

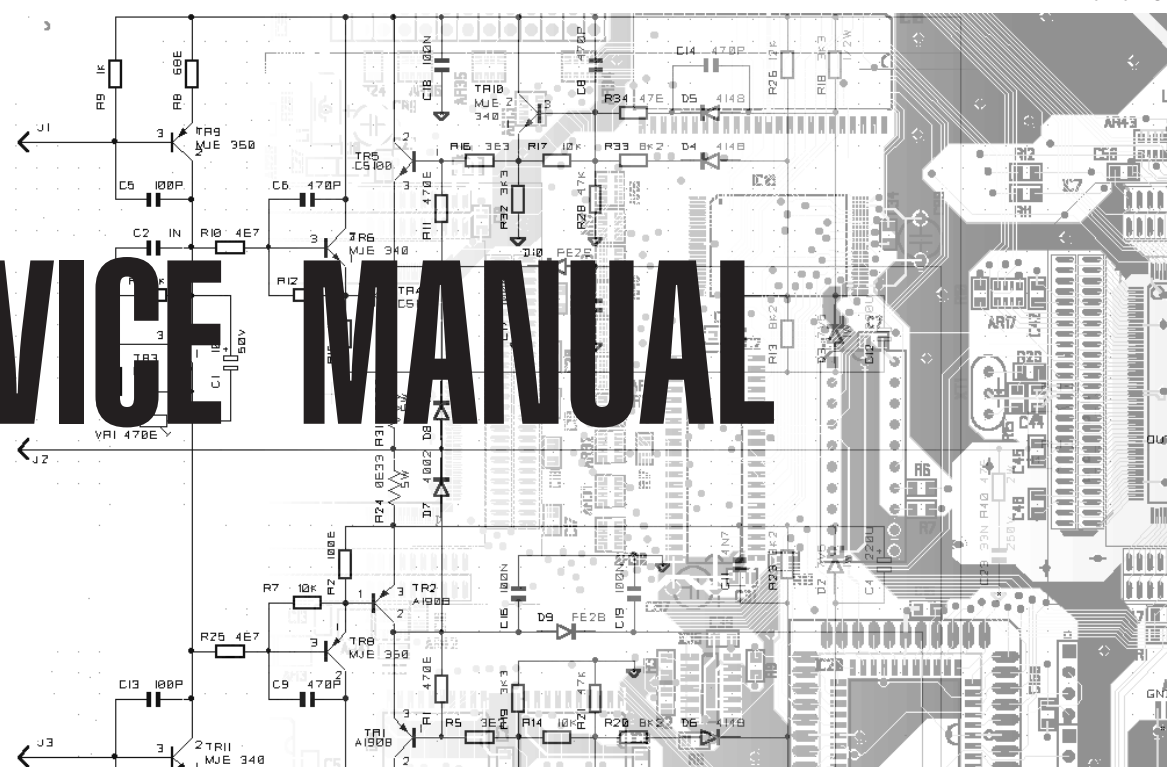


# SWING14P

## 14 INPUT POWERED MIXER

2nd Edition

# SERVICE MANUAL



CODE: 270271

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## 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 ( $\mu$ ) micro symbol of capacitance value is substituted by U.

The ( $\Omega$ ) 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.

