

Quality Uncompromised

**ROTEL**<sup>®</sup>

# Technical Manual

## STEREO POWER AMPLIFIER **RB-1092/v02**

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### Specification

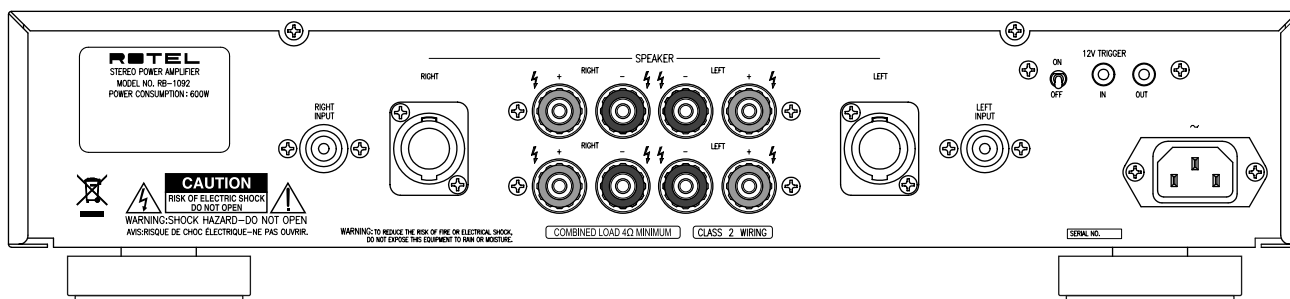
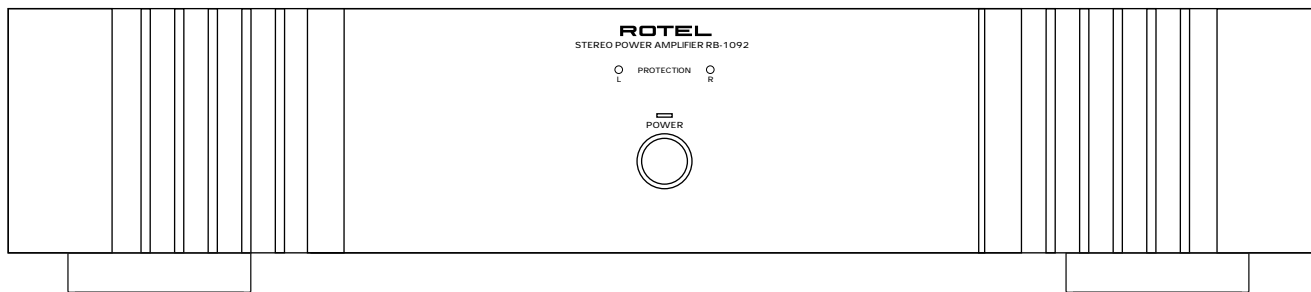
<b>Power Configurations</b>	2 x 500 Watts
<b>Watts/Channel</b>	500 watts, all channels driven, with 20KHz filter, 8 ohm load, 20-20 kHz, 0.03% THD
<b>Total Harmonic Distortion</b> (20Hz-20kHz, 8 ohms)	
Continuous Rated Power	< 0.03%
One-Half Rated Power	< 0.03%
One Watt per Channel	< 0.03%
<b>Power Output</b> (4 Ohms, 0.09% THD)	1000 watts
<b>Output Peak Current</b>	40A
<b>Intermodulation Distortion</b> 60 Hz:7 kHz, 4:1	< 0.03%
<b>Damping Factor</b> (8 ohms)	400
<b>Amp Gain</b>	27.2dB
<b>Input Sensitivity/Impedance</b>	2.2 V / 11.1 k ohms
<b>Frequency Response</b>	10 - 40 KHz (±3dB)
<b>Signal to Noise Ratio (IHF A)</b>	118 dB
<b>Power Requirements</b>	
USA	120 Volts, 60 Hz
Europe	230 Volts, 50 Hz
<b>Power Consumption</b>	600 Watts 69 Watts - Idling 3 Watts - Standby
<b>Dimensions</b> (W x H x D)	432 x 92 x 407 mm 17 <sup>1</sup> / <sub>8</sub> x 3 <sup>5</sup> / <sub>8</sub> x 16 <sup>1</sup> / <sub>8</sub> in
<b>Panel Height</b> (for rack mounting)	80 mm, 3 <sup>1</sup> / <sub>8</sub> in
<b>Weight</b> (net)	10 kg, 22 lb.

