF 10% 63V
C2	4200682	8.2 μF 10% 35V	C7	4130312	680 nF 10% 63V
C3	4200692	68 μF 10% 35V	C8	4200683	22 μF 10% 35V
C4	4130385	3.9 μF 10% 100V			

L1	6850197	270 μH	L4	6850199	1 mH
L2	6850190	1 mH	L5	6850166	47 μH
L3	6850188	100 μH			

## Samleinstruktion for Beovox Penta type 6611 med Beolab 150 type 172x

### Instructions for assembly of Beovox Penta type 6611 and Beolab 150 type 172x

På Beovox Penta afmonteres glasfoden pos. nr. 9142, ved at skrue de 5 skruer A ud, iflg. fig. 1.

Remove the glass base of the Beovox Penta, pos. no. 9142, by removing the 5 screws A, according to Fig. 1.

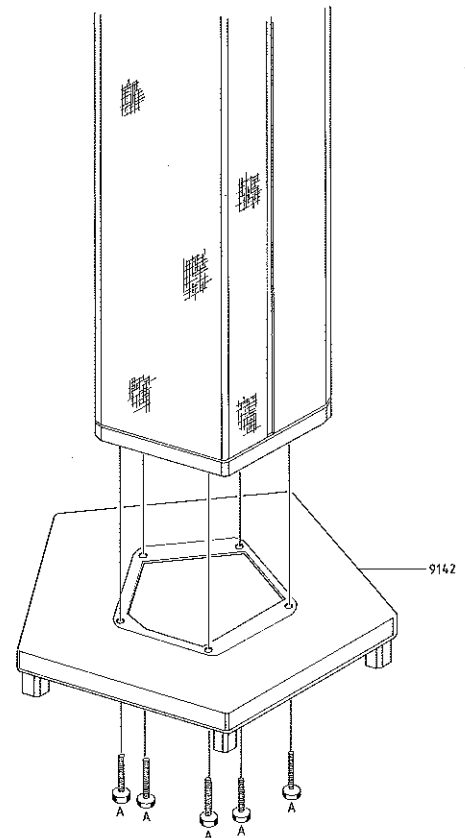


FIG. 1

På Beolab 150 skrues bunden pos. nr. 9045 af, ved at fjerne de 5 skruer B, iflg. fig. 2.

Mellemstykket pos. nr. 9041 frigøres, ved at afmontere de 5 møtrikker C, hvorefter ledningen der forbinder mellemstykket med forstærkerenheden, klippes af 2 cm over forstærkerenheden, iflg. fig. 2. Den afklippede ledning isoleres og placeres ved siden af stikbrønden på forstærkerenheden.

Remove the base of the Beolab 150, pos. no. 9045, by removing the 5 screws B, according to Fig. 2. Lift off the intermediate piece, pos. no. 9041, by removing the 5 nuts C, and then cut off the wire connecting the intermediate piece to the amplifier unit 2 cm above the amplifier unit, according to Fig. 2. Insulate the cut wire, and position it next to the recess with the sockets on the amplifier unit.

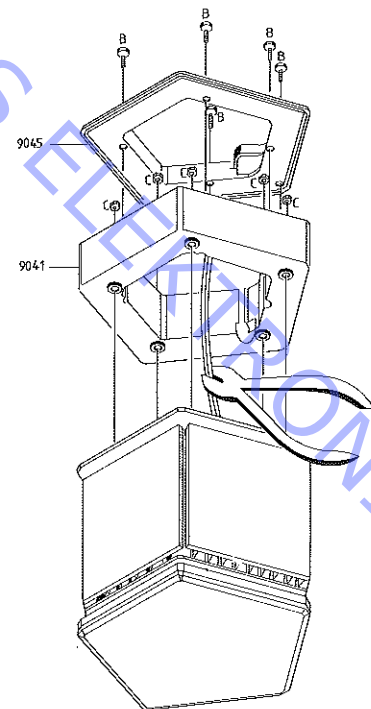


FIG. 2

# 3-2

# Bang & Olufsen

Forstærkerenheden vendes og låget pos. nr. 9027 løftes af iflg. fig. 3.

Turn the amplifier unit, and lift off the lid, pos. no. 9027, according to Fig. 3.

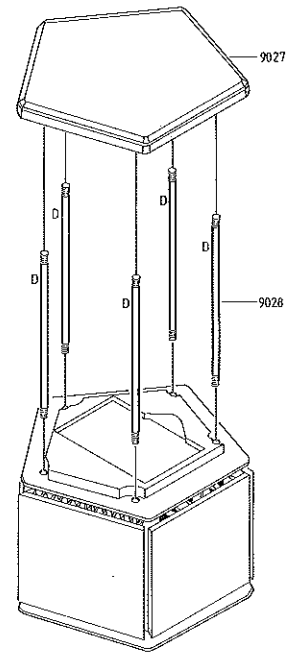


FIG. 3

De 5 stavbolte D afmonteres låget og monteres i bunden op Beovox Penta istedet, iflg. fig. 4.

Remove the 5 bolts D from the lid and mount them in the base of the Beovox Penta instead, according to Fig. 4.