↑ 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

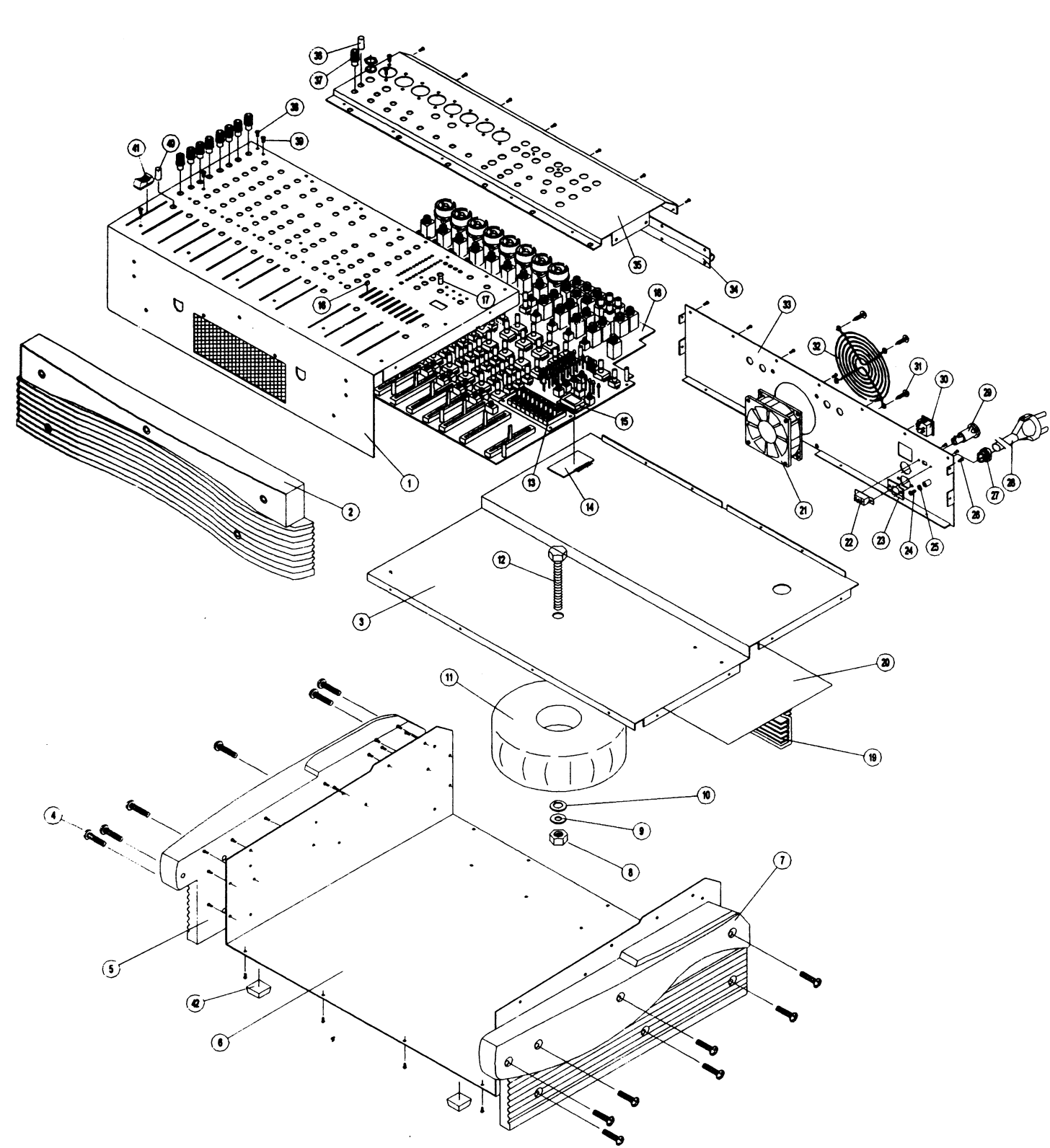


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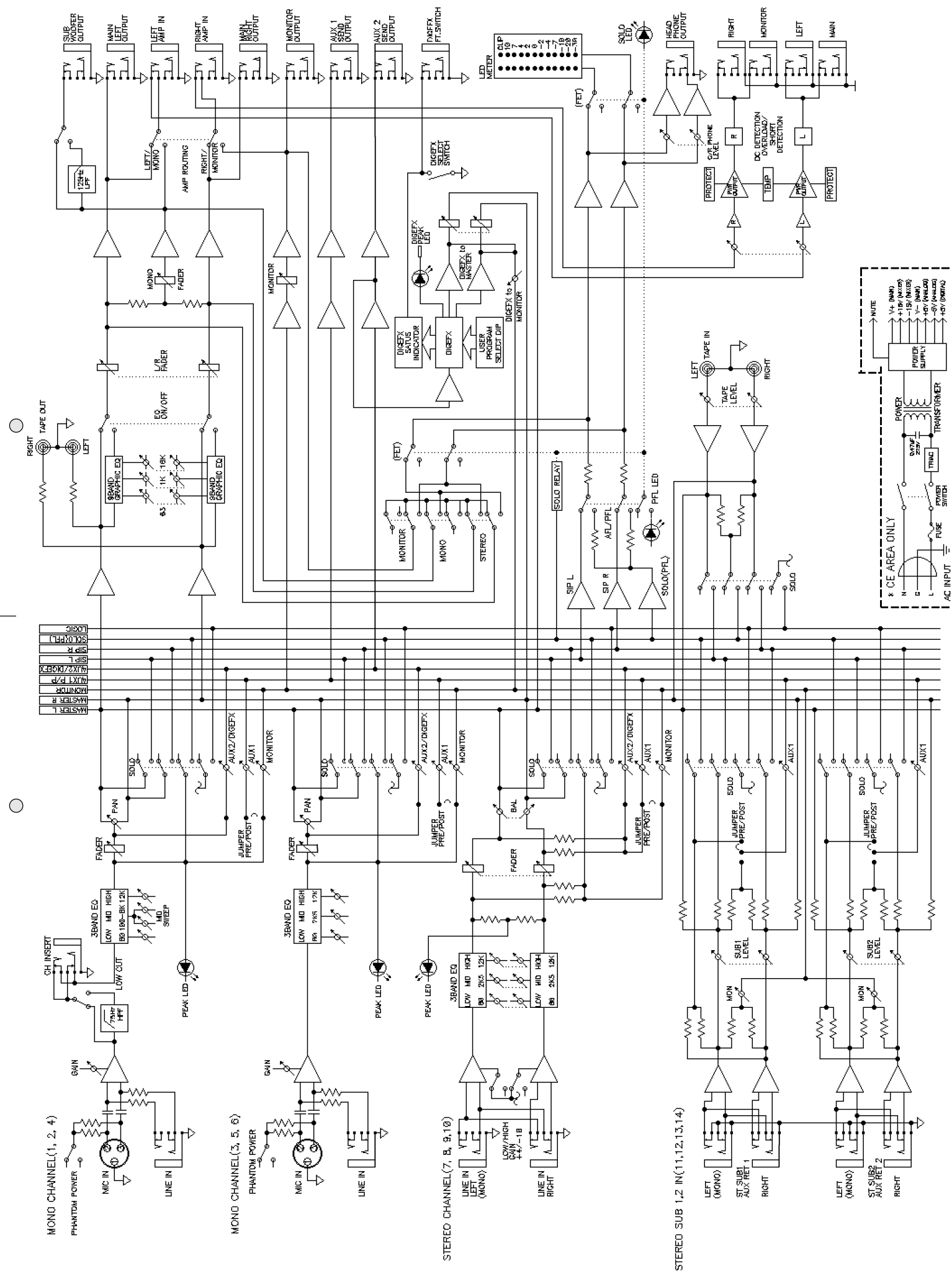
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SWING 14P TECHNICAL SPECIFICATIONS				
SECTION		LEVELS & DATA		CONNECTORS
MONO INPUT CHANNEL				
MIC input	sensitivity impedance	from -10 to -60dB 4 kOhms		XLR-F balanced
LINE input	sensitivity impedance	from +10 to -40dB 10 kOhms		JACK balanced
EQ	LO CUT	75 Hz, 18 db/oct. (CH 1-3)		
	HIGH	-15dB, @ 12kHz SHELIVING		
	MID	-15dB from 100 Hz to 8kHz PEAKING (CH 1-3)		
	LOW	-15dB @ 2.5kHz PEAKING (CH 4-6)		
INSERT (CH 1, 2 & 4)	sensitivity	+4dB		Stereo JACK
STEREO INPUT CHANNEL				
LINE input	sensitivity impedance	+4 / -10 dB 10 kOhms		JACK balanced
EQ	HIGH	-15dB, @ 12kHz SHELIVING		
	MID	-15dB @ 2.5kHz PEAKING		
	LOW	-15dB @ 80Hz, SHELIVING		
MASTER SECTION				
MIX output	output level impedance	+4dB 150 Ohms		JACK balanced
MONO output	output level impedance	+4dB 150 Ohms		JACK balanced
MONITOR output	output level impedance	+4dB 150 Ohms		JACK balanced
AUX sends	output level impedance	+4dB 150 Ohms		JACK balanced
