

Service
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Product Service Group CE Audio

Service Information

Already published Service Informations :

ADDITION TO SERVICE MANUAL

***Power Booster:**

Repair information and selected spare parts are now available for the Power Booster. For this reason layout, circuit drawing and parts list are enclosed (Page 1 to 10).

POWER BOOSTER

SPECIFICATIONS

Mains voltage : 110-127V/220-240V Switchable for /21/21M
 : 120V for /37
 Mains frequency : 50/60Hz
 Power Consumption : 25W at Standby
 : 150W at Active for /21/21M
 : 135W at Active for /37

I/P Sensitivity : 775mV +/-15%
 Frequency Response : 20Hz-20kHz +/-3dB
 Channel Different : 2dB (250Hz to 6.3kHz)
 Distortion : 0.4% (1W 1kHz)
 : 0.4% (1W 40Hz)
 : 0.9% (1W 16kHz)
 Channel Separation : >65dB (1kHz)
 : >50dB (250Hz)
 : >50dB (10kHz)

O/P Power : 100W
 FTC Power : 85W

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Power Booster Speaker Box

Power Booster Amplifier Box

Power Booster Speaker Box

VERSION VARIATIONS:

	FW-C798/21	FW-C798/37	FW-V795/21M
POWER BOOSTER	3139 118 79650 (PWB-C798/01)	3139 118 79640 (PWB-C798/17)	3139 118 79630 (PWB-V795/01)
AMPLIFIER BOX	9965 000 13808	9965 000 13800	9965 000 13725
SPEAKER BOX	9965 000 13809	9965 000 13801	9965 000 13726

DISMANTLING INSTRUCTIONS (POWER BOOSTER AMPLIFIER BOX)

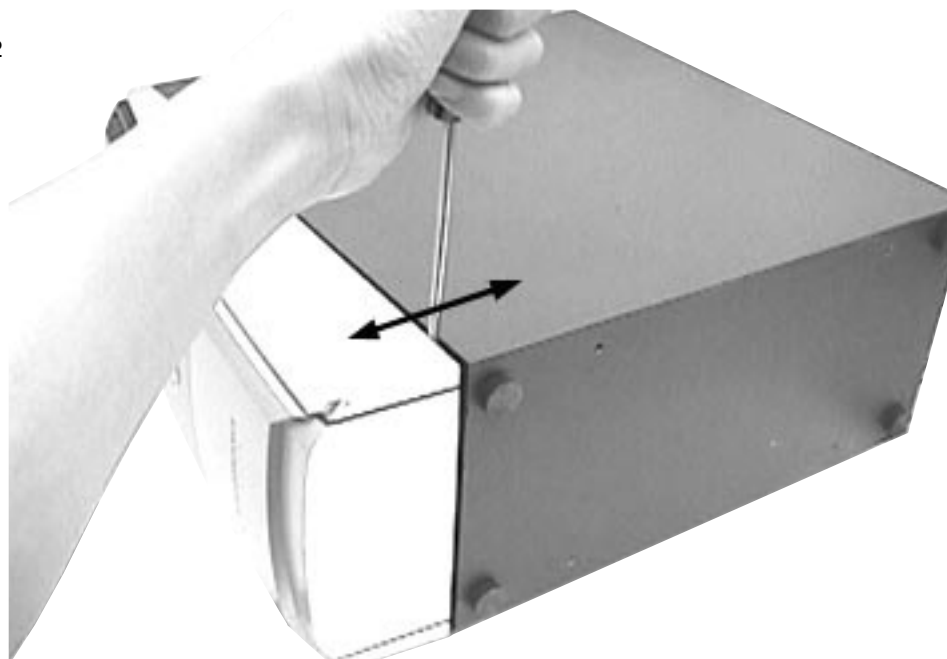
Dismantling the Front Assembly

1. Place the Power Booster Amplifier Box as shown in Picture 1 and Picture 2 and use a screw driver (minus type) to force open the Front assembly.
Caution: Do not break the bundle of wires to the front.

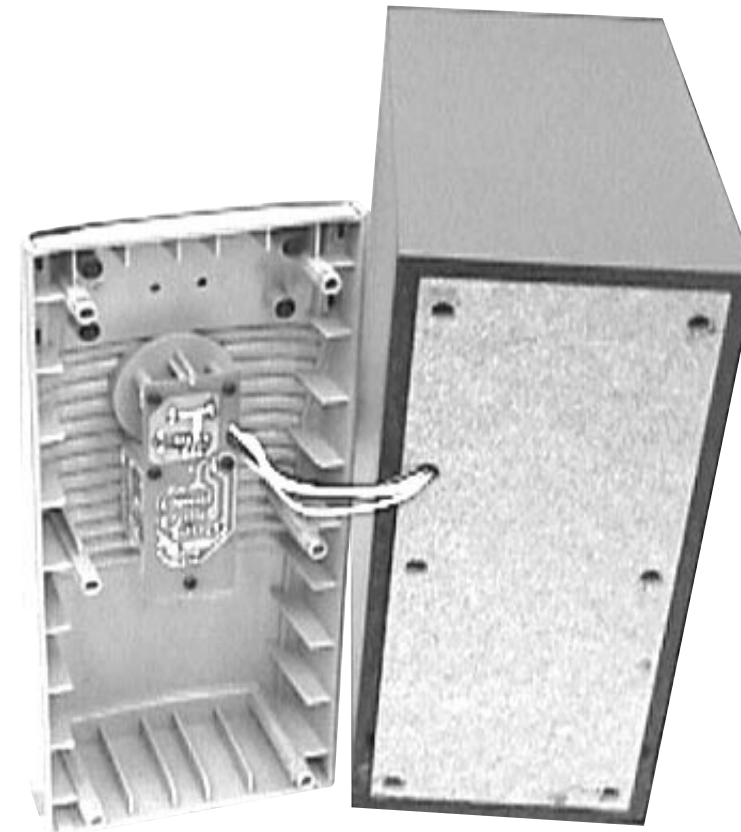
Picture 1



Picture 2

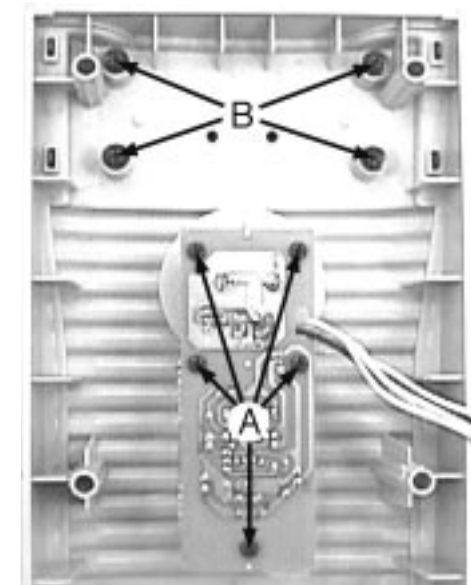


Service Position A



Dismantling the Control Board and the Panel Ornamental

1. Remove 5 screws A (see Picture 3) to loosen the Control Board (pos 6).
2. Remove 4 screws B (see Picture 3) to remove the Panel Ornamental (pos 17).



