

SOUNDCASE 12

SOUNDCASE 16

STEREO MIXER

SERVICE MANUAL

Schematic Diagrams



CODE : 277175



Index & Warnings

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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 (μ) 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.

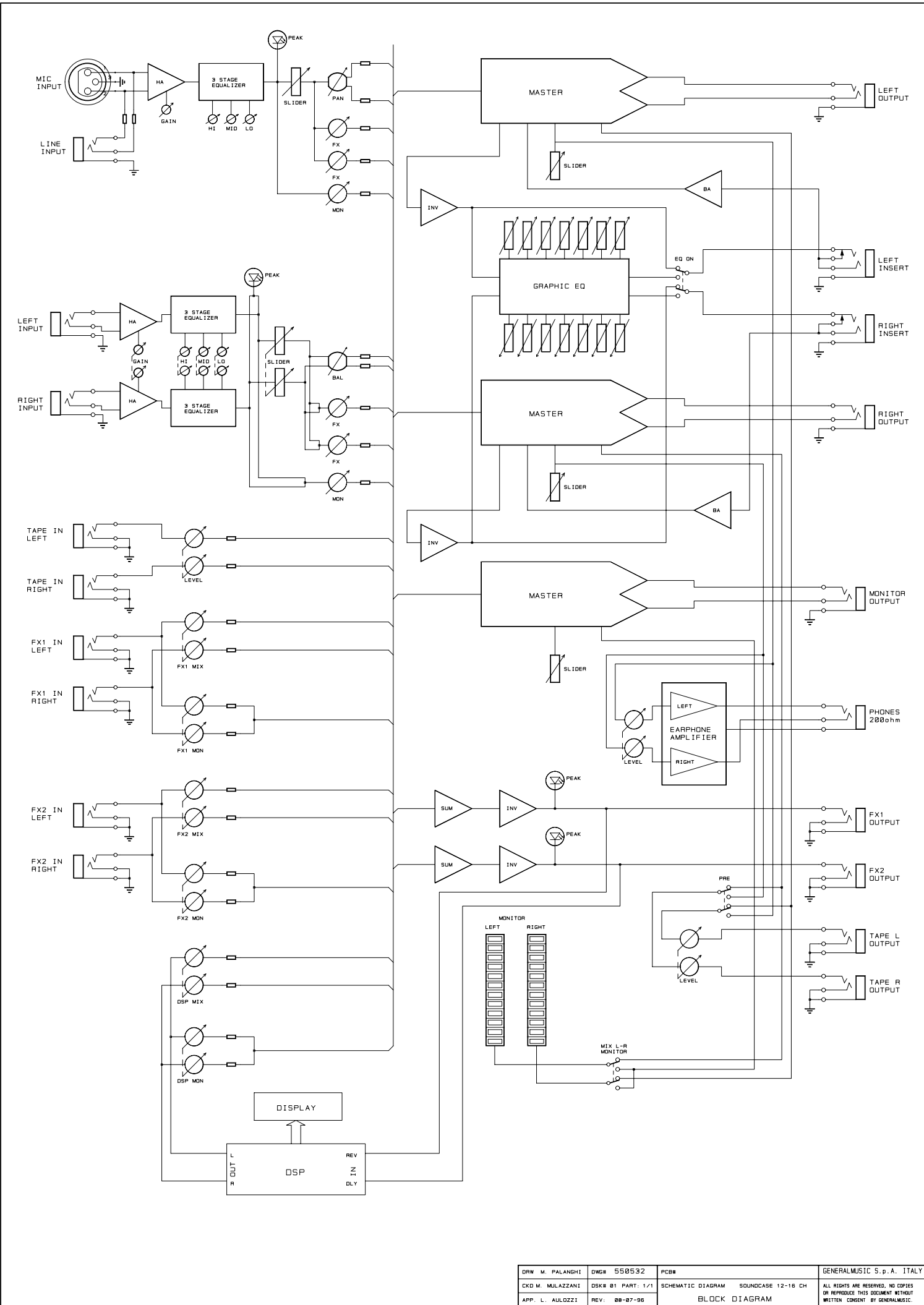


ATTENTION

Observe precautions when handling electrostatic sensitive devices

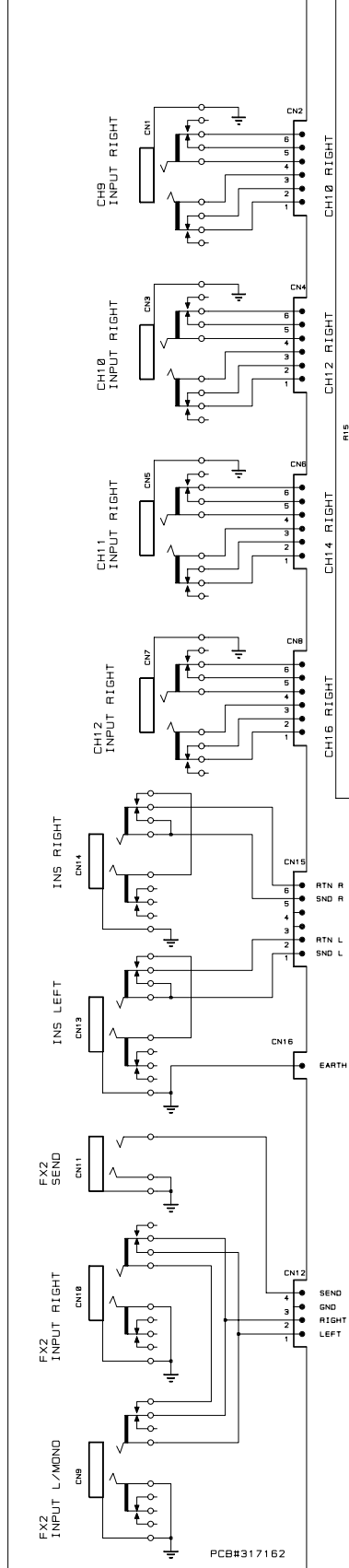


| SECTION | | LEVEL & DATA | | CONNECTORS | |
|----------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| INPUT CHANNELS | | | | | |
| MONO channel | sensitivity | from -20dB to -50dB | | XLR-F balanced | |
| MIC input | gain | 30dB | | | |
| | impedance | 1.2KΩ | | | |
| MONO channel | sensitivity | from +10dB to -20dB | | JACK balanced | |
| LINE input | gain | 30dB | | | |
| | impedance | 10KΩ | | | |
| STEREO channel | sensitivity | from +10dB to -30dB | | 2xJACK balanced | |
| | gain | 40dB | | | |
| | impedance | 45KΩ | | | |
| EQ HIGH | | ±15dB 10kHz (Shelving) | | | |
| EQ MID | | ±15dB 10Hz (Peaking) | | | |
| EQ LOW | | ±15dB 70kHz Shelving) | | | |
| MASTER | | | | | |
| LINE OUT (L&R) | | +4dB | | 2xJACK balanced | |
| MONITOR OUT | | +4dB | | JACK balanced | |
| INSERT SEND & RETURN (L&R) | | 0dB | | 2x stereo JACK | |
