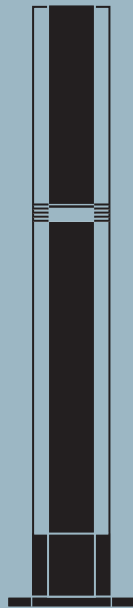


# Beolab Penta

Type 6621, 6622, 6623, 6624, 6625



## TECHNICAL SPECIFICATIONS

## BEOLAB PENTA

Type	6621, 6622, 6623, 6624, 6625
------	------------------------------

**Speaker:**

Long-term maximum power IEC	320 watts
Maximum noise power IEC	150 watts
Impedance	8 ohms
Frequency range +4/-8 dB	40-20,000 Hz
Power at 96 dB SPL (1 m)	2.5 watts
Sensitivity 1 W (1 m)	92 dB
Distortion 0.250 - 6 kHz	<0.5 %
Cabinet principle	Bass Reflex
Woofer	4 units 13 cm (5")
Mid-range	4 units 8 cm (3")
Tweeter	2.5 cm (1")
Crossover frequency	700/5000 Hz
Net cabinet volume	32 litres

**Power amplifier:**

Long-term maximum power IEC	300 watts
RMS DIN	175 watts
IHF	150 watts
Total harmonic distortion IHF	<0.015 %
Intermodulation IHF	<0.02 %
Dynamic headroom	>1.5 dB
Input sensitivity/impedance:	
POWER LINK sockets	1 V/>25 kohms
- channel separation	>70 dB
SPEAKER LINK socket	11 V/>15 kohms
LINE IN socket	1 V/>25 kohms
BASS EXTENSION switch	0 dB, +3 dB, +6 dB
INPUT LEVEL switch	0 dB, -3 dB, -6 dB
Dynamic Clipping Attenuator	Automatic
Power consumption	Max. 300 watts
Stand-by	2 watts
Dimensions W x H x D	22 x 165 x 20.5 cm
Dimensions, Stand	35.5 x 4 x 34 cm
Weight	24 kg

**Subject to change without notice**

## Ledningsmontering på nettransformatorer

### Wiring of Mains Transformers

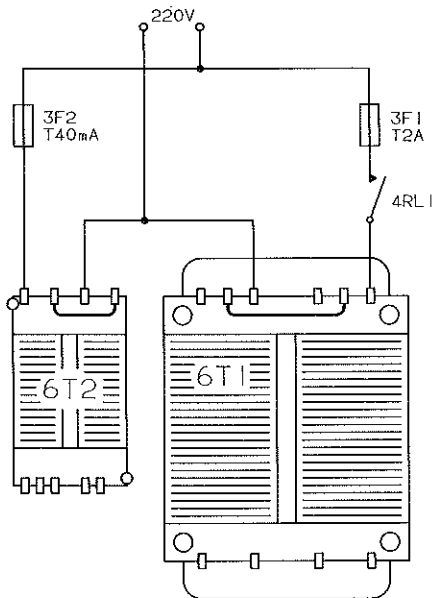
Type 6621

Type 6622

Type 6625

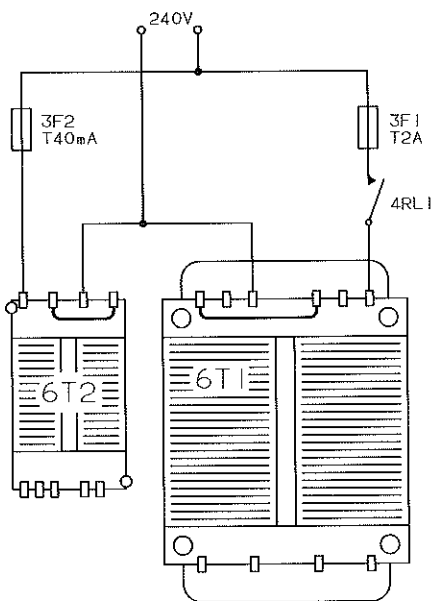
6T1 8013369  
6T2 8013370

3F1 6600009  
3F2 6600070



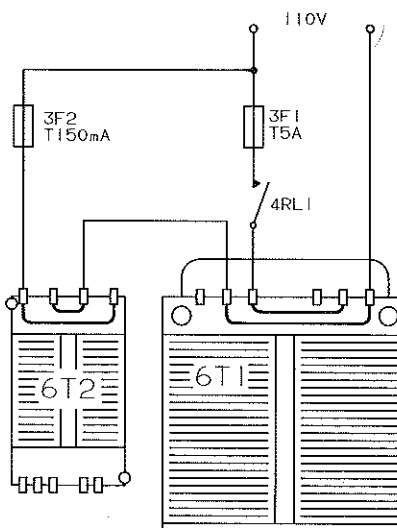
6T1 8013369  
6T2 8013370

3F1 6600009  
3F2 6600070



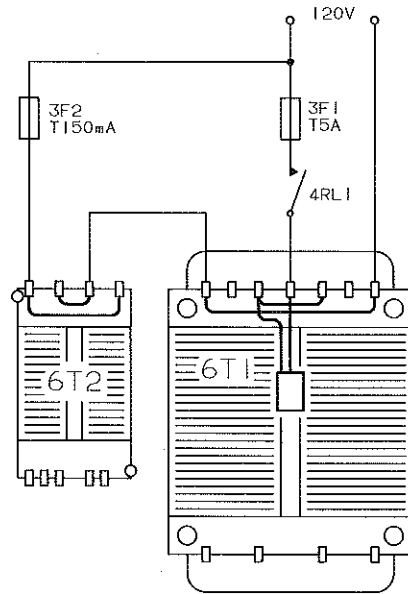
6T1 8013369  
6T2 8013370

3F1 6600019  
3F2 6600069

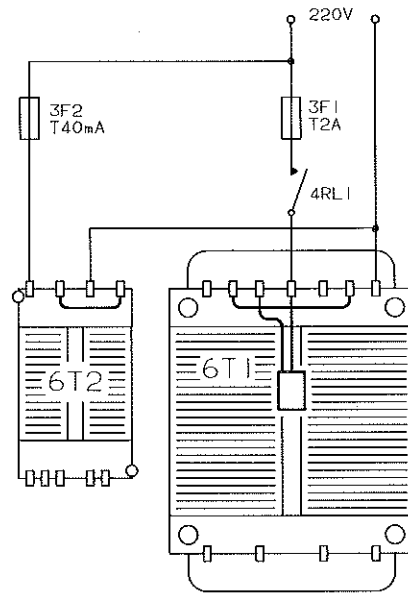


Type 6623

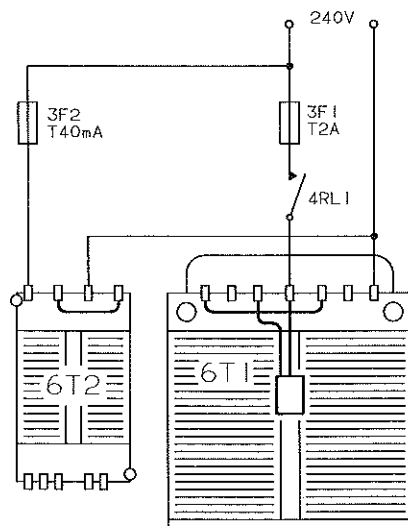
6T1 8013375  
 6T2 8013370  
 3F1 6600019  
 3F2 6600069

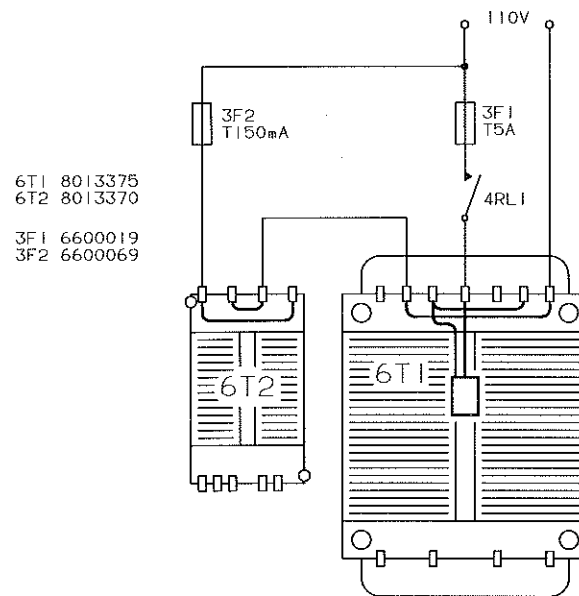


6T1 8013375  
 6T2 8013370  
 3F1 6600009  
 3F2 6600070

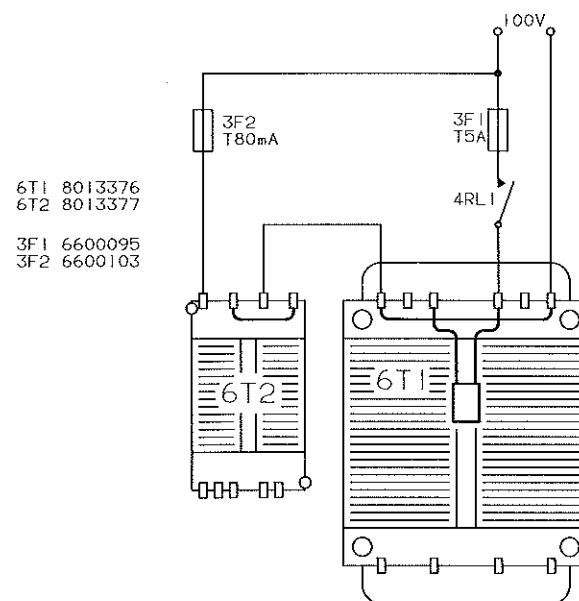


6T1 8013375  
 6T2 8013370  
 3F1 6600009  
 3F2 6600070





Type 6624



### DIAGRAMFORKLARING

På diagrammerne er der angivet typenumre på transistorer og IC'er. Hvis positionsnummeret er efterfulgt af en stjerne, skal reservedelsnummeret altid benyttes, da denne komponent er specielt udvalgt, f.eks. TR102\*.