**THE ROTEL CO., LTD**

10-10 SHINSEN-CHO , SHIBUYA-KU,  
TOKYO 150-0045, JAPAN

Serial. NO.

Y-388A-0610/pdf



## Please be requested:

When the fault are in the 1000ASP module,  
replace the module and send back the modules later.

## History to RB-1092v02 from RB-1092:

AC Line is replaced with three conductors from two conductors.

SYMBOL	PARTS NO.	DESCRIPTION
<b>016 X-1438A01-02 PCB ASSY</b>		
	501 X-1438-C	PCB ASSY
A,B	013 4TTU-13	PCB SUPPORT
T101	022 T-1075NO2	SUB TRANSFORMER
IC101	031 PC817X2	IC (PHOTO COUPLER) PC817X2J000F
Q101	032 TC3708-ST	TRANSISTOR 2SC3708AA-ST
D102,103,104,106,107	034 T1N4148-86	DIODE 1N4148TAP-50
D105	034 TRD12JST1	ZENER DIODE 12V (AB2)
D101	034 W02M	POWER DIODE 1.5A 200V
C101	041 TUTES1E471-7TS	ELECTROLYTIC CAPACITOR 25V470uF
C102,103	044 DE1307E472M	SPARK KILLER 4700pF
R105	053 CR14-221J-A	CANBON RESISTOR 1/4W 220
(R103)	053 CR14-272J-A	CANBON RESISTOR 1/4W 2.7K
(R103)	053 CR14-472J-A	CANBON RESISTOR 1/4W 4.7K
R102	053 CR16-333J-A	CANBON RESISTOR 1/4W 33K
R101,109	054 1WS120JF	MOF RESISTOR 1W 120
R104	054 1WS1KJF	MOF RESISTOR 1W 1K
R107,108	054 ERQ12AJ2R2P	FUSIBLE RESISTOR 1/2W 2.2
RY101,102	063 OZT-SS-112LM1	RELAY 12V TV8
S101	064 C-4613A01	TOGGLE SWITCH 200MDP1T2B2M7RE
TJ101,TJ102	065 YKB21-5103A	3.5Φ JACK
K102	068 B2B-EH	CONNECTOR POST 2P
K101	068 B3B-EH	CONNECTOR POST 3P
AC1,AC2	068 C-3683#1	PCB TERMINAL 2P P=7.5 TP WE-11 I-752NA
<b>016 X-1445A01-03 PCB ASSY</b>		
	501 X-1445	PCB ASSY
L201,202	021 LF174A00	SPEAKER COIL
Q201-203,206	032 TA608-FG	TRANSISTOR 2SA608KAA-FG
Q207,208	032 TC3708-ST	TRANSISTOR 2SC3708AA-ST
Q204,205,209,210	032 TC536-FG	TRANSISTOR 2SC536KAA-FG
D201,202	034 T1N4148-86	DIODE 1N4148TAP-50
C201,202	041 TUTES1E470-7TF	ELECTROLYTIC CAPACITOR 25V47uF
C901	044 DE1307E472M	SPARK KILLER 4700pF
R203-212,215,216	053 CR14-103J-A	CANBON RESISTOR 1/4W 10K
R219,220	053 CR14-222J-A	CANBON RESISTOR 1/4W 2.2K
R201,202,213,214,217,218	053 CR14-473J-A	CANBON RESISTOR 1/4W 47K
S901	061 C-4176A08	POWER SWITCH PS3-22SPA-P7CZ TV-8 (PCB)
RY201,202	063 DE2TU-12	RELAY DE12D2-OT(M)
K209,210	067 C-4761A01	4P SPEAKER TERMINAL
K205-208	068 B2B-EH	CONNECTOR POST 2P
<b>O T H E R S</b>		
	011 FP-590-B	BLACK PANEL ASSY
	011 FP-590-S	SILVER PANEL ASSY
	011 VP3-01A00	H/S PANEL
	012 RV4-09A00	PUSH BUTTON 14Φ (BLACK)
	012 RV4-09A01	PUSH BUTTON 14Φ (SILVER)
	014 VP3-09A00	UPPER COVER
	019 C-4714A00	POWER KNOB RING 14Φ (BLACK)
	019 C-4714A01	POWER KNOB RING 14Φ (SILVER)
	019 PK4-07A00T	METAL FOOT 60Φ
	034 LTL1214A	LED (RED) 2F
	034 SEL1124R	LED (RED) 1x5
	034 SEL1E24W	LED (BLU) 1x5
	036 5HT10-R	FUSE 250V10AH for 120V
	036 5HT6.3-R	FUSE 250V6.3AH for 230V
	066 C-4641A01	1P PIN JACK (WHT)
	069 C-4629A01	AC 2P INLET 6102.3100 (WIRING) for RB-1092
	069 C-4637A00	AC 3P INLET 0707-1-CW for RB-1092v02