| FX SEND | | 0dB | | JACK unbalanced | |
| STEREO FX RETURN | | 0dB | | 2xJACK unbalanced | |
| TAPE OUT (L&R) | | 0dB | | RCA pin x 2 unbalanced | |
| TAPE IN (L&R) | | 0dB | | RCA pin x 2 unbalanced | |
| STEREO HEADPHONES | | 200mW 200Ω minimum | | Stereo JACK | |
| GENERAL SPECIFICATIONS | | | | | |
| FREQUENCY RESPONSE | | 2Hz - 20kHz / -1dB | | | |
| TOTAL HARMONIC DISTORTION | | THD+N less than 0.04% @ 1kHz | | | |
| CROSSTALK | | -60dB input to output, stereo separation | | | |
| HUM & NOISE | | -130dB Equivalent input noise -94dB Residual input noise (LINE OUT) -80dB Master fader nominal, 1ch. fader nominal | | | |
| MAXIMUM VOLTAGE GAIN | | 54dB CH IN to LINE OUT | | | |
| MAXIMUM OUTPUT LEVEL | | +22dB for all outputs | | | |
| POWER REQUIREMENTS | | | | | |
| | SOUNDCASE12 | AC 230V 50-60Hz 53W * AC117V 60Hz 53W | | | |
| | SOUNDCASE16 | AC 230V 50-60Hz 58W * AC117V 60Hz 58W | | | |
| DIMENTIONS | | | | | |
| | SOUNDCASE12 | TABLE: mm442x427x133 * in 174x168x52.36 (WxHxD) | | | |
| | SOUNDCASE16 | TABLE: mm530x427x133 * in 208.7x168x52.36 (WxHxD) | | | |
| | SOUNDCASE12 | RACK: mm483x355x121 * in 190.2x140x47.6 (WxHxD) | | | |
| | SOUNDCASE16 | RACK: mm571x355x121 * in 224.9x140x47.6 (WxHxD) | | | |
| WEIGHT | | | | | |
| | SOUNDCASE12 | kg 9 lbs. 20 | | | |
| | SOUNDCASE16 | k911.5 lbs. 25.5 | | | |