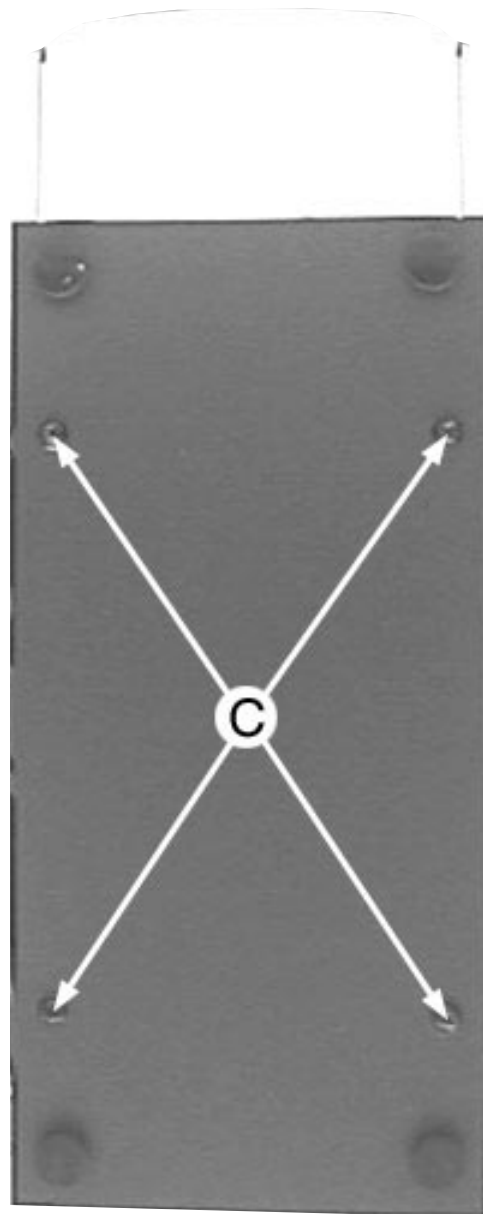
Picture 3

DISMANTLING INSTRUCTIONS (POWER BOOSTER AMPLIFIER BOX)

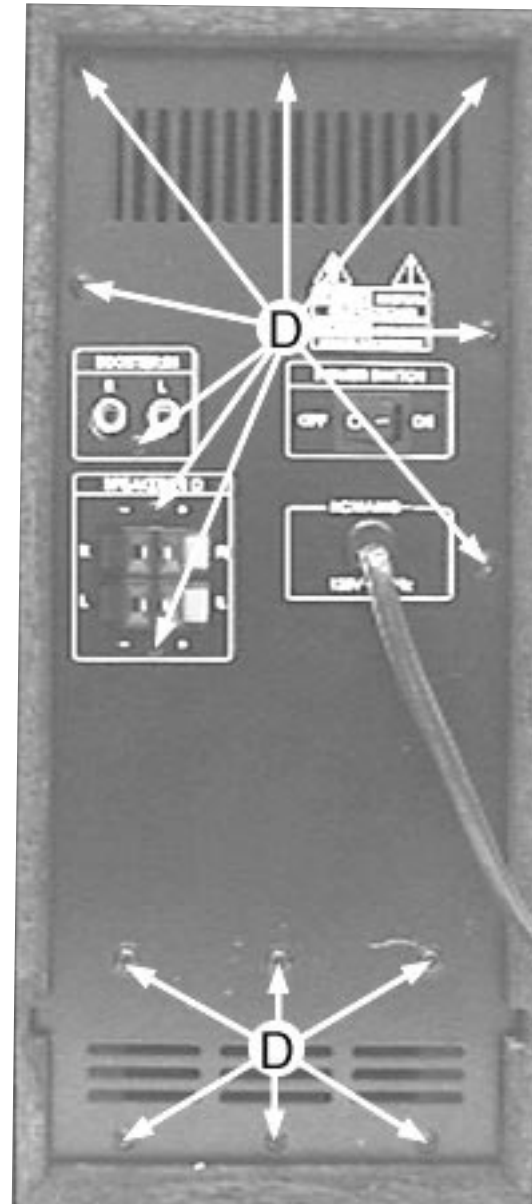
Dismantling the Rear Assembly

1. Remove 4 screws C at the bottom of the Power Booster Amplifier Box as shown in Picture 4.
2. Remove 15 screws D (see Picture 5) to remove the Metal Panel (pos 1).
3. Slide out the Main PCB assembly as shown in Service Position B.

Note: After repair, be very sure that the cables are tied and restored properly to its original position.

