

TM 12.2 ACTIVE

BI-AMPLIFIED DIGITALLY PROCESSED
LOUDSPEAKER SYSTEM

SERVICE MANUAL

Schematic Diagrams



CODE : 277304



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Notice

Service must be carried out by qualified personnel only. Any tampering carried out by unqualified personnel during the guarantee period will forfeit the right to guarantee.

For a correct operation of the instrument, after having switched off, be careful to wait at least 3 seconds before switching on again. To improve the device's specifications, the schematic diagrams may be subject to change without prior notice.

Schematic Notes

All components marked by this symbol have special safety characteristics, when replacing any of these components use only manufacturer's specified parts.

The (O) micro symbol of capacitance value is substituted by U. The (Ω) omega symbol of resistance value is substituted by E. The electrolytic capacitors are 25Vdc rated voltage unless otherwise specified. All resistors are 1/8W unless otherwise specified. All switches shown in the "OFF" position. All DC voltages measured to ground with a voltmeter 20KOhm/V.

← Soldering point.

• Male connector.

⌋ Female connector.

⌋ M/F faston connector.

□ Test point.

◁ Flag joined with one or more flags with the same signal name inscribed.

↑ Supply voltage.

⌋ Logic supply ground.

⌋ Analog supply ground.

↓ Signal ground.

⌋ Chassis ground.