### Komponenttryk og koordinatsystem

De største printplader er forsynet med komponenttryk og et koordinatsystem på både print- og komponentside. På diagrammerne er enhver komponent forsynet med et koordinatnummer. Dette fortæller i hvilket koordinat på printpladen, komponenten er placeret. Koordinatnumrene er angivet med mindre skrifttype end positionsnumrene.

### Styrekredsløb

I visse styrekredsløb er den aktive tilstand angivet med en funktions- eller bogstavsangivelse. Denne kan eksempelvis være ST.BY. = »low« i stand-by-stilling eller ST.BY. = »high« i stand-by-stilling.

### Ledningsforbindelser

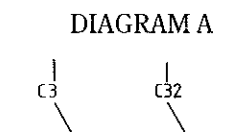
Ledningsforbindelserne på diagrammerne er samlet i »bundter«. De enkelte ledninger er forsynet med en af følgende koder:

### 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.

### FORBINDELSE TIL EN ANDEN DIAGRAMSIDE



Forbindelsen til en anden diagramside angives med et tal samt et bogstav for det diagram, forbindelsen går til.

### Forsyningsspændinger

Alle forsyningsspændinger i diagrammerne er angivet med en pil og en spændingsangivelse.

### Eksempel:

Ved siden af spændingsangivelsen står der f.eks.

### EXPLANATION OF DIAGRAM

Type numbers of transistors and ICs are indicated on the diagrams. If the position number is followed by an asterisk the spare part number must always be used because the component in question has been specially selected, e.g. TR102\*.

### Component print and coordinate system

The largest PCBs have component prints and a coordinate system on both the print and the component side. On the diagrams every component has a coordinate number. This indicates in which coordinate on the PCB the component is situated. The coordinate numbers are written in smaller print types than the position numbers.

### Control Circuit

In certain control circuits the active mode is indicated by a function term or by an abbreviation. This may be e.g. ST.BY. = low in the stand-by mode or ST.BY. = high in the stand-by mode.

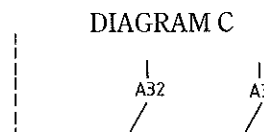
### Wiring Connections

The wiring connections on the diagrams are assembled in 'bundles'. The individual wires are provided with one of the following codes:

### 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 is found.

### CONNECTION TO ANOTHER DIAGRAM PAGE



A connection to another diagram page is indicated by a number as well as by a letter of the diagram to which the connection leads.

### Supply Voltages

All supply voltages in the diagrams are indicated by an arrow and a voltage indication.

### Example:

"7 CON." This means that the supply voltage in

SYMBOL FOR SIKKERHEDSKOMPONENTER

SYMBOL OF SAFETY COMPONENTS



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.

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

MÅLEBETINGELSER

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

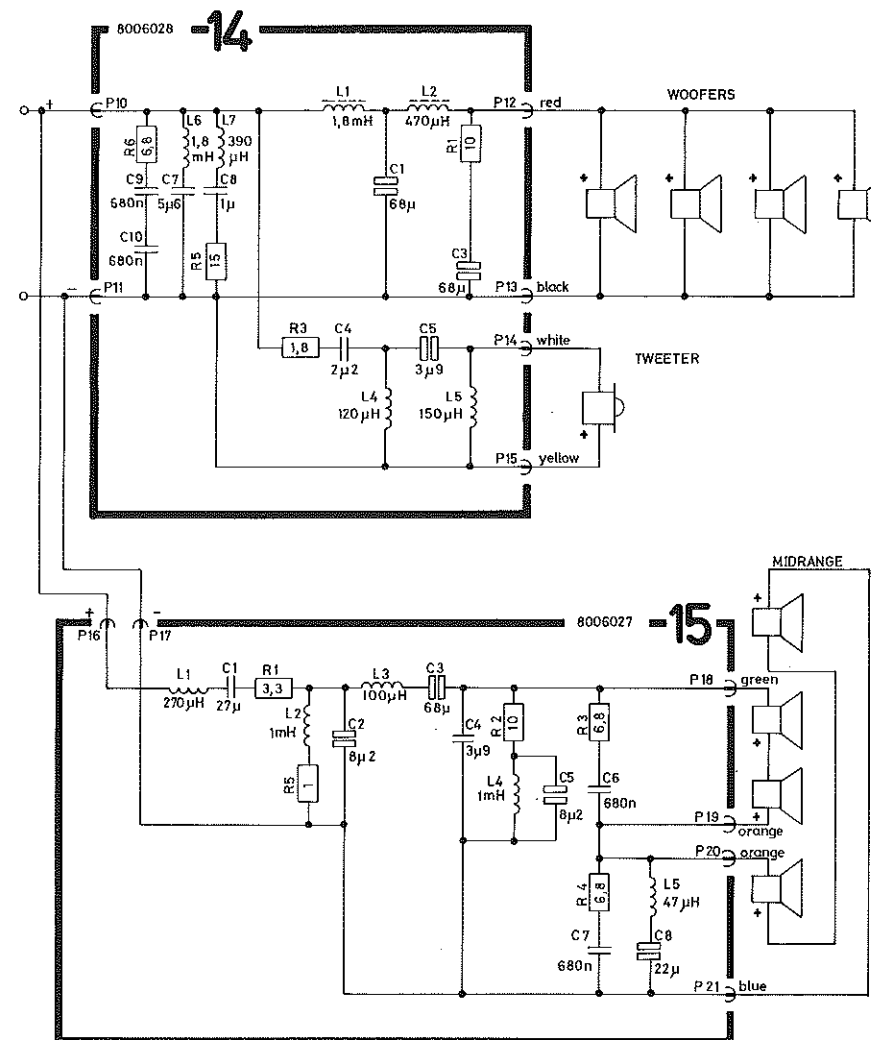
MEASURING CONDITIONS

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

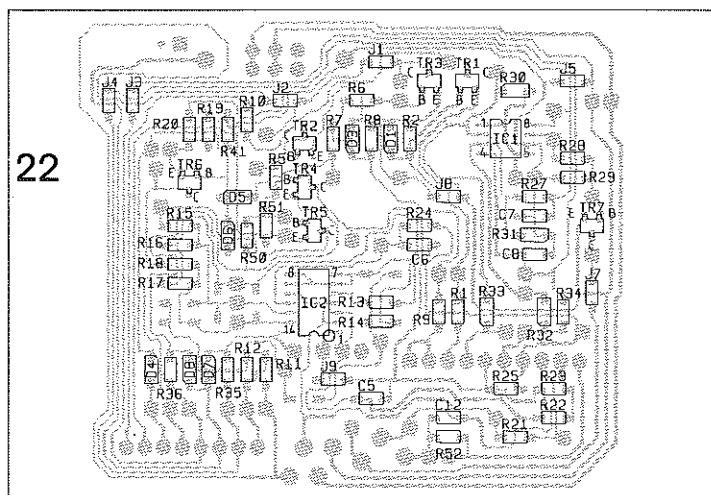
DC-spændingerne er opgivet i volt (V), f.eks. 0,7 V.

The DC voltages are stated in volts (V), e.g. 0.7 V.