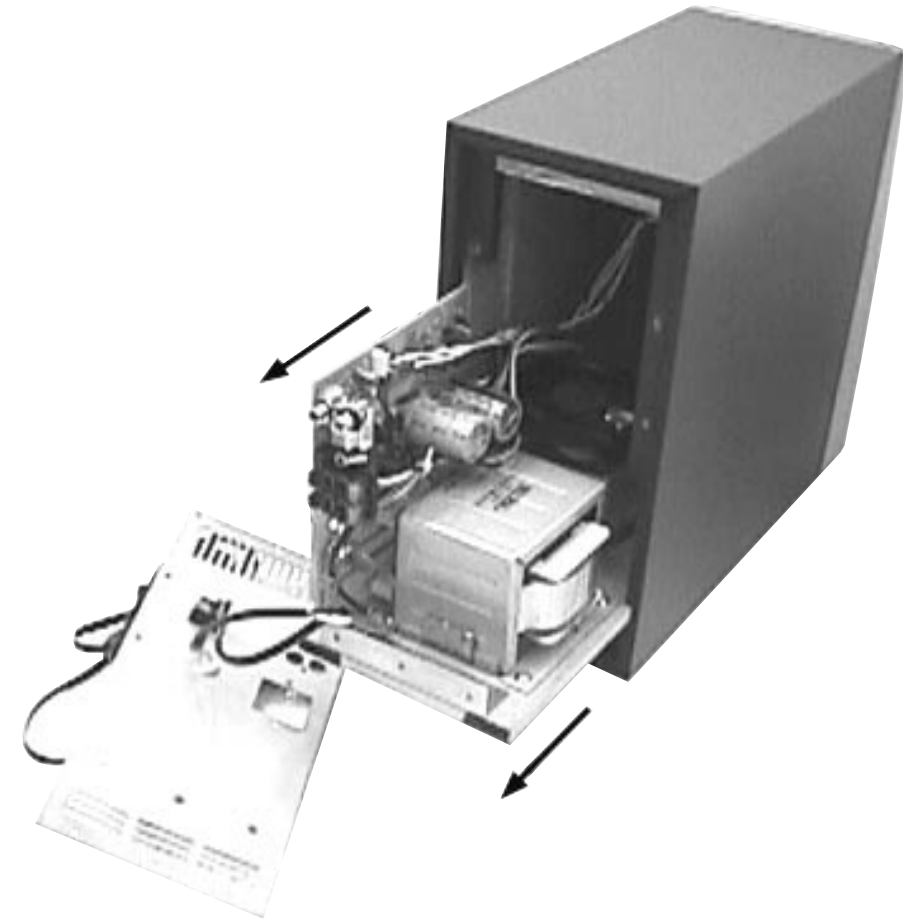


Picture 4

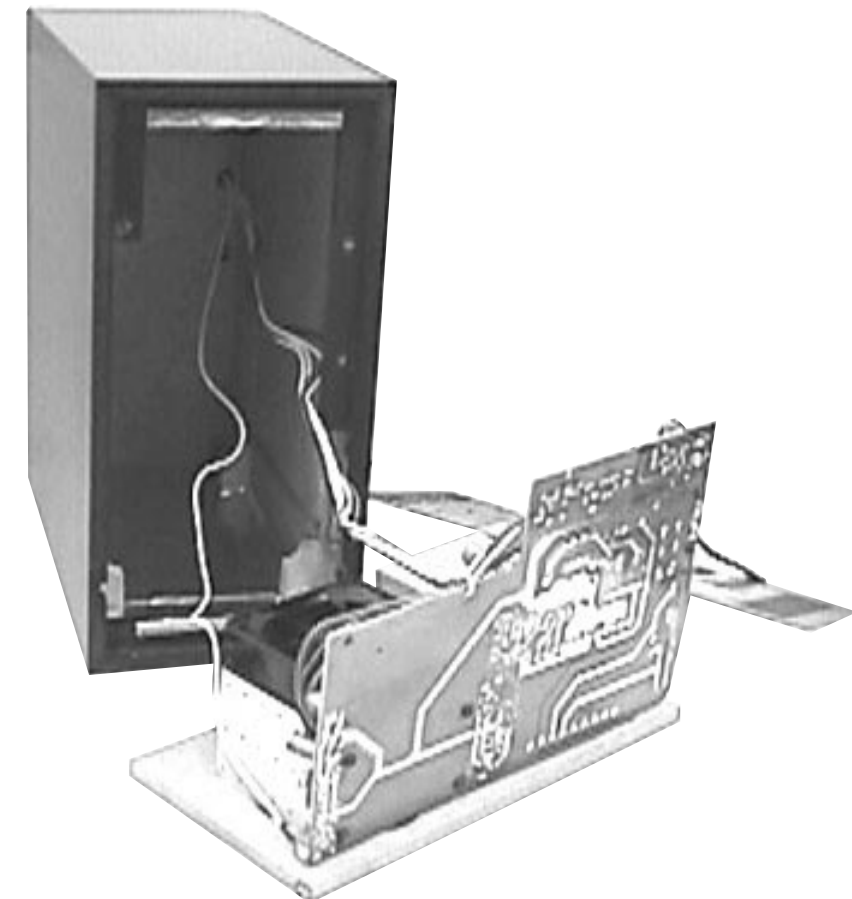


Picture 5

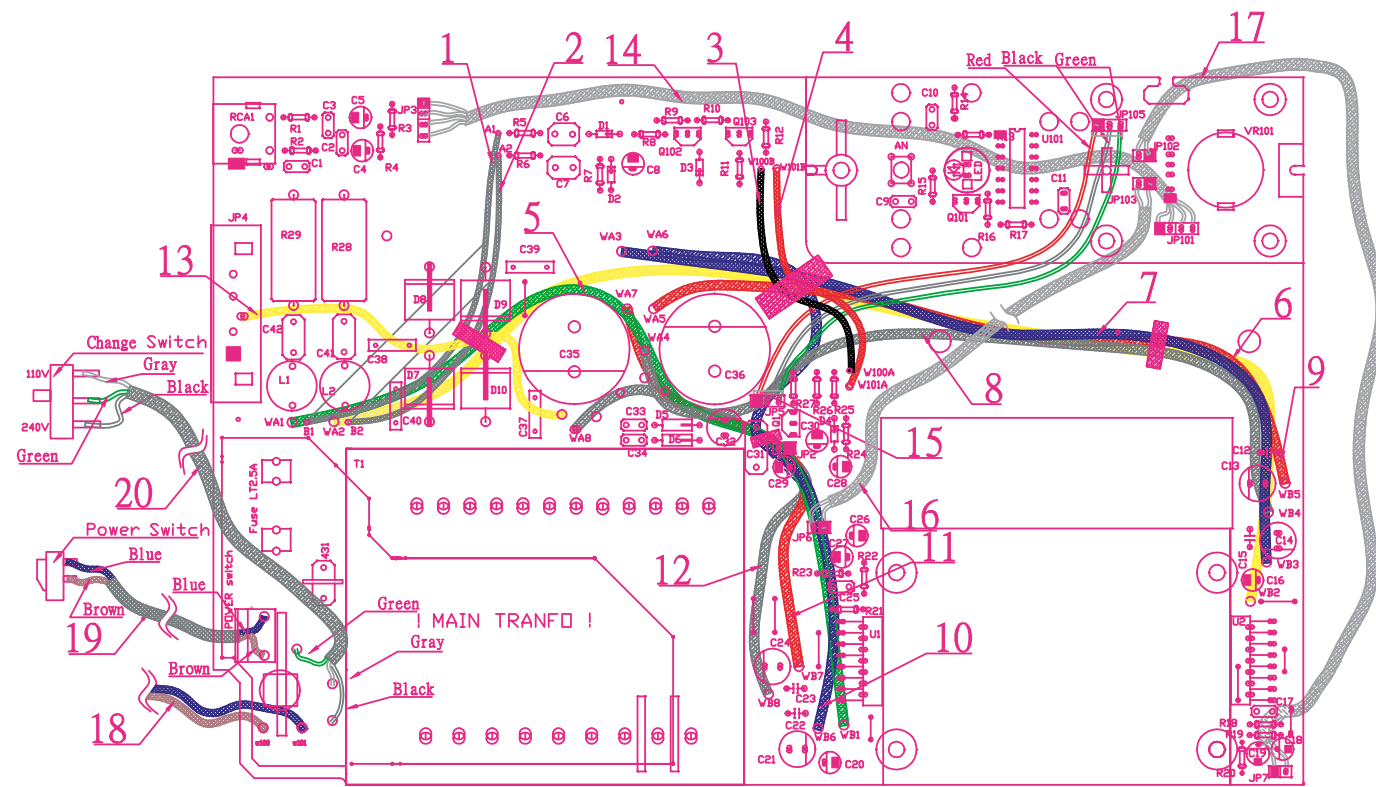
Service Position B



Service Position C

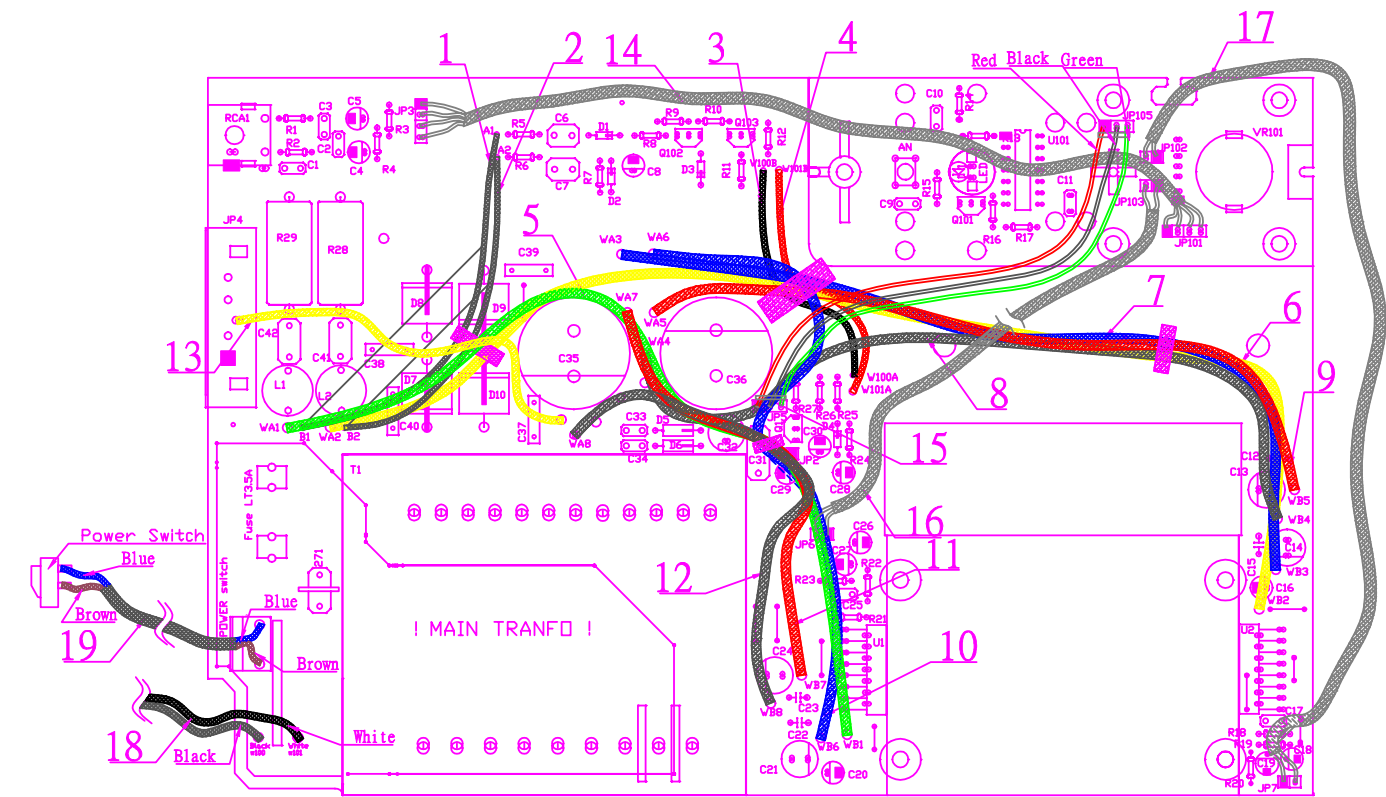


WIRING DIAGRAM - POWER BOOSTER AMPLIFIER BOX (/21/21M VERSION)



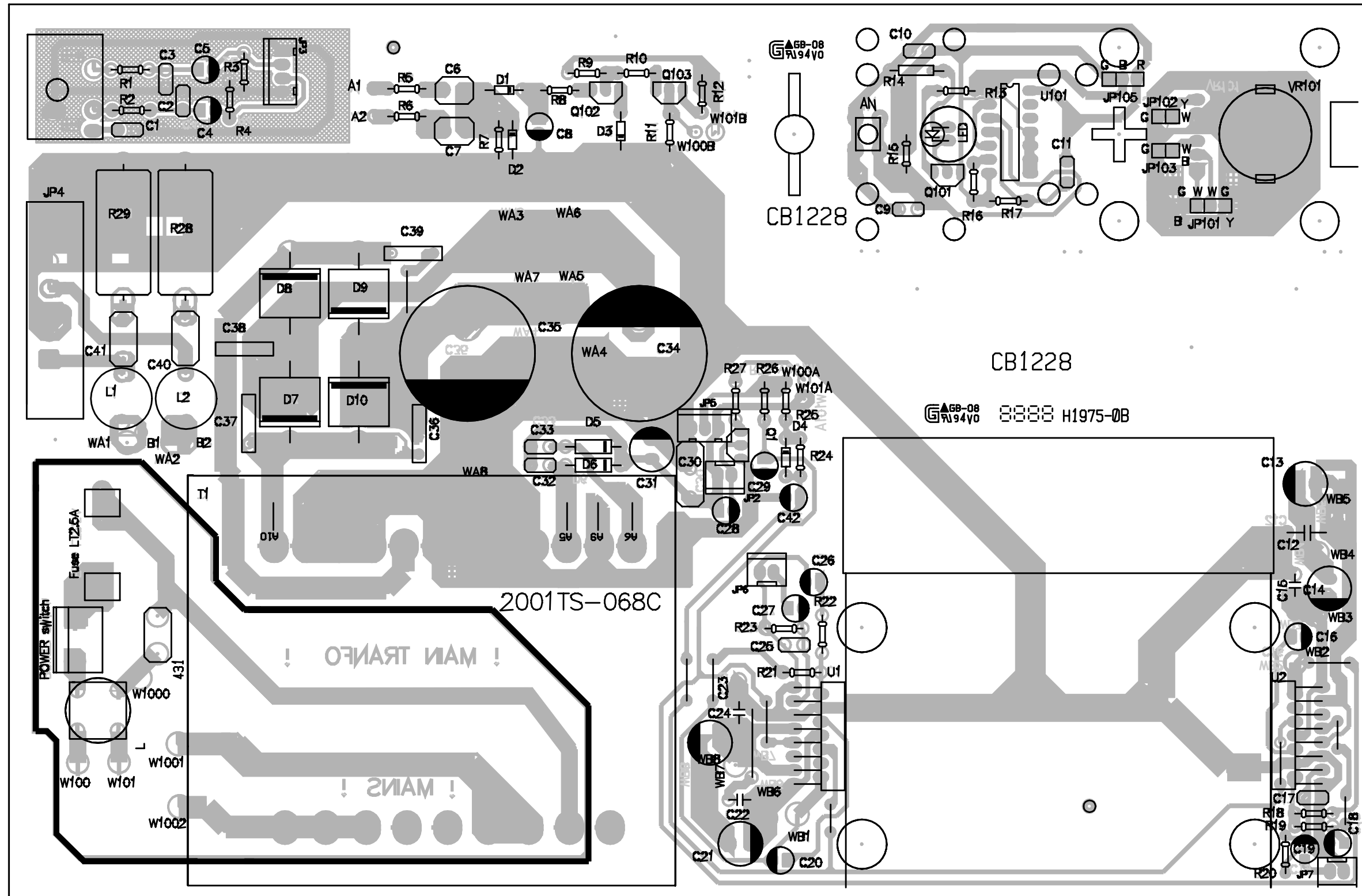
Item	Location	Description	Item	Location	Description
1	A1-B1	Black L=100mm AWG 26#	11	WA7-WB7	Red L=200mm UL1007 AWG 18#
2	A2-B2	Black L=100mm AWG 26#	12	WA8-WB8	Black L=125mm UL1007 AWG 18#
3	W100A-W100B	White L=80mm AWG 26#	13	HA-HB	Yellow L=120mm UL1007 AWG18#
4	W101A-W101B	Red L=80mm AWG 26#	14	JP3-JP101	White, Black, White, Black L=640mm UL1533 28#AWG
5	WA1-WB1	Green L=250mm UL1050 AWG 18#	15	JP5-JP105	Green, Red, Black L=560mm UL100726#AWG
6	WA2-WB2	Yellow L=280mm UL1050 AWG 18#	16	JP6-JP103	White, Black L=590mm UL1533 28#AWG(White PVC)
7	WA3-WB3	Blue L=200mm UL1050 AWG 18#	17	JP7-JP102	White, Black L=590mm UL1533 28#AWG(Yellow PVC)
8	WA4-WB4	Black L=200mm UL1050 AWG 18#	18	W100, W101	Blue, Brown L=160mm AGW22#
9	WA5-WB5	Red L=120mm UL1050 AWG 18#	19	POWER Switch	Blue, Brown L=160mm AGW22#
10	WA6-WB6	Blue L=180mm UL1050 AWG 18#	20	Change Switch	Green, Gray, Black L=130mm AGW22#