AUX inputs	sensitivity impedance	-10dB 10 kOhms		JACK balanced
AMP inputs	sensitivity impedance	-10dB 10 kOhms		JACK balanced
TAPE	IN	-10dB		RCA phono
	OUT	-10dB		
HEADPHONES	minimum impedance output level	200 Ohms 180 mW		Stereo JACK
DSP				
A/D converters	bit	18		
D/A converters	bit	18		
Internal dynamics	bit	18		
PRESETS number		128		
Effects		HALL REVERB, ROOM REVERB, PLATE REVERB, GATE REVERB, REVERSE REVERB, STEREO DELAY, MONO DELAY, CUSTOM DELAY		
POWER AMPLIFIER				
EIA output power (1 kHz, THD 1%)	4 Ohms 8 Ohms	250 + 250 W (1st version) 300+300 W (2nd version) 170 + 170 W (1st version) 195+195 W (2nd version)		2 x JACK
Harmonic distortion (THD)		<0.05% @ 1kHz		
PROTECTIONS		Short circuit, current limit, thermal protection, DC protection at speaker outputs, power ON/OFF transient		
GENERAL SPECIFICATIONS				
Frequency response		20Hz - 20kHz, +1 / -2 dB		
Hum & Noise		-128dB Equivalent input noise		
		-70dB Residual output noise (SP OUT)		
		-97dB Residual output noise (MIX OUT)		
Crosstalk		60dB @ 1kHz, adjacent channel inputs 60dB @ 1kHz, input to output		
Power supply		see label on the apparatus		
Weight	kg	18		
Dimensions	mm (WxHxD)	462x405x140		