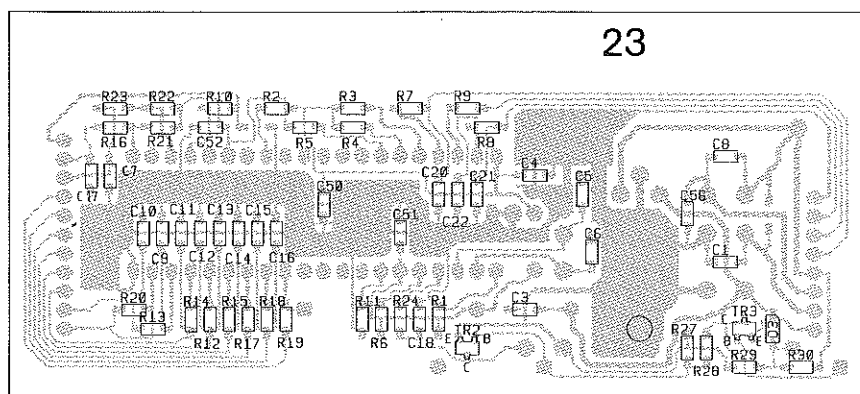
Crossover Network



PCB 22, Input Control



PCB 23, Microcomputer



PCB 24, Display Drive

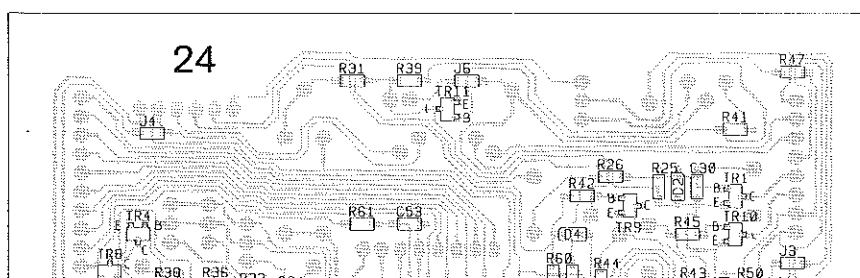


DIAGRAM A, Display

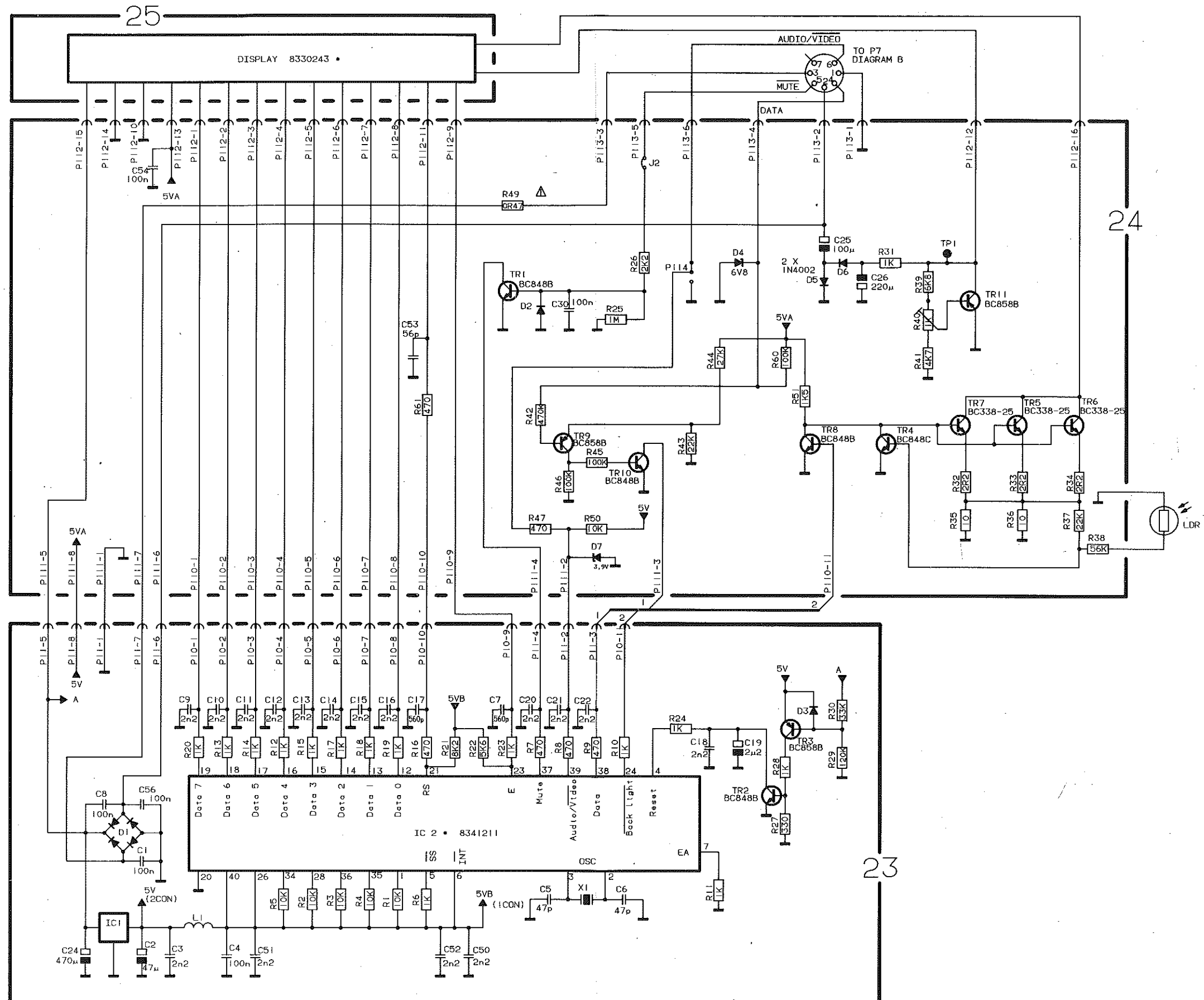
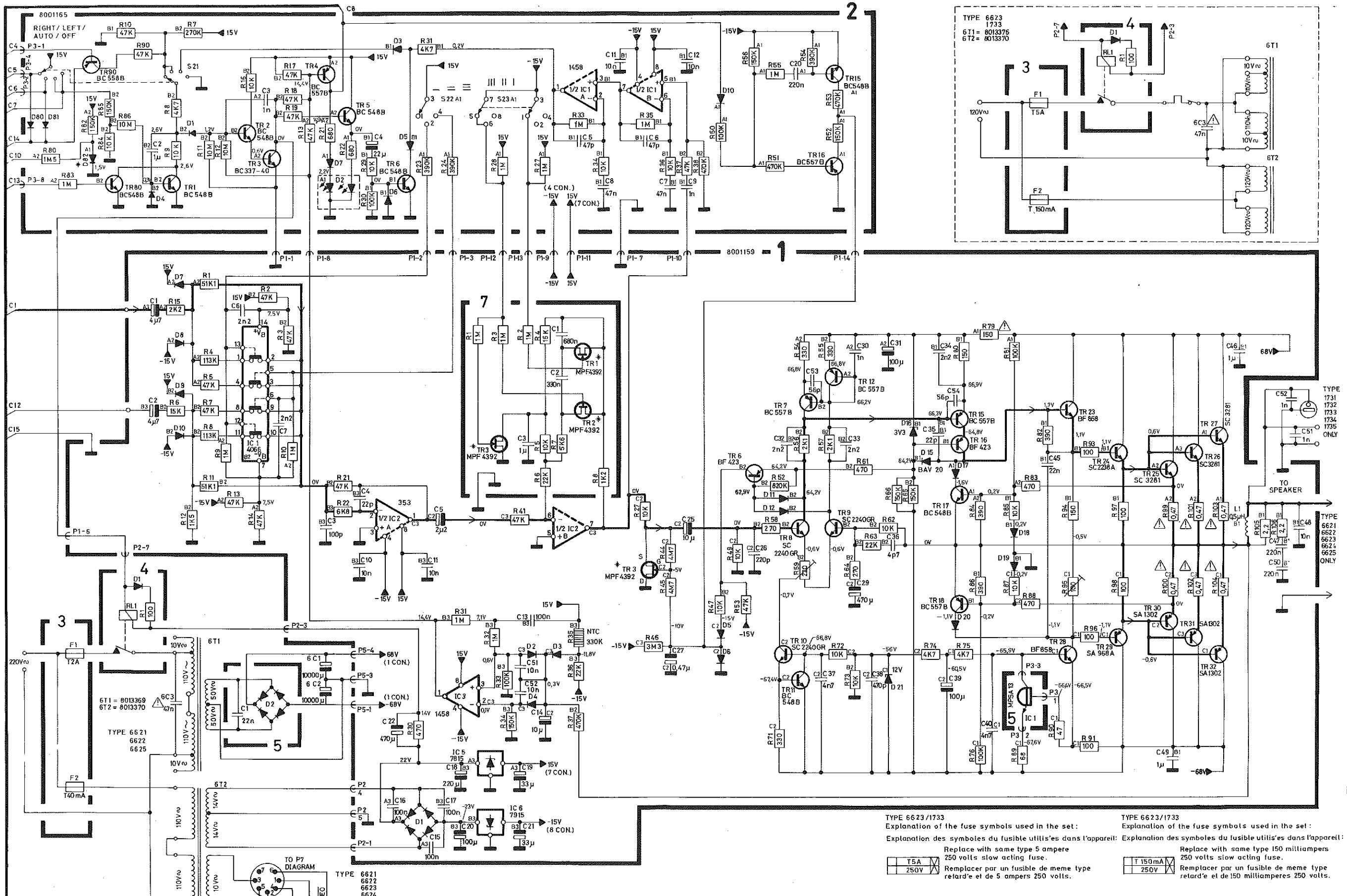


DIAGRAM B, Amplifier and Power Supply



TYPE 6623 /1733  
 Explanation of the fuse symbols used in the set:  
 Replace with same type 5 ampere 250 volts slow acting fuse.  
 Remplacer par un fusible de meme type retard'e et de 5 ampere 250 volts.