WIRING DIAGRAM - POWER BOOSTER AMPLIFIER BOX (/37 VERSION)

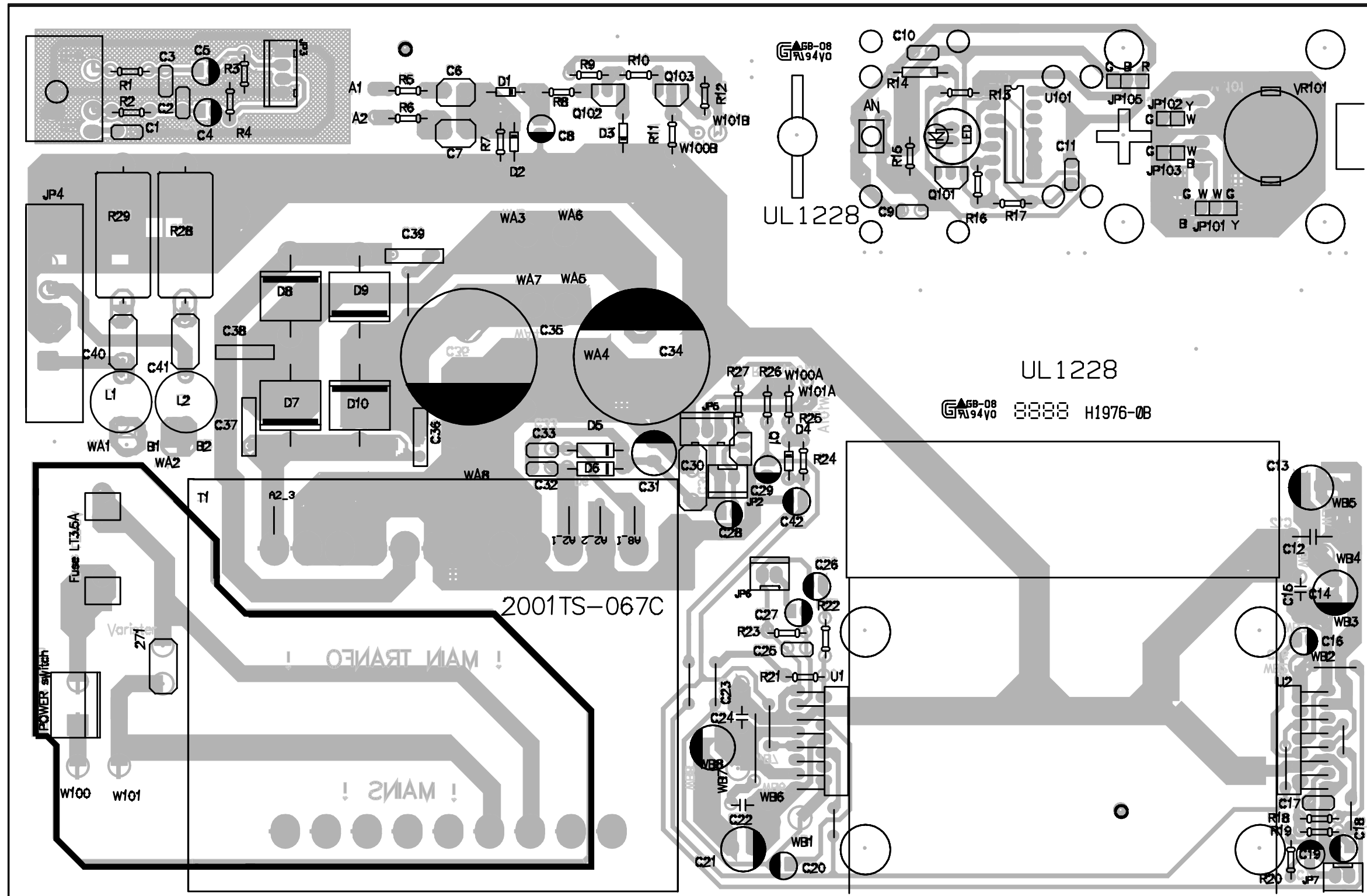


Item	Location	Description	Item	Location	Description
1	A1-B1	Black L=100mm AWG 26#	11	WA7-WB7	Red L=200mm UL1007 AWG 18#
2	A2-B2	Black L=100mm AWG 26#	12	WA8-WB8	Black L=125mm UL1007 AWG 18#
3	W100A-W100B	White L=80mm AWG 26#	13	HA-HB	Yellow L=120mm UL1007 AWG18#
4	W101A-W101B	Red L=80mm AWG 26#	14	JP3-JP101	White, Black, White, Black L=640mm UL1533 28#AWG
5	WA1-WB1	Green L=250mm UL1050 AWG 18#	15	JP5-JP105	Green, Red, Black L=560mm UL100726#AWG
6	WA2-WB2	Yellow L=280mm UL1050 AWG 18#	16	JP6-JP103	White, Black L=590mm UL1533 28#AWG(White PVC)
7	WA3-WB3	Blue L=200mm UL1050 AWG 18#	17	JP7-JP102	White, Black L=590mm UL1533 28#AWG(Yellow PVC)
8	WA4-WB4	Black L=200mm UL1050 AWG 18#	18	W100, W101	Black, White 1.6ml SG-B90262
9	WA5-WB5	Red L=120mm UL1050 AWG 18#	19	POWER Switch	Blue, Brown L=160mm AGW22#
10	WA6-WB6	Blue L=180mm UL1050 AWG 18#			