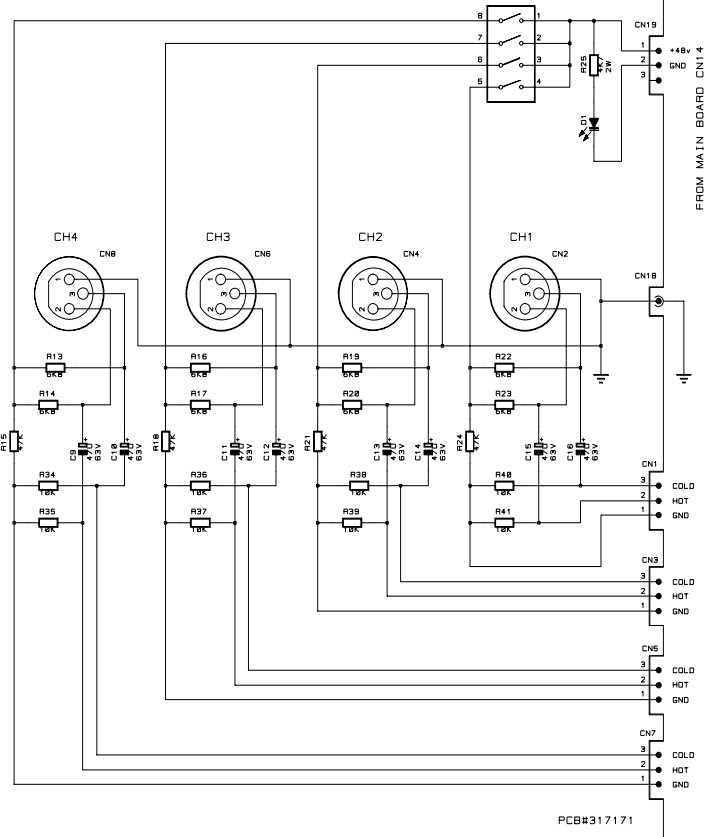




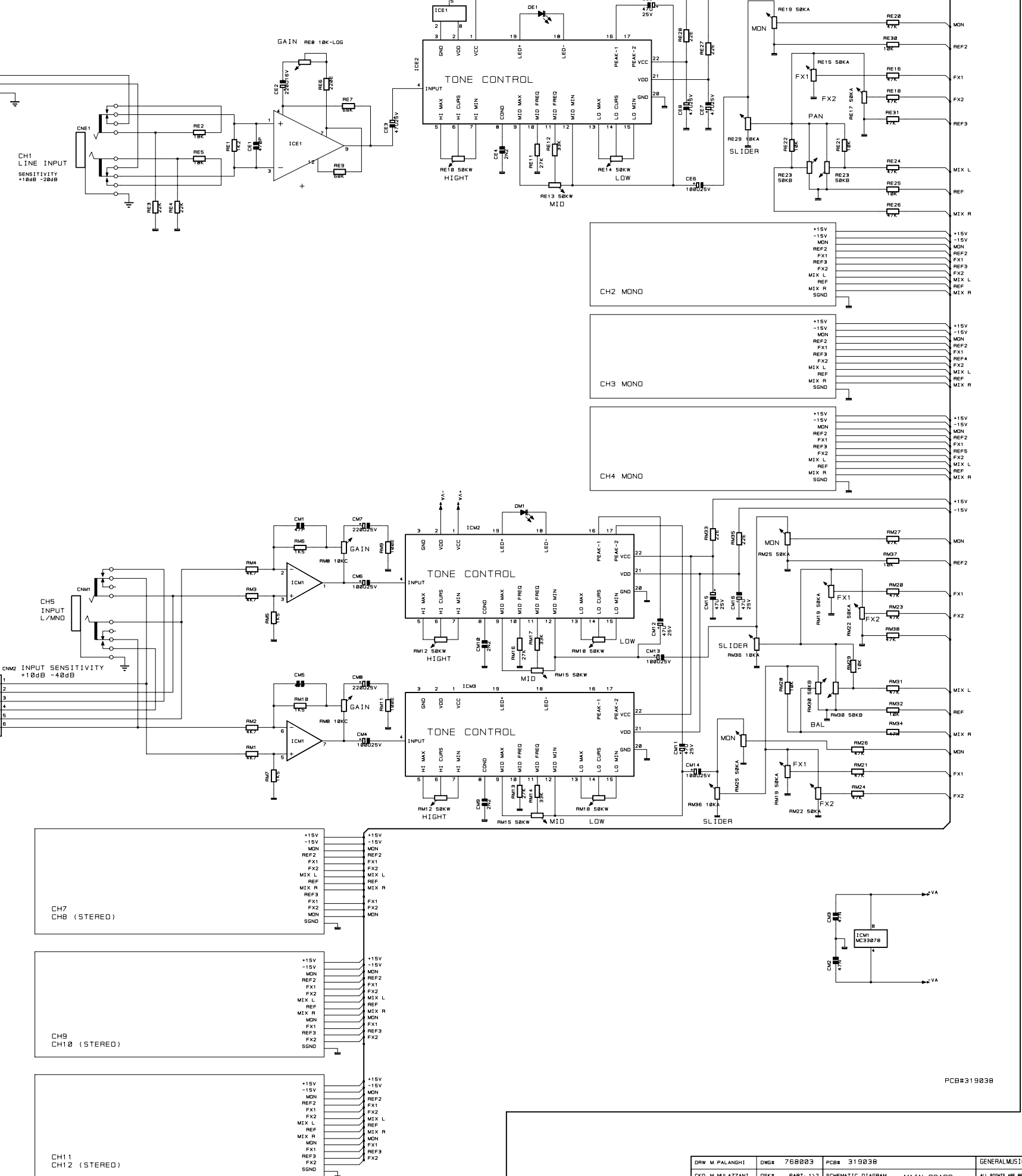
767966 - MASTER OUTPUTS BOARD