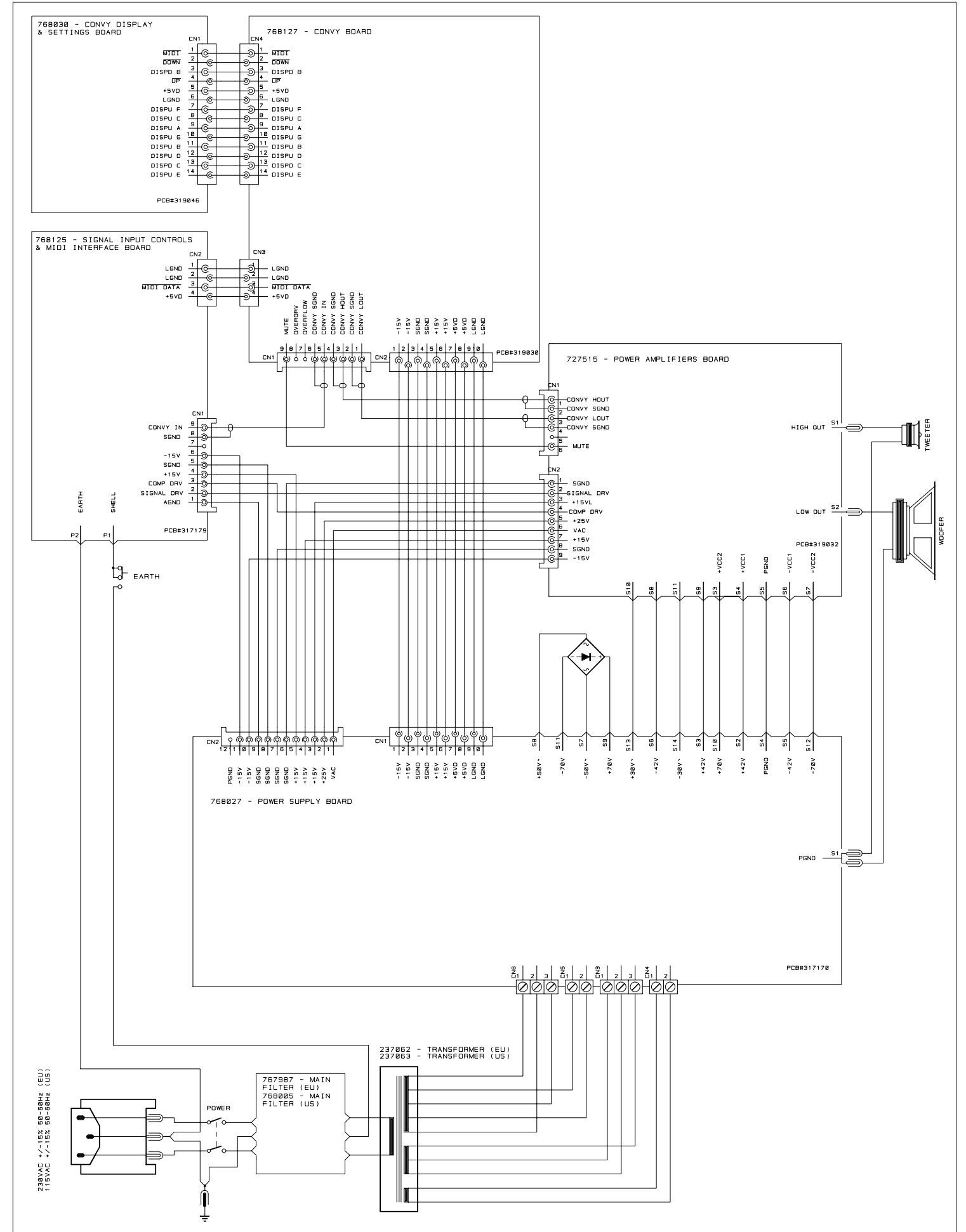
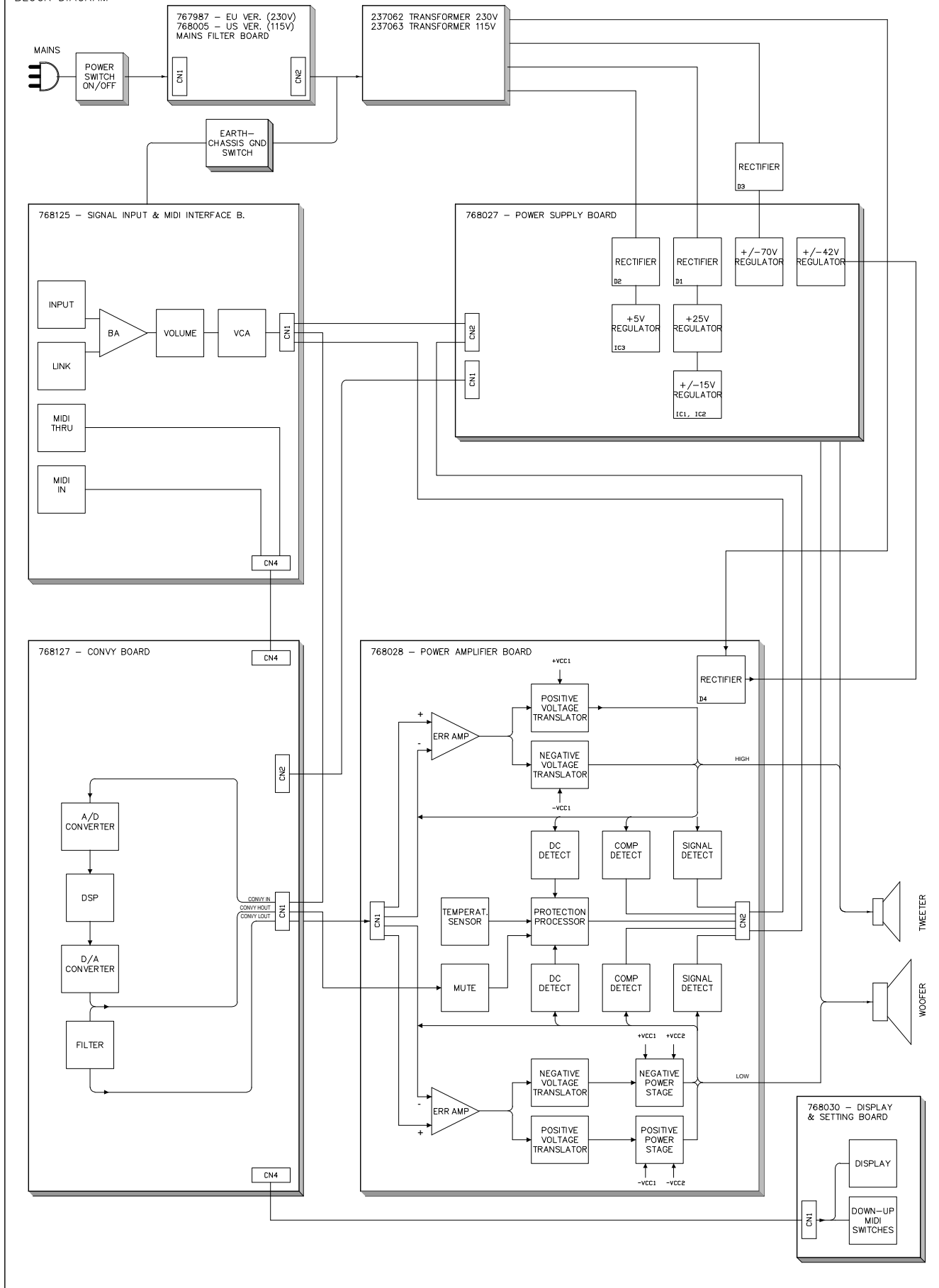