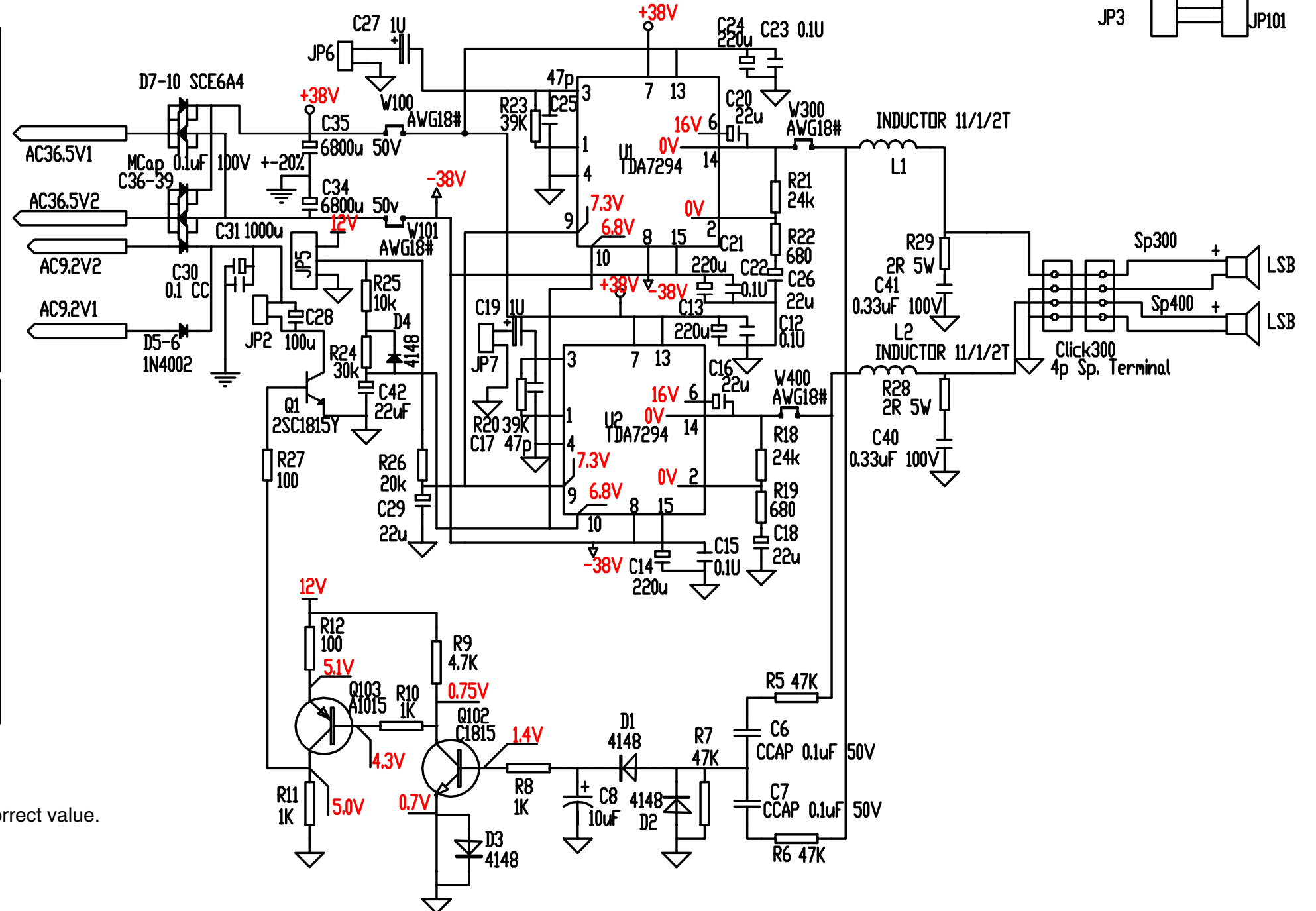
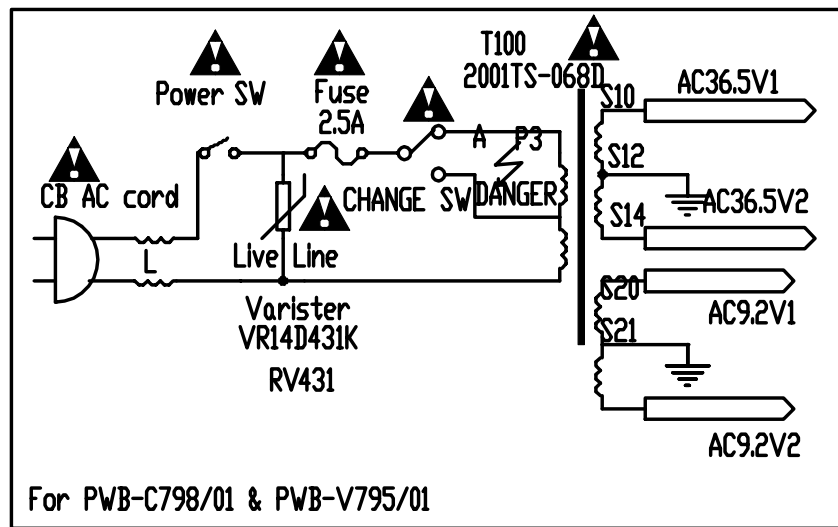
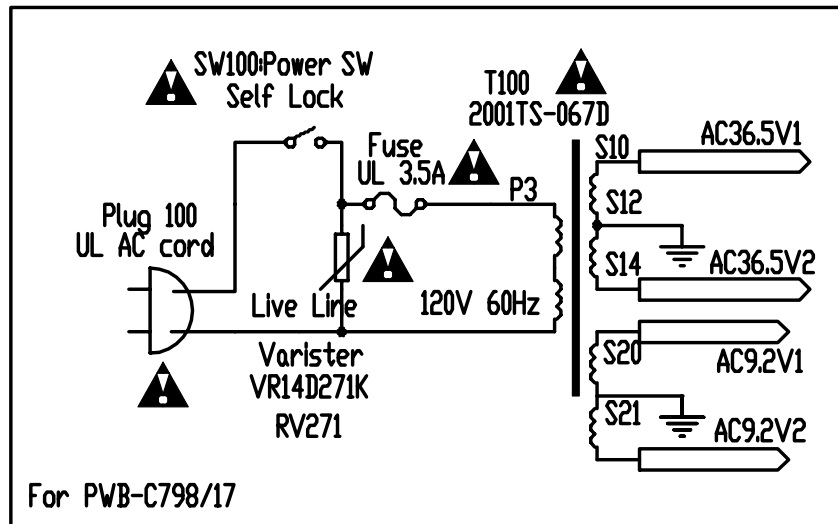
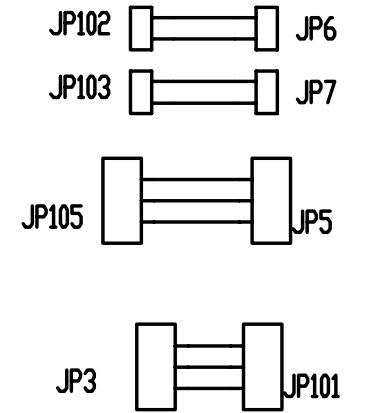
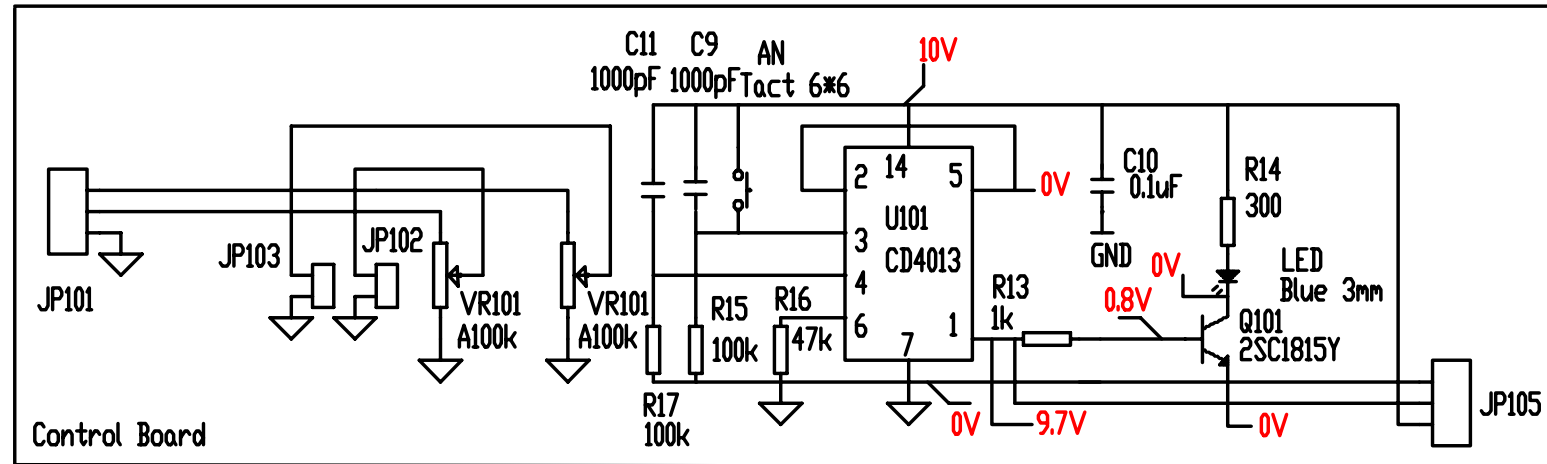
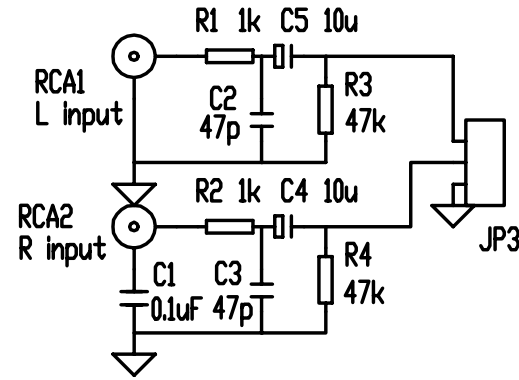
COMPONENT LAYOUT - POWER BOOSTER AMPLIFIER BOX (/21/21M VERSION)