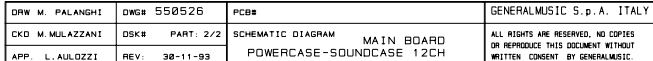


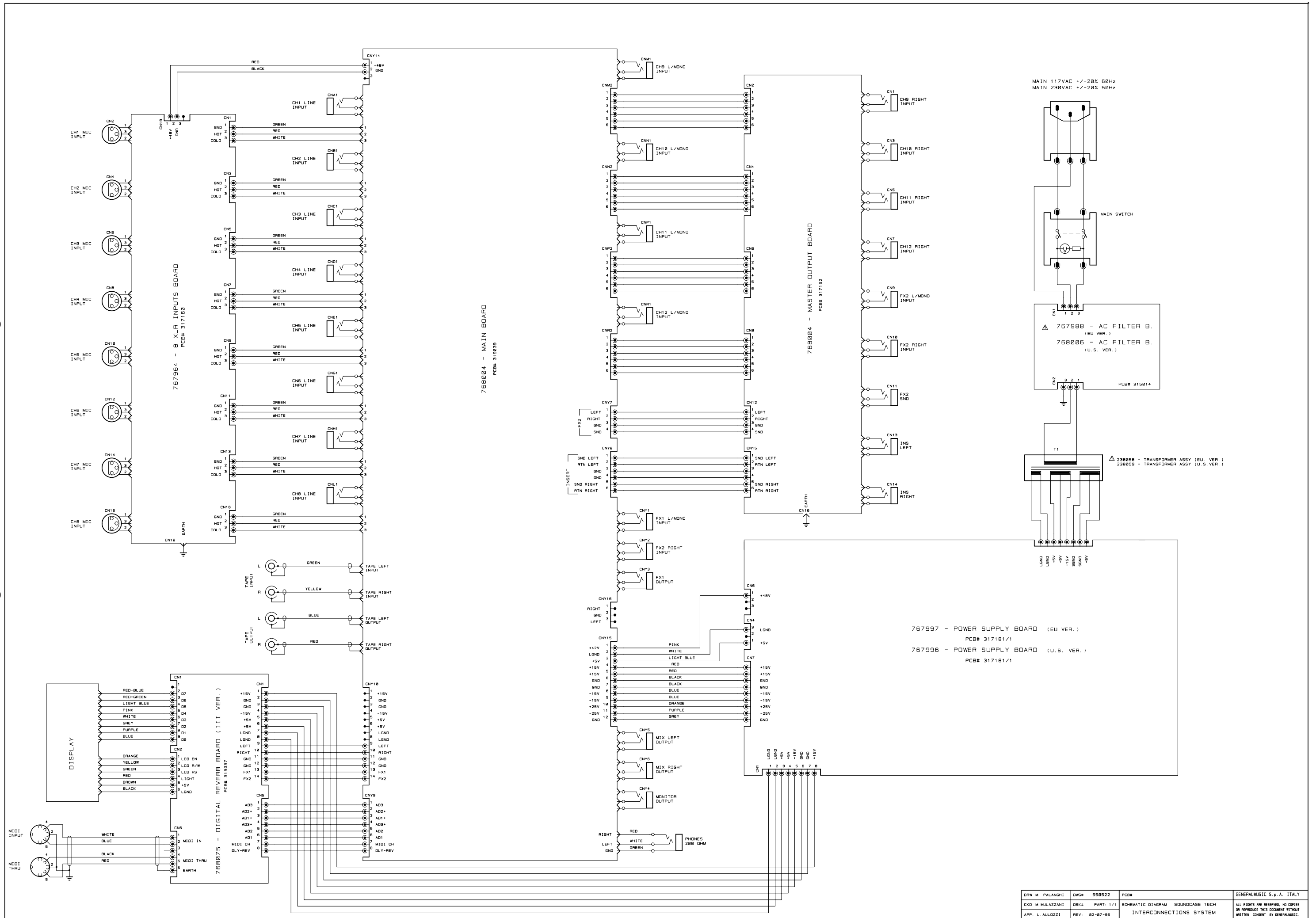
767963 - 4 XLR INPUTS BOARD (POWERCASE & SOUND CASE 12CH)