ATTENTION

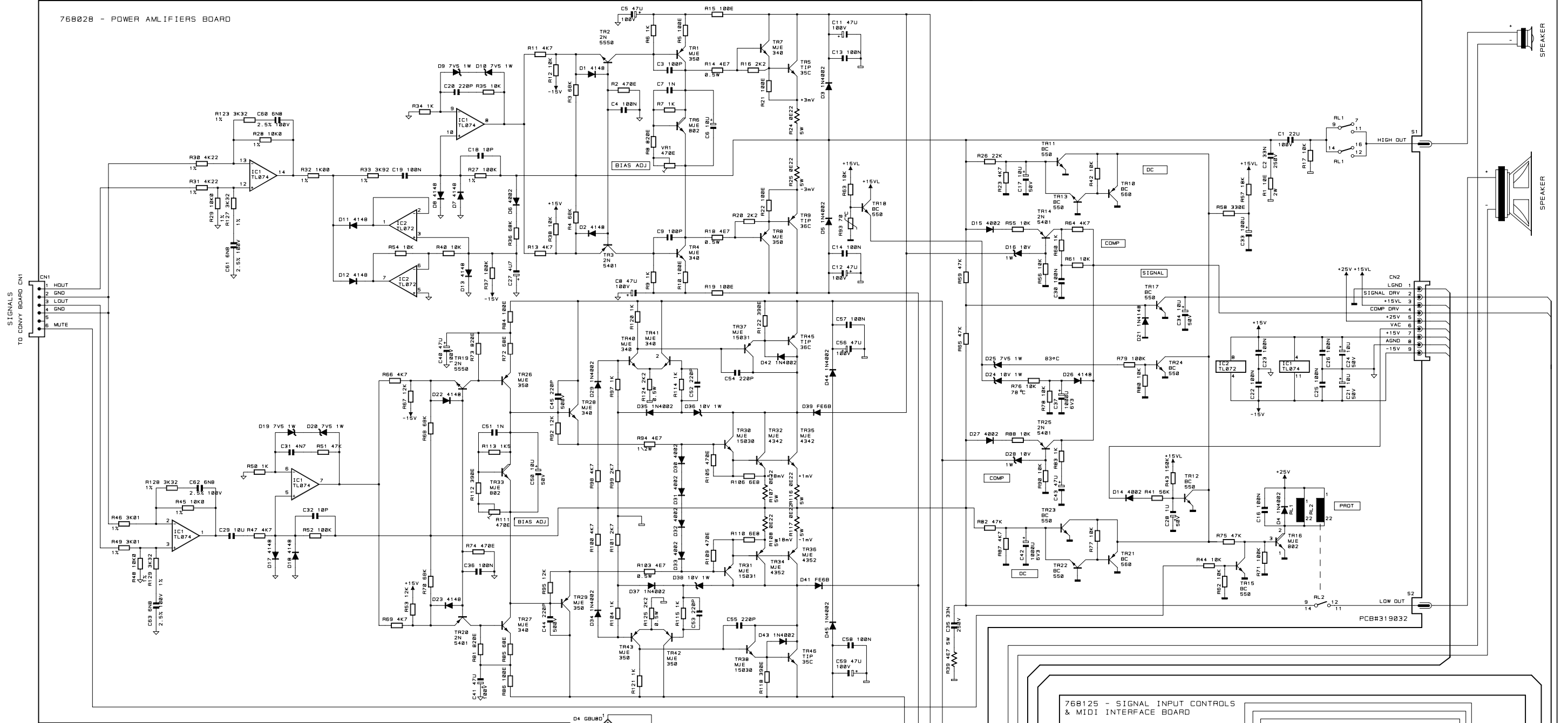
Observe precautions when handling electrostatic sensitive devices



BLOCK DIAGRAM



76802B - POWER AMPLIFIERS BOARD



237082 - TRANSFORMER ASSY (EU)
237083 - TRANSFORMER ASSY (US)

768.027 - POWER SUPPLY B.
(TM 12.2 ACTIVE)

767987 - MAINS FILTER BOARD (EU)
768005 - MAINS FILTER BOARD (US)

PCB#315016

230VAC +/-15% 50-60Hz (EU)
115VAC +/-15% 50-60Hz (US)

