PROFESSIONAL SOUND

Powered & passive loudspeaker systems

hurricane

service manual

schematic diagrams

CODE: 270306

GENERALMUSIC

Index

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 1/8W 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.

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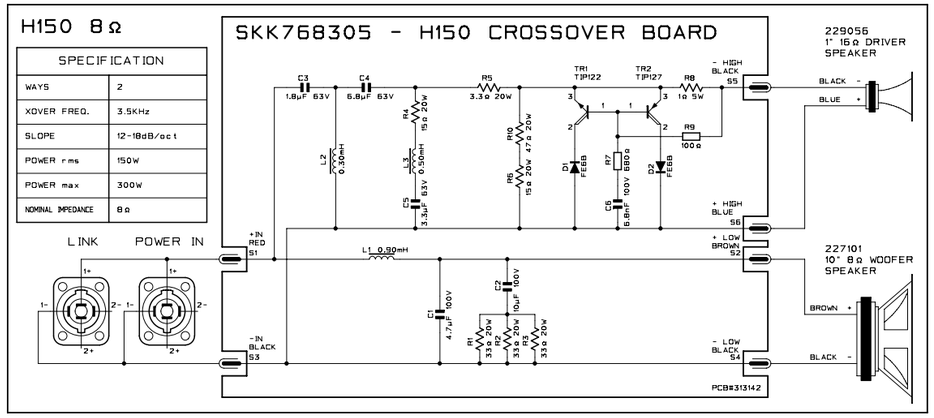
loudspeaker models		H150 / H150A	H200 / H200A	H300 / H300A	H350 / H350A	H500	H350S / H350SA	H400S / H400SA	H100MA	H200MA	H300MA
components	high	1" driver on EWT horn			1,5" supertweeter	1" driver on EWT horn	-		-	1" driver on EWT horn	
	mid	-			8" midrange	-			8" full-range	-	
	low	10" woofer	12" woofer	15" woofer	15" woofer	2 x 15" woofer	15" woofer	18" woofer	-	12" woofer	15" woofer
power handling (EIA RS-426A)		150W cont. 300W peak	200W cont. 400W peak	300W cont. 600W peak	350W cont. 700W peak	500W cont. 1000W peak	350W cont. 700W peak	400W cont. 800W peak	-		
impedance		8 Ohm	8 Ohm	4 / 8 Ohm	4 / 8 Ohm	4 Ohm	4 Ohm	4 Ohm	-		
passive crossover		3,5 kHz 12/18dB/oct.	3,5 kHz 12/18 dB/oct.	3 kHz 12/18 dB/oct.	6kHz @ 18dB/ott. 600Hz @ 12dB/oct.	200Hz@ 6dB/ott. 2.2kHz@12/18dB/oct	200Hz 6/6 dB/ott.	120 Hz 6/6 dB/ott.	-	3,5 kHz 12/18dB/oct.	-
connections		1/2 SPEAKON							-		
construction		high-density poplar chipboard with scratch-resistant gark grey carpet - Metal grid - 1/2 handles - Speaker stand adapter									
dimensions mm (LxAxP)		340x460x285	390x508x325	455x580x405	455x790x405	485x1060x435	475x555x520	625x540x545	305x395x275	390x508x325	455x580x405
weight (passive / active)		14kg / 18,5kg	17kg / 22kg	23kg / 27,5kg	29kg / 33,5kg	40kg	29,5kg / 35,6kg	38kg / 43kg	13kg	20,5kg	27kg

amplifier specifications	H150A	H200A	H300A	H350A		H350SA	H400SA	H100MA	H200MA	H300MA
input	sensitivity 0 dB (nominal) impedance 20 kOhms (balanced)									
active crossover	-		3.5Khz@ 12/18dB/oct.	6Khz@ 12/12dB/oct.	-	80-320Hz/-3dB @ 12dB/oct.	80-320Hz@ 12dB/oct.	-		3.5Khz@ 12/18dB/oct.
power output EIA (1kHz, THD 1%)	150Watt	200Watt	50W high 250W low	80W high 270W low		350Watt	400Watt	100Watt	200Watt	50W high 250W low
distortion	<0.02 %									
controls	volume - SHIELD					volume - SHIELD - Xover freq.		volume - SHIELD		
connectors	1 x XLR-F + 1 x JACK in parallel					2 x JACK + XLR-F (in) 2 x JACK + XLR-M (out)		1 x XLR-F + 1 x JACK in parallel		
power supply	see label									

system specifications	H150 / H150A	H200 / H200A	H300 / H300A	H350 / H350A	H500	H350S / H350SA	H400S / H400SA	H100MA	H200MA	H300MA
frequency response (-10dB)	60Hz-20kHz	55Hz-20kHz	48Hz-20kHz	38Hz-25kHz	40Hz-20kHz	38Hz-300Hz	32Hz-300Hz	65Hz-20kHz	55Hz-20kHz	48Hz-20kHz
MAX SPL continuous sens.	117 dB	120 dB	123 dB	122 dB	122 dB	122 dB	122 dB	114 dB	120 dB	123 dB
dispersion	60°x40°	60°x40°	60°x40°	120°x40°	60°x40°			90°x90°	60°x40°	60°x40°

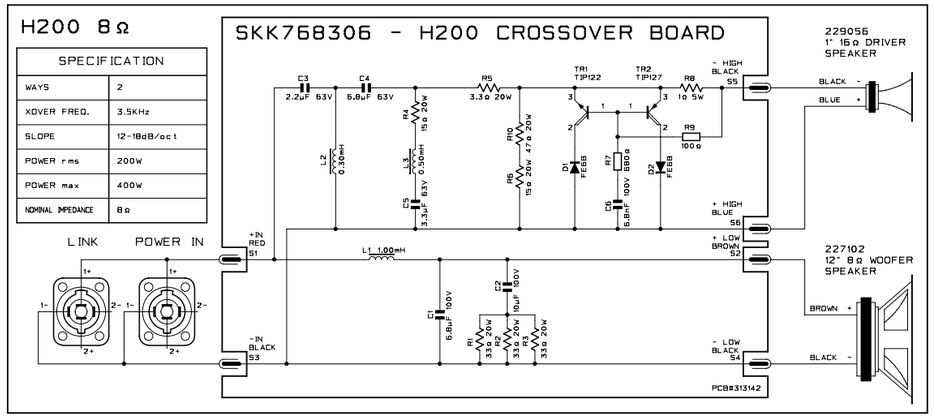
H150 8Ω

SPECIFICATION	
WAYS	2
XOVER FREQ.	3.5KHz
SLOPE	12-18dB/oct
POWER rms	150W
POWER max	300W
NOMINAL IMPEDANCE	8Ω



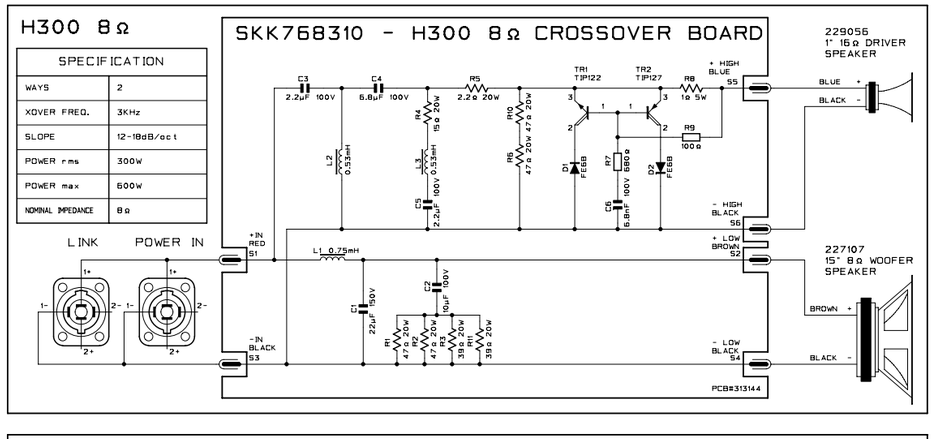
H200 8Ω

SPECIFICATION	
WAYS	2
XOVER FREQ.	3.5KHz
SLOPE	12-18dB/oct
POWER rms	200W
POWER max	400W
NOMINAL IMPEDANCE	8Ω



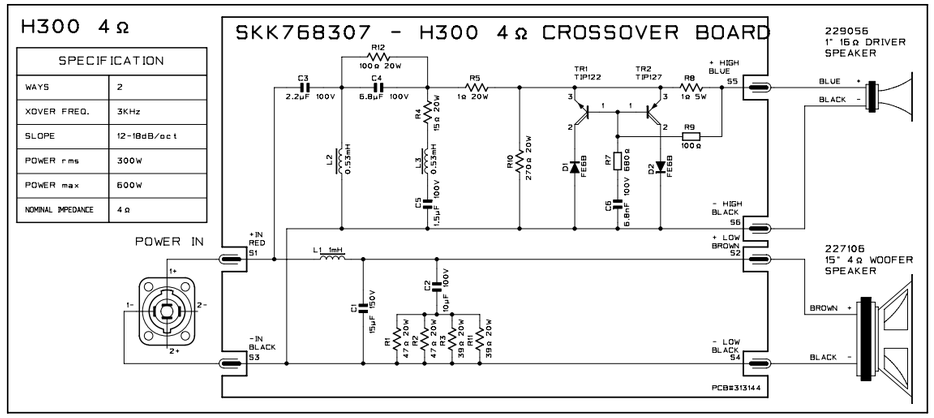
H300 8Ω

SPECIFICATION	
WAYS	2
XOVER FREQ.	3KHz
SLOPE	12-18dB/oct
POWER rms	300W
POWER max	600W
NOMINAL IMPEDANCE	8Ω



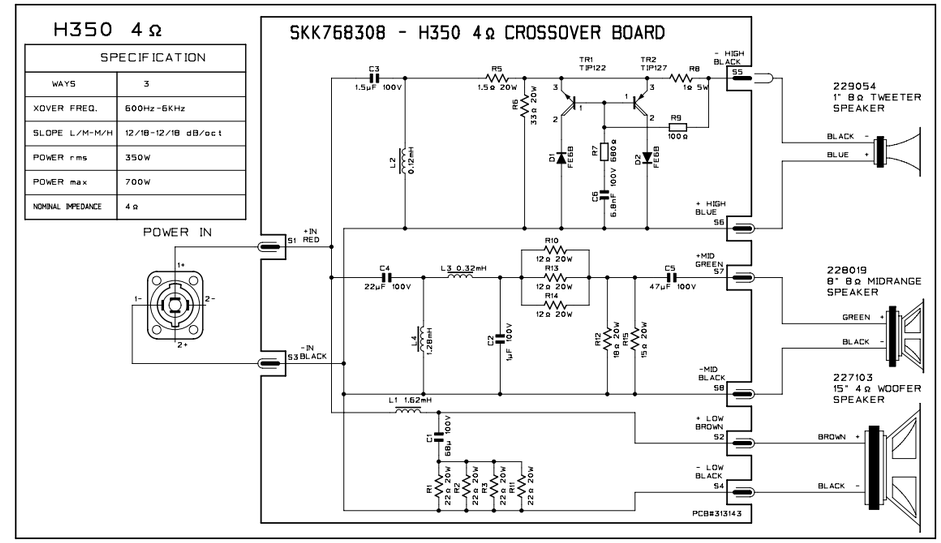
H300 4Ω

SPECIFICATION	
WAYS	2
XOVER FREQ.	3KHz
SLOPE	12-18dB/oct
POWER rms	300W
POWER max	600W
NOMINAL IMPEDANCE	4Ω



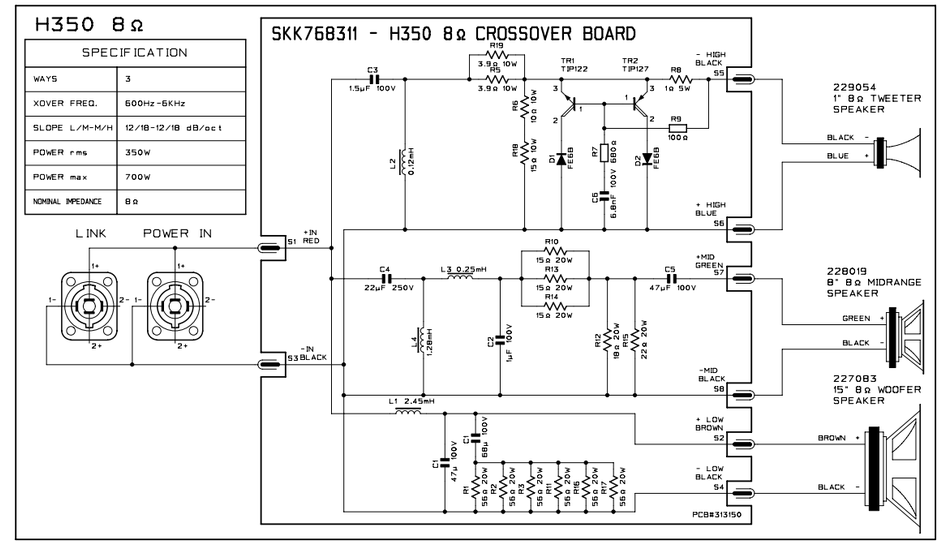
H350 4Ω

SPECIFICATION	
WAYS	3
XOVER FREQ.	600Hz-6KHz
SLOPE L/M-M/H	12/18-12/18 dB/oct
POWER rms	350W
POWER max	700W
NOMINAL IMPEDANCE	4Ω