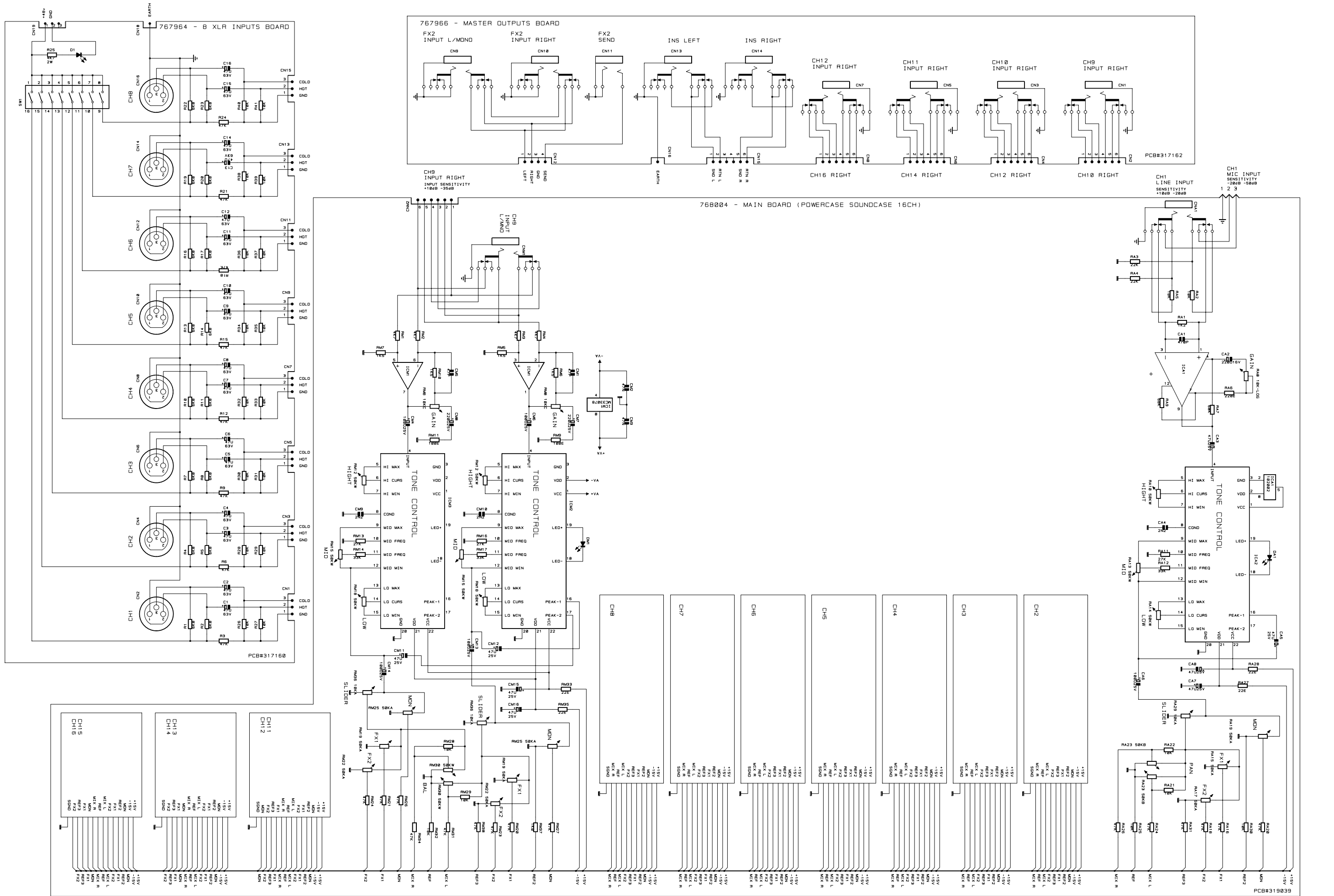


768003 - MAIN BOARD (POWERCASE/SOUNDCASE 12CH)