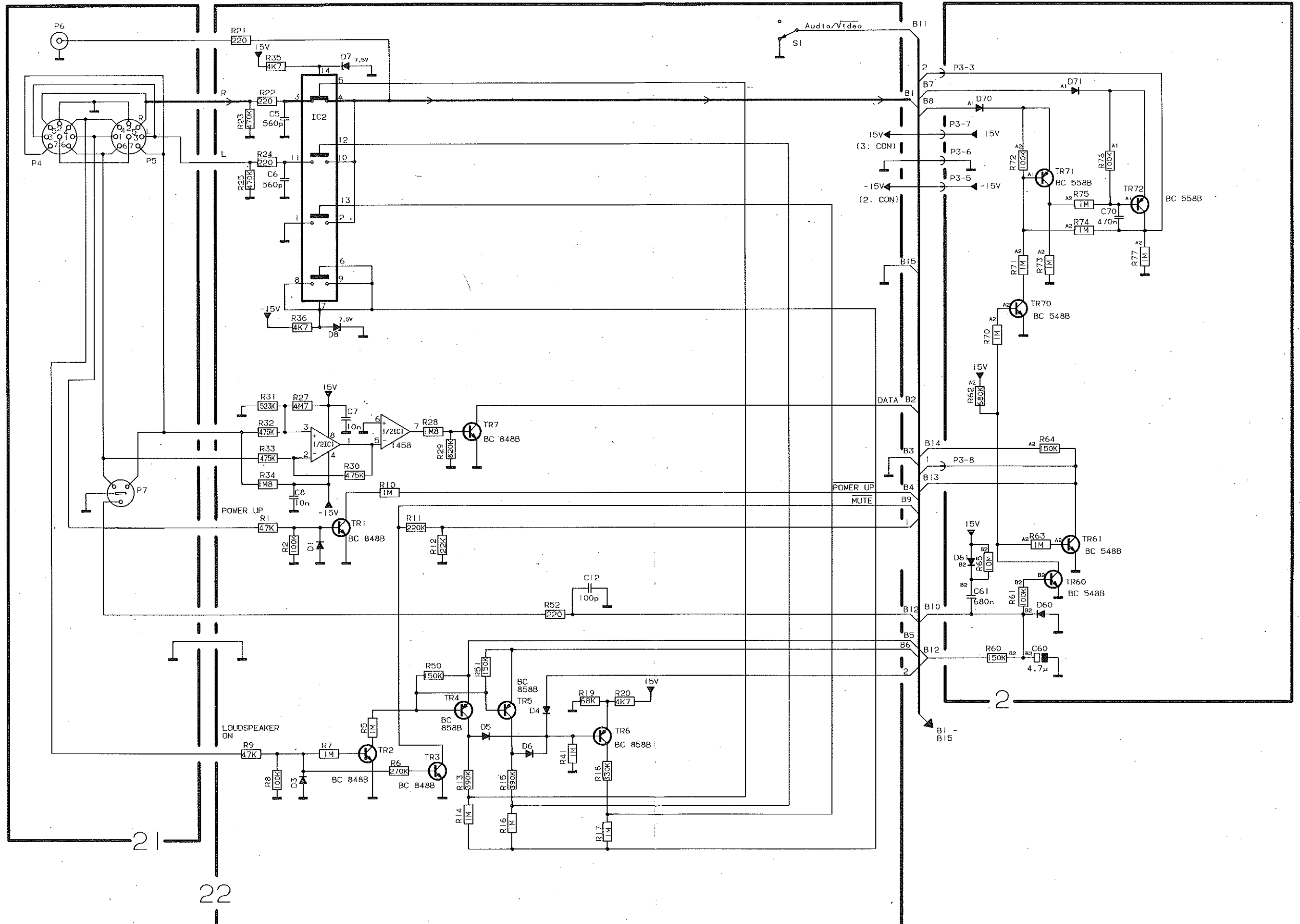
T5A	250V
-----	------

TYPE 6623/1733  
 Explanation of the fuse symbols used in the set:  
 Replace with same type 150 milliamperes 250 volts slow acting fuse.  
 Remplacer par un fusible de meme type retard'e et de 150 milliamperes 250 volts.

T 150mA	250V
---------	------



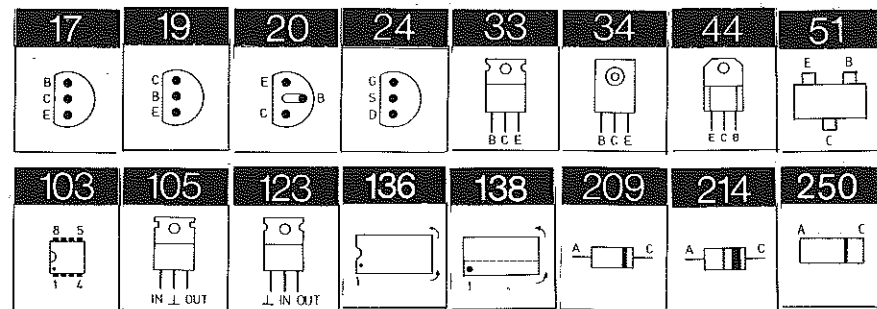
DIAGRAM C, Input



21

22

LIST OF ELECTRICAL PARTS



Resistors not referred to are standard, see page 3-4

PCB 1, 8001159 Amplifier

IC1Δ	8340202	136	MC 4066 BCP	IC5	8340064	105	MC 7815
IC2	8340763	136	LF353-TL072	IC6	8340240	123	MC 7915 CT
IC3	8340048	103	MC 1458 N				

TR3*Δ	8320396	24	MPF 4392	TR17	8320509	20	BC 548B
TR6	8320623	17	BF 423	TR18	8320503	20	BC 557B
TR7	8320503	20	BC 557B	TR23	8320646	44	BF 858
TR8-10	8320641	17	SC 2240 GR	TR24	8320643	33	SC 2238A
TR11	8320509	20	BC 548B	TR25-27	8320645	34	SC 3281
TR12	8320503	20	BC 557B	TR28	8320646	44	BF 858
TR15	8320503	20	BC 557B	TR29	8320642	33	SA 968A
TR16	8320623	17	BF 423	TR30-32	8320644	34	SA 1302

D1	8300466		B125 C1500	D16	8300541	209	ZPD 3.3V
D2-12	8300058	209	1N 4148	D17-20	8300058	209	1N 4148
D15	8300409	214	BAV 20-25	D21	8300407	209	ZPD 12V

R1	5020363	51.1 kΩ	1% 1/4W	R62	5020110	10 kΩ	1% 1/4W
R4	5020126	113 kΩ	1% 1/4W	R64	5020954	270 Ω	1% 1/4W
R8	5020126	113 kΩ	1% 1/4W	R73	5020127	10 kΩ	5% 1W
R11	5020363	51.1 kΩ	1% 1/4W	R79	5020633	150 Ω	5% 0.35W
R35	5220036	330 kΩ	10% 1/2W	R95	5370341	100 Ω	20% 0.1W
R56-57	5020200	2.1 kΩ	1% 1/4W	R99-	5100203	0.47 Ω	10% 2W
R59	5370351	220 Ω	20% 0.1W	R104			

C1-2	4200515	4.7 μF	20% 25V	C30	4010105	1 nF	10% 63V
C3	4100232	100 pF	5% 63V	C31	4200652	100 μF	20% 100V
C4	4000136	22 pF	5% 63V	C32-34	4010103	2.2 nF	10% 63V
C5	4200517	2.2 μF	20% 50V	C35	4003059	22 pF	5% 500V
C6-7	4010103	2.2 nF	10% 63V	C36	4000145	4.7 pF	0.25 pF 63V
C10-11	4010106	10 nF	-20+80% 40V	C37	4010101	4.7 nF	10% 63V
C13	4130230	100 nF	20% 63V	C38	4010128	470 pF	10% 63V
C14	4200510	10 μF	20% 16V	C39	4200511	100 μF	20% 10V
C15-17	4130230	100 nF	20% 63V	C40	4010101	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	4200368	100 μF	-10+100% 63V	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	4200510	10 μF	20% 16V	C50	4130308	220 nF	10% 63V
C26	4100234	220 pF	5% 63V	C51-52	4130265	10 nF	10% 63V
C27	4200523	0.47 μF	20% 50V	C53-54	4000362	56 pF	5% 63V
C29	4200665	470 μF	20% 6.3V				

