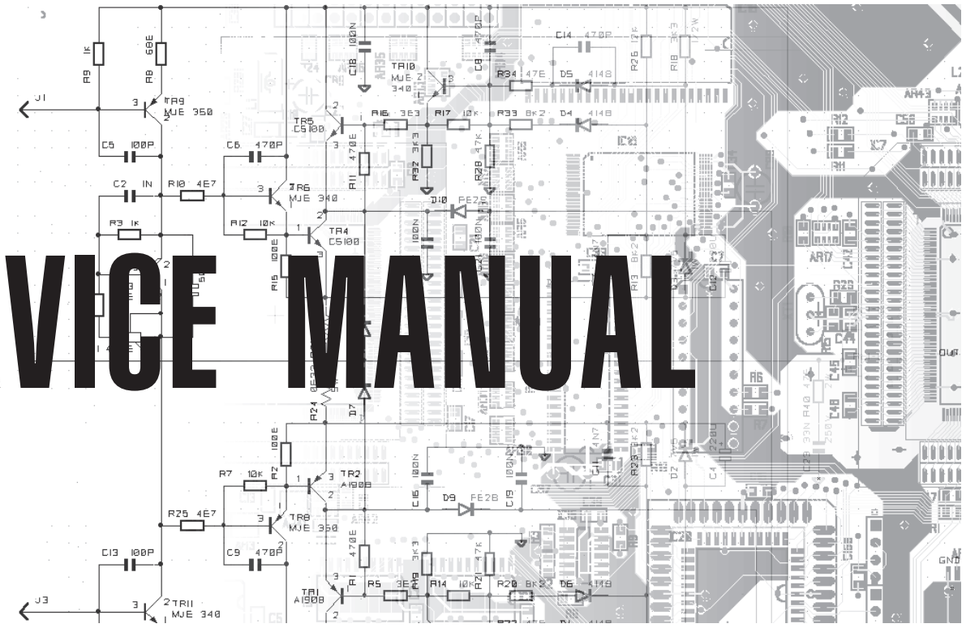
Sound Pressure

MEDIA LIVE

ACTIVE

Second Edition

SERVICE MANUAL



GENERALMUSIC®

CODE: 270218

Index

2 Block Diagram
2 Technical Specifications
2 Schematics Drawing
3 Exploded View
3 Spare Part List

Warnings

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.
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 1/8Ω unless otherwise specified.
All switches shown in the "OFF" position. All DC voltages measured to ground with a voltmeter 20KOhm/V.