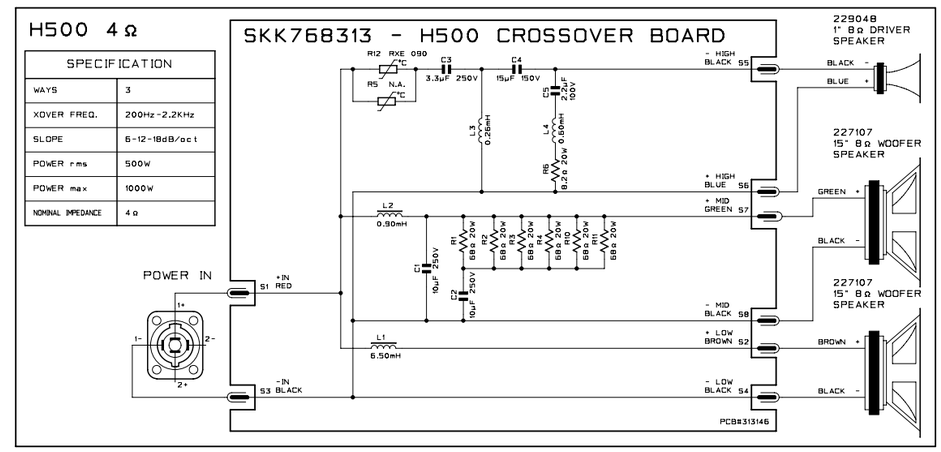
H350 8Ω

SPECIFICATION	
WAYS	3
XOVER FREQ.	600Hz-6KHz
SLOPE L/M-M/H	12/18-12/18 dB/oct
POWER rms	350W
POWER max	700W
NOMINAL IMPEDANCE	8Ω

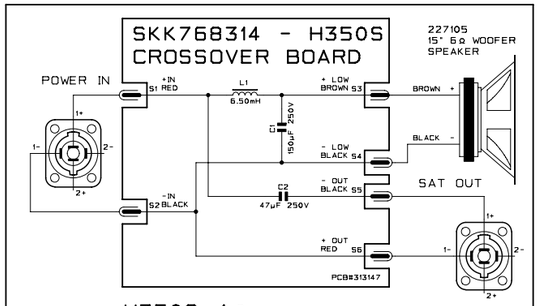


H500 4Ω

SPECIFICATION	
WAYS	3
XOVER FREQ.	200Hz-2.2KHz
SLOPE	6-12-18dB/oct
POWER rms	500W
POWER max	1000W
NOMINAL IMPEDANCE	4Ω



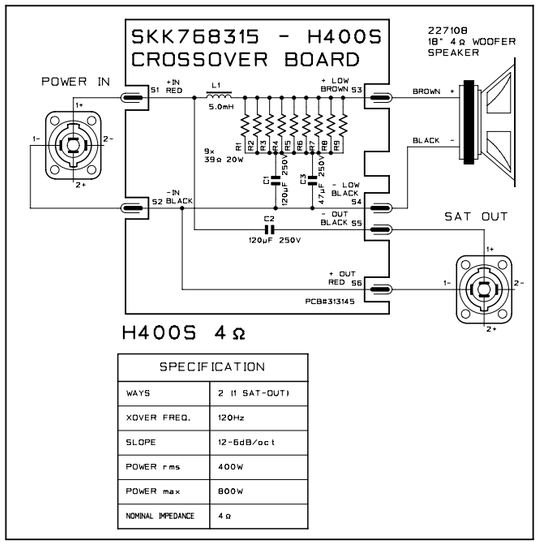
SKK768314 - H350S CROSSOVER BOARD



H350S 4Ω

SPECIFICATION	
WAYS	2 (1 SAT-OUT)
XOVER FREQ.	200Hz
SLOPE	12-6dB/oct
POWER rms	350W
POWER max	700W
NOMINAL IMPEDANCE	4Ω

SKK768315 - H400S CROSSOVER BOARD



H400S 4Ω

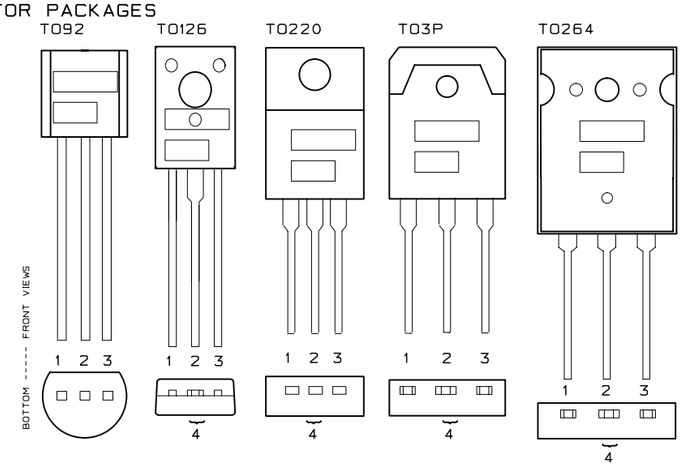
SPECIFICATION	
WAYS	2 (1 SAT-OUT)
XOVER FREQ.	120Hz
SLOPE	12-6dB/oct
POWER rms	400W
POWER max	800W
NOMINAL IMPEDANCE	4Ω

DRW G.BOCCATO	DwG# 550818	PCB# 313142, 313143, 313144, 313145, 313146, 313147, 313150	GENERALMUSIC S.p.A. ITALY
CKD G.RICCI	DATE 17/06/2005	SCHEMATIC DIAGRAM	
APP.F.GATTO	REV: A	HURRICANE PASSIVE LOUDSPEAKER	

General Precaution

- To prevent short circuit during any test, **the oscilloscope must be EARTH insulated**, this occurs because some test require to connect its probe to the amplifier output, non-compliance may cause damages to oscilloscope inputs circuitry.
- Before removing or installing any modules and connectors, disconnect the amplifier from AC MAINS and measure the DC supply voltages across each of the power suppliy capacitors. If your measurement on any of the caps is greater than 10Vdc, connect a 100Ω 10W resistor across the applicable caps to discharge them for your safety. Remember to remove the discharge resistor immediately after discharging caps. Do not power up the amplifier with the discharge resistor connected.
- Read these notes entirely before proceeding to any operation. These notes are not comprehensive of all damages that possibly occur, but includes some specifically advices, checks and adjustments relative to this amplified speaker.
- Do not check the amplifier with the speaker connected use only an appropriate load resistor.
- BE CAREFUL increasing the Variac you must not exceed the nominal mains voltage plus its tolerance (see specifications) any upper voltage can be cause of damage.

TRANSISTOR PACKAGES



Visual Check

- Check the speakers for any damaging (cone-breaking, interruption or so).
- Before proceed to supply the amplifier check visually the internal assembly, if appears an evident damage find the most possible reasons that cause it.
- Check the wiring cables for possible interruptions or shorts.
- If the damage has burnt a printed circuit board don't try to repair it, replace with a new one.

Test Instruments

- Audio Generator
- Dual Trace Oscilloscope
- Digital Multimeter
- Temperature Meter
- 8Ω 500W, 4Ω 500W, 100Ω 10W resistors
- Variac (0÷250Vac)

H100MA CHECKING & ADJUSTMENTS

The following adjustment and notes are relative to these models only.

Technical Specifications

Dimensions:	H100MA (WxHxD)	305x395x275mm
Weight:	H100MA	13Kg
Power Requirements:	(230Vac±10% 50Hz)	150VA
	(115Vac±10% 50/60Hz)	150VA
Output Power*:	(8Ω)	90W
Max.Undistorted Out*:	(8Ω)	76Vpp
Sensitivity:	H100MA (1W/1m)	92.6dBSPL
Max SPL:	H100MA (continuous)	112dBSPL
	H100MA (peak)	115dBSPL
Frequency Response	(amplifier+speaker)	65Hz÷20KHz
	(only amplifier -3dB)	10Hz÷60KHz
Input Sensitivity:	(0dB)	0.775VRMS
Input Impedance:	(balanced)	30KΩ
	(unbalanced)	15KΩ
Voltage Gain:		31±1dB
IMD:	(SMPTE 60Hz/7KHz 4:1)	<0.1%
THD:	(THD+N)	<0.1%
S/N Ratio:	(unweighted)	>100dB

*Note: measured with the limiter enabled.

Setup

- Verify, with the Multimeter, the insulation between the heatsink and the transistors collectors. Also see Advices section.
- Verify, with the Multimeter, the PTC resistor value (TH1), it must be between 50Ω and 200Ω.
- Connect the Variac between the mains and the amplifier and set it at zero voltage.
- Connect the audio generator to the channel input and set it to 1kHz 775mVRMS (0dB) sinusoidal signal.
- Place the temperature sensor between heatsink and the PTC (TH1).
- Connect the CH1 scope GND clip to CN4 pin 1 (SGND terminal) and the probe tip to R50 side RL1 (PWR out), set it to 20V/div. 1mS/div.
- Connect the CH2 probe tip to R58 side C28 and set its sensitivity at 0.2V/div.
- Set the LEVEL potentiometer full clockwise.
- The load resistor is disconnected.
- The procedures that follow must be executed subsequently in the order specified.

Supply Check

- Remove the transformer secondary fuses (located on SUPPLY board), set the Variac to the nominal mains voltage, check with the Multimeter the AC supply voltages:
  F1-F2=71±2Vac
- Re-set the Variac at zero voltage, turn off the amplifier and put the fuses back on its holders.
- Set up the Variac slowly monitoring the Outputs with the oscilloscope CH1 connected, starts from 2/3 of nominal mains voltage it should display the sinusoidal input signal amplified with no distortions, if a distortion occur or the protection trips, turn off the amplifier and check the AMPLIFIER board as suggested in the ADVICES section.
- Finally verify the DC supplies on SUPPLY board:
  CN4 pin 2 (+Vcc1) =+50±2Vdc
  CN5 pin 1-2 (-Vcc1) =-50±2Vdc
  CN4 pin 4 =+15±1Vdc
  CN4 pin 5 =-15±1Vdc
- If one or more voltages don't correspond, check the rectifiers, capacitors and transformers disconnecting them from circuitry, refer to schematics.

Channel Check

VOLTAGE AMPLIFIER TEST:

- Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation. If there is a distortion read the section ADVICES.

CURRENT AMPLIFIER TEST:

- Connect the 8Ω 500W load on the output and repeat the test.

LIMITER CHECK:

- Increase the input signal of 10 dB and verify the output voltage and wave shape remain constant.

BIAS ADJUSTMENT:

- With resistive load connected wait until the temperature reach 50°c.
- Set the generator level at zero, connect the Multimeter across the R50 and R53 resistors, then adjust VR1 trimmer to read 5±0.1mVdc.

BANDWIDTH CHECK:

- Switch alternatively the generator frequency to 100Hz and 10kHz, no level changes must be detectable respect 1kHz.
- Switch the generator frequency to 30Hz and verify the output level decreases abruptly respect to 1 KHz level.

OFFSET SENSOR CHECK:

- Set the Variac to zero voltage output, disconnect resistive load from the amplifier output, connect temporarily (by means of a suitable conductor wire) CN4 pin 4 (+15Vdc) to R72 side RL1, the protection circuitry (Q14,15,16) detect the DC voltage and open the output relay (RL1) within 3 seconds approx.
- Remove the connection, wait until the relay switch on and after some seconds repeat the check with -15Vdc (available on CN4 pin 5), the protection circuitry must open the relay again.

SIGNAL TO NOISE RATIO CHECK:

- Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

H150A H200A H200MA CHECKING & ADJUSTMENTS

The following adjustment and notes are relative to these models only.

Technical Specifications

Dimensions:	H150A (WxHxD)	340x460x285mm
	H200A (WxHxD)	390x508x325mm
	H200MA (WxHxD)	390x508x325mm
Weight:	H150A	18.5Kg
	H200A	22Kg
	H200MA	20.5Kg
Power Requirements:	(230Vac±10% 50Hz)	180VA
	(115Vac±10% 50/60Hz)	180VA
Output Power*:	(8Ω)	136W
Max.Undistorted Out*:	(8Ω)	93Vpp
Sensitivity:	H150A (1W/1m)	92.5dBSPL
	H200A H200MA (1W/1m)	96.4dBSPL
Max SPL:	H150A (continuous)	114dBSPL
	H150A (peak)	117dBSPL
	H200A H200MA (continuous)	118dBSPL
	H200A H200MA (peak)	121dBSPL
Frequency Response	H150A (amplifier+speaker)	60Hz÷20KHz
	H200A (amplifier+speaker)	55Hz÷20KHz
	(only amplifier -3dB)	10Hz÷60KHz
Input Sensitivity:	(0dB)	0.775VRMS
Input Impedance:	(balanced)	30KΩ
	(unbalanced)	15KΩ
Voltage Gain:		33±1dB
IMD:	(SMPTE 60Hz/7KHz 4:1)	<0.1%
THD:	(THD+N)	<0.1%
S/N Ratio:	(unweighted)	>100dB

*Note: measured with the limiter enabled.

Setup

- Verify, with the Multimeter, the insulation between the heatsink and the transistors collectors. Also see Advices section.
- Verify, with the Multimeter, the PTC resistor value (TH1), it must be between 50Ω and 200Ω.
- Connect the Variac between the mains and the amplifier and set it at zero voltage.
- Connect the audio generator to the channel input and set it to 1kHz 775mVRMS (0dB) sinusoidal signal.
- Place the temperature sensor between heatsink and the PTC (TH1).
- Connect the CH1 scope GND clip to CN4 pin 1 (SGND terminal) and the probe tip to R50 side RL1 (PWR out), set it to 20V/div. 1mS/div.
- Connect the CH2 probe tip to R58 side C28 and set its sensitivity at 0.2V/div.
- Set the LEVEL potentiometer full clockwise.
- The load resistor is disconnected.
- The procedures that follow must be executed subsequently in the order specified.