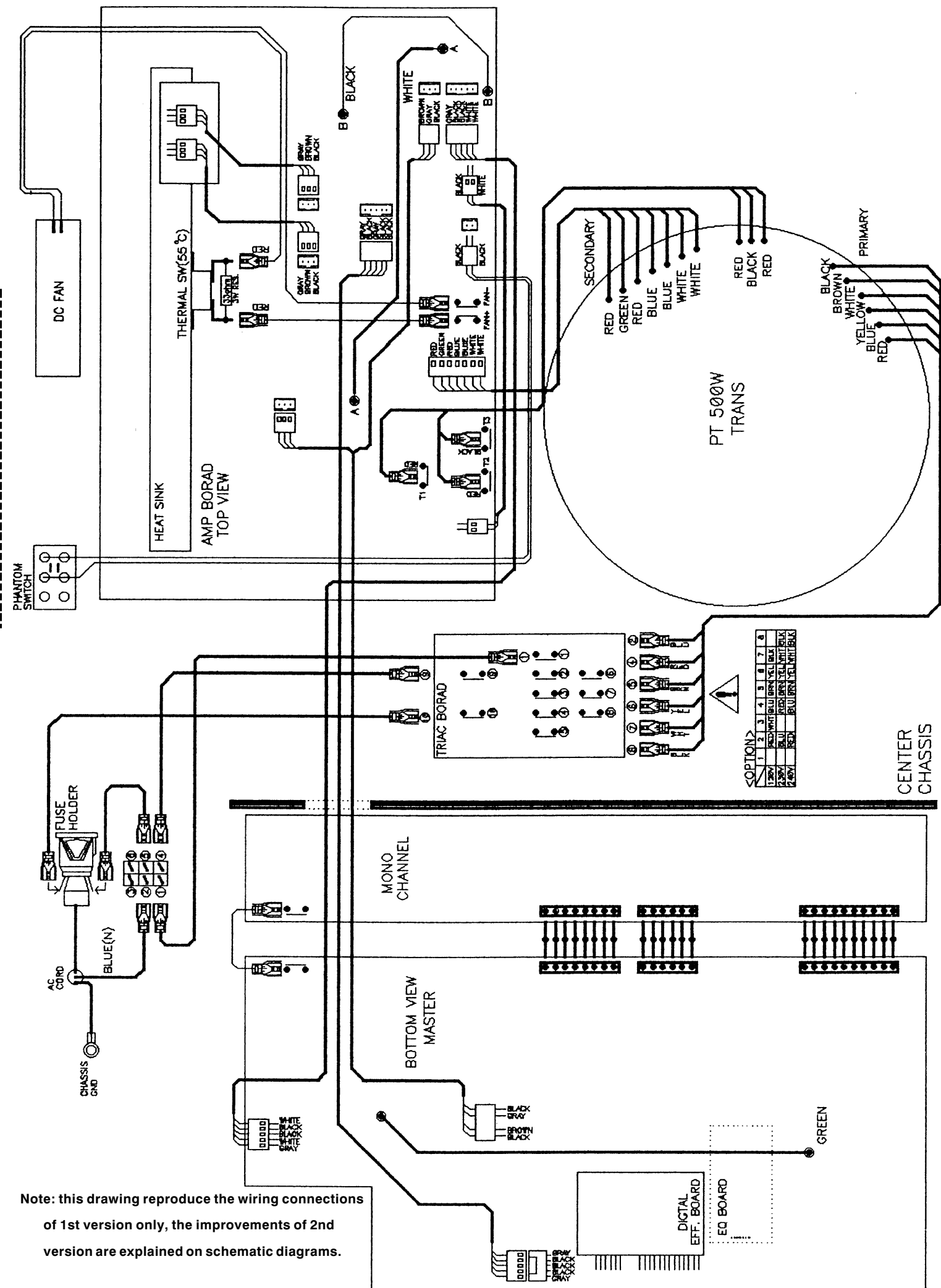


Note: this drawing reproduce themixer assembly of the 1st version only.