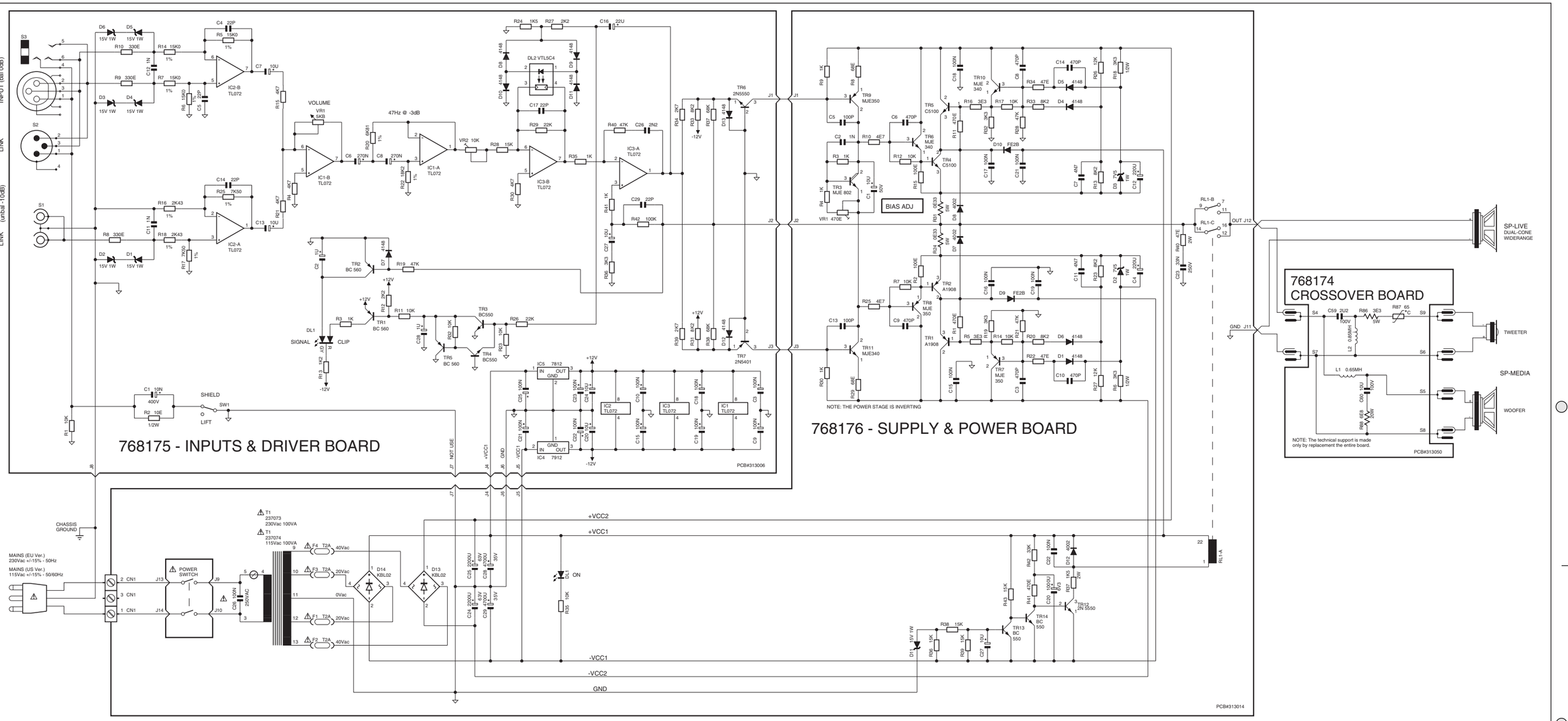
- ← Soldering point.
- • Male connector.
- ⊃ Female connector.
- ⟜ M/F faston connector.
- ↑ Supply voltage.
- ⊡ Test point.
- ⬭ Flag joined with one or more flags with the same signal name inscribed.
- ⊥ Logic supply ground.
- ⏚ Analog supply ground.
- ⏚ Chassis ground.
- ⊕ Earth ground.

ATTENTION

Observe precautions when handling electrostatic sensitive devices.

Address

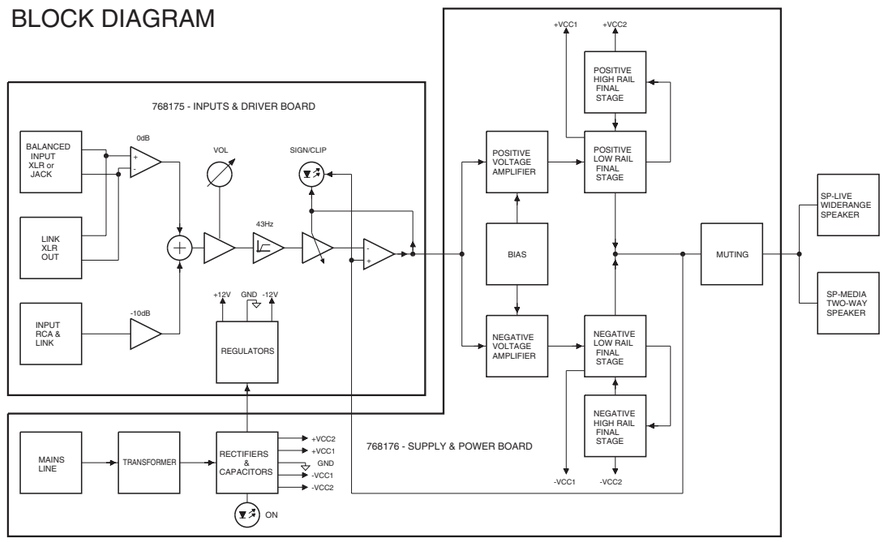
GENERALMUSIC S.p.A. Sales Division: 47842 S.Giovanni in Marignano (RN) ITALY - Via delle Rose, 12 - tel. 0541/959511 - fax 0541/957404
GENERALMUSIC on the NET: http://www.generalmusic.com