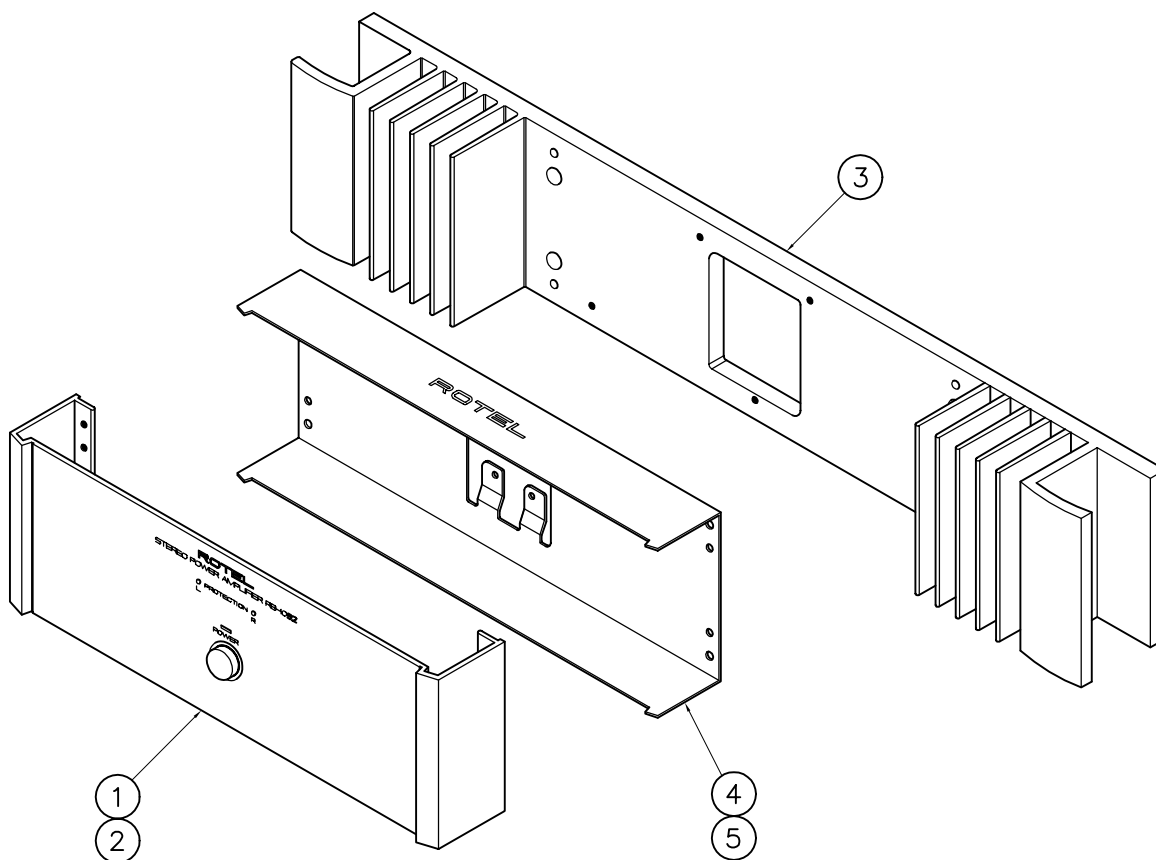
SYMBOL	PARTS NO.	DESCRIPTION
	072 4TR-2489	3.5mm PLUG SHIELD CORD
	072 C-4621A03	AC CORD SET (SJT AWG16) for RAA (RB-1092)
	072 C-4392A04	AC CORD SET (SJT AWG14) for RAA (RB-1091v02)
	072 C-4622A02	AC CORD SET for AUSTRALIA (RB-1092)
	072 C-4423A04	AC CORD SET for AUSTRALIA (RB-1092v02)
	072 C-4624A03	AC CORD SET for EUROPE (RB-1092)
	072 C-4393A04	AC CORD SET for EUROPE (RB-1092v02)
	072 C-4623A02	AC CORD SET for UK (RB-1092)
	072 C-4639A02	AC CORD SET for UK (RB-1092v02)
	081 VQ3-03A00	INSIDE CARTON
	081 VQ3-04A00	SHIPPING CARTON
	081 ZE-216	ETHAFOAM MOULDING
	082 OMRB-1092-1	OWNER'S MANUAL (EFGISDSwR)
	092 ICEPOWER1000ASP	DIGITAL AMP ASSY (WITH POWER SUPPLY)