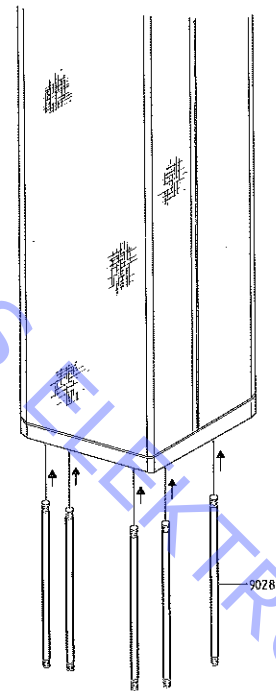


FIG. 4

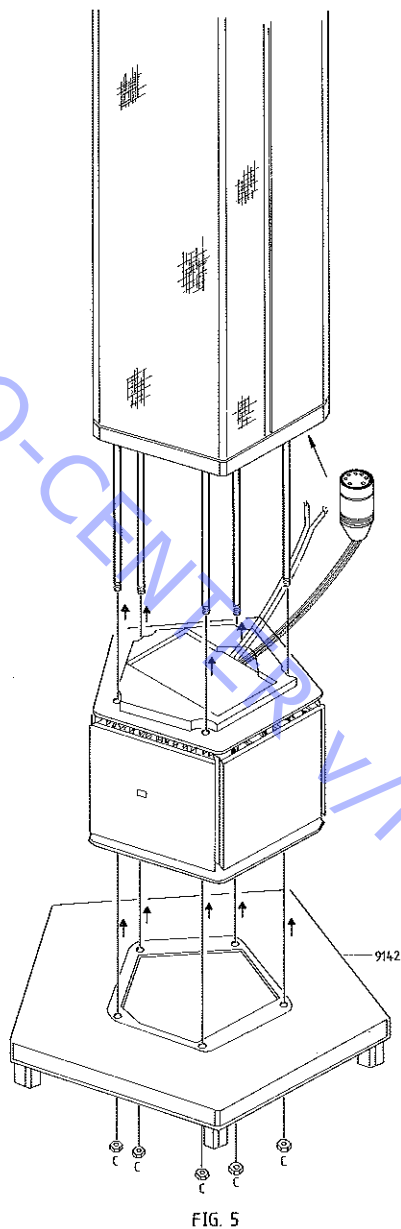


FIG. 5

På disse stavbolte placeres den ændrede Beolab 150 således, at forsiden af Beolab 150 og Beovox Penta vender samme vej, iflg. fig. 5.

Isoleringen på HT-ledningen fra Beolab 150 fjernes, og ledningerne monteres på Beovox Penta med den mærkede ledning til -, iflg. fig. 6.

Proppen over DIN-bøsningen i Beovox Penta fjernes, og DIN-stikket fra Beolab 150 monteres. De 2 enheder kan nu skrues sammen, ved at montere glasfoden nederunder den ændrede Beolab 150, og derefter montere de 5 møtrikker C, iflg. fig. 5.

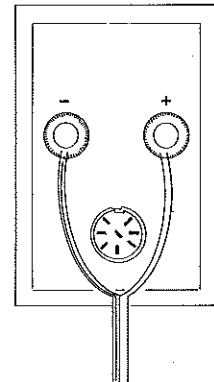


FIG. 6

Position the modified Beolab 150 on these rod bolts so that the front of the Beolab 150 and of the Beovox Penta face the same way, according to Fig. 5.

Remove the insulation on the speaker wire from the Beolab 150, and connect the wires to the Beovox Penta. Connect the marked wire to -, according to Fig. 6.

Remove the cap on the DIN socket in the Beovox Penta and mount the DIN plug from the Beolab 150 in that socket.

The two units by placing the glass base underneath the modified Beolab 150 and then screwing on the 5 nuts C, according to Fig. 5.



**ISOLATIONSTEST**

Ethvert apparat skal isolationstestes efter at det har været adskilt. Testen udføres når apparatet igen er helt samlet og klar til udlevering til kunden.

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes en af terminalerne på isolationstesteren. Den anden terminal fra isolationstesteren tilsluttes den sorte klembøsning i AMP LEVEL INPUT.

**OBS!**

For at undgå beskadigelser på apparatet er det vigtigt, at begge terminaler fra isolationstesteren har virkelig god mekanisk kontakt.

Der drejes nu langsomt med spændingsreguleringen på isolationstesteren indtil en spænding på 1,5 - 2 kV er opnået. Her skal den holdes i 1 sekund, derefter drejes der langsomt ned for spændingen igen.

Der må ikke på noget tidspunkt under testen forekomme overslag.

**INSULATION TEST**

Each set must be insulation tested after dismantling. The test is to be performed when the set has been reassembled and is ready for delivery to the customer.

Make the insulation test as follows:

Short-circuit the two plug pins of the mains plug and connect one of the terminals of the insulation tester. Connect the other terminal of the insulation tester to the black spring loaded contact marked AMP LEVEL INPUT.

**N.B.!**

To avoid ruining the set, it is essential that both insulator test terminals are in really good mechanical contact.

Now turn slowly the voltage control of the insulation tester until a voltage of 1.5 - 2 kV is obtained. Hold it there for 1 second, then turn slowly the voltage down again.

At no point during the testing procedure any flash-overs are permissible.

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