TECHNICAL SPECIFICATIONS

Power (Wrms)	90
Distortion (THD+N)	less than 0.1%
XLR Input Impedance (ohm)	30K (balanced) 15K (unbalanced)
XLR Input Sensitivity (dB)	0 (0.775Vrms)
RCA Input Impedance (ohm)	10K (unbalanced)
RCA Input Sensitivity (dB)	-10dB (0.245Vrms)
Sensitivity (dBspl 1W/1mt)	95 (Media) 91 (Live)
Max Sensitivity (dBspl)	119 (Media) 115 (Live)
Frequency Response (Hz -6dB)	85-20000 (Media) 70-20000 (Live)
Crossover Frequency (Hz)	3.2KHz @ 12dB/oct. (Media)
Speakers	Live: 1x6 1/2"widerange (Live) Media: 1x1"tweeter with EWT horn 1x6 1/2"woofer

BLOCK DIAGRAM



TEST & ADJUSTMENT PROCEDURE

Instruments, materials and tools:

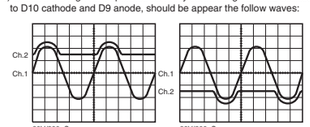
- Audio generator
- Dual trace oscilloscope (Earth lift)
- Digital voltmeter or multimeter
- 8E 100W Resistor
- Variac (0-250Vac)
- Temperature Meter

Setup:

- Connect the Mains plug to the Variac
- Connect the Audio generator to the input and set it to 1KHz sinus signal
- Connect the Ch.1 oscilloscope probe on the output (R40 side RL1) and set it at 20V/div 200uS/div
- Turn the trimmer VR1 on Power Board full counterclockwise (from solder side)
- Place the temperature sensor on the heatsink near a final transistor
- Insert the Voltmeter terminals across R24 (or alternatively R31)
- Put the VOL potentiometer at maximum level

Test Procedure:

1) Turn on the amplifier
2) Set the input signal to obtain 0dB (0.775Vrms) or -10dB (0.245Vrms) to the appropriate input.
3) Increase slowly the Variac to the nominal value of 230Vac and check if the output appear correctly, the value must be 43Vp, eventually regulate the level adjusting VR2 trimmer.
4) Check if the high rails operates correctly connecting the Ch.2 oscilloscope probe alternatively to D10 cathode and D9 anode, should be appear the follow waves:



5) Set the Variac to 0, connect the 8E 100W resistor to the amplifier output instead of the speaker or x-over, check again if the amplifier operates correctly as specified at points 3 and 4 but with the level reduced to 38+/-0,7Vp.