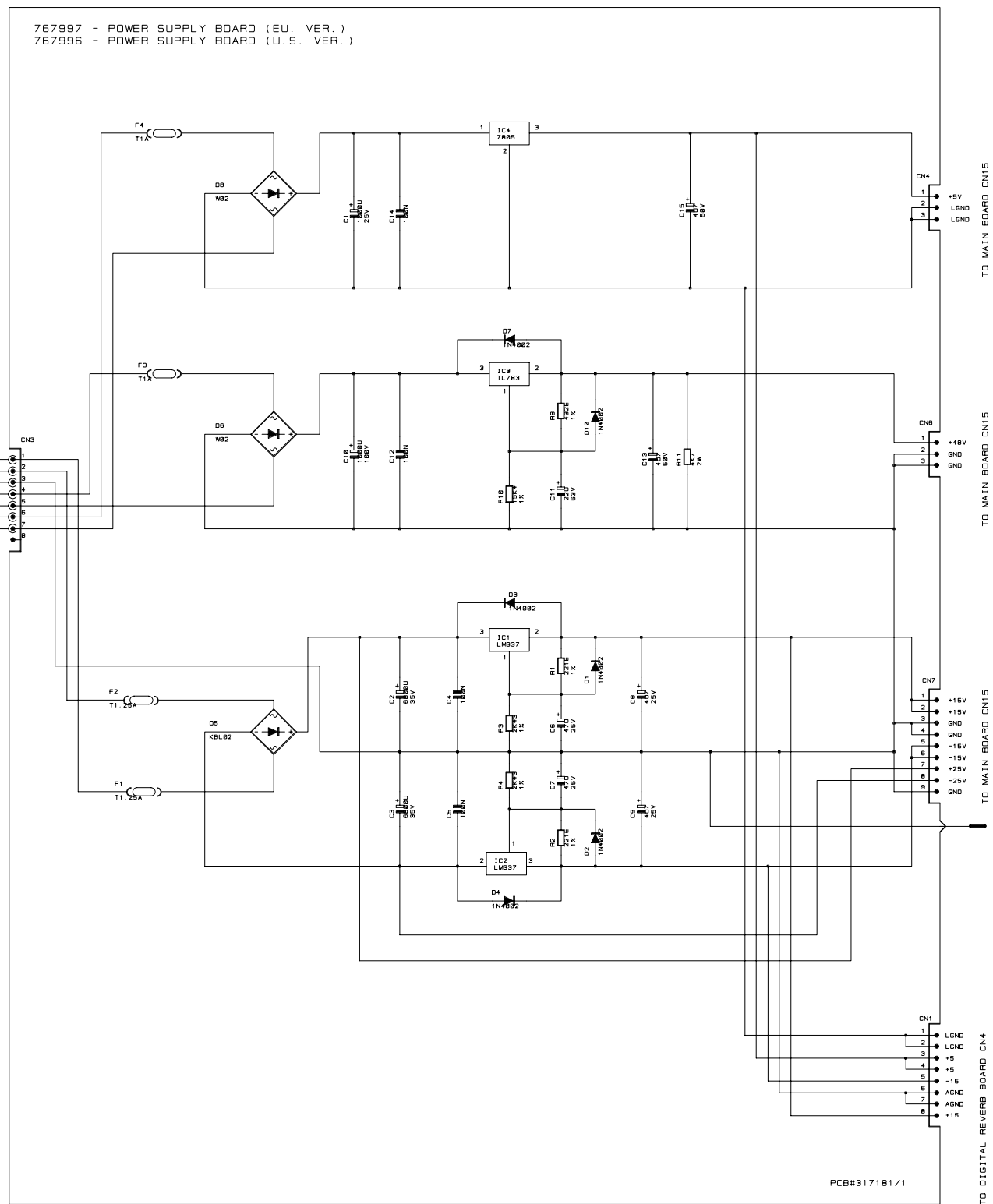
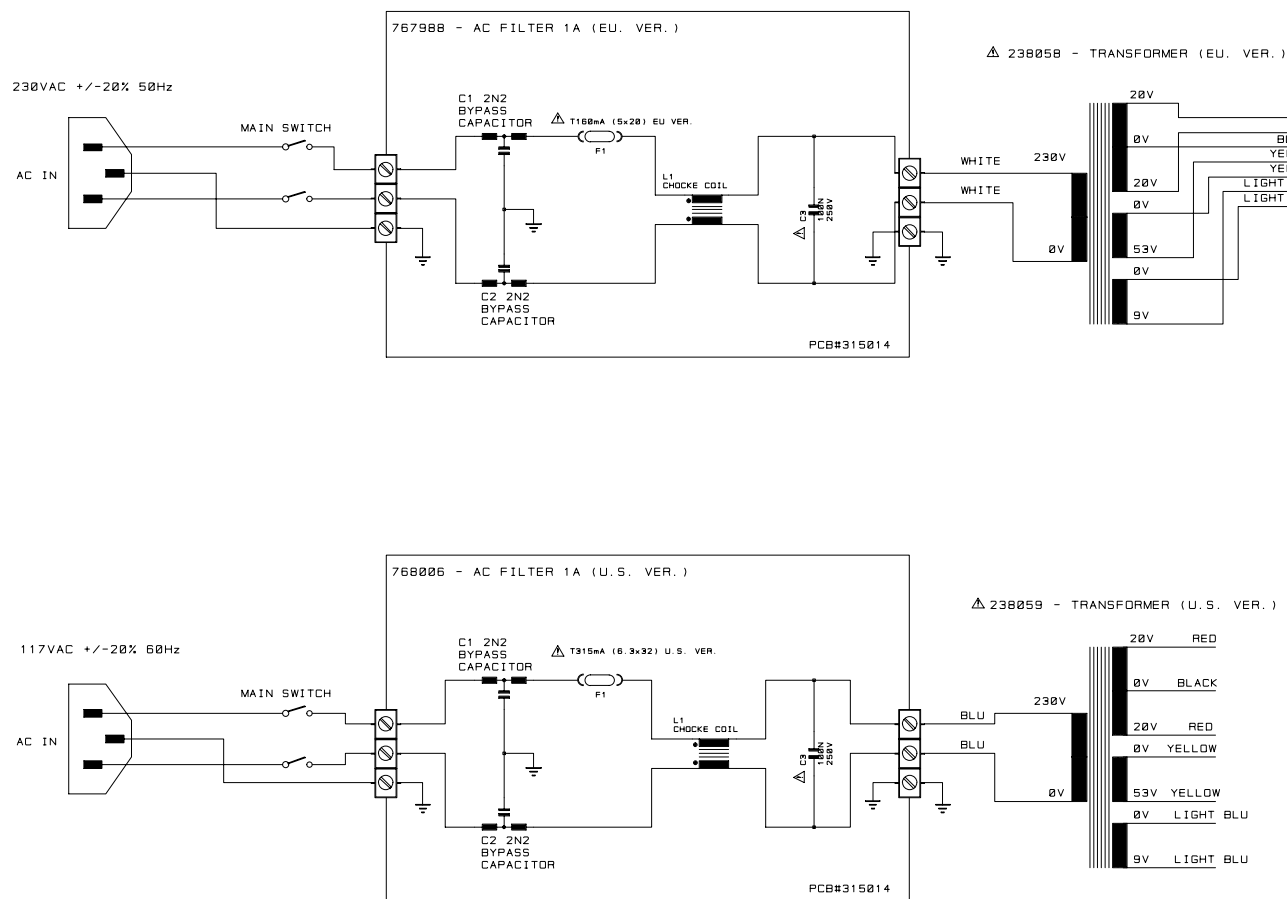