Supply Check

- Remove the transformer secondary fuses (located on SUPPLY board), set the Variac to the nominal mains voltage, check with the Multimeter the AC supply voltages:
  F1-F2=90±2Vac
- Re-set the Variac at zero voltage, turn off the amplifier and put the fuses back on its holders.
- Set up the Variac slowly monitoring the Outputs with the oscilloscope CH1 connected, starts from 2/3 of nominal mains voltage it should display the sinusoidal input signal amplified with no distortions, if a distortion occur or the protection trips, turn off the amplifier and check the AMPLIFIER board as suggested in the ADVICES section.
- Finally verify the DC supplies on SUPPLY board:
  CN4 pin 2 (+Vcc1) =+63±2Vdc
  CN5 pin 1-2 (-Vcc1) =-63±2Vdc
  CN4 pin 4 =+15±1Vdc
  CN4 pin 5 =-15±1Vdc
- If one or more voltages don't correspond, check the rectifiers, capacitors and transformers disconnecting them from circuitry, refer to schematics.

Channel Check

VOLTAGE AMPLIFIER TEST:

- Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation. If there is a distortion read the section ADVICES.

CURRENT AMPLIFIER TEST:

- Connect the 8Ω 500W load on the output and repeat the test.

LIMITER CHECK:

- Increase the input signal of 10 dB and verify the output voltage and wave shape remain constant.

BIAS ADJUSTMENT:

- With resistive load connected wait until the temperature reach 50°c.

• Set the generator level at zero, connect the Multimeter across the R50 and R53 resistors, then adjust VR1 trimmer to read 5±0.1mVdc.

BANDWIDTH CHECK:

• Switch alternatively the generator frequency to 100Hz and 10kHz, no level changes must be detectable respect 1kHz.
• Switch the generator frequency to 30Hz and verify the output level decreases abruptly respect to 1 KHz level.

OFFSET SENSOR CHECK:

• Set the Variac to zero voltage output, disconnect resistive load from the amplifier output, connect temporarily (by means of a suitable conductor wire) CN4 pin 4 (+15Vdc) to R72 side RL1, the protection circuitry (Q14,15,16) detect the DC voltage and open the output relay (RL1) within 3 seconds approx.
• Remove the connection, wait until the relay switch on and after some seconds repeat the check with -15Vdc (available on CN4 pin 5), the protection circuitry must open the relay again.

SIGNAL TO NOISE RATIO CHECK:

• Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

H300A H300MA CHECKING & ADJUSTMENTS

The following adjustment and notes are relative to these models only.

Technical Specifications

Dimensions:	H300A (WxHxD)	455x580x405mm
	H300MA (WxHxD)	455x580x405mm
Weight:	H300A	27.5Kg
	H300MA	27Kg
Power Requirements:	(230Vac±10% 50Hz)	310VA
	(115Vac±10% 50/60Hz)	310VA
Output Power*:	(4Ω/8Ω)	230W/80W
Max.Undistorted Out*:	(4Ω/8Ω)	85Vpp/71Vpp
Active crossover:	(frequency Hz @ slope dB/oct.)	3.5K@12/18
Sensitivity:	H300A H300MA (1W/1m)	97.3dBSPL
Max SPL:	H300A H300MA (continuous)	121dBSPL
	H300A H300MA (peak)	124dBSPL
Frequency Response	(amplifier+speaker)	48Hz÷20KHz
	(only amplifier -3dB)	10Hz÷60KHz
Input Sensitivity:	(0dB)	0.775VRMS
Input Impedance:	(balanced)	30KΩ
	(unbalanced)	15KΩ
Voltage Gain:		32±1dB
IMD:	(SMPTE 60Hz/7KHz 4:1)	<0.1%
THD:	(THD+N)	<0.1%
S/N Ratio:	(unweighted)	>100dB

*Note: measured with the limiter enabled.

Remarks

• This is a bi-amplified speaker, the more powerful amplifier is for the low frequency range (woofer), the less powerful amplifier is for the high frequency range (compression HF driver).
• The power supply of the first amplifier utilizes a dual bipolar DC rail configuration with low and high voltages; one positive and one negative low rail (+/-Vcc1) and one positive and one negative high rail (+/-Vcc2). The second amplifier is supplied by means the onlylow rail (+/-Vcc1).

Setup

• Verify, with the Multimeter, the insulation between the heatsink and the transistors collectors. Also see Advices section.
• Verify, with the Multimeter, the PTC resistor value (TH1), it must be between 50Ω and 200Ω.
• Connect the Variac between the mains and the amplifier and set it at zero voltage.
• Connect the audio generator to the channel input and set it to 2kHz 775mVRMS (0dB) sinusoidal signal.
• Place the temperature sensor between heatsink and the PTC (TH1).
• Connect the CH1 scope GND clip to CN1 pin 1 (SGND terminal) and the probe tip to R60 side RL1 (LF PWR out), set it to 20V/div. 1mS/div.
• Connect the CH2 probe tip to R260 side IC202 (HF PWR out) and set its sensitivity at 20V/div.
• Set the LEVEL potentiometer full clockwise.
• The load resistor is disconnected.
• The procedures that follow must be executed subsequently in the order specified.

Supply Check

• Remove the transformer secondary fuses (located on SUPPLY board), set the Variac to the nominal mains voltage, check with the Multimeter the AC supply voltages:
F1-F2=86±2Vac
F4-F5=62±1.5Vac.
• Re-set the Variac at zero voltage, turn off the amplifier and put the fuses back on its holders.
• Set up the Variac slowly monitoring the Outputs with the oscilloscope CH1 and CH2 connected, starts from 2/3 of nominal mains voltage it should display the sinusoidal input signal amplified with no distortions, if a distortion occur or the protection trips check the AMPLIFIER board as suggested in the ADVICES section.
• Finally verify the DC supplies on SUPPLY board:
CN1 pin 2 (+Vcc2) =+60±2Vdc
CN2 pin 3 (+Vcc1) =+43±1.5Vdc
CN2 pin 1 (-Vcc1) =-43±1.5Vdc
CN2 pin 2 (-Vcc2) =-60±2Vdc
CN1 pin 4 =+15±1Vdc
CN1 pin 5 =-15±1Vdc
• If one or more voltages don't correspond, check the rectifiers, capacitors and transformers disconnecting them from circuitry, refer to schematics.

Low Frequency Channel Check

• Set the audio generator to 500Hz 775mVRMS (0dB) sinusoidal signal.
• Connect the CH2 probe tip to D22 cathode and set its sensitivity at 20V/div.

LOW RAIL VOLTAGE AMPLIFICATION TEST:

• Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation as shown in Fig.1 Trace A (Trace B shown the amplifier 2nd stage input R58 side C28). If there is a distortion read the section ADVICES.

HIGH RAIL VOLTAGE AMPLIFICATION TEST:

• When the output signal (Positive half-wave) is less than 34Vp the voltage on D22 cathode must remain constant at 40V, when the output signal exceeds 34Vp the voltage must follow the output signal with 6V offset (see Fig.2 Trace B), to check the negative high rail connect the probe to D26 anode (see Fig.2 Trace C).

LOAD CURRENT TEST:

• Connect the 4Ω 500W load on the output and repeat the LOW RAIL and HIGH RAIL tests.

LIMITER CHECK:

• Increase the input signal of 10 dB and verify the output voltage and wave shape remain constant.

BIAS ADJUSTMENT:

• With resistive load connected wait until the temperature reach 50°c.
• Set the level at zero, connect the Multimeter across the resistors R60, then adjust VR1 trimmer to read 6±0.1mVdc.

BANDWIDTH CHECK:

• Disconnect the load. Set the generator at -10dB, sweeping the generator frequency from 10Hz to 10kHz the level changes accordingly Figure 4 (1a).

OFFSET SENSOR CHECK:

• Set the Variac to zero voltage output, disconnect resistive load from the amplifier output, connect temporarily (by means of a suitable conductor wire) CN1 pin 4 (+15Vdc) to R72 side RL1, the protection circuitry (Q14,15,16) detect the DC voltage and open the output relay (RL1) within 3 seconds approx.
• Remove the connection, wait until the relay switch on and after some seconds repeat the check with -15Vdc (available on CN1 pin 5), the protection circuitry must open the relay again.

SIGNAL TO NOISE RATIO CHECK:

• Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

High Frequency Channel Check

• Verify, with the Multimeter, the insulation between the heatsink and the TDA7294 case.
• Set the audio generator to 5KHz 775mVRMS (0dB) sinusoidal signal.
• Connect the CH2 probe tip to R260 side IC202 (HF PWR out) and set its sensitivity at 20V/div. 200µS/div.

VOLTAGE AMPLIFICATION TEST:

• Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation. If there is a distortion replace the TDA7294.

LOAD CURRENT TEST:

• Connect the 8Ω 500W load on the output and repeat the test.

LIMITER CHECK:

• Increase the input signal of 10 dB and verify the output voltage and wave shape remain constant.

BANDWIDTH CHECK:

• Disconnect the load. Set the generator at -10dB, sweeping the generator frequency from 10Hz to 10kHz the level changes accordingly Figure 4 (1b).

SIGNAL TO NOISE RATIO CHECK:

• Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

H350A CHECKING & ADJUSTMENTS

The following adjustment and notes are relative to these models only.

Technical Specifications

Dimensions:	H350A (WxHxD)	455x790x405mm
Weight:	H350A	33.5Kg
Power Requirements:	(230Vac±10% 50Hz)	310VA
	(115Vac±10% 50/60Hz)	310VA
Output Power*:	(4Ω/8Ω)	230W/80W
Max.Undistorted Out*:	(4Ω/8Ω)	85Vpp/71Vpp
Active crossover:	(frequency Hz @ slope dB/oct.)	600@18/18
Sensitivity:	H350A (1W/1m)	96.7dBSPL
Max SPL:	H350A (continuous)	121dBSPL
	H350A (peak)	124dBSPL
Frequency Response	(amplifier+speaker)	38Hz÷20KHz
	(only amplifier -3dB)	10Hz÷60KHz
Input Sensitivity:	(0dB)	0.775VRMS
Input Impedance:	(balanced)	30KΩ
	(unbalanced)	15KΩ
Voltage Gain:		32±1dB
IMD:	(SMPTE 60Hz/7KHz 4:1)	<0.1%
THD:	(THD+N)	<0.1%
S/N Ratio:	(unweighted)	>100dB

*Note: measured with the limiter enabled.

Remarks

• This is a bi-amplified speaker, the more powerful amplifier is for the low frequency range (woofer), the less powerful amplifier is for the high frequency range (midrange and tweeter).
• The power supply of the first amplifier utilizes a dual bipolar DC rail configuration with low and high voltages; one positive and one negative low rail (+/-Vcc1) and one positive and one negative high rail (+/-Vcc2). The second amplifier is supplied by means the onlylow rail (+/-Vcc1).

Setup

• Verify, with the Multimeter, the insulation between the heatsink and the transistors collectors. Also see Advices section.
• Verify, with the Multimeter, the PTC resistor value (TH1), it must be between 50Ω and 200Ω.
• Connect the Variac between the mains and the amplifier and set it at zero voltage.
• Connect the audio generator to the channel input and set it to 2kHz 775mVRMS (0dB) sinusoidal signal.
• Place the temperature sensor between heatsink and the PTC (TH1).
• Connect the CH1 scope GND clip to CN1 pin 1 (SGND terminal) and the probe tip to R60 side RL1 (LF PWR out), set it to 20V/div. 1mS/div.
• Connect the CH2 probe tip to R260 side IC202 (HF PWR out) and set its sensitivity at 20V/div.
• Set the LEVEL potentiometer full clockwise.
• The load resistor is disconnected.
• The procedures that follow must be executed subsequently in the order specified.

Supply Check

• Remove the transformer secondary fuses (located on SUPPLY board), set the Variac to the nominal mains voltage, check with the Multimeter the AC supply voltages:
F1-F2=86±2Vac
F4-F5=62±1.5Vac.
• Re-set the Variac at zero voltage, turn off the amplifier and put the fuses back on its holders.
• Set up the Variac slowly monitoring the Outputs with the oscilloscope CH1 and CH2 connected, starts from 2/3 of nominal mains voltage it should display the sinusoidal input signal amplified with no distortions, if a distortion occur or the protection trips check the AMPLIFIER board as suggested in the ADVICES section.
• Finally verify the DC supplies on SUPPLY board:
CN1 pin 2 (+Vcc2) =+60±2Vdc
CN2 pin 3 (+Vcc1) =+43±1.5Vdc
CN2 pin 1 (-Vcc1) =-43±1.5Vdc
CN2 pin 2 (-Vcc2) =-60±2Vdc
CN1 pin 4 =+15±1Vdc
CN1 pin 5 =-15±1Vdc
• If one or more voltages don't correspond, check the rectifiers, capacitors and transformers disconnecting them from circuitry, refer to schematics.

Low Frequency Channel Check

- Set the audio generator to 300Hz 775mVRMS (0dB) sinusoidal signal.
- Connect the CH2 probe tip to D22 cathode and set its sensitivity at 20V/div.

LOW RAIL VOLTAGE AMPLIFICATION TEST:

- Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation as shown in Fig.1 Trace A (Trace B shown the amplifier 2nd stage input R58 side C28). If there is a distortion read the section ADVICES.