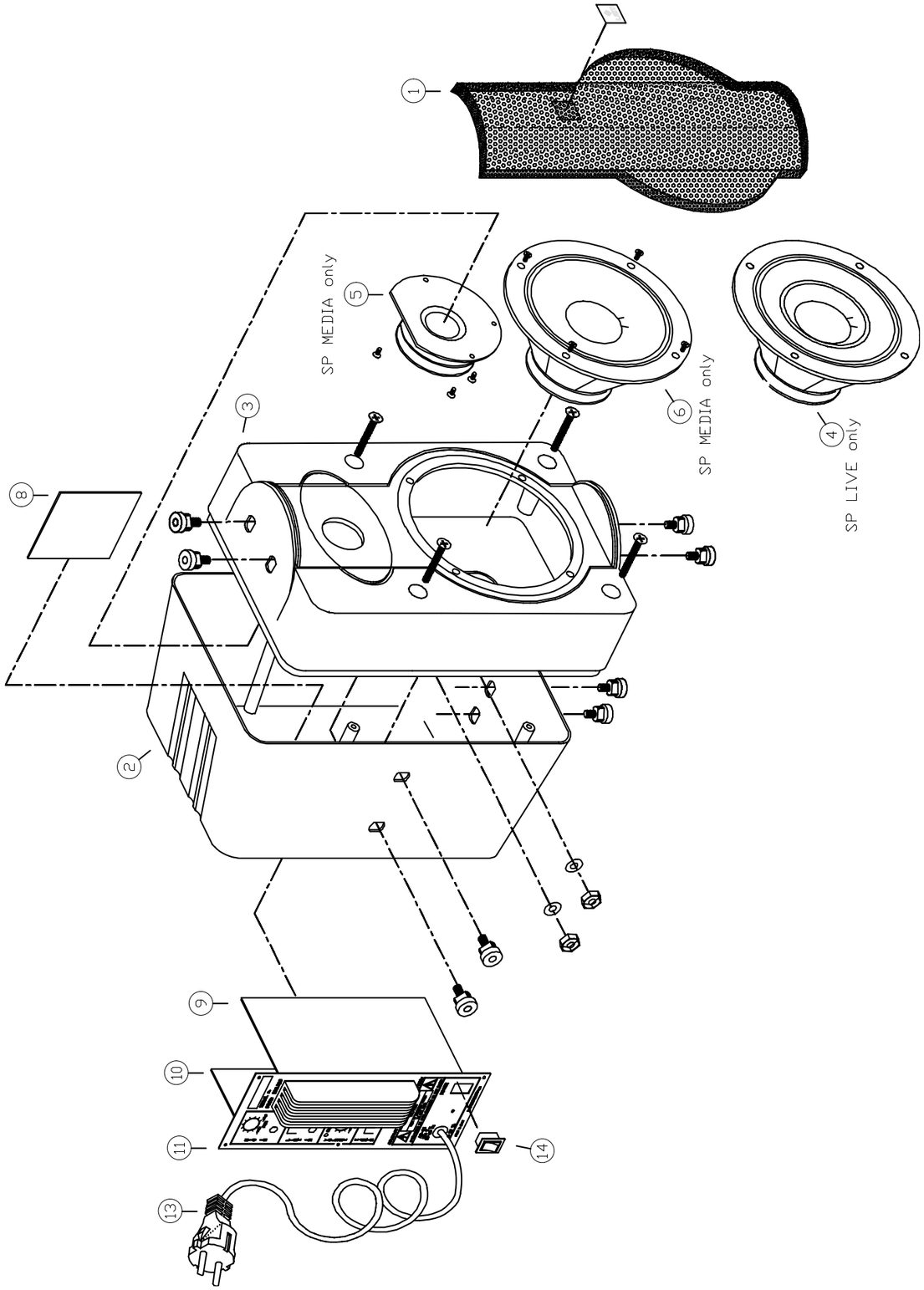
Adjustment procedure:

6) Leaving the amplifier operate, wait until the temperature reaches 50 c, set the input signal to 0 and wait some seconds to stabilize the temperature, adjust the VR1 trimmer to obtain 10+/-0.05mV on the Voltmeter.

Veryfing:

7) Increase the input level to obtain an output voltage about of 0.5Vpp, check if don`t appear a cross-talk distortion, eventually slightly adjust the VR1 position until distortion disappear
8) The voltage value across R24 (or R31) resistor must not exceed 15mV
9) Re-connect the speaker instead of the 8E 100W resistor

DRW Battelli	DWG# 550607	PCB# 313050/313006/313014	GENERALMUSIC S.p.A. ITALY
CKD Ricci	DSK# PART: 1/1	SCHEMATIC DIAGRAM Sound Pressure Media & Live	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. Zuccatti	REV: 02/03/98		



DWG:550611

Spare Part List

	Legend	
EU	= Specify Europe Version (230Vac)	
US	= Specify US Version (115Vac)	
SPLive	= Specify Live Version	
SPMedia	= Specify Media Version	

Ref.	Code		Description

Optional Accessories

	951126	SC80 Flange for Telescopic stand and TOTEM system
	951127	SC81 Male Flange
	951128	SC82 Female Flange
	951131	SC85 TOTEM System Support
	950978	SC31 Telescopic Stand
	950444	SC61 Microphone Stand Adaptor
	950445	SC62 Wall Mounting Support
	950446	SC63 Table Fixing Clamp
	951125	SC64 T-Stand

Accessories

	277326	Owner's Manual

Cabinet Assembly

1	667662	Speaker Net
	667659	Threaded Fixing for External Supports
2	657257	Rear Shell
3	657255	Front Panel (SPLive)
3	657544	Front Panel (SPMedia)
4	228014	8ohm 100W 6" Widerange Speaker (SPLive)
5	229015	8ohm 20W 1" Dome Tweeter Speaker (SPMedia)
6	228013	8ohm 75W 6" Woofer Speaker (SPMedia)
	210231	Amplifier Gasket
	210229	Tweeter Gasket (SPMedia)
	210217	Black Sealer (specify mt)
	210209	Dacron Filler (specify mq)
7	180661	"Lem" Adhesive Orange Plate (SPLive)
7	180654	"Lem" Adhesive Blue Plate (SPMedia)
	120603	M8 (UNI558865) Nut
	120471	8.4mm Washer