L1	6850114	Coil	0.5 μH
----	---------	------	--------

P1	7220143	Plug	14/14 pole
P2	7220203	Plug	10/9 pole
P3	7220313	Plug	3 pole
P5	7220634	Plug	4/3 pole

PCB 2, 8001165 Control

IC1	8340048	103	MC 1458 CP1				
TR1-2	8320509	20	BC 548B	TR60-61	8320509	20	BC 548B
TR3	8320595	20	BC 337-40	TR70	8320509	20	BC 548B
TR4	8320503	20	BC 557B	TR71-72	8320510	20	BC 558B
TR5-6	8320509	20	BC 548B	TR80	8320509	20	BC 548B
TR15	8320509	20	BC 548B	TR90	8320510	20	BC 558B
TR16	8320503	20	BC 557B				

D1	8300058	209	1N 4148	D60-61	8300058	209	1N 4148
D2	8330153		TLSV 5100	D70-71	8300058	209	1N 4148
D3-7	8300058	209	1N 4148	D80-81	8300058	209	1N 4148
D10	8300058	209	1N 4148	D82*	8300056	209	ZTE 1.5V

R65	5020875	10 MΩ	5% 1/8W
-----	---------	-------	---------

C2	4130399	1 μF	10% 63V	C11-12	4010106	10 nF	-20+80% 40V
C3	4010105	1 nF	10% 63V	C20	4130308	220 nF	10% 63V
C4	4200016	22 μF	-10+50% 25V	C60	4200842	4.7 μF	20% 16V
C5-6	4000137	47 pF	5% 63V	C61	4130311	680 nF	10% 63V
C7-8	4130240	47 nF	10% 63V	C70	4130313	470 nF	20% 63V
C9	4010105	1 nF	10% 63V				

S21	7400378	Switch
S22-23	7400379	Switch

P3	7220221	Plug	8/8 pole
----	---------	------	----------

PCB 3, 8002905 PCB without fuses and mains lead

Type 6621-6622-6625 (EU-GB-AUS)

Type 6623 (US-CDN)

Type 6624 (JAP)

PCB 4, 8001166 Relay

F1	6600009	Fuse	2 AT
F2	6600070	Fuse	40 mAAT
	6271102	Mains lead	(EU-GB)
	6270297	Mains lead	(AUS)

F1	6600019	Fuse	5 AT
F2	6600069	Fuse	150 mAAT

	6270251	Mains lead
--	---------	------------

F1	6600095	Fuse	5 AT
F2	6600103	Fuse	80 mAAT

	6271016	Mains lead
--	---------	------------

D1	8300058	209	1N 4148
----	---------	-----	---------

RL1	7600069	Relay
	3917109	Damping material

PCB 5, 8001167 Bridge

IC1	8340505	19	MPS A13
-----	---------	----	---------

D2	8300497		KBU 6D
----	---------	--	--------

C1	4130079	22 nF	20% 250V
----	---------	-------	----------

**PCB 6, Power Supply**  
Type 6621-6622-6625

C1-2	4200653	10000 $\mu$ F 20% 80V	C3	4130394	47 nF 20% 250V
T1	8013369	Transformer	T2	8013370	Transformer

Type 6623

C1-2	4200653	10000 $\mu$ F 20% 80V	C3	4130397	47 nF 20% 125V
T1	8013375	Transformer	T2	8013370	Transformer

Type 6624

C1-2	4200653	10000 $\mu$ F 20% 80V			
T1	8013376	Transformer	T2	8013377	Transformer

**PCB 7, 8001168**  
Signal Level

TR1-3* $\Delta$	8320396	24 MPF 4392			
C1	4130311	680 nF 10% 63V	C3	4130070	1 $\mu$ F 10% 50V
C2	4130309	330 nF 10% 63V			
P1	7220544	Plug 5 pole			

**PCB 14, 8006028**  
Crossover Network/  
Woofers-Tweeter

R1	5100059	10 $\Omega$ 10% 9W	R5	5100200	15 $\Omega$ 10% 3W
R3	5100235	1.8 $\Omega$ 10% 3W	R6	5100242	6.8 $\Omega$ 5% 3W
C1	4200692	68 $\mu$ F 10% 35V	C7	4200732	5.6 $\mu$ F 10% 35V
C3	4200692	68 $\mu$ F 10% 35V	C8	4130155	1 $\mu$ F 10% 100V
C4	4130152	2.2 $\mu$ F 10% 100V	C9-10	4130312	680 nF 10% 63V
C5	4130385	3.9 $\mu$ F 10% 100V			
L1	6850193	Coil 1.8 mH	L5	6850142	Coil 0.15 mH
L2	6850192	Coil 470 $\mu$ H	L6	6850200	Coil 1.8 mH
L4	6850196	Coil 120 $\mu$ H	L7	6850198	Coil 390 $\mu$ H

**PCB 15, 8006027**  
Crossover Network/Midrange

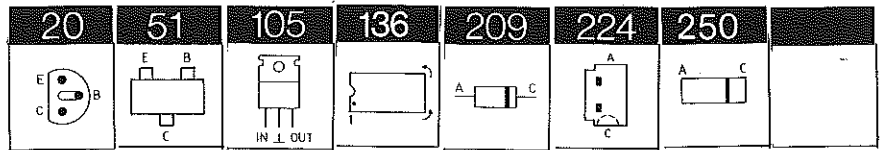
R1	5100340	3.3 $\Omega$ 10% 9W	R3-4	5100242	6.8 $\Omega$ 5% 3W
R2	5104009	10 $\Omega$ 10% 3W	R5	5104020	1 $\Omega$ 10% 3W
C1	4200731	27 $\mu$ F 10% 35V	C5	4200682	8.2 $\mu$ F 10% 35V
C2	4200682	8.2 $\mu$ F 10% 35V	C6-7	4130312	680 nF 10% 63V
C3	4200692	68 $\mu$ F 10% 35V	C8	4200683	22 $\mu$ F 10% 35V
C4	4130385	3.9 $\mu$ F 10% 100V			
L1	6850197	Coil 270 $\mu$ H	L4	6850199	Coil 1 mH
L2	6850190	Coil 1 mH	L5	6850166	Coil 47 $\mu$ H
L3	6850188	Coil 100 $\mu$ H			

**PCB 21, 8001169 Input Socket**

P4-5	7210518	8 pole DIN socket	P7	7210521	Loudspeaker socket
P6	7220746	Phono plug			

**PCB 22, 8001172 Input Control**

IC1	8340996	138 1458	IC2	8341024	138 4066
TR1-3	8320615	51 BC 848B	TR7	8320615	51 BC 848B
TR4-6	8320616	51 BC 858B			
D1	8300482	250 LL 4148	D7-8	8300636	250 ZPD 75V
D3-6	8300482	250 LL 4148			
R30	5011732	475 k $\Omega$ 1% 1/8W	R32-33	5011732	475 k $\Omega$ 1% 1/8W
R31	5011733	523 k $\Omega$ 1% 1/8W			
C5-6	4000325	560 pF 5% 50V	C12	4000292	100 pF 5% 50V
C7-8	4010176	10 nF -20+80% 50V			



Resistors not referred to are standard, see page 3-4.

### PCB 23, 8001173 Microcomputer

IC1 8341163 105 78M05  
IC2\*Δ 8341211 136 80C50

TR2 8320615 51 BC 848B  
TR3 8320616 51 BC 858B

D1 8300466 B125 C1500  
D3 8300482 250 LL 4148

C1	4010166	100 nF -20+80% 50V	C17	4000325	560 pF 5% 50V
C2	4201087	47 μF -10+100% 40V	C18	4010170	2.2 nF 10% 50V
C3	4010170	2.2 nF 10% 50V	C19	4200517	2.2 μF 20% 50V
C4	4010166	100 nF -20+80% 50V	C20-22	4010170	2.2 nF 10% 50V
C5-6	4000234	47 pF 5% 50V	C24	4200834	470 μF -10+50% 25V
C7	4000325	560 pF 5% 50V	C50-52	4010170	2.2 nF 10% 50V
C8	4010166	100 nF -20+80% 50V	C56	4010166	100 nF -20+80% 50V
C9-16	4010170	2.2 nF 10% 50V			

L1 8020552 Coil 10 μH

X1 8090009 Crystal 6.000 MHz

P10 7220862 Plug 11/11 pole  
P11 7220600 Plug 8/8 pole

### PCB 24, 8001174 Display Drive

TR1	8320615	51 BC 848B	TR9	8320616	51 BC 858B
TR4	8320747	51 BC 848C	TR10	8320615	51 BC 848B
TR5-7	8320848	20 BC 338-25	TR11	8320616	51 BC 858B
TR8	8320615	51 BC 848B			