CHASSIS GROUND

PCB#317178

POWER SUPPLY BOARD CN2

TO CONVEY PROCESSOR

TO CONVEY BOARD CN1

TO CONVEY BOARD CN3

TO CONVEY BOARD CN4

TO CONVEY BOARD CN5

TO CONVEY BOARD CN6

TO CONVEY BOARD CN7

TO CONVEY BOARD CN8

TO CONVEY BOARD CN9

TO CONVEY BOARD CN10

TO CONVEY BOARD CN11

TO CONVEY BOARD CN12

TO CONVEY BOARD CN13

TO CONVEY BOARD CN14

768125 - SIGNAL INPUT CONTROLS
& MIDI INTERFACE BOARD

INPUT 0dB LINK

THRU

TO CONVEY PROCESSOR

TO CONVEY BOARD CN1

TO CONVEY BOARD CN2

TO CONVEY BOARD CN3

TO CONVEY BOARD CN4

TO CONVEY BOARD CN5

TO CONVEY BOARD CN6

TO CONVEY BOARD CN7

TO CONVEY BOARD CN8

TO CONVEY BOARD CN9

TO CONVEY BOARD CN10

TO CONVEY BOARD CN11

TO CONVEY BOARD CN12

TO CONVEY BOARD CN13

TO CONVEY BOARD CN14

TO CONVEY BOARD CN15

TO CONVEY BOARD CN16

TO CONVEY BOARD CN17

TO CONVEY BOARD CN18

TO CONVEY BOARD CN19

TO CONVEY BOARD CN20

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TO CONVEY BOARD CN22

TO CONVEY BOARD CN23

TO CONVEY BOARD CN24

TO CONVEY BOARD CN25

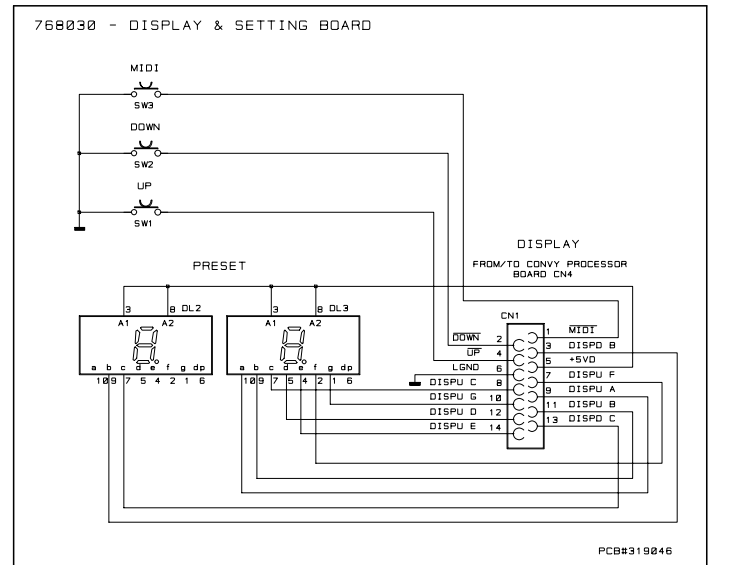
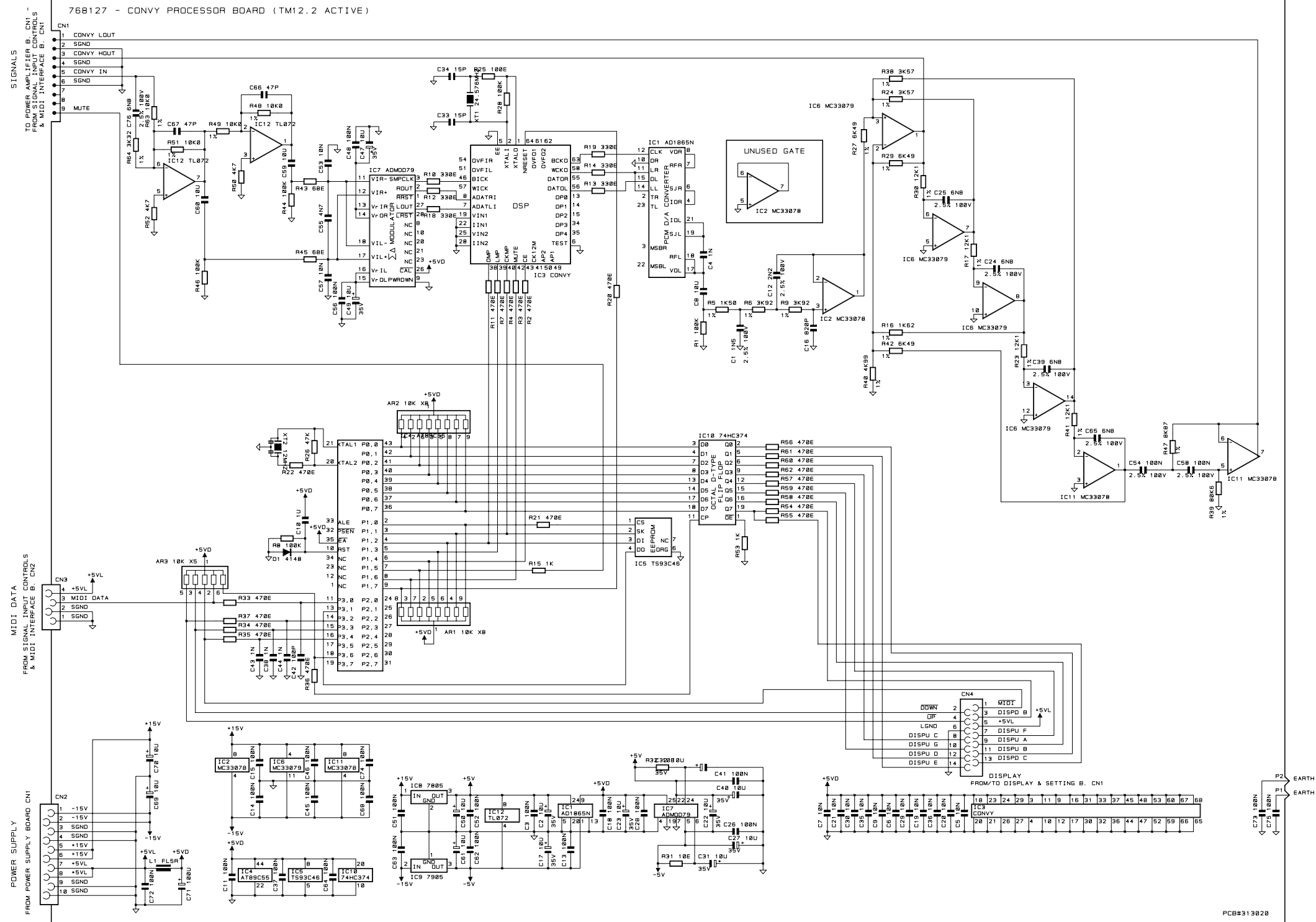
TO CONVEY BOARD CN26