COMPONENT LAYOUT - POWER BOOSTER AMPLIFIER BOX (/37 VERSION)

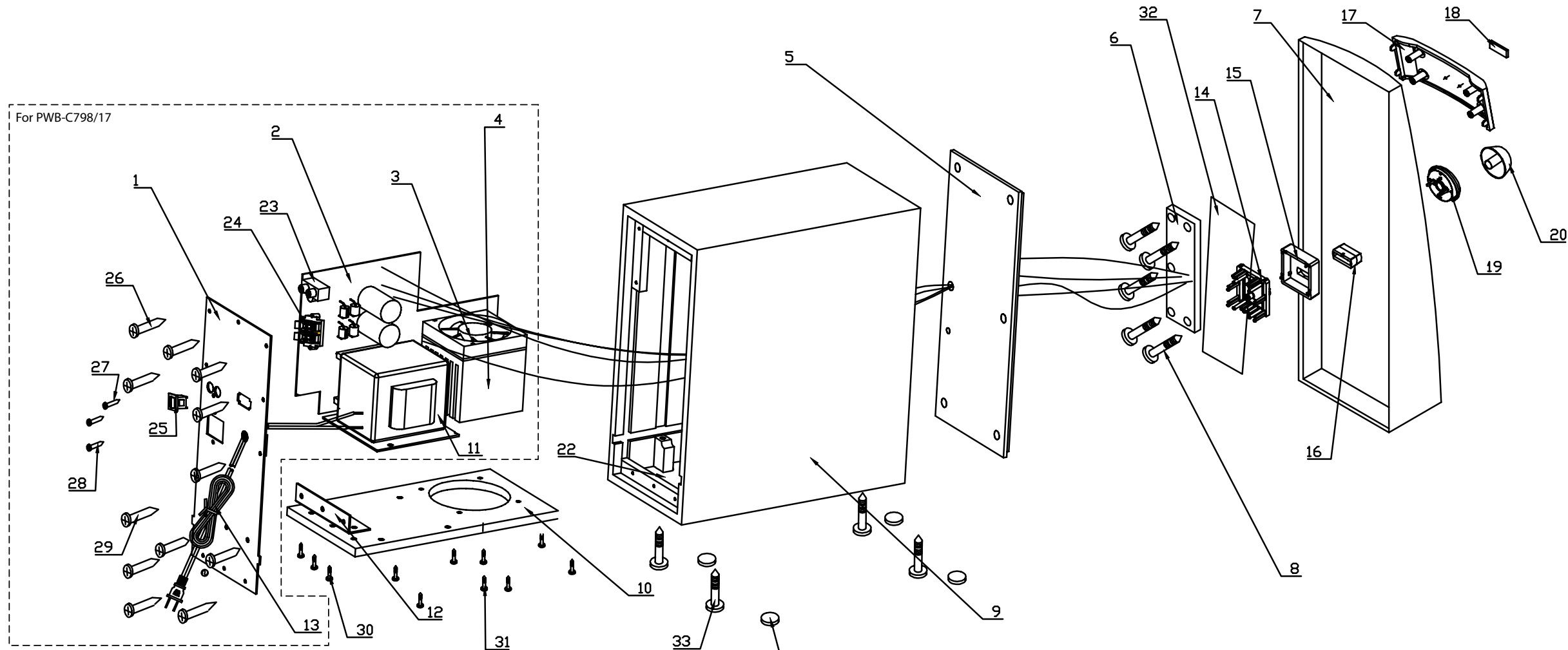


CIRCUIT DIAGRAM - POWER BOOSTER AMPLIFIER BOX



Note : Some values may varies, see respective parts list for correct value.

EXPLODED VIEW - POWER BOOSTER AMPLIFIER BOX



For PWB-C798/17

For PWB-C798/01 & PWB-V795/01

Exploded View (Power Booster Amp.Box) dd wk0220

MECHANICAL & ACCESSORIES PARTS LIST - POWER BOOSTER AMPLIFIER BOX

3	9965 000 13727	△ Fan 80*80, 0.17A, RDH8025S	23	9965 000 13738	RCA Jack 2P Blue/Green
7	9965 000 13728	Front Panel	24	9965 000 13739	Speakers Terminal 4P
11 *	9965 000 13729	△ Transformer 2001TS-068D	25 *	9965 000 13741	△ Power Switch
11 ^	9965 000 13802	△ Transformer 2001TS-067D	25 ^	9965 000 13804	△ Power Switch
13 *	9965 000 13730	△ AC Cord	34 *	9965 000 13742	△ Voltage Selector 127V/240V
13 ^	9965 000 13803	△ AC Cord	*	9965 000 13740	△ AC Socket
14	9965 000 13731	Light Guide Primary	^	9965 000 13805	△ Strain Relief
15	9965 000 13732	Light Guide			
16	9965 000 13733	Knob Power			
17	9965 000 13734	Panel Ornamental			
18	9965 000 12992	Badge (PHILIPS)			
19	9965 000 13735	Volume Ring			
20	9965 000 13736	Volume Knob			
21	9965 000 13737	Rubber Foot Dia 15 D=5mm			