D2	8300482	250 LL 4148	D5-6	8300023	209 1N 4002
D4	8300520	224 ZPD 6.8V	D7	8300577	250 ZPD 3.9V

R40 5370141 1 kΩ 20% 0.1W  
R49 5020684 0.47 Ω 10% 0.4W

LDR 5210006 3.3 kΩ 33% - 21 LUX

C25	4200462	100 μF -10+50% 25V	C53	4000240	56 pF 5% 50V
C26	4200835	220 μF -20+50% 25V	C54	4010166	100 nF -20+80% 50V
C30	4010166	100 nF -20+80% 50V			

P110	7210748	Socket 11/11 pole	P113	7220167	Plug 6/6 pole
P111	7210290	Socket 8/8 pole	P114	7220212	Plug 3/3 pole
P112	7210723	Socket 16 pole		7210570	Strap

### PCB 25, 8330243 Display

### 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	5020803	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	5011038	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	5011348	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	5011377	5010622	5010070	5010069	5010060	5010073	5010714	
4.7	5010888	5010411	5010058	5010048	5010045	5010077	5011513	
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		

Resistors 5% 1/8 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0		5011464	5011357	5010816	5010935	5011440	5011459	5020875
1.2		5011351	5011084	5011442	5011338	5011341	5011175	
1.5		5011463	5011443	5011178	5011364	5011398	5011460	
1.8			5011350	5011361	5011344	5011468		
2.2	5011032	5011376	5010886	5011353	5010833	5011369	5011342	
2.7		5011471	5011355	5011362	5011366	5011370	5011478	
3.3			5011337	5010827	5011346	5011371	5011462	
3.9		5011438	5011817	5011157	5011457	5011372	5020876	
4.7	5011363	5011038	5011441	5011363	5010937	5011343	5011611	
5.6		5011412	5011358	5010885	5011166	5011340		
6.8		5011356	5011336	5010839	5011367	5011458		
8.2		5011466	5011354	5011339	5011368	5011373		

Resistors SMD 2% 1/8 W

SMD 5% 1/8 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
				5%	2%	2%	2%	2%
				2%	2%	2%	5%	5%
1.0	5011623	5011647	5011218	5011227	5011241	5011256	5011267	5011730
1.1	5011624	5011648	5011669	5011681	5011689	5011694	5011707	
1.2	5011625	5011649	5011219	5011682	5011490	5011257	5011708	
1.3	5011626	5011650	5011670	5011683	5011242	5011258	5011709	
1.5	5011627	5011651	5011220	5011228	5011243	5011259	5011710	
1.6	5011628	5011652	5011671	5011684	5011690	5011695	5011711	
1.8	5011629	5011653	5011672	5011229	5011244	5011260	5011712	
2.0	5011630	5011654	5011673	5011685	5011691	5011696	5011713	
2.2	5011216	5011655	5011674	5011230	5011245	5011261	5011714	
2.4	5011634	5011656	5011675	5011686	5011246	5011697	5011715	
2.7	5011635	5011657	5011497	5011231	5011247	5011262	5011716	
3.0	5011731	5011658	5011499	5011500	5011692	5011698	5011717	
3.3	5011217	5011659	5011676	5011232	5011248	5011263	5011718	
3.6	5011636	5011660	5011677	5011687	5011249	5011264	5011719	
3.9	5011637	5011661	5011221	5011233	5011491	5011699	5011720	
4.3	5011638	5011662	5011498	5011688	5011492	5011700	5011721	
4.7	5011639	5011269	5011222	5011234	5011250	5011265	5011722	
5.1	5011640	5011663	5011678	5011235	5011493	5011701	5011723	
5.6	5011641	5011664	5011223	5011236	5011251	5011702	5011724	
6.2	5011642	5011665	5011224	5011237	5011693	5011703	5011725	
6.8	5011643	5011666	5011225	5011238	5011252	5011704	5011726	
7.5	5011644	5011667	5011679	5011239	5011253	5011705	5011727	
8.2	5011645	5011270	5011226	5011240	5011254	5011266	5011728	
9.1	5011646	5011668	5011680	5011489	5011255	5011706	5011729	

(Glue dots, approx. 200, part no. 3181932).

**MEKANISK STYKLISTE**  
**LIST OF MECHANICAL PARTS**
**Beolab Penta**

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	Cloth front, small
9106	8480197	Bashøjtaler	Woofers
9107	8480197	Bashøjtaler	Woofers
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 f/mellemtonehøjtaler	Baffle f/midrange speaker
9114	3947202	Skumtape i metermål	Foam tape by the meter
9115	3320132	Dækglas f/display	Cover glass f/display
9117	3320100	Bånd	Frame
9119	3132125	Skuffe f/PCB	Tray f/PCB
9120	8480196	Mellemtonehøjtaler	Midrange speaker
9121	8480196	Mellemtonehøjtaler	Midrange speaker
9122	2630024	Beslag f/mellemtonehøjtaler	Fitting f/midrange speaker
9123	8480206	Diskanthøjtaler	Tweeter
9124	3031125	Beslag f/diskanthøjtaler	Fitting f/tweeter
9125	8480197	Bashøjtaler	Woofers
9126	8480196	Mellemtonehøjtaler	Midrange speaker
9127	8480196	Mellemtonehøjtaler	Midrange speaker
9128	3450667	Stoframme, stor	Cloth front, big
9129	2630024	Beslag f/mellemtonehøjtaler	Fitting f/midrange speaker
9130	2630024	Beslag f/mellemtonehøjtaler	Fitting f/midrange speaker
9131	8480197	Bashøjtaler	Woofers
9132	2560243	Pynteliste højre, stor	Decorative moulding right, big
9133	3302406	Kabinetside og -liste, stor	Cabinet side and moulding, big
9134	6275649	Ledningsbunt	Wire bundle
		m/7 pol. DIN stik - hun	w/7 pole DIN socket - female
	7210608	7 pol. DIN stik - hun	7 pole DIN socket - female
9136	3302406	Kabinetside og -liste, stor	Cabinet side and moulding, big
9137	2560244	Pynteliste venstre, stor	Decorative moulding left, big
9138	3454478	Bund m/tryk	Bottom w/print
9139	3947202	Skumtape i metermål	Foam tape by the meter
9140	7210596	Skrueterminal, sort	Terminal screw, black
9141	7210595	Skrueterminal, rød	Terminal screw, red
9142	8860250	Glassokkel	Glass socket
9143	3340072	Pakning	Gasket
9144	3103224	Fod	Foot
9145	3103066	Gummifod	Rubber foot
9146	2732084	O-ring	O-ring
9147	3340070	Pakning	Gasket
9148	3340070	Pakning	Gasket
9149	3340070	Pakning	Gasket
9150	3340070	Pakning	Gasket
9151	3183092	Afdækning f/display	Masking f/display