## BLOCK DIAGRAM

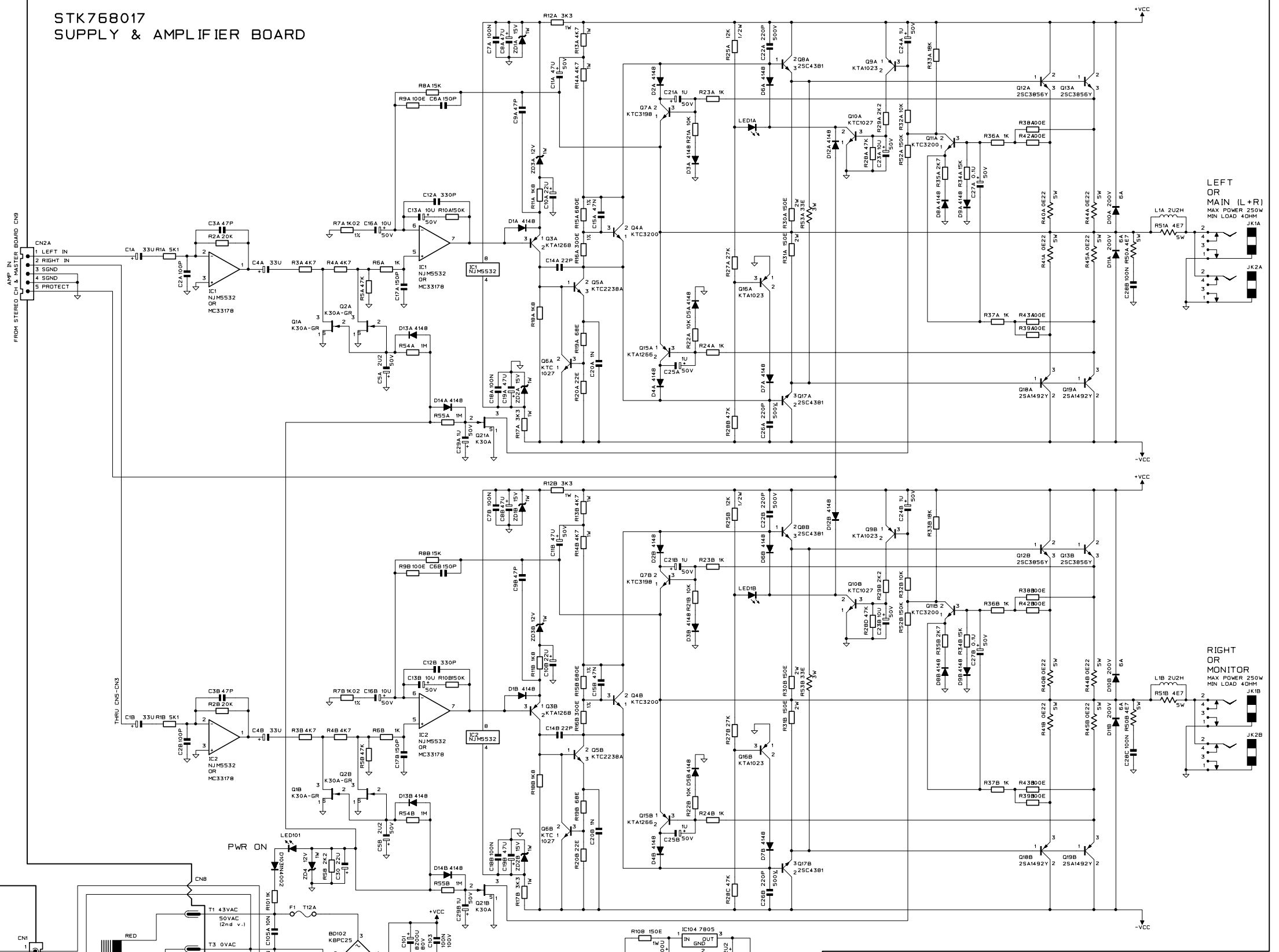


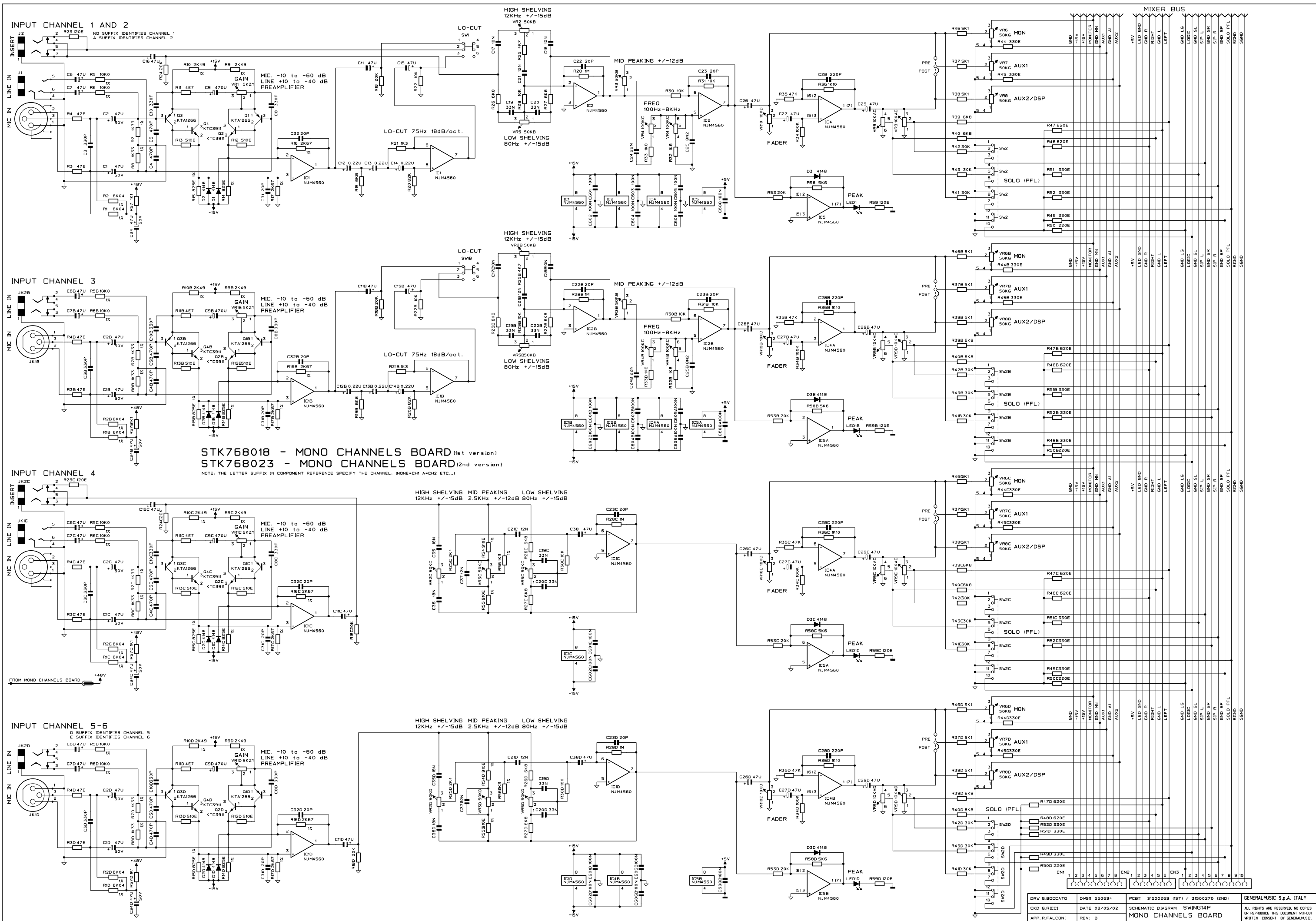
## WIRING DIAGRAM



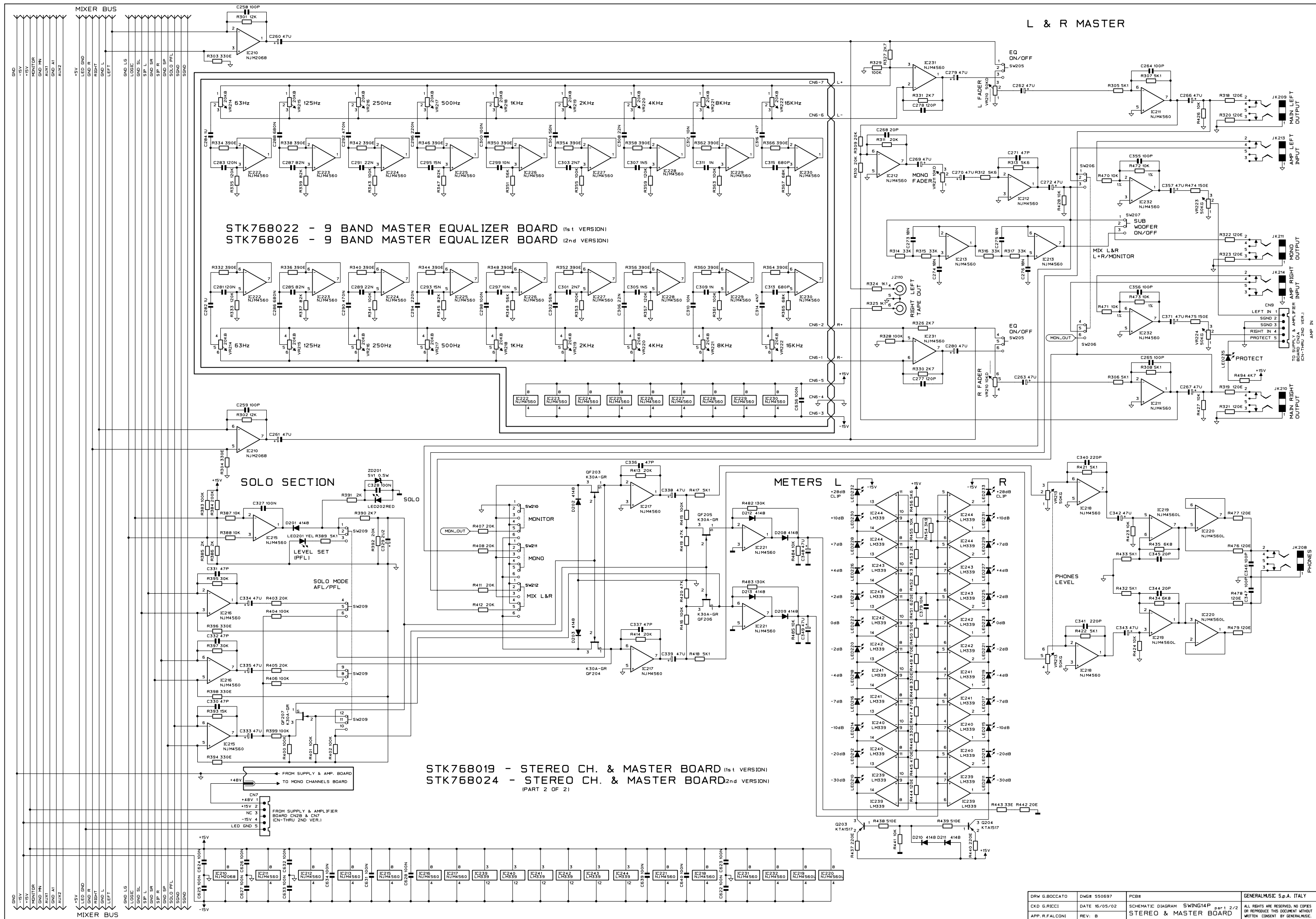
Note: this drawing reproduce the wiring connections of 1st version only, the improvements of 2nd version are explained on schematic diagrams.