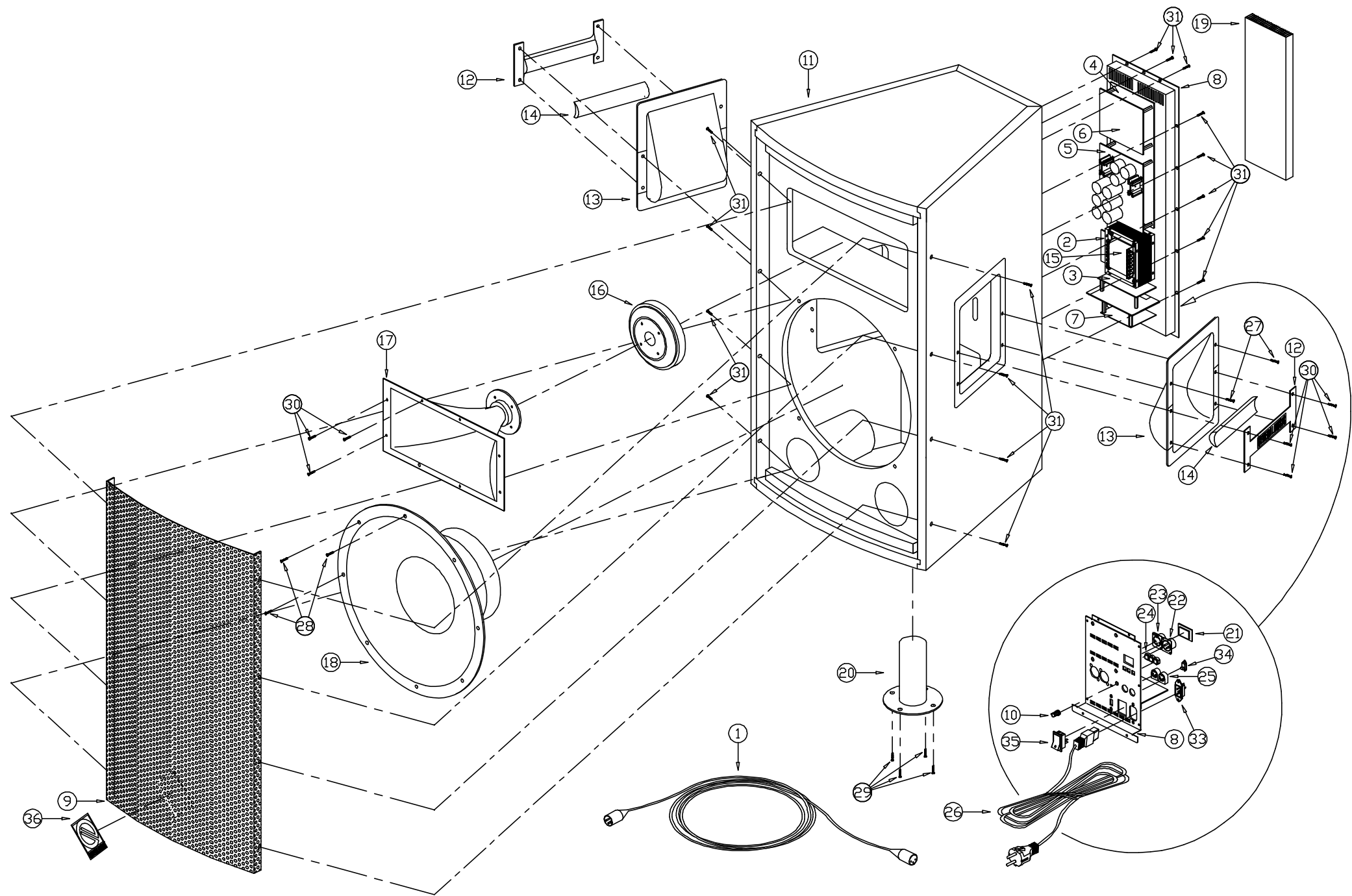
TO CONVEY BOARD CN27

TO CONVEY BOARD CN28

TO CONVEY BOARD CN29

DRW M. PALANGHI DWG# 550544 PCB# 319832-313019-315016-317178
CKD I. BATTIELI DSK# 45 PART 1/1 TM 12.2 ACTIVE
APP. C. ZUCCATTI REV: 24/02/97 POWER AMPLIFIERS & SUPPLY B.
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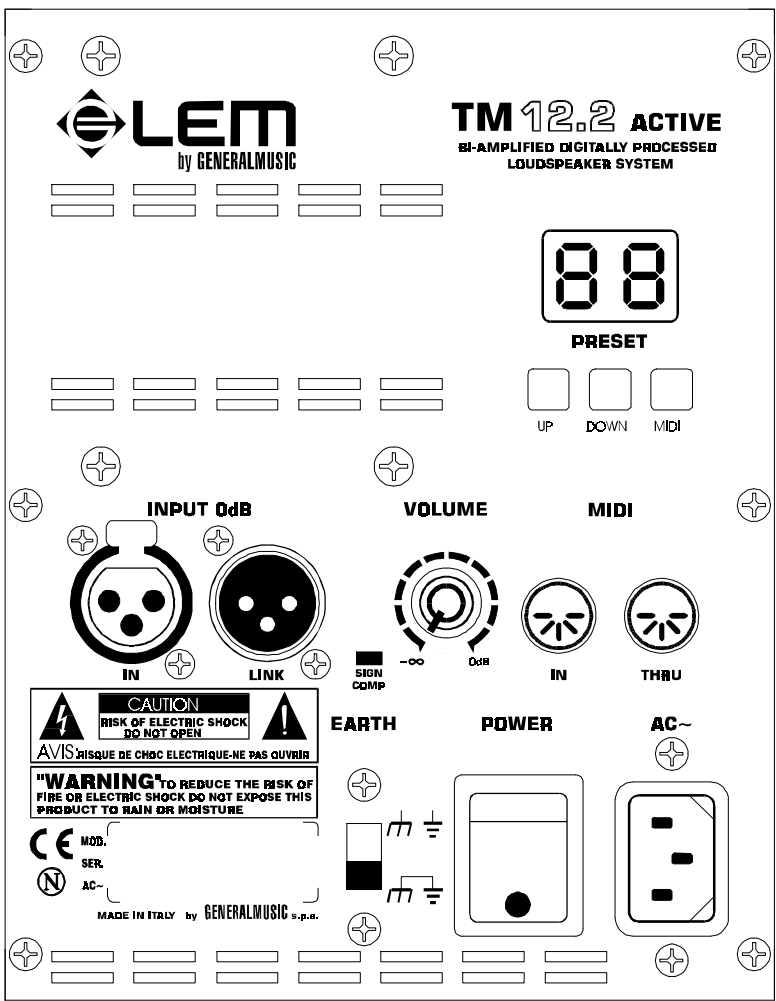




Spare Parts

1	887074	MALE-FEMALE SIGNAL CABLE (mt. 1.5)
2	768030	DISPLAY & SETTING BOARD
3	768019	SIGNAL INPUTS CONTROLS & MIDI INTERFACE BOARD
4	768028	POWER AMPLIFIER BOARD
5	768027	POWER SUPPLY BOARD
6	768026	CONVY PROCESSOR BOARD
7	767987	MAIN FILTER BOARD
8	727516	INPUTS & CONTROL PANEL
9	667488	METAL GRID
10	659027	CYL. KNOB WITE CAP
11	430054	WOODEN CABINET
12	347287	PLASTIC HANDLE
13	347286	HANDLE SET
14	347187	RUBBER HEANDLE
15	237062	TRANSFORMER (EU)
16	229029	1" B&C DRIVER