---

 14Modul 8006028 PCB14, Crossover Network/Woofers-Tweeter
 

---

 15Modul 8006027 PCB15, Crossover Network/Midrange
 

---

 23Modul 8001173 PCB23, Microcomputer
 

---

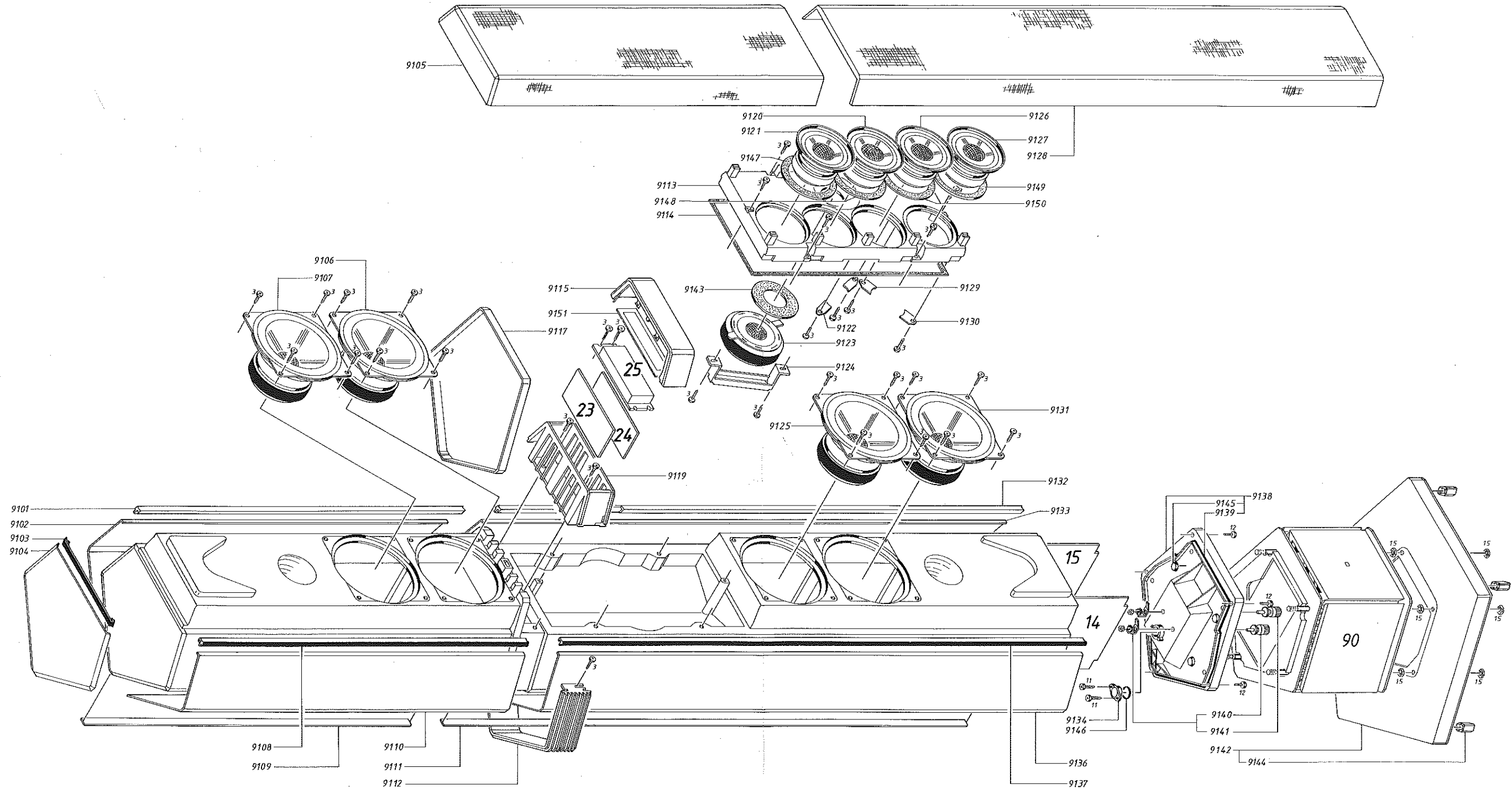
 24Modul 8001174 PCB24, Display Drive
 

---

 25Modul 8330243 PCB25, Display
 

---

Beolab Penta



Power Amplifier

Power Amplifier

Beolab 200

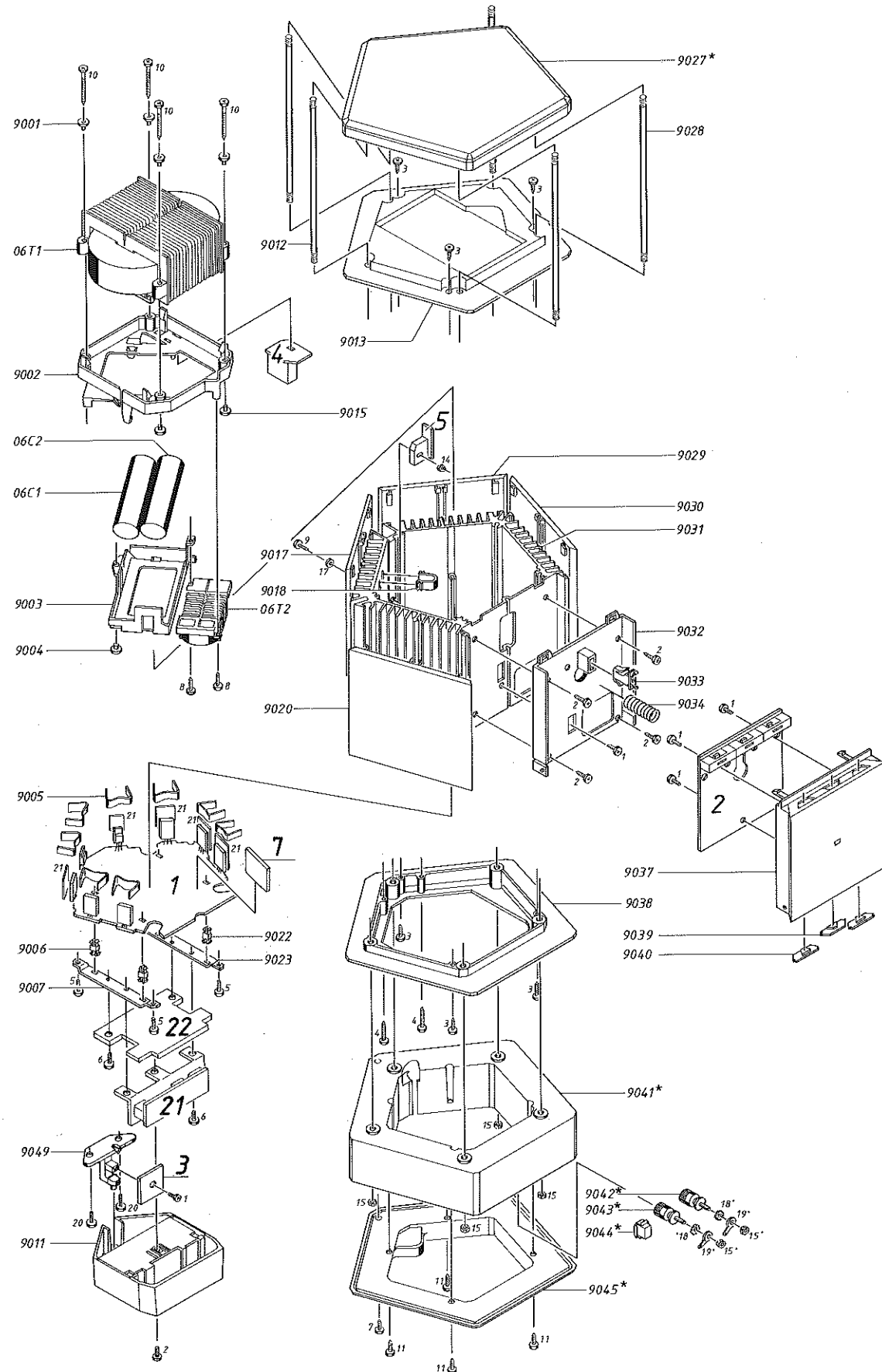
Survey of screws

9001	2938154	Bøsning	Bushing
9002	3152455	Holder f/elektrolytter	Holder f/electrolytes
9003	3164608	Låg f/elektrolytter	Cover f/electrolytes
9004	2938154	Bøsning	Bushing
9005	2819157	Bøjle	Clamp
9006	3152063	Holder f/PCB1	Holder f/PCB1
9007	2542669	Vinkel f/PCB1	Bracket f/PCB1
9011	3164742	Dæksel f/stikbrønd	Cover f/socket
9012	2076007	Gevindestykke	Threaded piece
9013	3162266	Sammenpændingsstykke	Assembling piece
9015	2938154	Bøsning	Bushing
9017	3164748	Dæklade m/tryk, type 6621	Cover plate w/print, type 6621
9017	3164749	Dæklade m/tryk, type 6622	Cover plate w/print, type 6622
9017	3164751	Dæklade m/tryk, type 6623	Cover plate w/print, type 6623
9017	3164753	Dæklade m/tryk, type 6624	Cover plate w/print, type 6624
9017	3164750	Dæklade m/tryk, type 6625	Cover plate w/print, type 6625
9018	3152507	Ledningsholder	Wire holder
9020	3164602	Dæklade	Cover plate
9022	3152063	Holder f/PCB1	Holder f/PCB1
9023	2542669	Vinkel f/PCB1	Bracket f/PCB1
9028	2076007	Gevindestykke	Threaded piece
9029	3164603	Dæklade	Cover plate
9030	3164602	Dæklade	Cover plate
9031	2568847	Køleprofil	Heat sink
9032	3452527	Bagstykke, betjening	Rear cover, control
9033	3034066	Lås f/låg	Lock f/lid
9034	2812113	Trykfjeder	Pressure spring
9037	3168769	Betjeningspanel	Control panel
9038	3162268	Sammenpændingsstykke	Assembling piece
9039	2776037	Knap omskifter	Switch button
9040	2776037	Knap omskifter	Switch button
9049	3152657	Holder f/netledning	Holder f/mains lead

15	2380016	Nut M4
18	2625003	Washer
19	7530091	Soldering lug

01Modul	8001159	PCB1, Amplifier
02Modul	8001165	PCB2, Control
03Modul	8002905	PCB3, PCB without fuses and mains lead
	6271102	Mains lead, type 6621-6622
	6270251	Mains lead, type 6623
	6271016	Mains lead, type 6624
	6270297	Mains lead, type 6625
04Modul	8001166	PCB4, Relay
	3917109	Damping material
05Modul	8001167	PCB5, Bridge
06T1	8013369	Transformer, type 6621-6622-6625
	8013375	Transformer, type 6623
	8013376	Transformer, type 6624
06T2	8013370	Transformer, type 6621-6622-6623-6625
	8013377	Transformer, type 6624
06C1	4200653	10000 uF 20% 80V
06C2	4200653	10000 uF 20% 80V
	3917109	Damping material
07Modul	8001168	PCB7, Signal Level
21Modul	8001169	PCB21, Input Socket