# STK768017 SUPPLY & AMPLIFIER BOARD









SWING14P Spare Part List

IMPORTANT NOTE:

On March 2002 SWING14P powered mixer had some improvements:

- 1) The Mono Channels, Stereo Channels & Master, DSP and Master Equalizer printed circuits have been redesigned.
- 2) The Transformer secondary had a voltage improvement to deliver a greater power to the amplifier circuit.

You may recognize them as follows:

The 1st version is 250+250W with the transformer mounted on top chassis.

The 2nd version is 300+300W with the transformer mounted on bottom chassis.

Ref	Code	Description
Accessories		
277369		Swing14P Owner's Manual (English-Italian)
Mechanical Parts		
6	STK667019	Bottom Chassis
1	STK667020	Top Chassis
2	STK340012	Front Board
5	STK340013	Left Board
7	STK340014	Right Board
42	STK340008	Adhesive Rubber Foot
36	STK340000	High Switch Actuator
40	STK340001	Low Switch Actuator
37	STK340002	Red Knob
37	STK340003	Blue Knob
37	STK340004	Gray Knob
37	STK340005	Yellow Knob
37	STK340006	White Knob
4	STK340007	White Knob for 60mm Slider Pot (Channels)
	STK340009	White Knob for Effects
16	STK340015	White Knob for 30mm Slider Pot (Master EQ)
21	STK110301	12Vdc 80x25mm Fan
	STK110000	55°c Normally Open Thermal Switch

Mains Assembly

28	130306	Mains Cable (EU)
27	STK340016	Cable Stopper
29	STK110100	Fuse Hoder
	110020	T5A Fuse 5x20mm (EU)
30	STK110205	4A 250Vac Bipolar Power Switch
22	STK110203	Black Bipolar Switch
11	STK238000	Toroidal Transformer (PT-500W) 230Vac/900W (1st Version)
11	STK238001	Toroidal Transformer (PT-500W) 230Vac/900W (2nd Version)

Soft Start Board

	STK768021	Soft Start Board
	STK110001	* 105°c Normally Closed Thermal Switch
	STK100001	* TL561G Photocoupler
	STK090004	* BTA41 TRIAC
	STK020000	* 1uF 275Vac IEC/UL/CSA Capacitor
	STK080221	* 4V7 1W 5% Zener Diode
	STK061000	* 600E 10W 5% Wire Resistor

Amplifier & Supply Board

20	STK768017	Amplifier & Supply Board
	STK030000	* 8200u 80V 20% Vert Electrolytic Capacitor
	STK030805	* 2200u 25V 20% Vert Electrolytic Capacitor
	STK100060	* 7815 +15V 1A Voltage Regulator
	STK100049	* 7915 -15V 1A Voltage Regulator
	STK100059	* 7805 +5V 1A Voltage Regulator
	STK100058	* 7905 -5V 1A Voltage Regulator
	STK100923	* NJM5532A Dual LN Operational Amplifier
	STK090005	* KTA1268GR TO92 LN Pnp Transistor
	STK090006	* KTA1023Y TO92L Pnp Transistor
	STK090007	* 2SA1492Y TO3P Pnp Transistor
	STK090008	* 2SA1667Y TO220 Pnp Transistor
	STK090000	* KTA1266Y TO92 LN Pnp Transistor
	STK090009	* KTC3200GR TO92 LN Npn Transistor
	STK090010	* KTC1027Y TO92L Npn Transistor
	STK090011	* 2SC3856Y TO3P Npn Transistor
	STK090012	* 2SC4381Y TO220 Npn Transistor
	STK090002	* KTC2238AY Npn Transistor
	STK090013	* KTC3198Y TO92 Pnp Transistor
	STK090001	* 2SK30AGR N-Channel J-Fet Transistor
	STK080700	* 3mm Diffused Red Led
	STK080701	* 3mm Diffused Green Led
	STK080000	* 6A 200V Rectifier Diode
	080103	* 1N4148 100mA 75V Signal Diode
	STK080156	* 1N4002 1A 100V Rectifier Diode
	080272	* 12V 1W 5% Zener Diode
	080293	* 15V 1W 5% Zener Diode
	STK080201	* 1N4756A 47V 1W 5% Zener Diode