17	229014	M45 BBC CAST ALLUMINIUM
18	227035	12" LOUDSPEAKER
19	177476	AMPLIFIER HEAT SINK
20	177325	PLASTIC FLANGE
21	150591	RED GLASS DISPLAY
22	141202	XLR MALE CONNECTOR
23	141184	XLR FEMALE CONNECTOR
24	140526	GRAY BUTTON
25	140212	5 Ways DIN SOCKET
26	130297	EU 6A BLACK MAIN CABLE
27	120319	BLACK ZINC-PLATED WL 4x15 PAN HEAD SCREW (HEANDLES FIXING)
28	120125	BLACK ZINC-PLATED M5x35 C/SUNK SCREW (LOUDSPEAKER FIXING)
29	120111	BLACK ZINC-PLATED M6x25 PAN HEAD SCREW (BESBECO FLANGE FIXING)
30	120108	BLACK ZINC-PLATED M5x30 PAN HEAD SCREW (CAST ALLUMINIUM FIXING)
31	120099	BLACK ZINC-PLATED M4x25 PAN HEAD SCREW (METAL GRID FIXING)
32	120098	BLACK ZINC-PLATED M4x20 PAN HEAD SCREW(HEANDLE FIXING)
33	110614	10A F=6.3mm CURRENT-TAP (EU)(US)
34	110297	2 POLES 2 POS. SLIDE SWITCH
35	110291	BLACK BIPOLAR MAIN SWITCH WITH RED LED (EU)(US)
36	180637	ADHESIVE "GENERALMUSIC-LEM" BRAND