* for /21/21M version only
 ^ for /37 version only

Note : Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST - POWER BOOSTER AMPLIFIER BOX (Main Board)**MISCELLANEOUS**

FUSE	9965 000 13777	△ Fuse 2.5A	/21/21M
FUSE	9965 000 13807	△ Fuse 3.5A	/37
RV431	9965 000 13776	△ VR14D431K	/21/21M
RV271	9965 000 13806	△ VR14D271K	/37

CAPACITORS

C1	9965 000 13755	M CAP 0.1uF 100V 20%
C2	9965 000 13756	C CAP 47pF 50V 20%
C3	9965 000 13756	C CAP 47pF 50V 20%
C4	9965 000 13748	E CAP 10uF 25V 20%
C5	9965 000 13748	E CAP 10uF 25V 20%
C6	9965 000 13757	C CAP 0.1uF 50V 20%
C7	9965 000 13757	C CAP 0.1uF 50V 20%
C8	9965 000 13748	E CAP 10uF 25V 20%
C12	9965 000 13755	M CAP 0.1uF 100V 20%
C13	9965 000 13750	E CAP 220uF 50V 20%
C14	9965 000 13750	E CAP 220uF 50V 20%
C15	9965 000 13755	M CAP 0.1uF 100V 20%
C16	9965 000 13749	E CAP 22uF 25V 20%
C17	9965 000 13756	C CAP 47pF 50V 20%
C18	9965 000 13749	E CAP 22uF 25V 20%
C19	9965 000 13747	E CAP 1uF 25V 20%
C20	9965 000 13749	E CAP 22uF 25V 20%
C21	9965 000 13750	E CAP 220uF 50V 20%
C22	9965 000 13755	M CAP 0.1uF 100V 20%
C23	9965 000 13755	M CAP 0.1uF 100V 20%
C24	9965 000 13750	E CAP 220uF 50V 20%
C25	9965 000 13756	C CAP 47pF 50V 20%
C26	9965 000 13749	E CAP 22uF 25V 20%
C27	9965 000 13747	E CAP 1uF 25V 20%
C28	9965 000 13751	E CAP 100uF 16V 20%
C29	9965 000 13749	E CAP 22uF 25V 20%
C30	9965 000 13757	C CAP 0.1uF 50V 20%
C31	9965 000 13752	E CAP 1000uF 16V 20%
C34	9965 000 13753	E CAP 6800uF 50V +80/-20%
C35	9965 000 13753	E CAP 6800uF 50V +80/-20%
C36	9965 000 13755	M CAP 0.1uF 100V 20%
C37	9965 000 13755	M CAP 0.1uF 100V 20%
C38	9965 000 13755	M CAP 0.1uF 100V 20%
C39	9965 000 13755	M CAP 0.1uF 100V 20%
C40	9965 000 13754	M CAP 0.33uF 100V 20%
C41	9965 000 13754	M CAP 0.33uF 100V 20%
C42	9965 000 13749	E CAP 22uF 25V 20%

RESISTORS

R1	9965 000 13759	Carbon Film Res 1k 1/8W 5%
R2	9965 000 13759	Carbon Film Res 1k 1/8W 5%
R3	9965 000 13760	Carbon Film Res 47k 1/8W 5%

R4	9965 000 13760	Carbon Film Res 47k 1/8W 5%
R5	9965 000 13760	Carbon Film Res 47k 1/8W 5%
R6	9965 000 13760	Carbon Film Res 47k 1/8W 5%
R7	9965 000 13760	Carbon Film Res 47k 1/8W 5%
R8	9965 000 13759	Carbon Film Res 1k 1/8W 5%
R9	9965 000 13764	Carbon Film Res 4.7k 1/8W 5%
R10	9965 000 13759	Carbon Film Res 1k 1/8W 5%
R11	9965 000 13759	Carbon Film Res 1k 1/8W 5%
R12	9965 000 13762	Carbon Film Res 100R 1/8W 5%
R18	9965 000 13767	Carbon Film Res 24k 1/8W 5%
R19	9965 000 13763	Carbon Film Res 680R 1/8W 5%
R20	9965 000 13769	Carbon Film Res 39k 1/8W 5%
R21	9965 000 13767	Carbon Film Res 24k 1/8W 5%
R22	9965 000 13763	Carbon Film Res 680R 1/8W 5%
R23	9965 000 13769	Carbon Film Res 39k 1/8W 5%
R24	9965 000 13768	Carbon Film Res 30k 1/8W 5%
R25	9965 000 13765	Carbon Film Res 10k 1/8W 5%
R26	9965 000 13766	Carbon Film Res 20k 1/8W 5%
R27	9965 000 13762	Carbon Film Res 100R 1/8W 5%
R28	9965 000 13775	Power Res 2R 5W 10%
R29	9965 000 13775	Power Res 2R 5W 10%

DIODES

D1	4822 130 30621	1N4148
D2	4822 130 30621	1N4148
D3	4822 130 30621	1N4148
D4	4822 130 30621	1N4148
D5	5322 130 30684	1N4002
D6	5322 130 30684	1N4002
D7	9965 000 13772	Diode 6A 400V SCE6A4
D8	9965 000 13772	Diode 6A 400V SCE6A4
D9	9965 000 13772	Diode 6A 400V SCE6A4
D10	9965 000 13772	Diode 6A 400V SCE6A4

COILS & FILTERS

L	9965 000 13774	Inductor 2001TS-098 /21/21M
L1	9965 000 13773	Inductor 11.5T Vertical
L2	9965 000 13773	Inductor 11.5T Vertical

TRANSISTORS & INTEGRATED CIRCUITS

Q1	4822 130 41947	2SC1815Y
Q102	4822 130 41947	2SC1815Y
Q103	4822 130 42959	2SA1015Y
U1	4822 209 90939	TDA7294
U2	4822 209 90939	TDA7294

Note : Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST - POWER BOOSTER AMPLIFIER BOX (Control Board)

MISCELLANEOUS

AN	9965 000 13770	Tact Switch 6*6, 4 Pins
LED	9965 000 13744	LED Dia 3mm, Blue
VR101	9965 000 13771	VR 100KA*2, 6 Pins

CAPACITORS

C9	9965 000 13745	C CAP 0.001uF 50V 20%
C10	9965 000 13746	C CAP 0.1uF 16V 20%
C11	9965 000 13745	C CAP 0.001uF 50V 20%

RESISTORS

R13	9965 000 13759	Carbon Film Res 1k 1/8W 5%
R14	9965 000 13758	Carbon Film Res 300R 1/4W 5%
R15	9965 000 13761	Carbon Film Res 100k 1/8W 5%
R16	9965 000 13760	Carbon Film Res 47k 1/8W 5%
R17	9965 000 13761	Carbon Film Res 100k 1/8W 5%

TRANSISTORS & INTEGRATED CIRCUITS

Q101	4822 130 41947	2SC1815Y
U101	9965 000 13743	CMOS IC Dual D Trigger, CD4013

Note : Only the parts mentioned in this list are normal service spare parts.