	STK080001	* KBL103 Rectifier Diodes Bridge
	STK080168	* W02M 1.5A Rectifier Diodes Bridge
	STK080608	* KBPC3502 35A 200V Rectifier Diode Bridge
	340079	* TO220 Mica Washer
	STK140002	* Horizontal Jack Mono Female Socket
	STK230000	* 2.2uH Coil For Amplifier
	110031	* T12A Fuse 5x20mm (EU)

Mono Channels Board

18A	STK768018	Mono Channels Board (1st Version)
18A	STK768023	Mono Channels Board (2nd Version)
	STK140000	* Vertical Jack Stereo Female Socket
	STK141000	* Vertical Female XLR Socket
	STK141001	* Vertical Female XLR-Jack Combo Socket
	STK075000	* 5KZY Rotary Potentiometer
	STK074000	* 50KB Rotary Potentiometer with Central Click
	STK074001	* 50KG Rotary Potentiometer with Central Click
	STK074005	* 100KC Rotary Potentiometer
	STK075002	* 10KA+10KC Rotary Potentiometer with Central Click
	STK073001	* 10KD 60mm Slider Potentiometer
	STK090000	* KTA1266Y TO92 LN Pnp Transistor
	STK091000	* KTC3911Y SOT23 LN Npn Transistor
	STK110200	* 4sw 2pos Vertical Slider Switch
	STK110201	* 2sw 2pos Vertical Slider Switch
	080103	* 1N4148 100mA 75V Signal Diode
	STK081000	* 1N4148 100mA 75V Signal Diode
	STK080700	* 3mm Diffused Red Led
	STK106000	* NJM4560M SOIC Dual Operational Amplifier

Stereo Channels & Master Board

18B	STK768019	Stereo Channels & Master Board (1st Version)
18B	STK768024	Stereo Channels & Master Board (2nd Version)
	STK140000	* Vertical Jack Stereo Female Socket
	STK140201	* Vertical Rca Quad Female Socket
	STK074001	* 50KG Rotary Potentiometer with Central Click
	STK074003	* 2x50KG Rotary Potentiometer with Central Click
	STK074004	* 2x50KB Rotary Potentiometer with Central Click
	STK075002	* 10KA+10KC Rotary Potentiometer with Central Click
	STK074006	* 50KG Rotary Potentiometer
	STK073001	* 10KD 60mm Slider Potentiometer
	STK073003	* 2x10KD 60mm Slider Potentiometer
	STK073002	* 2x50KD 60mm Slider Potentiometer
	STK091000	* KTC3911Y SOT23 LN Npn Transistor
	STK091001	* KTC3911Y SOT23 LN Npn Transistor
	STK090001	* 2SK30AGR TO92 LN N-Channel Jfet
	STK110201	* 2sw 2pos Vertical Slider Switch
	STK110200	* 4sw 2pos Vertical Slider Switch
	STK110206	* Rotary Encoder
	STK080232	* 5V1 0.5W 5% Zener Diode
	080103	* 1N4148 100mA 75V Signal Diode
	STK081000	* PMLL4148 Smd 100mA 75V Signal Diode
	STK080700	* 3mm Diffused Red Led
	STK080701	* 3mm Diffused Green Led
	STK080702	* 3mm Diffused Yellow Led
	STK080703	* 5mm Diffused Red Led
	STK080704	* 5mm Flat Orange Led
	STK080705	* 5mm Flat Red Led
	STK080706	* 5mm Flat Green Led
	STK106000	* NJM4560M SOIC Dual Operational Amplifier
	STK106001	* NJM2068M SOIC LN Dual Operational Amplifier
	STK106002	* LM339 SOIC Quad Comparator
	STK100000	* NJM4560L SIP8 Dual Operational Amplifier

DSP Board

14	STK768020	DSP Board (1st Version)
14	STK768025	DSP Board (2nd Version)

Master Equalizer Board

13	STK768022	Master Equalizer Board (1st Version)
13	STK768026	Master Equalizer Board (2nd Version)
	STK106000	* NJM4560M SOIC Dual Operational Amplifier
	STK073004	* 2x20KB 30mm Slider Potentiometer with Central Click

Note:

- 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 name,

3) Module code,

4) Reference name,

5) Quantity number.
- 8