21P4	7210518	8 pole DIN socket	21P6	7220746	Phono plug
21P5	7210518	8 pole DIN socket	21P7	7210521	Loudspeaker socket



\* Kemi Beolab 200, type 1720



## Ikke viste dele Parts not shown

6275627	Ledningsbunt m/7 pol. DIN stik - han	Wire bundle w/7 pole DIN plug - male
7220205	7 pol. DIN stik - han	7 pole DIN plug - male
3040026	Topnøgle	Socket spanner
3922023	Dæmpemateriale	Damping material
3922025	Dæmpemateriale f/mellemtone, lille	Damping material f/midrange, small
3922024	Dæmpemateriale f/mellemtone, stor	Damping material f/midrange, big
3946038	Folie i meter	Foil by the meter
3397604	Skumemballage f/glassokkel	Foam packing f/glass socket
3397555	Skumemballage mellemstykker	Foam packing f/spacers
3397554	Skumemballage endestykker	Foam packing f/end pieces
3391838	Yderæske	Outer carton
3397601	Skumemballage f/bund	Foam packing f/bottom

## Oversigt over skruer, skiver m.m. Survey of screws, washers etc.

1	2013208	Skrue 2,9 x 9,5 mm	Screw 2.9 x 9.5 mm
2	2039027	Skrue 3 x 6 mm	Screw 3 x 6 mm
3	2015088	Skrue 3,5 x 16 mm	Screw 3.5 x 16 mm
4	2015116	Skrue 3,5 x 25 mm	Screw 3.5 x 25 mm
5	2015201	Skrue 3,5 x 9,5 mm	Screw 3.5 x 9.5 mm
6	2039026	Skrue 3 x 4 mm	Screw 3 x 4 mm
7	2039028	Skrue 3 x 8 mm	Screw 3 x 8 mm
8	2015008	Skrue 3,5 x 13 mm	Screw 3.5 x 13 mm
9	2039014	Skrue 3 x 20 mm	Screw 3 x 20 mm
10	2015115	Skrue 3,5 x 50 mm	Screw 3.5 x 50 mm
11	2013107	Skrue 2,9 x 9,5 mm	Screw 2.9 x 9.5 mm
12	2043016	Skrue 4 x 10 mm	Screw 4 x 10 mm
14	2380011	Møtrik M3	Nut M3
15	2380016	Møtrik M4	Nut M4
17	2624013	Skive	Washer
20	2015108	Skrue 3,5 x 16 mm	Screw 3.5 x 16 mm
21	3170169	Glimmerskive	Mica washer

## TILBEHØR ACCESSORIES

6270336	4 pol DIN skærmet HT ledning - 5 m	4-pin DIN shielded speaker cable - 5 m
6270352	4 pol DIN skærmet HT ledning - 10 m	4-pin DIN shielded speaker cable - 10 m
6270350	2 pol DIN skærmet HT ledning - 5 m	2-pin DIN shielded speaker cable - 5 m
6270417	8 pol DIN Power Link ledning - 2,5 m	8-pin DIN Power Link cable - 2.5 m
6270418	8 pol DIN Power Link ledning - 5 m	8-pin DIN Power Link cable - 5 m
6270419	8 pol DIN Power Link ledning - 10 m	8-pin DIN Power Link cable - 10 m
7229075	Adaptor f/Power Link - 8 pol DIN hun/8 pol DIN hun	Adaptor f/Power Link - 8-pin DIN female/8-pin DIN female

## OWNER'S MANUALS

3506145	Dansk	Danish
3506146	Svensk	Swedish
3506147	Finsk	Finnish
3506148	Engelsk	English
3506149	Tysk	German
3506150	Hollandsk	Dutch
3506151	Fransk	French
3506153	Italiensk	Italian
3506154	Spansk	Spanish

## JUSTERINGER

### Tomgangsstrøm

Tomgangsstrøm justeres medens forstærkeren er kold og uden signal tilført.

Højtaler må ikke være tilsluttet.

DC millivoltmeter tilsluttes over modstandene 1R103/1R104, dvs. fra emitteren på 1TR32 til emitteren på 1TR27.

1R95 justeres til 30mV.

### Offset

DC voltmeter tilsluttes højtalerudgangen.

1R59 justeres til 0 V.

### Display

DC voltmeter tilsluttes stel og 24TP1.

Med potentiometer 24R40 justeres kontrastspændingen til  $1,9V \pm 0,05V$ .

## ADJUSTMENTS

### No-load current

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

The loudspeaker must not be connected to the amplifier.

Connect the DC millivoltmeter across the two resistors 1R103/1R104, that is from the emitter of 1TR32 to the emitter of 1TR27.

Adjust 1R95 to 30mV.

### Offset

Connect the DC voltmeter to the loudspeaker output.

Adjust 1R59 to 0 V.

### Display

Connect DC voltmeter across ground and 24TP1.

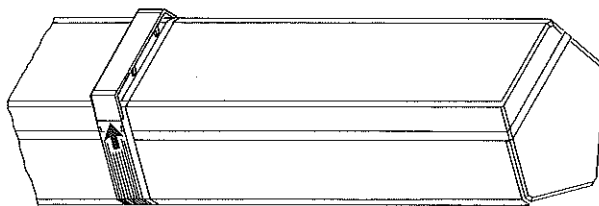
Use potentiometer 24R40 to adjust contrast voltage to  $1.9V \pm 0.05V$ .

## ADSKILLELSE

Display

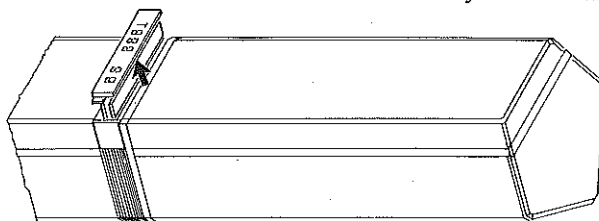
## DISMANTLING

Display



Dækslet afmonteres ved at trække i pilens retning.

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



Ved at løsne de 4 skruer kan display-enheden frigøres, og løftes ud i serviceposition.

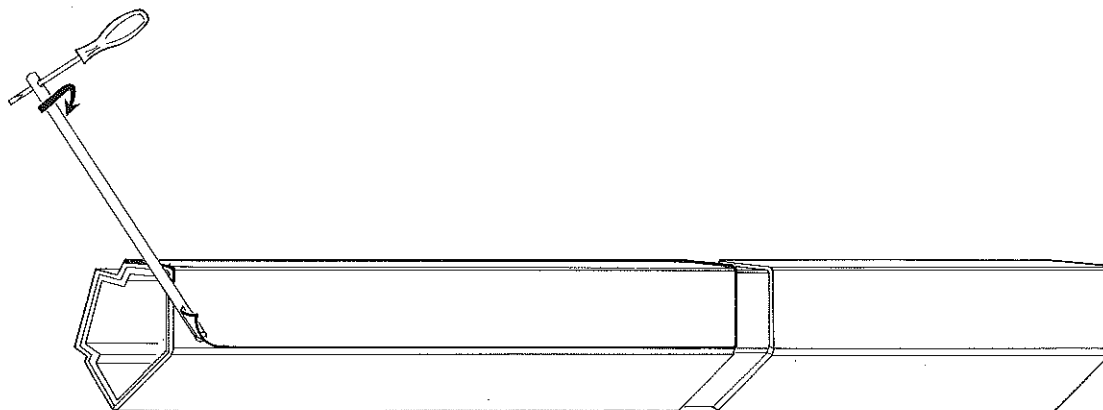
By loosening the 4 screws the display unit become accessible and can be lifted up in service position.

## REPARATIONSTIPS

Udskiftning af rustfrit stål

## REPAIR HINTS

Replacement of stainless steel



De rustfrie stålpaneler løsnes forsigtigt i et af hjørnerne.

Loosen the stainless steel panels carefully in one corner.

Hjælpeværktøj bestillingsnr. 3629116 benyttes som vist på tegningen.

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

**ISOLATIONSTEST**

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

Der må ikke forekomme overslag under testen!

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes den ene af terminalerne på isolationstesteren. Den anden terminal tilsluttes stel på phonobøsningen (LINE IN).

**OBS!**

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

Spændingsreguleringen på isolationstesteren drejes langsomt op, indtil en spænding på 1,5-2 kV er opnået. Her skal den holdes i ét sekund, hvorefter der langsomt drejes ned for spændingen igen.

**INSULATION TEST**

Each set must be insulation tested after having been dismantled. Make the test when the set has been reassembled and is ready to be returned to the customer.

Flashovers must not occur during the testing procedure!

Make the insulation test as follows:

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal to ground in phono socket (LINE IN).

**NOTE!**

To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.

Slowly turn the voltage control of the insulation tester until a voltage of 1.5-2 kV is obtained. Maintain that voltage for one second, then slowly turn it down again.

Bang & Olufsen  
DK-7600 Struer  
Denmark

Phone +45 96 84 11 22\*  
Fax +45 97 85 39 11

3538008 03-04