HIGH RAIL VOLTAGE AMPLIFICATION TEST:

- When the output signal (Positive half-wave) is less than 34Vp the voltage on D22 cathode must remain constant at 40V, when the output signal exceeds 34Vp the voltage must follow the output signal with 6V offset (see Fig.2 Trace B), to check the negative high rail connect the probe to D26 anode (see Fig.2 Trace C).

LOAD CURRENT TEST:

- Connect the 4Ω 500W load on the output and repeat the LOW RAIL and HIGH RAIL tests.

LIMITER CHECK:

- Increase the input signal of 10 dB and verify the output voltage and wave shape remain constant.

BIAS ADJUSTMENT:

- With resistive load connected wait until the temperature reach 50°c.
- Set the level at zero, connect the Multimeter across the resistors R60, then adjust VR1 trimmer to read 6±0.1mVdc.

BANDWIDTH CHECK:

- Disconnect the load. Set the generator at -10dB, sweeping the generator frequency from 10Hz to 10kHz the level changes accordingly Figure5 (1a).

OFFSET SENSOR CHECK:

- Set the Variac to zero voltage output, disconnect resistive load from the amplifier output, connect temporarily (by means of a suitable conductor wire) CN1 pin 4 (+15Vdc) to R72 side RL1, the protection circuitry (Q14,15,16) detect the DC voltage and open the output relay (RL1) within 3 seconds approx.
- Remove the connection, wait until the relay switch on and after some seconds repeat the check with -15Vdc (available on CN1 pin 5), the protection circuitry must open the relay again.

SIGNAL TO NOISE RATIO CHECK:

- Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

High Frequency Channel Check

- Verify, with the Multimeter, the insulation between the heatsink and the TDA7294 case.
- Set the audio generator to 5KHz 775mVRMS (0dB) sinusoidal signal.
- Connect the CH2 probe tip to R260 side IC202 (HF PWR out) and set its sensitivity at 20V/div. 200µS/div.

VOLTAGE AMPLIFICATION TEST:

- Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation. If there is a distortion replace the TDA7294.

LOAD CURRENT TEST:

- Connect the 8Ω 500W load on the output and repeat the test.

LIMITER CHECK:

- Increase the input signal of 10 dB and verify the output voltage and wave shape remain constant.

BANDWIDTH CHECK:

- Disconnect the load. Set the generator at -10dB, sweeping the generator frequency from 10Hz to 10kHz the level changes accordingly Figure 5 (1b).

SIGNAL TO NOISE RATIO CHECK:

- Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

H350SA H400SA CHECKING & ADJUSTMENTS

The following adjustment and notes are relative to this model only.

Technical Specifications

Dimensions:	H350SA (WxHxD)	475x555x520mm
	H400SA (WxHxD)	625x540x545mm
Weight:	H350SA	35.6Kg
Weight:	H400SA	43Kg
Power Requirements:	(230Vac±10% 50Hz)	350VA
	(115Vac±10% 50/60Hz)	350VA
Output Power*:	H350SA (6Ω)	250W
	H400SA (4Ω)	350W
Max.Undistorted Out*:	H350SA (6Ω)	105Vpp
	H400SA (4Ω)	105Vpp
Sensitivity:	H350SA (1W/1m)	96.2dBSPL
	H400SA (1W/1m)	95.5dBSPL
Max SPL:	H350SA (continuous)	120dBSPL
	H350SA (peak)	123dBSPL
	H400SA (continuous)	122dBSPL
	H400SA (peak)	125dBSPL
Frequency Response:	H350SA (amplifier+speaker)	38Hz÷300Hz
	H400SA (amplifier+speaker)	32Hz÷300Hz
	(only amplifier -3dB)	10Hz÷10KHz
Input Sensitivity:	(0dB)	0.775VRMS
Input Impedance:	(balanced)	30KΩ
	(unbalanced)	15KΩ
Voltage Gain:		33.5±1dB
IMD:	(SMPTE 60Hz/7KHz 4:1)	<0.1%
THD:	(THD+N)	<0.1%
S/N Ratio:	(unweighted)	>100dB

*Note: measured with the limiter enabled.

Remarks

- The power supply utilizes a dual bipolar DC rail configuration with low and high voltages; one positive and one negative low rail (+/-Vcc1) and one positive and one negative high rail (+/-Vcc2).

Setup

- Connect the Variac between the mains and the amplifier and set it at zero voltage.
- Turn full clockwise the LEVEL and X-OVER potentiometers.
- Connect the audio generator to the channel R input and set it to 150Hz 775mVRMS (0dB) sinusoidal signal.
- Place the temperature sensor between heatsink and the PTC (R59).
- Connect the CH1 scope GND clip to CN2 pin 6 (SGND terminal) and the probe tip to R72 side RL1 (PWR out), set its sensitivity at 20V/div. 10mS/div.
- Connect the CH2 probe tip to D25 cathode and set its sensitivity at 20V/div.
- The load resistor is disconnected.
- The procedures that follow must be executed subsequently in the order specified.

Supply Check

- Remove the transformer secondary fuses (located on SUPPLY board), set the Variac to the nominal mains voltage, check with the Multimeter the AC supply voltages:
  F1-F2=102±2Vac
  F3-F4=60±1.5Vac.
- Re-set the Variac at zero voltage, turn off the amplifier and put the fuses back on its holders.
- Set up the Variac slowly monitoring the Outputs with the oscilloscope CH1 connected, starts from 2/3 of nominal mains voltage it should display the sinusoidal input signal amplified with no distortions, if a distortion occur check the AMPLIFIER board as suggested in the ADVICES section.
- If the protection trips, turn off the amplifier, wait some minutes and disconnect the supplies from the amplifier module (CN2, CN3 on AMPLIFIER board), continue to check the supplies.
- Finally verify the DC supplies on SUPPLY board:

CN2 pin 5 (+Vcc2)	=+71±2Vdc
CN3 pin 1 (+Vcc1)	=+42±1.5Vdc
CN3 pin 5-6 (-Vcc1)	=-42±1.5Vdc
CN3 pin 4 (-Vcc2)	=-71±2Vdc
CN2 pin 3	=+15±1Vdc
CN2 pin 2	=-15±1Vdc

- If one or more voltages don't correspond, check the rectifiers, capacitors and transformers disconnecting them from circuitry, refer to schematics.

Channels Check

- Verify, with the Multimeter, the insulation between the heatsink and the transistors collectors.
- Verify, with the Multimeter, the PTC resistor value (R59), it must be between 50Ω and 200Ω.

INITIAL TEST:

- Increase slowly the Variac. The channel output signals must be symmetrical respect the GND without visible distortion and oscillation as shown in Fig.1 Trace A (Trace B shown the amplifier 2nd stage input R58 side C28). If there is a distortion read the section ADVICES.

HIGH RAIL CHECK:

- When the output signal (Positive half-wave) is less than 34Vp the voltage on D25 cathode must remain constant at 40V, when the output signal exceeds 40Vp the voltage must follow the output signal with 6V offset (see Fig.2 Trace B), to check the negative high rail connect the probe to D26 anode (see Fig.2 Trace C).

LOAD CURRENT TEST:

- Connect the 4Ω 500W load on the output and repeat the INITIAL and HIGH RAIL checks.

SIGN/COMP SENSOR CHECK:

- Set the LEVEL pot to minimum, set the scope timebase at 1V/div. 1mS/div., then increase the level and check the SIGNAL/COMP led activity: it must turn on (green light) when the amplifier output is higher than 1Vp.
- Set the scope at 20V/div. and increase the level, check the led: it must change from green to red colour when the amplifier output signal is 50±2Vp, increasing the input level the output signal must keep the same level, this is due to the limiter-compression circuitry (IC2, DL1, IC1).

BIAS ADJUSTMENT:

- With the load connected wait until the temperature reach 50°c.
- Set the generator level at zero, connect the Multimeter across the resistors R60, then adjust VR1 trimmer to read 15±0.1mVdc.

BANDWIDTH CHECK:

- The bandwidth of the amplifier board only is linear within the audio range (20Hz-20kHz), but in this case is limited by the X-OVER circuitry on CONTROLS & CROSSOVER board.
- Figure 4 and 5 show the LowPass and the HighPass response, check the correspondance with it for some frequency values (50,100,150,300 for example).

OFFSET SENSOR CHECK:

- Set the Variac to zero voltage output, disconnect resistive load from the amplifier output, connect temporarily (by means of a suitable conductor wire) CN2 pin 3 (+15Vdc) to R72 side RL1, the protection circuitry (TR14,15,16) detect the DC voltage and open the output relay (RL1) within 3 seconds approx.
- Remove the connection, wait until the relay switch on and after some seconds repeat the check with -15Vdc (available on CN2 pin 2), the protection circuitry must open the relay again.

SIGNAL TO NOISE RATIO CHECK:

- Disconnect the audio generator and short the input (pin 1,2,3 of XLR socket shorted) the output signal (noise) must be less than 1mV.

Advices

- If you have determinate that the problem is a short on a rail, you must check the output transistors to determine which transistor devices are bad.
- Use a soldering iron to lift one leg of each emitter pin and measure the emitter-collector resistance on each device.
- Unsolder and lift one leg of each base pin and check the base-collector resistance of each transistor and replace any that measure as a short.
- If all the transistors are OK, unsolder and lift one leg of each diode and check them.
- Check the circuit board for open foil traces.
- Use the Multimeter as Ohm-meter to check the resistors, particularly the base and emitter resistors of damaged transistor.
- If the input sinewave appears to be distorted during the negative cycle, you can assume that the problem is located somewhere in the circuitry of the positive low rail.
- If the positive cycle appears distorted, you can assume that the problem is in the circuitry of the negative low rail.
- If the high rails appear distorted or are not modulating as shown in figure, then the problem probably exists somewhere in the circuitry of the respective (+ or -) defective high rail. Refer to the schematics.

Reliability Check

Before reassembling the amplifier and before deliver it to the user, it is a goal verify its reliability with the following checks:

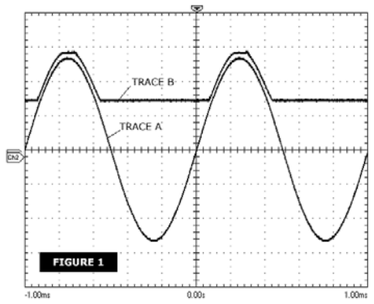
- Switch off the amplifier, or leaving it switched on but operating with greatest caution, carefully shake the boards and connections inside it using an insulated tool (for example the handle of a screwdriver) to find wrong contacts and so on.
- Turn on the amplifier and verify that it operates correctly.

Burn in Check

- Connect the appropriate load resistor to the output and a noise signal generator to the input, set it to C or A weighted pink noise with a 4:1 (12dB) of crest factor and 0dB peak level.
- Leave the amplifier switched on at least 2 hour and finally check its correct functionality after the test.

Figures

Figure 1 and 2 show the right shape of the traces but not their real levels, refer to the levels mentioned in the chapter of appropriate amplified loudspeaker.



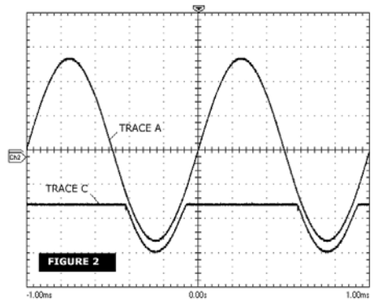


Figure 3 shows the frequency response of the H150A-H200A AMPLIFIER.

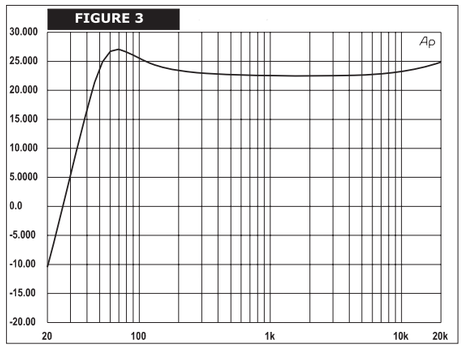


Figure 4 shows the frequency response of the H300A DUAL AMPLIFIER.

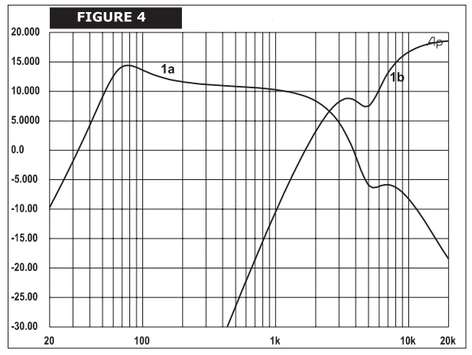


Figure 5 shows the frequency response of the H350A DUAL AMPLIFIER.