Inputs Controls Panel



SPARE PARTS LIST

ACCESSORIES		
887074	XLR Female-Male Signal Cable (1.5mt)	
277309	Owner's Manual	
VARIOUS		
667612	Inputs & Controls Panel	
659027	Cyl. Knob White Cap	
237062	Transformer (EU)	
237063	Transformer (US)	
177477	Amplifier Fixing Square	
177475	Transformer Shield	
150591	Display Red Glass	
110614	Mains Socket	
110291	Power Switch	
667487	Upper Stirrup	
667486	Left Side Stirrup	
667485	Right Side Stirrup	
110085	T630mA Fuse 6.3x32mm (US)	
110036	T4A Fuse 6.3x32mm (US)	
110035	T2.5A Fuse 6.3x32mm (US)	
110029	T4A Fuse 5x20mm (EU)	
110014	T2.5A Fuse 5x20mm (EU)	
110010	T2A Fuse 5x20mm (EU)	
110009	T630mA Fuse 5x20mm (EU)	
717053	Wooden Parts	
657250	* GEBERIT Black Tube	
430058	* Wooden Cabinet	
667609	Metal Grid	
347287	Plastic Handle	
347286	Plastic Setted Handle	
347187	Plastic Grip	
229029	1" DE25 8 OHM B&C Driver	
229014	M45 BBC Cast Alluminium	
227035	12" 12/052 8 OHM B&C Speaker	
130297	Mains Cord (Europe Version)	
130283	Mains Cord (U.S. Version)	
Convy Board		
768127	Convy Board (PCB#313020)	
230569	* FL5R200PNT EMI Coil For Signal	
141059	* Con V M 9 C Mini Mate Burndy	
141058	* Con V M 6 C Mini Mate Burndy	
141015	* Con V F 14c P=1.27 Mmatch Amp	
141013	* Con V F 10c P=1.27 Mmatch Amp	
141010	* 4 Contacts Vert Female Connector	
100943	* MC33079 Quad Ln Op Amp	
100919	* MC33078 Dual LN J-Fet Operational Amplifier	
100737	* ADMOD79 2ch Ad Delta Modulator	
100643	* AD1865N Dual 18bit Dac	
100642	* TS93C46 1Kbit Eeprom Memory	
100612	* 74HC374 Octal D-Type Flip-Flop	
100614	* 74HC74 Dual Flip-Flop	
100611	* 74HC373 Octal D-Type Latch	
100602	* 74HC04 Hex Inverter	
100579	* 80C32 Cpu Fc=16MHz	
100061	* TL072 Dual J-Fet Operational Amplifier	
100059	* 7805 +5V 1A Voltage Regulator	
100058	* 7905 -5V 1A Voltage Regulator	
080103	* 1N4148 100mA 75V Signal Diode	
050494	* Resistor Array 10K X5 1/8w 5%	
050492	* 10Kx8 1/8w 5% Resistor Array	
010722	* 24.576MHz Quartz Resonator	
010720	* 12MHz Ceramic Resonator With Capacitors	
010703	* 24MHz Quartz Resonator	
557025	* MICRO PROGRAM.CONVY	
557011	* EPROM CONVY	
105001	* CONVY Dsp Convolver	
100737	* ADMOD79 2ch Ad Delta Modulator	
100643	* AD1865N Dual 18bit Dac	
100590	* 27C256 Eprom 256Kbit Ta=120ns	
100579	* 80C32 Cpu Fc=16MHz	
090920	* Mje803 To126 Npn Darl Transistor	
090919	* Mje15031 To220 Pnp Transistor	
090918	* MJE15030 TO220 Npn Transistor	
090917	* MJE350 TO126 Pnp Transistor	
090916	* MJE340 TO126 Npn Transistor	
090913	* MJE4352 TO218 Pnp Transistor	
090912	* MJE4342 TO218 Npn Transistor	
090863	* TIP36C TO218 Pnp Transistor	
090862	* TIP35C TO218 Npn Transistor	
080819	* Ptc 70 Pth59f04bg222ts	
080607	* Kbpс25 25a 200V Bridge Rec Dio	
080606	* GBU8D 8A Rectifier Diodes Bridge	