| | | | | | | |
|------|---------------|------|-----------|--------------------------|------------|-------------------------------------------------------------------------------------------------------|
| DRW | M. MULLAZZANI | DWG# | 767962 | PCB# | | GENERALMUSIC S.p.A. ITALY |
| CKD | M. MULLAZZANI | DSK# | PART: 1/2 | SCHEMATIC DIAGRAM | MAIN BOARD | ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC |
| APP. | L. AULIOZZI | REV. | 38-11-93 | POWERCASE SOUNDCASE 16CH | | |



| | | | |
|------------------|----------------|-------------------------------|--------------------------------------------------------------------------------------------------------|
| DRW M. MALAZZANI | DWG# 550531 | PCB# | GENERALMUSIC S.p.A. ITALY |
| CKD M. MALAZZANI | DSK# PART: 1/1 | SCHEMATIC DIAGRAM (SOUNDCASE) | |
| APP L. AULIOZZI | REV: 16-09-93 | FILTER & POWER SUPPLY BOARD | ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC. |

SPARE PARTS LIST

| Accessories | |
|-------------|-----------------------------|
| 277174 | Owner's manual |
| | |
| Various | |
| 667567 | Chassis (12ch Version) |
| 667417 | Cover (12ch Version) |
| 657213 | Left side |
| 657212 | Right Side |
| 347241 | Handle (12ch Version) |
| 347028 | "System" foot |
| 340435 | Adhesive Foot |
| 340186 | Mains Cable Fixing |
| 238058 | Transformer 230V |
| 230098 | Transformer 117V |
| 141133 | 8 Contacts Female Connector |
| 110614 | Mains Socket |
| 110285 | Power Switch |
| 110013 | T1.25A Fuse 5x20mm (EU) |
| 110026 | T1.25A Fuse 6.3x32mm (US) |
| 130297 | Mains Cord (Europe Version) |
| 130283 | Mains Cord (U.S. Version) |
| | |

| Mechanical Parts | |
|------------------|----------------------------------------------|
| 347256 | * Two-colored Switch Cup (Pantone 564) |
| 347251 | * Two-colored Knob (Pantone 5493) |
| 347250 | * Two-colored Knob (Pantone 5473) |
| 347249 | * Two-colored Knob (Pantone 564) |
| 347248 | * Two-colored Knob (Pantone 562) |
| 347247 | * Two-colored Knob (Pantone 556) |
| 177433 | * Inner Panel (SOUNDCASE 12) |
| 177434 | * Inner Panel (SOUNDCASE 16) |
| 177431 | * Jack Support |
| 177252 | * Power Supply Board Fixing |
| 140241 | * Red RCA Socket |
| 140240 | * Black RCA Socket |
| 140220 | * Jack Slim Horizontal Female Apj678 Adimpex |
| 667411 | * Front Panel |
| 347255 | * Two-colored Slider Knob (Pantone 5493) |
| 347254 | * Two-colored Slider Knob (Pantone 5473) |
| 347253 | * Two-colored Slider Knob (Pantone 564) |
| 347252 | * Two-colored Slider Knob (Pantone 556) |
| 080745 | * 2x16 Characters Lcd Display |
| | |

Digital Reverb Board

| | | |
|---------------|----------|--------------------------------------------------------|
| 758075 | * | Digital Reverb Board (III Version) (PCB#319057) |
| 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 |
| 141012 | ** | Con V F 8 C P=1.27 Mmatch Amp |
| 103021 | ** | Tda1309hn2 Bitstream Ad/Da Con |
| 103016 | ** | 74hc373dw Octal D-Type Latch |
| 103015 | ** | 74hc164m 8bit S To P Shift Reg |
| 103014 | ** | 74hc109d Soic Dual J-/K F-F |
| 103013 | ** | 74HC138 1 OF 8 DECODER SMD |
| 103010 | ** | 74hc04d Soic Hex Inverter |
| 103007 | ** | 74hc74d Soic Dual Flip-Flop |
| 103002 | ** | 74hc245dw Soic Octal Bus Transceiver |
| 103001 | ** | 74hc08d Soic Quad 2-Input And Gate |
| 100919 | ** | Mc33078 Dual Ln J-Fet Operational Amplifier |
| 100642 | ** | Ts93c46 1Kbit Eeprom Memory |
| 100628 | ** | Rev2 Digital Reverb Processor |
| 100617 | ** | 74HC4040 12-Stage Binary Counter |
| 100586 | ** | HM514256P10 Dynamic Ram 1mbit Ta=100n |
| 100579 | ** | 80C32 Cpu Fc=16MHz |
| 100066 | ** | Lm317 1.2v-37v 1.5a Adj Reg |
| 100035 | ** | 6N138 Optocoupler |
| 050492 | ** | 10Kx8 1/8w 5% Resistor Array |
| 042435 | ** | 432E 1/4w 1% Metalized Film Resistor |
| 042405 | ** | 221E 1/4w 1% Metalized Film Resistor |
| 010724 | ** | 16MHz Ceramic Resonator With Capacitors |
| 010718 | ** | 32MHz Quartz Resonator |
| 010660 | ** | 470p 10% 50V X8 Cap Array |
| 557023 | * | Programed EPROM |
| 100721 | ** | 27C512 Eprom 512Kbit Ta=200ns |
| | | |

Power Supply Board

| | | |
|---------------|----------------------------------------------------|--------------------------------------------------|
| 767997 | Power Supply Board (PCB#317181) (EU. Ver.) | |
| 767996 | Power Supply Board (PCB#317181) (U.S. Ver.) | |
| 141130 | * | Con Horizontal Male 8contacts P=5.08 Pa253 Gibi |
| 141059 | * | Con Vertical Male 9 Contacts Mini Mate Burndy |
| 141056 | * | Con Vertical Male 3 Contacts Mini Mate Burndy |
| 141012 | * | Con Vertical Female 8 Contacts P=1.27 Mmatch Amp |
| 110113 | * | Fuse Clip 5x20mm 6A max (EU) |

| | | |
|--------|---|------------------------------------------|
| 110013 | * | T1.25A Fuse 5x20mm (EU) |
| 110011 | * | T1A Fuse 5x20mm (EU) |
| 110114 | * | Fuse Clip 6.3x32mm 10A Max (US) |
| 110082 | * | T1A Fuse 6.3x32mm (US) |
| 110026 | * | T1.25A Fuse 6.3x32mm (US) |
| 100952 | * | TI783c 125V 700ma High Volt Re |
| 100952 | * | TI783c 125V 700ma High Volt Re |
| 100067 | * | Lm337 1.2v-37v 1.5a Adjustable Regulator |
| 100066 | * | Lm317 1.2v-37v 1.5a Adj Reg |
| 100059 | * | 7805 +5v 1a Voltage Regulator |
| 080605 | * | Kbl02 4a 200V Bridge Rec Diode |
| 080168 | * | W02M 1.5A Rectifier Diodes Bridge |
| 080156 | * | 1N4002 1A 100V Rectifier Diode |
| 042626 | * | 15K4 1/4w 1% Metalized Film Resistor |
| 042524 | * | 2K43 1/4w 1% Metalized Film Resistor |
| 042435 | * | 432E 1/4w 1% Metalized Film Resistor |
| 042405 | * | 221E 1/4w 1% Metalized Film Resistor |
| | | |