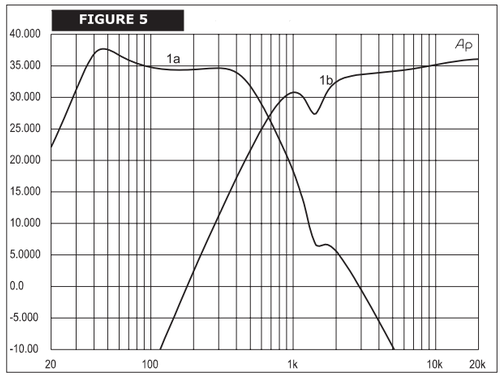
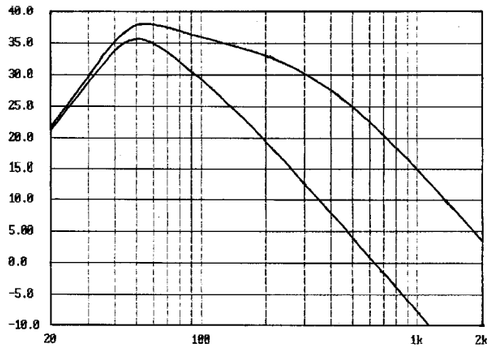
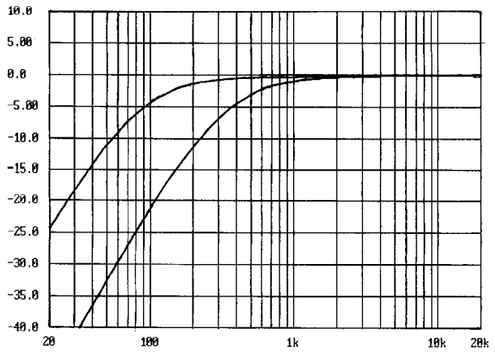
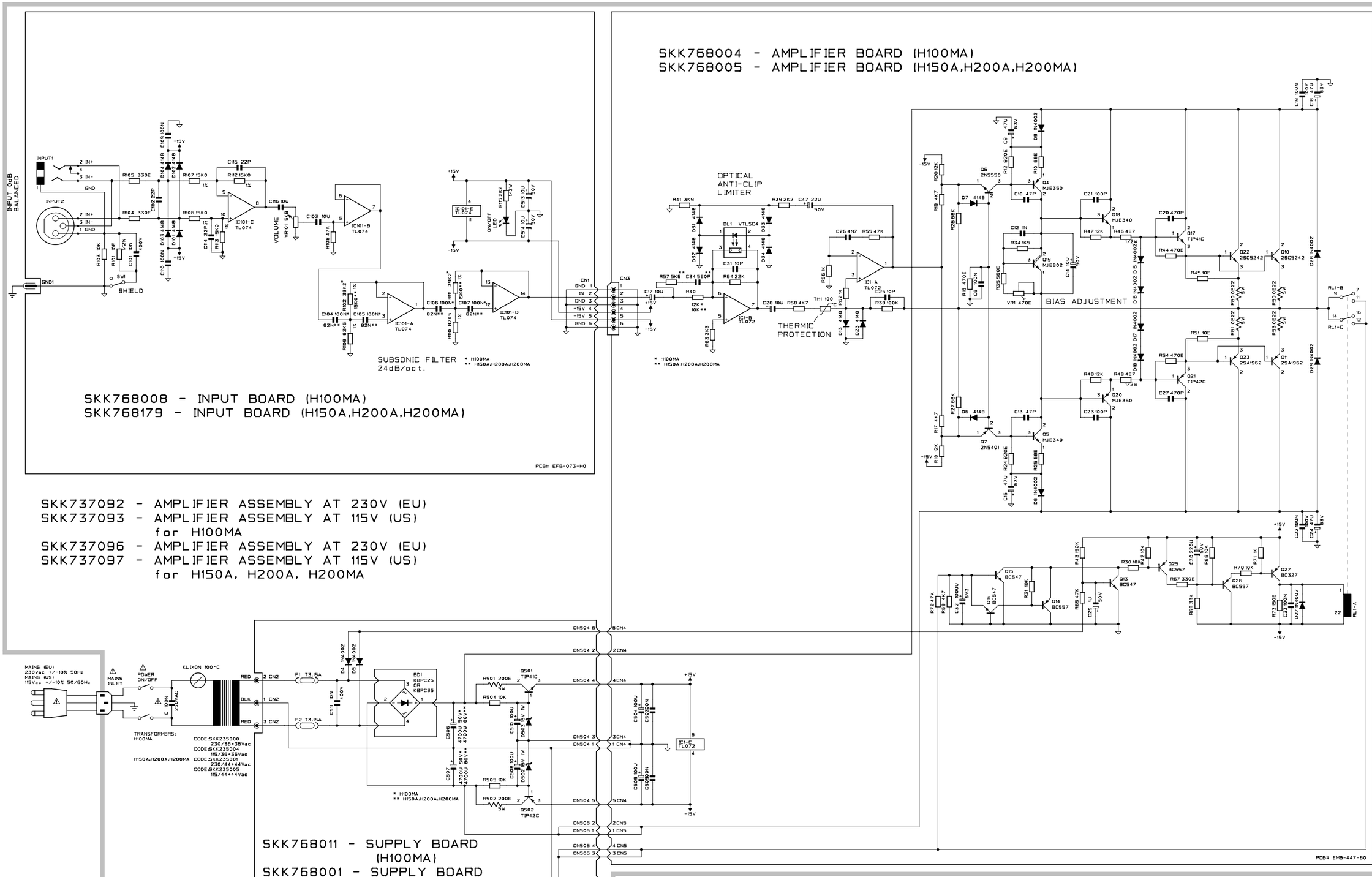


Figure 6 & 7 show the H350SA & H400SA amplifier response and sat out response, the crossover frequency is sweepable into 80-300Hz range.





SKK768004 - AMPLIFIER BOARD (H100MA)
SKK768005 - AMPLIFIER BOARD (H150A,H200A,H200MA)



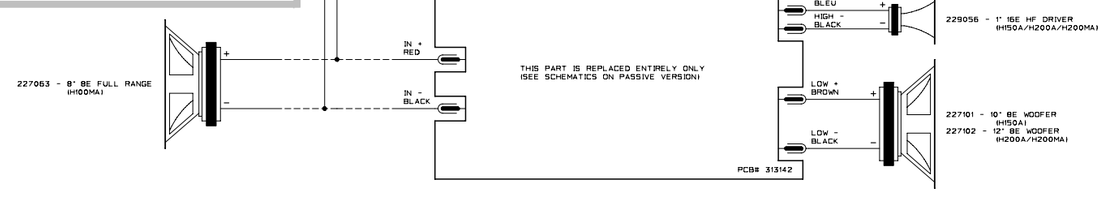
SKK768008 - INPUT BOARD (H100MA)
SKK768179 - INPUT BOARD (H150A,H200A,H200MA)

SKK737092 - AMPLIFIER ASSEMBLY AT 230V (EU)
SKK737093 - AMPLIFIER ASSEMBLY AT 115V (US) for H100MA
SKK737096 - AMPLIFIER ASSEMBLY AT 230V (EU)
SKK737097 - AMPLIFIER ASSEMBLY AT 115V (US) for H150A, H200A, H200MA

SKK768011 - SUPPLY BOARD (H100MA)
SKK768001 - SUPPLY BOARD (H150A,H200A,H200MA)

PCB# EMB-449-H0

SKK768305 - XOVER BOARD (H150A)
SKK768306 - XOVER BOARD (H200A/H200MA)



DRW G.BOCCATO	DWG# 550819	PCB# EFB-073 EMB-447 EMB-449 313075	GENERALMUSIC S.p.A. ITALY
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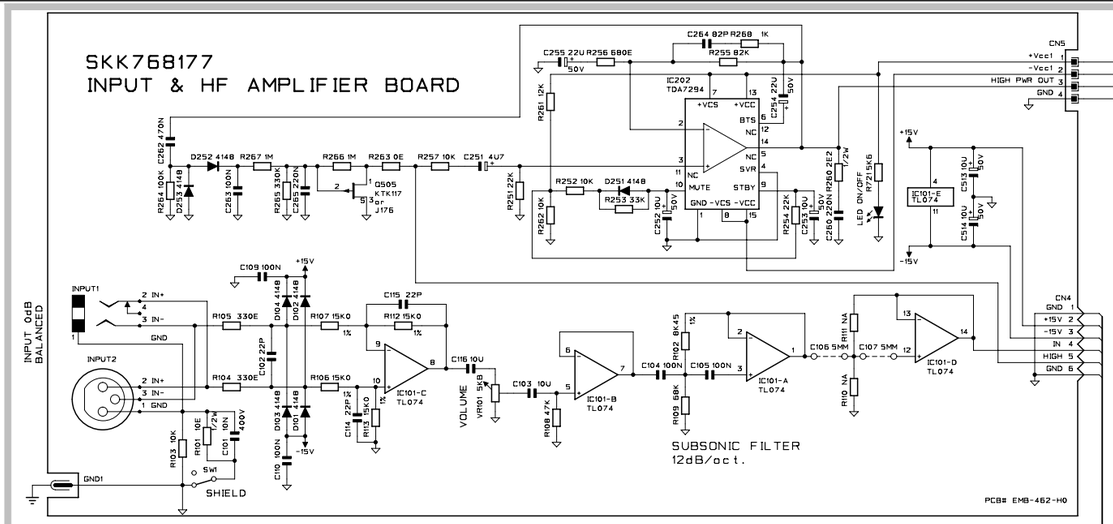
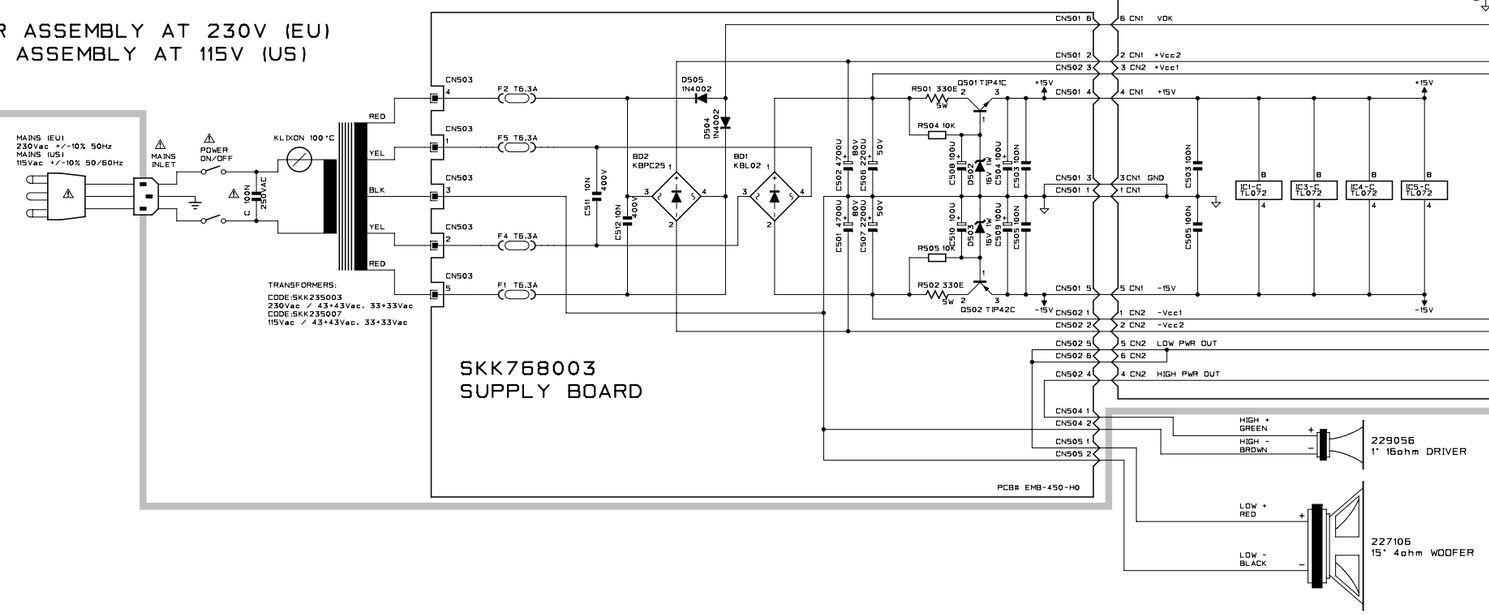
APP. R.FALCONI	REV: A		

SKK768177
INPUT & HF AMPLIFIER BOARD



SKK768178 - XOVER & LF AMPLIFIER BOARD

SKK737100 - AMPLIFIER ASSEMBLY AT 230V (EU)
SKK737101 - AMPLIFIER ASSEMBLY AT 115V (US)



DRW G. Baccato	DWG# 550820	PCB# EMB-456-60 EMB-450-H0 EMB-462-H0	GENERALMUSIC S.p.A. ITALY
CKD G.Ricci R.Maggiolti	DATE 10/06/05	SCHEMATIC DIAGRAM H300A - H300MA	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
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SKK768183
INPUT & HF AMPLIFIER BOARD

SKK768184 - XOVER & LF AMPLIFIER BOARD

SKK737094 - AMPLIFIER ASSEMBLY AT 230V (EU)
SKK737095 - AMPLIFIER ASSEMBLY AT 115V (US)

SKK768003
SUPPLY BOARD

SUBSONIC FILTER
18dB/oct.

HIGH PASS FILTER
18dB/oct.

LOW PASS FILTER
18dB/oct.