Power Supply Board		
768027	Power Supply Board (PCB#317170)	
141060	* Con V M 12c Mini Mate Burndy	
141013	* Con V F 10c P=1.27 Mmatch Amp	
140081	* H 2c P=10 Terminal Block	
140069	* H 3c P=10mm Terminal Block	
110119	* Fuse Clip 10A max (EU) (US)	
110029	* T4A Fuse 5x20mm (EU)	
110020	* T2.5A Fuse 5x20mm (EU)	
110018	* T630mA Fuse 5x20mm (EU)	
100060	* 7815 +15V 1A Voltage Regulator	
100059	* 7805 +5V 1A Voltage Regulator	
100049	* 7915 -15v 1a Voltage Regulator	
080168	* W02M 1.5A Rectifier Diodes Bridge	
030882	* 10000uF 50V Snap-In Electrolytic Capacitor	
030858	* 4700u 25V 20% Vert Electrolytic Capacitor	
030560	* 4700u 80v 20% Snap-In Electrolytic Capacitor	
030554	* 4700u 35v 20% Snap-In Electrolytic Capacitor	

Signal Input Controls & MIDI Interface Board		
768125	Signal Input Controls & midi Interface Board (PCB#313019)	
757942	* Photores Coupler	
230569	* FL5R200PNT EMI Coil For Signal	
141202	* Xlr H M M21bc Nuova Asme	
141184	* Xlr H F Riten Nc3fprh Neutrik	
141064	* Con H M 9 C Mini Mate Burndy	
141010	* 4 Contacts Vert Female Connector	
140212	* Horizontal Female 5 Poles Din Socket	
100602	* 74HC04 Hex Inverter	
100061	* TL072 Dual J-Fet Operational Amplifier	
100035	* 6N138 Optocoupler	
090194	* BC560 TO92 LN Pnp Transistor	
090183	* Bc550 To92 Ln Npn Transistor	
080734	* Led 2.5x5mm Rect Diff Red-Grn	
080245	* 7V5 1w 5% Zener Diode	
080103	* 1N4148 100mA 75V Signal Diode	
074570	* 5K lin. 31 clicks Potentiometer	
070125	* 1K 20% Vertical Linear Trimmer	

Display & Setting Board		
768030	Display & Setting Board (PCB#319046)	
141015	* Con V F 14c P=1.27 Mmatch Amp	
140526	* Microswitch 100V 100ma 0.8mm	
080717	* HDN1105 7 Segments Display	

Mains Filter Board		
767987	Mains Filter Board (PCB#315016) (EU)	
768005	Mains Filter Board (PCB#315016) (US)	
230565	* 2.5mH 250V 3A AC Line Filter	
140010	* 3 Contacts P=10 Vert Terminal Block	
110113	* Fuse Clip 5x20mm 6A max (EU)	
110114	* Fuse Clip 6.3x32mm 10A max (US)	
020493	* 100n 250Vac MKP EMI Capacitor "Siemens"	
010719	* 2n2 250Vac 7A 20% AC Line "Y" Filter "Murata"	

Power Amplifier Board		
768028	Power Amplifier Board (PCB#319032)	
141060	* Con V M 12c Mini Mate Burndy	
141059	* Con V M 9 C Mini Mate Burndy	
141058	* Con V M 6 C Mini Mate Burndy	
110316	* Relay 24V / 1 Switch no 16A 250V	
110307	* Relay 24V / 2 Switch 5A 250V	
100084	* TL074 Quad J-Fet Operational Amplifier	
100061	* TL072 Dual J-Fet Operational Amplifier	
090920	* Mje803 To126 Npn Darl Transistor	
090917	* MJE350 TO126 Pnp Transistor	
090916	* MJE340 TO126 Npn Transistor	
090201	* 2n5401 To92 Pnp Transistor	
090200	* 2n5550 To92 Npn Transistor	
090192	* BC307 TO92 Pnp Transistor	
090182	* BC173C TO92 Npn Transistor	
080261	* 10V1w 5% Zener Diode	
080245	* 7V5 1w 5% Zener Diode	
080241	* 5V6 1W 5% Zener Diode	
080171	* Fe6b 6a 100V Fast Recovery Diode	
080156	* 1N4002 1A 100V Rectifier Diode	
080103	* 1N4148 100mA 75V Signal Diode	
070106	* 470e 20% Horizontal Linear Trimmer	
070082	* 220e 20% Horizontal Linear Trimmer	
030715	* 1000u 6v3 20% Vert Electrolytic Capacitor	

Notes:

Each spare part is single quantity unless otherwise specified

Asterisk prefix explanation:

Omitted = First level spare part.

One asterisk = Second level, part of previous listed first level part.

Two asterisk = Third level, part of previous listed second level part.

Three asterisk =.....

Any request for not above mentioned part must encompass specific description including:

- 1) Model name,
- 2) Section,
- 3) Module code,
- 4) Reference name,
- 5) Quantity number.