Crossover Board

8	**768174**		**Crossover Board (PCB#313050) (SPMedia)**
			The Service Support is made only by replacement the entire Board

Amplifier Assembly

	727593		Amplifier Assembly (EU)
	727594		Amplifier Assembly (US)
9	**768176**	*	**Supply & Power Board (PCB#313014)**
	140081	**	H 2c P=10 Terminal Block
	110307	**	Relay 24V / 2 Switch 5A 250V
	110119	**	Fuse Clip 10A max (EU) (US)
	090917	**	MJE350 TO126 Pnp Transistor
	090916	**	MJE340 TO126 Npn Transistor
	090200	**	2N5550 TO92 Npn Transistor
	090183	**	BC550 TO92 LN Npn Transistor
	080743	**	3mm Wide Diffused Green Led
	080605	**	KBL02 4A 200V Rectifier Diode Bridge
	080293	**	15V 1W 5% Zener Diode
	080245	**	7V5 1W 5% Zener Diode
	080170	**	BYV27 2A 100V Fast Recovery Diode
	080156	**	1N4002 1A 100V Rectifier Diode
	080103	**	1N4148 100mA 75V Signal Diode
	070106	**	470E 20% Horizontal Linear Trimmer
	060501	**	1K5 2W 10% Resistor
	060336	**	47E 2W 10% Resistor
	060075	**	0E33 5W 5% Wire Resistor
	030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
	030554	**	4700u 35v 20% SnapIn Electrolytic Capacitor
	030525	**	2200u 63V 20% SnapIn Electrolytic Capacitor
	020493	**	100n 250Vac MKP EMI Capacitor "Siemens"
	768175	*	**Inputs & Driver Board (PCB#313006)**
	141189	**	Hor Female XLRJack Socket (NCJ6FKH Neutrik)
	141186	**	Hor Male XLR Socket (NC3MAH Neutrik)
	140242	**	Dual Rca Horizontal Socket
	110267	**	1sw 2pos Horizontal Slider Switch
	100061	**	TL072 Dual JFet Operational Amplifier
	100045	**	7812 +12V 1A Voltage Regulator
	100043	**	7912 12V 1A Voltage Regulator
	090201	**	2N5401 TO92 Pnp Transistor
	090200	**	2N5550 TO92 Npn Transistor
	090194	**	BC560 TO92 LN Pnp Transistor
	090183	**	BC550 TO92 LN Npn Transistor
	080901	**	VTL5C4 Analog Optoisolator
	080742	**	Led 3mm Wide Diffused RedGrn
	080293	**	15V 1W 5% Zener Diode
	080103	**	1N4148 100mA 75V Signal Diode
	074570	**	5K 31steps Linear Potentiometer
	042632	**	18K2 1/4w 1% Metalized Film Resistor
	042625	**	15K0 1/4W 1% Metalized Film Resistor
	042586	**	7K50 1/4w 1% Metalized Film Resistor
	042585	**	6K81 1/4w 1% Metalized Film Resistor
	042524	**	2K43 1/4w 1% Metalized Film Resistor
11	667661	*	Rear Panel
	659027	*	White Pot Knob
	340079	*	TO220 Mica Washer
	237073	*	Transformer 230Vac 100VA (EU)
	237074	*	Transformer 115Vac 100VA (US)
	210212	*	Slider Switch Adhesive Gasket
	190229	*	Lateroid Insulator
12	177656	*	Heatsink
	150021	*	Cord Lock
13	130294	*	Mains Cord (EU)
13	130277	*	Mains Cord (US)
14	110285	*	Power Switch
	110010	*	T2A Fuse 5x20mm (EU)
	110083	*	T2A Fuse 6.3x32mm (US)
	090926	*	2SA1908 TO3P Pnp Transistor
	090925	*	2SC5100 TO3P Npn Transistor
	090920	*	MJE802 TO126 Npn Darl Transistor

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 asterisks	= 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.