EQUALIZING FILTER

OPTICAL
ANTI-CLIP
LIMITER

THERMIC
PROTECTION

BIAS ADJUSTMENT

SKK768321
XOVER BOARD

227103
15" 4ohm WOOFER

229055
1.8" 8ohm TWEETER

228019
8" 8ohm MIDRANGE

THIS PART IS REPLACED ENTIRERLY ONLY

PCB# EMB-462-H0

PCB# EMB-456-60

PCB# EMB-450-H0

PCB# 313149

DRW G. Boccato	DWG# 550821	PCB# EMB-456-60 EMB-450-H0 EMB-462-H0 313149	GENERALMUSIC S.p.A. ITALY
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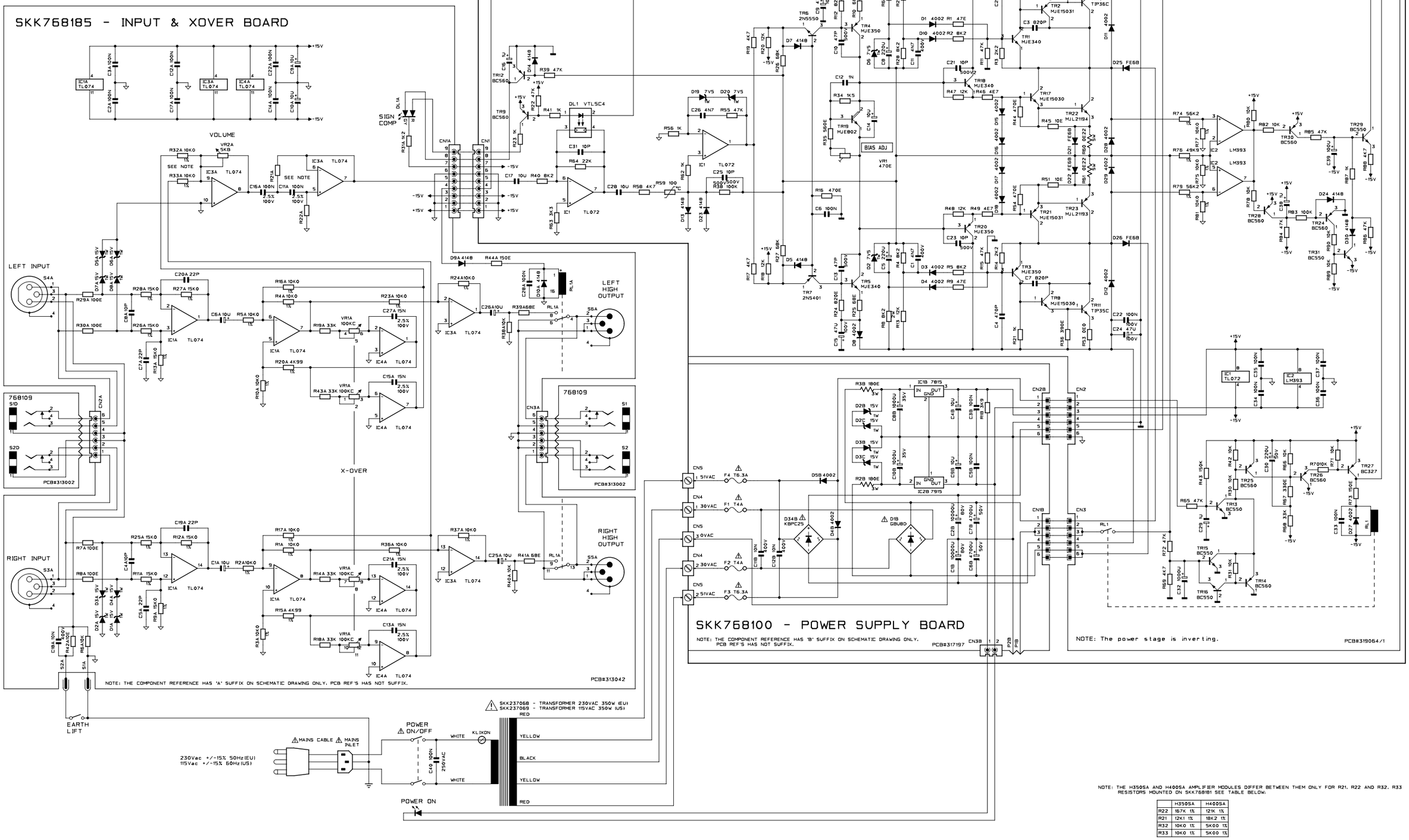
APP. N. Zavatta	REV: A		

SKK737088 - H350SA AMPLIFIER ASSEMBLY AT 230VAC (EU)
SKK737089 - H350SA AMPLIFIER ASSEMBLY AT 115VAC (US)
SKK737090 - H400SA AMPLIFIER ASSEMBLY AT 230VAC (EU)
SKK737091 - H400SA AMPLIFIER ASSEMBLY AT 115VAC (US)

SKK727562 - 350W POWER AMPLIFIER ASSEMBLY

SKK768094 - 350W POWER AMPLIFIER BOARD (WITHOUT COMPONENT MOUNTED ON HEATSINK)



NOTE: THE H350SA AND H400SA AMPLIFIER MODULES DIFFER BETWEEN THEM ONLY FOR R21, R22 AND R32, R33 RESISTORS MOUNTED ON SKK768181 SEE TABLE BELOW:

	H350SA	H400SA
R22	16K 1%	12K 1%
R21	12K1 1%	18K2 1%
R32	10K0 1%	5K00 1%
R33	10K0 1%	5K00 1%

DRW I.BATTELLI	DwG# 550822	PCB# 313002, 313042, 317197, 319054/1	GENERALMUSIC S.p.A. ITALY
CKD G.BOCCATO	DATE Feb.19 2004	SCHEMATIC DIAGRAM	
APP. G.RICCI	REV: A	H350SA, H400SA AMPLIFIER	

Spare Part List

Legend

EU = Europe version 230V

US = United States version 115V

Code		Description

Optional Accessories

950978		SC31 Alluminium Telescopic Stand (for SUB - SAT)
950199		SC30 Alluminium Telescopic Stand (for SAT Standalone)
951133		15mt Speakon-Speakon 2x1.50mm² Cable

Hurricane Active

Accessories

277412		Owner's Manual (Italian-English)
130297		Mains Cable 10A (EU)
130283		Mains Cable 10A (US)

H150A

Assembly

SKK768305		**Crossover Board Assembly (Pcb#313142)**
		(this part is replaced entirely only)
841375		30cm Blue/Black 0.75mm² Faston/Faston Dual Wire
841374		50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire
727662		Horn Assembly
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*	**1" 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1" 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
717106		Speaker Cabinet Assembly
657292	*	Reflex Duct
430112	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667708		Speaker Grill
227101		**10" 8ohm Woofer Speaker**
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
180863		"H150A" Adhesive Label
180822		"LEM" Logo Adhesive Plate
150298		100x2.5mm Nylon Cable Tie
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737096		**Amplifier Assembly (EU)**
SKK737097		**Amplifier Assembly (US)**
SKK768180	*	**Amplifier Board (Pcb#EMB-447-60)**
SKK090015	**	**2SC5242-O TO3P Npn Transistor**
SKK090016	**	**2SA1962-O TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110307	**	Relay 24V / 2 Switch 5A 250Vac
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor (BC557C Equivalent)
090183	**	BC550C TO92 LN Npn Transistor (BC547C Equivalent)
090153	**	BC327 TO92 Pnp Transistor
080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK768179	*	**Input Board (Pcb#EFB-073-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768001	*	**Supply Board (Pcb#EMB-449-H0)**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
SKK667003	*	H-Series Painted Frame Panel (SE1595)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK235001	*	**Transformer 230Vac (EU)**
SKK235005	*	**Transformer 115Vac (US)**
110003	*	T3.15A Fuse 5x20mm (EU)
110061	*	T3.15A Fuse 6.3x32mm (US)
340154	*	TO3P/TO218 Mica Washer
340079	*	TO220 Mica Washer
340078	*	TO220 Insulated Bush
110285	*	4A 250Vac Bipolar Power Switch
110614	*	3 Terminal Universal Mains Inlet 10A Faston=6.3mm
080607	*	KBPC25 25A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor

H200A

Assembly

SKK768306		**Crossover Board Assembly (Pcb#313142)**
		(this part is replaced entirely only)
841374		50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire
841338		40cm Blue/Black 0.75mm² Faston/Faston Dual Wire
727662		Horn Assembly
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*	**1" 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1" 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
717108		Speaker Cabinet Assembly
657293	*	Reflex Duct
430114	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667709		Speaker Grill
227102		**12" 8ohm Woofer Speaker**
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
180864		"H200A" Adhesive Label
180822		"LEM" Logo Adhesive Plate
150298		100x2.5mm Nylon Cable Tie
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737096		**Amplifier Assembly (EU)**
SKK737097		**Amplifier Assembly (US)**
SKK768180	*	**Amplifier Board (Pcb#EMB-447-60)**
SKK090015	**	**2SC5242-O TO3P Npn Transistor**
SKK090016	**	**2SA1962-O TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110307	**	Relay 24V / 2 Switch 5A 250Vac
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor (BC557C Equivalent)
090183	**	BC550C TO92 LN Npn Transistor (BC547C Equivalent)
090153	**	BC327 TO92 Pnp Transistor
080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK768179	*	**Input Board (Pcb#EFB-073-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768001	*	**Supply Board (Pcb#EMB-449-H0)**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
SKK667003	*	H-Series Painted Frame Panel (SE1595)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK235001	*	**Transformer 230Vac (EU)**
SKK235005	*	**Transformer 115Vac (US)**
110003	*	T3.15A Fuse 5x20mm (EU)
110061	*	T3.15A Fuse 6.3x32mm (US)
340154	*	TO3P/TO218 Mica Washer
340079	*	TO220 Mica Washer
340078	*	TO220 Insulated Bush
110285	*	4A 250Vac Bipolar Power Switch
110614	*	3 Terminal Universal Mains Inlet 10A Faston=6.3mm
080607	*	KBPC25 25A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor

H300A

Assembly

727662		Horn Assembly
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*	**1" 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1" 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
717110		Speaker Cabinet Assembly
657292	*	Reflex Duct
430116	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667710		Speaker Grill
227106		**15" 4ohm Woofer Speaker**
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
180865		"H300A" Adhesive Label
180822		"LEM" Logo Adhesive Plate
150298		100x2.5mm Nylon Cable Tie
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737100		**Amplifier Assembly (EU)**
SKK737101		**Amplifier Assembly (US)**
SKK768178	*	**X-over & LF Amplifier Board (Pcb#EMB-456-60)**
SKK090017	**	**2SC5669 TO3P Npn Transistor**
SKK090018	**	**2SA2031 TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110316	**	Relay 24V / 1 Switch no 16A 250V
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor
090183	**	BC550C TO92 LN Npn Transistor
090153	**	BC327 TO92 Pnp Transistor
080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK768177	*	**Input & HF Amplifier Board (Pcb#EMB-462-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100965	**	**TDA7294 80W Audio Amplifier with Mute**
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768003	*	**Supply Board (Pcb#EMB-450-H0)**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080606	**	GBU8D 8A Rectifier Diodes Bridge
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
SKK667004	*	H-Series Painted Frame Panel (SE1596)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK235003	*	**Transformer 230Vac (EU)**
SKK235007	*	**Transformer 230Vac (US)**
110614	*	Mains Socket
110291	*	16A 250Vac Bipolar Power Switch
110018	*	T6.3A Fuse 5x20mm (EU)
110037	*	T6.3A Fuse 6.3x32mm (US)
080608	*	KBPC3502 35A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor

H350A

Assembly

SKK768312		**Crossover Board Assembly (Pcb#313149)**
		(this part is replaced entirely only)
841384		75cm Blue/Black 0.75mm² Faston/Faston Dual Wire
841349		65cm Blue/Black 0.75mm² Faston/Unsheath Dual Wire
717112		Speaker Cabinet Assembly
657295	*	Reflex Duct
430118	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177783	*	Black Metallic Flange
177328	*	220x160mm Metal Handle
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667787		Speaker Grill
229054		1.8" 8ohm Tweeter Speaker
229055		**1.8" 8ohm Diaphgram for 229054 Tweeter Speaker**
228019		**8" 8ohm Midrange Speaker**
227103		**15" 4ohm Woofer Speaker**
210273		Speaker Filler (400gr/m² 50x50x4cm)
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
210215		Adhesive Rubber Foam 10x1.9mm (Specify mt)
180822		"LEM" Logo Adhesive Plate
150298		100x2.5mm Nylon Cable Tie
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120482		4mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737094		**Amplifier Assembly (EU)**
SKK737095		**Amplifier Assembly (US)**
SKK768184	*	**X-over & LF Amplifier Board (Pcb#EMB-456-60)**
SKK090017	**	**2SC5669 TO3P Npn Transistor**
SKK090018	**	**2SA2031 TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110316	**	Relay 24V / 1 Switch no 16A 250V
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor
090183	**	BC550C TO92 LN Npn Transistor
090153	**	BC327 TO92 Pnp Transistor

080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK768183	*	**Input & HF Amplifier Board (Pcb#EMB-462-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100965	**	**TDA7294 80W Audio Amplifier with Mute**
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768004	*	**Amplifier Board (Pcb#EMB-447-60)**
SKK090015	**	**2SC5242-O TO3P Npn Transistor**
SKK090016	**	**2SA1962-O TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110307	**	Relay 24V / 2 Switch 5A 250Vac
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor (BC557C Equivalent)
090183	**	BC550C TO92 LN Npn Transistor (BC547C Equivalent)
090153	**	BC327 TO92 Pnp Transistor
080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080102	*	M4x30tsp Black Screw
667713		Speaker Grill
227063		**8" 8ohm Full-Range Speaker**
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
180822		"LEM" Logo Adhesive Plate
120482		4mm Black Shakeproof Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw

Amplifier Assembly

SKK737092		**Amplifier Assembly (EU)**
SKK737093		**Amplifier Assembly (US)**
SKK768011	*	**Supply Board (Pcb#EMB-449-H0)**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
SKK768008	*	**Input Board (Pcb#EFB-073-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768004	*	**Amplifier Board (Pcb#EMB-447-60)**
SKK090015	**	**2SC5242-O TO3P Npn Transistor**
SKK090016	**	**2SA1962-O TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110307	**	Relay 24V / 2 Switch 5A 250Vac
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor (BC557C Equivalent)
090183	**	BC550C TO92 LN Npn Transistor (BC547C Equivalent)
090153	**	BC327 TO92 Pnp Transistor
080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK667005	*	H100MA Painted Frame Panel
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK235000	*	**Transformer 230Vac (EU)**
SKK235004	*	**Transformer 115Vac (US)**
110003	*	T3.15A Fuse 5x20mm (EU)
110061	*	T3.15A Fuse 6.3x32mm (US)

H200MA

Assembly

SKK768306		**Crossover Board Assembly (Pcb#313142)**
		(this part is replaced entirely only)
841374		50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire
841338		40cm Blue/Black 0.75mm² Faston/Faston Dual Wire
727662		Horn Assembly
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*	**1" 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1" 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
717115		Speaker Cabinet Assembly
657293	*	Reflex Duct
430121	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177328	*	220x160mm Metal Handle
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
667709		Speaker Grill
227102		**12" 8ohm Woofer Speaker**
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
180868		"H200MA" Adhesive Label
180822		"LEM" Logo Adhesive Plate
150298		100x2.5mm Nylon Cable Tie
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737096		**Amplifier Assembly (EU)**
SKK737097		**Amplifier Assembly (US)**
SKK768180	*	**Amplifier Board (Pcb#EMB-447-60)**
SKK090015	**	**2SC5242-O TO3P Npn Transistor**
SKK090016	**	**2SA1962-O TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK768179	*	**Input Board (Pcb#EFB-073-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768001	*	**Supply Board (Pcb#EMB-449-H0)**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
SKK667003	*	H-Series Painted Frame Panel (SE1595)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK235001	*	**Transformer 230Vac (EU)**
SKK235005	*	**Transformer 115Vac (US)**
110003	*	T3.15A Fuse 5x20mm (EU)
110061	*	T3.15A Fuse 6.3x32mm (US)
340154	*	TO3P/TO218 Mica Washer
340079	*	TO220 Mica Washer
340078	*	TO220 Insulated Bush
110285	*	4A 250Vac Bipolar Power Switch
110614	*	3 Terminal Universal Mains Inlet 10A Faston=6.3mm
080607	*	KBPC25 25A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor

H300MA

Assembly

727662		Horn Assembly
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*	**1" 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1" 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
717116		Speaker Cabinet Assembly
657292	*	Reflex Duct
430122	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177328	*	220x160mm Metal Handle
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
667710		Speaker Grill
227106		**15" 4ohm Woofer Speaker**
210273		Speaker Filler (400gr/m² 50x50x4cm)
210217		Black Sealer (specify mt)
180869		"H300MA" Adhesive Label
180822		"LEM" Logo Adhesive Plate
150298		100x2.5mm Nylon Cable Tie
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737100		**Amplifier Assembly (EU)**
SKK737101		**Amplifier Assembly (US)**
SKK768178	*	**X-over & LF Amplifier Board (Pcb#EMB-456-60)**
SKK090017	**	**2SC5669 TO3P Npn Transistor**
SKK090018	**	**2SA2031 TO3P Pnp Transistor**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110316	**	Relay 24V / 1 Switch no 16A 250V
100061	**	TL072 Dual J-Fet Operational Amplifier
090920	**	MJE802 TO126 Npn Darl Transistor
090917	**	MJE350 TO126 Pnp Transistor
090916	**	MJE340 TO126 Npn Transistor
090201	**	2N5401 TO92 Pnp Transistor
090200	**	2N5550 TO92 Npn Transistor
090194	**	BC560C TO92 LN Pnp Transistor
090183	**	BC550C TO92 LN Npn Transistor
090153	**	BC327 TO92 Pnp Transistor
080901	**	VTL5C4 Analog Optoisolator
080821	**	Ptc 90 PTH59F04BE222TS
080156	**	1N4002 1A 100V Rectifier Diode
080103	**	1N4148 100mA 75V Signal Diode
060051	**	0E22 5W 5% Wire Resistor
030715	**	1000u 6v3 20% Vert Electrolytic Capacitor
SKK768177	*	**Input & HF Amplifier Board (Pcb#EMB-462-H0)**
141187	**	XLR Female Socket
SKK110267	**	Slider Switch
140217	**	Jack Slim Horizontal S-F Socket
100965	**	**TDA7294 80W Audio Amplifier with Mute**
100084	**	TL074 Quad J-Fet Operational Amplifier
SKK080706	**	Led 3mm Wide Diffused Green
SKK074570	**	5K 41steps Linear Potentiometer
SKK768003	*	**Supply Board (Pcb#EMB-450-H0)**
SKK090001	**	TIP42C TO220 Pnp Transistor
SKK090000	**	TIP41C TO220 Npn Transistor
110119	**	Fuse Clip 10A max (EU) (US)
080606	**	GBU8D 8A Rectifier Diodes Bridge
080292	**	16V 1W 5% Zener Diode
080156	**	1N4002 1A 100V Rectifier Diode
SKK667004	*	H-Series Painted Frame Panel (SE1596)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK235003	*	**Transformer 230Vac (EU)**
SKK235007	*	**Transformer 230Vac (US)**
110614	*	Mains Socket
110291	*	16A 250Vac Bipolar Power Switch
110018	*	T6.3A Fuse 5x20mm (EU)
110037	*	T6.3A Fuse 6.3x32mm (US)
080608	*	KBPC3502 35A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor

H350SA

Assembly

717118		Speaker Cabinet Assembly
430124	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177783	*	Black Metallic Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667788		Speaker Grill
227105		**15" 6ohm Woofer Speaker**
210274		Speaker Filler (400gr/m² 100x50x4cm)
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
210215		Adhesive Rubber Foam 10x1.9mm (Specify mt)
180870		H350SA Adhesive Label
180822		"LEM" Logo Adhesive Plate
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

Amplifier Assembly

SKK737088		**Amplifier Assembly (EU)**
SKK737089		**Amplifier Assembly (US)**
SKK768185	*	**Input & Xover Board (Pcb#313042)**
141187	**	Hor Female XLR Socket (NC3FAH Neutrik)
141186	**	Hor Male XLR Socket (NC3MAH Neutrik)
140929	**	9 Contacts Vert Male Connector
140908	**	6 Contacts Vert Male Small Connector
110305	**	Relay 12V / 2 Switch 1A 250V
100084	**	TL074 Quad J-Fet Operational Amplifier
080734	**	2.5x5mm Rect Diffused Red-Grn Led
080293	**	15V 1W 5% Zener Diode
080103	**	1N4148 100mA 75V Signal Diode
075820	**	4x100KC RK16 Hor Rotary Potentiometer K15
074570	**	5KB RK16 Hor Rotary Potentiometer K15C31
SKK727562	*	Power Amplifier Assembly
SKK768100	**	**Supply Board (Pcb#317197)**
340079	***	TO220 Mica Washer
340078	***	TO220 Insulated Bush
100060	***	7815 +15V 1A Voltage Regulator
100049	***	7915 -15V 1A Voltage Regulator
080606	***	GBU8D 8A Rectifier Diodes Bridge
080293	***	15V 1W 5% Zener Diode
080156	***	1N4002 1A 100V Rectifier Diode
060403	***	180E 3W 10% Resistor
030884	***	10000U 80V 20% Snap-In Electrolytic Capacitor
030722	***	1000u 35V 20% Vert Electrolytic Capacitor
030555	***	4700u 50V 20% Snap-In Electrolytic Capacitor
SKK768094	**	**Amplifier Board (Pcb#319064/1)**
110316	***	Relay 24V / 1 Switch no 16A 250V
100904	***	LM393 Dual Comparator
100061	***	TL072 Dual J-Fet Operational Amplifier
090917	***	MJE350 TO126 Pnp Transistor
090916	***	MJE340 TO126 Npn Transistor
090201	***	2N5401 TO92 Pnp Transistor
090200	***	2N5550 TO92 Npn Transistor
090194	***	BC560C TO92 LN Pnp Transistor
090183	***	BC550C TO92 LN Npn Transistor
090153	***	BC327 TO92 Pnp Transistor
080901	***	VTL5C4 Analog Optoisolator
080245	***	7V5 1W 5% Zener Diode
080171	***	FE6B 6A 100V Fast Recovery Diode
080156	***	1N4002 1A 100V Rectifier Diode
080103	***	1N4148 100mA 75V Signal Diode
060051	***	0E22 5W 5% Wire Resistor
030715	***	1000u 6v3 20% Vert Electrolytic Capacitor
030247	***	10u 25V 20% Vert Electrolytic Bipolar Capacitor
090924	**	**MJL21194 TO264 Npn Transistor**
090923	**	**MJL21193 TO264 Pnp Transistor**

340783	**	TO264 Mica Washer
340154	**	TO3P/TO218 Mica Washer
340079	**	TO220 Mica Washer
340078	**	TO220 Insulated Bush
090920	**	MJE802 TO126 Npn Darl Transistor
090919	**	MJE15031 TO220 Pnp Transistor
090918	**	MJE15030 TO220 Npn Transistor
090863	**	TIP36C TO218 Pnp Transistor
090862	**	TIP35C TO218 Npn Transistor
080821	**	Ptc 100° PTH9L04BD222TS2F330 Murata
SKK667002	*	H-Series Painted Frame Panel (SE1597)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK237068	*****	**Transformer 230Vac (EU)**
SKK237069	*****	**Transformer 115Vac (US)**
768109	*****	**Jack Sockets Board (Pcb#313002)**
778111	**	6 Contacts Female Cable
140217	**	Jack Stereo Slim Horizontal Socket
110614	*	3 Terminal Universal Mains Inlet 10A Faston=6.3mm
110291	*	16A 250Vac Bipolar Power Switch
110029	*	T4A Fuse 5x20mm (EU)
110018	*	T6.3A Fuse 5x20mm (EU)
080607	*	KBPC2502 25A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor
110029	*	T4A Fuse 5x20mm (EU)
110018	*	T6.3A Fuse 5x20mm (EU)

H400SA 230V

Assembly

717120	Speaker Cabinet Assembly	
657295	*	Reflex Duct
430126	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177783	*	Black Metallic Flange
177328	*	220x160mm Metal Handle
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667746	Speaker Grill	
227108	**18” 4ohm Woofer Speaker**	
210273	Speaker Filler (400gr/m² 50x50x4cm)	
210217	Black Sealer (specify mt)	
210215	Adhesive Rubber Foam 10x1.9mm (Specify mt)	
180871	H400SA Adhesive Label	
180822	“LEM” Logo Adhesive Plate	
120483	5mm Black Shakeproof Washer	
120461	5.3x10x1 Black Washer	
120364	WL3.5x12tt Black Screw	
120124	M5x30tc Black Screw	
120059	M4x25tc Black Zinc Plated Screw	

Amplifier Assembly

SKK737090	**Amplifier Assembly (EU)**	
SKK737091	**Amplifier Assembly (US)**	
SKK768185	*****	**Input & Xover Board (Pcb#313042)**
141187	**	Hor Female XLR Socket (NC3FAH Neutrik)
141186	**	Hor Male XLR Socket (NC3MAH Neutrik)
140929	**	9 Contacts Vert Male Connector
140908	**	6 Contacts Vert Male Small Connector
110305	**	Relay 12V / 2 Switch 1A 250V
100084	**	TL074 Quad J-Fet Operational Amplifier
080734	**	2.5x5mm Rect Diffused Red-Grn Led
080293	**	15V 1W 5% Zener Diode
080103	**	1N4148 100mA 75V Signal Diode
075820	**	4x100KC RK16 Hor Rotary Potentiometer K15
074570	**	5KB RK16 Hor Rotary Potentiometer K15C31
SKK727562	*	Power Amplifier Assembly
SKK768100	******	**Supply Board (Pcb#317197)**
340079	***	TO220 Mica Washer
340078	***	TO220 Insulated Bush
100060	***	7815 +15V 1A Voltage Regulator
100049	***	7915 -15V 1A Voltage Regulator
080606	***	GBU8D 8A Rectifier Diodes Bridge
080293	***	15V 1W 5% Zener Diode
080156	***	1N4002 1A 100V Rectifier Diode
060403	***	180E 3W 10% Resistor
030884	***	10000U 80V 20% Snap-In Electrolytic Capacitor
030722	***	1000u 35V 20% Vert Electrolytic Capacitor
030555	***	4700u 50V 20% Snap-In Electrolytic Capacitor
SKK768094	******	**Amplifier Board (Pcb#319064/1)**
110316	***	Relay 24V / 1 Switch no 16A 250V
100904	***	LM393 Dual Comparator
100061	***	TL072 Dual J-Fet Operational Amplifier
090917	***	MJE350 TO126 Pnp Transistor
090916	***	MJE340 TO126 Npn Transistor
090201	***	2N5401 TO92 Pnp Transistor
090200	***	2N5550 TO92 Npn Transistor
090194	***	BC560C TO92 LN Pnp Transistor
090183	***	BC550C TO92 LN Npn Transistor
090153	***	BC327 T092 Pnp Transistor
080901	***	VTL5C4 Analog Optoisolator
080245	***	7V5 1W 5% Zener Diode
080171	***	FE6B 6A 100V Fast Recovery Diode
080156	***	1N4002 1A 100V Rectifier Diode
080103	***	1N4148 100mA 75V Signal Diode
060051	***	0E22 5W 5% Wire Resistor
030715	***	1000u 6v3 20% Vert Electrolytic Capacitor
030247	***	10u 25V 20% Vert Electrolytic Bipolar Capacitor
090924	******	**MJL21194 TO264 Npn Transistor**
090923	******	**MJL21193 TO264 Pnp Transistor**
340783	**	TO264 Mica Washer
340154	**	TO3P/TO218 Mica Washer
340079	**	TO220 Mica Washer
340078	**	TO220 Insulated Bush
090920	**	MJE802 TO126 Npn Darl Transistor
090919	**	MJE15031 TO220 Pnp Transistor
090918	**	MJE15030 TO220 Npn Transistor
090863	**	TIP36C TO218 Pnp Transistor
090862	**	TIP35C TO218 Npn Transistor
080821	**	Ptc 100° PTH9L04BD222TS2F330 Murata
SKK667002	*	H-Series Painted Frame Panel (SE1597)
SKK347030	*	Rotary Pot Black Knob D=15MM
SKK237068	*****	**Transformer 230Vac (EU)**
SKK237069	*****	**Transformer 115Vac (US)**
768109	*****	**Jack Sockets Board (Pcb#313002)**
778111	**	6 Contacts Female Cable
140217	**	Jack Stereo Slim Horizontal Socket
110614	*	3 Terminal Universal Mains Inlet 10A Faston=6.3mm
110291	*	16A 250Vac Bipolar Power Switch
110029	*	T4A Fuse 5x20mm (EU)
110018	*	T6.3A Fuse 5x20mm (EU)
080607	*	KBPC2502 25A 200V Rectifier Diode Bridge
020491	*	100nF 10% 250Vac Polyester Capacitor
110029	*	T4A Fuse 5x20mm (EU)
110018	*	T6.3A Fuse 5x20mm (EU)