Filter Board

| | | |
|---------------|----------------------------------|-------------------------------------|
| 767988 | Filter Board (PCB#315014) | |
| 768006 | Filter Board (PCB#315014) | |
| 140010 | * | 3 Contacts P=10 Vert Terminal Block |
| 110113 | * | Fuse Clip 5x20mm 6A max (EU) |
| 020493 | * | 100n 250Vac MKP EMI Capacitor |
| 010719 | * | 2n2 250V 7A 20% AC Line Capacitor |
| | | |

Main Board

| | | |
|---------------|----------|--------------------------------------------------|
| 768003 | * | Main Board (PCB#319038) (SOUNDCASE 12) |
| 768004 | * | Main Board (PCB#319039) (SOUNDCASE 16) |
| 347020 | ** | 15 LEDs Support |
| 340771 | ** | Led Spacer H=16,3mm |
| 141065 | ** | Con Horizontal Male 12contacts Mini Mate Burndy |
| 141061 | ** | Con Horizontal Male 3 Contacts Mini Mate Burndy |
| 141056 | ** | Con Vertical Male 3 Contacts Mini Mate Burndy |
| 141015 | ** | Con Vertical Female 14contacts P=1.27 Mmatch Amp |
| 141012 | ** | Con Vertical Female 8 Contacts P=1.27 Mmatch Amp |
| 141011 | ** | Con Vertical Female 6 Contacts P=1.27 Mmatch Amp |
| 141010 | ** | Con. Vert. Female 4 Contacts P=1.27 Match Amp. |
| 140397 | ** | 2sw 2pos Vertical Slider Switch |
| 140231 | ** | Jack Horizontal Female Socket S-G4617 Smk |
| 140220 | ** | Jack Slim Horizontal Female Apj678 Adimpex |
| 110258 | ** | Encoder |
| 102006 | ** | Hybrid St Graphic Equalizer |
| 102005 | ** | Hybrid 3 Band Tone Control |
| 102004 | ** | Hybrid Master & Bal Output |
| 102002 | ** | Hybrid Balanced Input Circuit |
| 102001 | ** | Hybrid Stereo Headphones Amp |
| 100927 | ** | Lb1412 12 Dots Level Meter |
| 100919 | ** | Mc33078 Dual Ln J-Fet Operational Amplifier |
| 100918 | ** | Mc33178 Dual Op Amp |
| 100620 | ** | 74hc86 Quad 2-Input Exor Gate |
| 100614 | ** | 74HC74 Dual Flip-Flop |
| 090183 | ** | Bc550 To92 Ln Npn Transistor |
| 080733 | ** | Led 2.5x5mm Rect Diff Green |
| 080731 | ** | Led 2.5x5mm Rect Diff Red |
| 080706 | ** | Led 3mm 60deg Diffused Green |
| 080705 | ** | Led 3mm 60deg Diffused Red |
| 075802 | ** | 2x50Ka 14mm Vert. Rotary Pot |
| 075699 | ** | 50Ka 9mm Vert. Rotary Pot |
| 075615 | ** | 2x10Kc 14mm Vert. Rotary Pot |
| 075591 | ** | 10Kc 9mm Vert. Rotary Pot |
| 074761 | ** | 2x50Kb C.C. 14mm Vert. Rotary |
| 074753 | ** | 2x50Kw C.C. 14mm Vert. Rotary |
| 074698 | ** | 50Kw C.C. 9mm Vert. Rotary Pot |
| 073596 | ** | 2x10Ka 60mm Slider Pot Slim |
| 073574 | ** | 10Ka 60mm Slider Pot Slim |
| 072705 | ** | 2x50K W 30mm Slider Potentiometer |
| | | |

Master Output Board

| | | |
|---------------|----------|--------------------------------------------------|
| 767966 | * | Master Outputs Board (PCB#317162) |
| 141011 | ** | Con Vertical Female 6 Contacts P=1.27 Mmatch Amp |
| 141010 | ** | Con. Vert. Female 4 Contacts P=1.27 Match Amp. |
| 140231 | ** | Jack Horizontal Female Socket S-G4617 Smk |
| 140220 | ** | Jack Slim Horizontal Female Apj678 Adimpex |
| | | |

4 XLR Inputs Board

| | | |
|---------------|----------|-------------------------------------------------|
| 767963 | * | 4 XLR Inputs Board (PCB#317171) |
| 141183 | ** | XLR Horizontal Female Norit Nc3fprho Neutrik |
| 141061 | ** | Con Horizontal Male 3 Contacts Mini Mate Burndy |
| 141056 | ** | Con Vertical Male 3 Contacts Mini Mate Burndy |
| 080705 | ** | Led 3mm 60deg Diffused Red |
| | | |

8 XLR Inputs Board

| | | |
|---------------|----------|--------------------------------------------------|
| 767964 | * | 8 XLR Inputs Board (PCB#317160) |
| 141183 | ** | XLR Horizontal Female Norit Nc3fprho Neutrik |
| 141061 | ** | Con Horizontal Male 3 Connector Mini Mate Burndy |
| 141056 | ** | Con Vertical Male 3 Connector Mini Mate Burndy |
| 080705 | ** | Led 3mm 60deg Diffused Red |
| | | |

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.