Hurricane Passive

Accessories

951133	15mt 2 Conductors Speakon-Speakon Power Cable
277411	Owner’s Manual (Italian-English)

H150 8 Ohm

Assembly

SKK768305	**Crossover Board Assembly (Pcb#313142)**	
	(this part is replaced entirely only)	
841374	50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire	
841338	40cm Blue/Black 0.75mm² Faston/Faston Dual Wire	
727662	Horn Assembly	
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*****	**1” 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1” 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
727658	Input Panel Assembly	
778178	*	Dual Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717105	Speaker Cabinet Assembly	
657292	*	Reflex Duct
430111	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667708	Speaker Grill	
227101	**10” 8ohm Woofer Speaker**	
210272	Speaker Filler (400gr/m² 30x50x4cm)	
210217	Black Sealer (specify mt)	
180872	“H150” Adhesive Label	
180822	“LEM” Logo Adhesive Plate	
129962	WL3.5X25ts Black Screw	
120483	5mm Black Shakeproof Washer	
120461	5.3x10x1 Black Washer	
120414	WL3.5x35tt Black Screw	
120411	WL3.5x20tt Black Screw	
120124	M5x30tc Black Screw	
120059	M4x25tc Black Zinc Plated Screw	

H200 8 Ohm

Assembly

SKK768306	**Crossover Board Assembly (Pcb#313142)**	
	(this part is replaced entirely only)	
841374	50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire	
841338	40cm Blue/Black 0.75mm² Faston/Faston Dual Wire	
727662	Horn Assembly	
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*****	**1” 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1” 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
727658	Input Panel Assembly	
778178	*	Dual Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717107	Speaker Cabinet Assembly	
657293	*	Reflex Duct
430113	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667709	Speaker Grill	
227102	**12” 8ohm Woofer Speaker**	
210272	Speaker Filler (400gr/m² 30x50x4cm)	
210217	Black Sealer (specify mt)	
180873	“H200” Adhesive Label	
180822	“LEM” Logo Adhesive Plate	
129962	WL3.5X25ts Black Screw	
120483	5mm Black Shakeproof Washer	
120461	5.3x10x1 Black Washer	
120414	WL3.5x35tt Black Screw	
120411	WL3.5x20tt Black Screw	
120124	M5x30tc Black Screw	
120059	M4x25tc Black Zinc Plated Screw	

H300 4 Ohm

Assembly

SKK768307	**Crossover Board Assembly (Pcb#313144)**	
	(this part is replaced entirely only)	
841376	50cm Blue/Black 0.75mm² Faston/Faston Dual Wire	
841374	50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire	
727662	Horn Assembly	
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*****	**1” 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1” 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
727657	Input Panel Assembly	
778165	*	Single Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717109	Speaker Cabinet Assembly	
657292	*	Reflex Duct
430115	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667710	Speaker Grill	
227106	**15” 4ohm Woofer Speaker**	
210272	Speaker Filler (400gr/m² 30x50x4cm)	
210217	Black Sealer (specify mt)	
180874	“H300” Adhesive Label	
180822	“LEM” Logo Adhesive Plate	
129962	WL3.5X25ts Black Screw	
120483	5mm Black Shakeproof Washer	
120461	5.3x10x1 Black Washer	
120414	WL3.5x35tt Black Screw	
120411	WL3.5x20tt Black Screw	
120124	M5x30tc Black Screw	
120059	M4x25tc Black Zinc Plated Screw	

H300 8 Ohm

Assembly

SKK768310	**Crossover Board Assembly (Pcb#313144)**	
	(this part is replaced entirely only)	
841376	50cm Blue/Black 0.75mm² Faston/Faston Dual Wire	
841374	50cm Brown/Black 0.75mm² Faston6.3/4.8 Dual Wire	
727662	Horn Assembly	
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229057	*****	**1” 16ohm Diaphgram for 229056 Compression Driver**
229056	*	1” 16ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
727658	Input Panel Assembly	
778178	*	Dual Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717109	Speaker Cabinet Assembly	
657292	*	Reflex Duct
430115	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177325	*	Suspension Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667710	Speaker Grill	
227107	**15” 8ohm Woofer Speaker**	
210272	Speaker Filler (400gr/m² 30x50x4cm)	
210217	Black Sealer (specify mt)	
180874	“H300” Adhesive Label	
180822	“LEM” Logo Adhesive Plate	
129962	WL3.5X25ts Black Screw	
120483	5mm Black Shakeproof Washer	
120461	5.3x10x1 Black Washer	
120414	WL3.5x35tt Black Screw	
120411	WL3.5x20tt Black Screw	
120124	M5x30tc Black Screw	
120059	M4x25tc Black Zinc Plated Screw	

H350 4 Ohm

Assembly

SKK768308	**Crossover Board Assembly (Pcb#313143)**	
	(this part is replaced entirely only)	
841349	65cm Blue/Black 0.75mm² Faston/Unsheath Dual Wire	
841334	60cm Green/Black 0.75mm² Faston/Faston Dual Wire	
841208	55cm Brown/Black 0.75mm² Faston/Faston Dual Wire	
727657	Input Panel Assembly	
778165	*	Single Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717111	Speaker Cabinet Assembly	
657295	*	Reflex Duct
430117	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177783	*	Black Metallic Flange
177328	*	220x160mm Metal Handle
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667787	Speaker Grill	
229054	1.8” 8ohm Tweeter Speaker	
229055	**1.8” 8ohm Diaphgram for 229054 Tweeter Speaker**	
228019	**8” 8ohm Midrange Speaker**	
227103	**15” 4ohm Woofer Speaker**	
210273	Speaker Filler (400gr/m² 50x50x4cm)	
210272	Speaker Filler (400gr/m² 30x50x4cm)	
210217	Black Sealer (specify mt)	
210215	Adhesive Rubber Foam 10x1.9mm (Specify mt)	
180875	“H350” Adhesive Label	
180822	“LEM” Logo Adhesive Plate	
129962	WL3.5X25ts Black Screw	
120483	5mm Black Shakeproof Washer	

120482		4mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

H350 8 Ohm

Assembly

SKK768311		**Crossover Board Assembly (Pcb#313150)**
		(this part is replaced entirely only)
841349		65cm Blue/Black 0.75mm² Faston/Unsheath Dual Wire
841334		60cm Green/Black 0.75mm² Faston/Faston Dual Wire
841208		55cm Brown/Black 0.75mm² Faston/Faston Dual Wire
727658		Input Panel Assembly
778178	*	Dual Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717111		Speaker Cabinet Assembly
657295	*	Reflex Duct
430117	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177783	*	Black Metallic Flange
177328	*	220x160mm Metal Handle
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667787		Speaker Grill
229054		1.8" 8ohm Tweeter Speaker
229055		**1.8" 8ohm Diaphgram for 229054 Tweeter Speaker**
228019		**8" 8ohm Midrange Speaker**
227083		**15" 8ohm Woofer Speaker**
210273		Speaker Filler (400gr/m² 50x50x4cm)
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
210215		Adhesive Rubber Foam 10x1.9mm (Specify mt)
180875		"H350" Adhesive Label
180822		"LEM" Logo Adhesive Plate
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120482		4mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

H500 4 Ohm

Assembly

SKK768313		**Crossover Board Assembly (Pcb#313146)**
		(this part is replaced entirely only)
841334		60cm Green/Black 0.75mm² Faston/Faston Dual Wire
841333		65cm Blue/Black 0.75mm² Faston/Faston Dual Wire
841208		55cm Brown/Black 0.75mm² Faston/Faston Dual Wire
727664		Horn Assembly
347424	*	Horn / Driver Adapter
347407	*	EWT Gray Elliptical Horn
229051	*	**1" 8ohm Diaphgram for 229048 Driver**
229048	*	1" 8ohm Compression Driver
210267	*	Gasket between Horn and Box
120346	*	WL4x20tc Black Screw
120106	*	M5x10tsp Black Screw
727657		Input Panel Assembly
778165	*	Single Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717113		Speaker Cabinet Assembly
657296	*	Reflex Duct
430119	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177783	*	Black Metallic Flange
177328	*	220x160mm Metal Handle
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120661	*	M4 4-tips Lock Nut
120341	*	WL4x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667742		Speaker Grill
227107		**15" 8ohm Woofer Speaker**
210274		Speaker Filler (400gr/m² 100x50x4cm)
210273		Speaker Filler (400gr/m² 50x50x4cm)
210217		Black Sealer (specify mt)
210215		Adhesive Rubber Foam 10x1.9mm (Specify mt)
180876		"H500" Adhesive Label
180822		"LEM" Logo Adhesive Plate
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120364		WL3.5x12tt Black Screw
120124		M5x30tc Black Screw
120059		M4x25tc Black Zinc Plated Screw

H350S 4 Ohm

Assembly

SKK768314		**Crossover Board Assembly (Pcb#313147)**
		(this part is replaced entirely only)
841208		55cm Brown/Black 0.75mm² Faston/Faston Dual Wire
727663		Input Panel Assembly
778165	*	Single Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717117		Speaker Cabinet Assembly
430123	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
347395	*	Plastic Handle
177783	*	Black Metallic Flange
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120336	*	WL4x25tt Black Screw
120111	*	M6x25tsp Black Screw
667788		Speaker Grill
227105		**15" 6ohm Woofer Speaker**
210274		Speaker Filler (400gr/m² 100x50x4cm)
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
210215		Adhesive Rubber Foam 10x1.9mm (Specify mt)
180877		"H350S" Adhesive Label
180822		"LEM" Logo Adhesive Plate
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120414		WL3.5x35tt Black Screw
120411		WL3.5x20tt Black Screw
120124		M5x30tc Black Screw

H400S 4 OHM

Assembly

SKK768315		**Crossover Board Assembly (Pcb#313145)**
		(this part is replaced entirely only)
841208		55cm Brown/Black 0.75mm² Faston/Faston Dual Wire
727663		Input Panel Assembly
778165	*	Single Speakon Cables Assembly
141200	**	Speakon Socket (NL4MP Neutrik)
717119		Speaker Cabinet Assembly
657295	*	Reflex Duct
430125	*	Wooden Cabinet with Gray Carpet
347420	*	Rubber Foot
177783	*	Black Metallic Flange
177328	*	220x160mm Metal Handle
120664	*	M6 4-tips Lock Nut
120662	*	M5 4-tips Lock Nut
120411	*	WL3.5x20tt Black Screw
120341	*	WL4x20tt Black Screw
120111	*	M6x25tsp Black Screw
667746		Speaker Grill
227108		**18" 4ohm Woofer Speaker**
210273		Speaker Filler (400gr/m² 50x50x4cm)
210272		Speaker Filler (400gr/m² 30x50x4cm)
210217		Black Sealer (specify mt)
210215		Adhesive Rubber Foam 10x1.9mm (Specify mt)
180878		"H400S" Adhesive Label
180822		"LEM" Logo Adhesive Plate
129962		WL3.5X25ts Black Screw
120483		5mm Black Shakeproof Washer
120461		5.3x10x1 Black Washer
120411		WL3.5x20tt Black Screw
120364		WL3.5x12tt Black Screw
120124		M5x30tc Black Screw

Note:

- All dimensions are in mm unless otherwise specified.
- The screw description is defined as follows:
  type of screw + diameter + X + length + type of head
  where type of screw is one of these:
  M = Metric thread
  B = Self-tapping screw for metal
  WL = Self-tapping screw for wood
  and type of head is one of these:
  tc = cylinder Phillips head
  ts = flared Phillips head
  tt = rounded Phillips head
  te = hexagonal nut head
  tsp = flat flared Phillips head
  tce = cylinder Allen hexagonal head
  tspe = flat flared Allen hexagonal head
- The washer description is defined as follow:
  hole diameter + X + external diameter + X + thick
- 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.