# Addendum List for Black and Silver

RB-1092

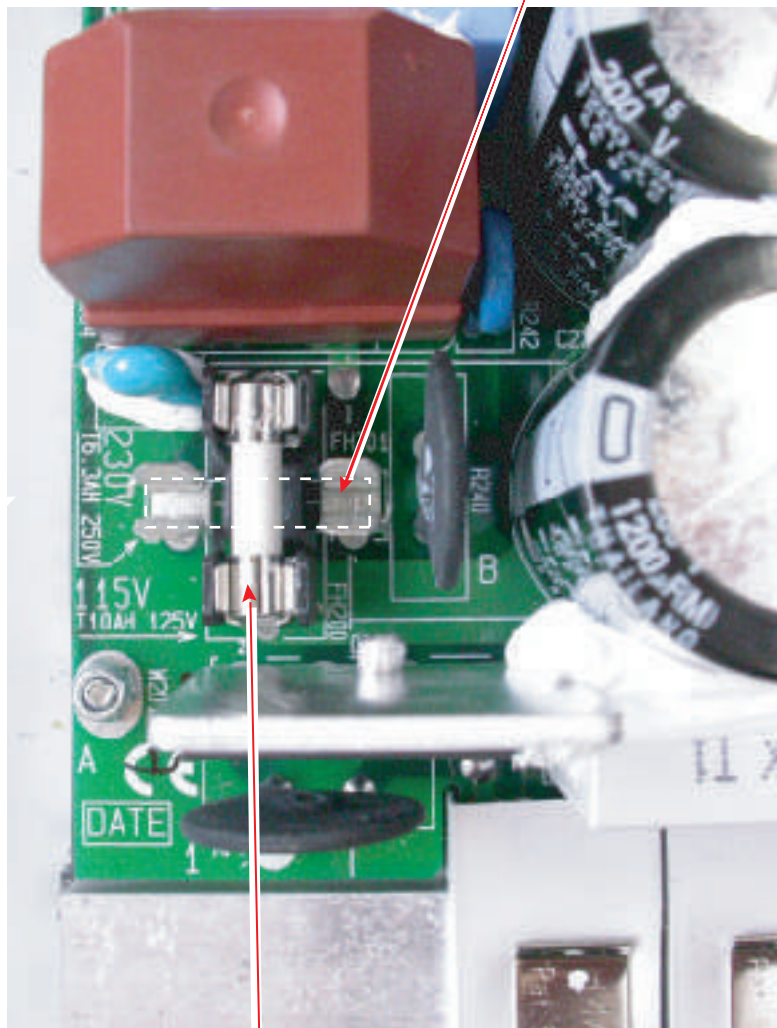
SYMBOL	PARTS	DESCRIPTION
①	011 FP-590-B	BLACK PANEL ASSY
②	011 FP-590-S	SILVER PANEL ASSY
③	011 VP3-01A00	H/S PANEL H150
④	013 VP3-03A00	SUB PANEL HOLDER (BLK)
⑤	013 VP3-03A01	SUB PANEL HOLDER (SLV)
	012 RV4-09A00	PUSH BUTTON 14F (BLK)
	012 RV4-09A01	PUSH BUTTON 14F (SLV)
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLU) 1X5

Panel Assy is included:  
Knob Ring  
LED



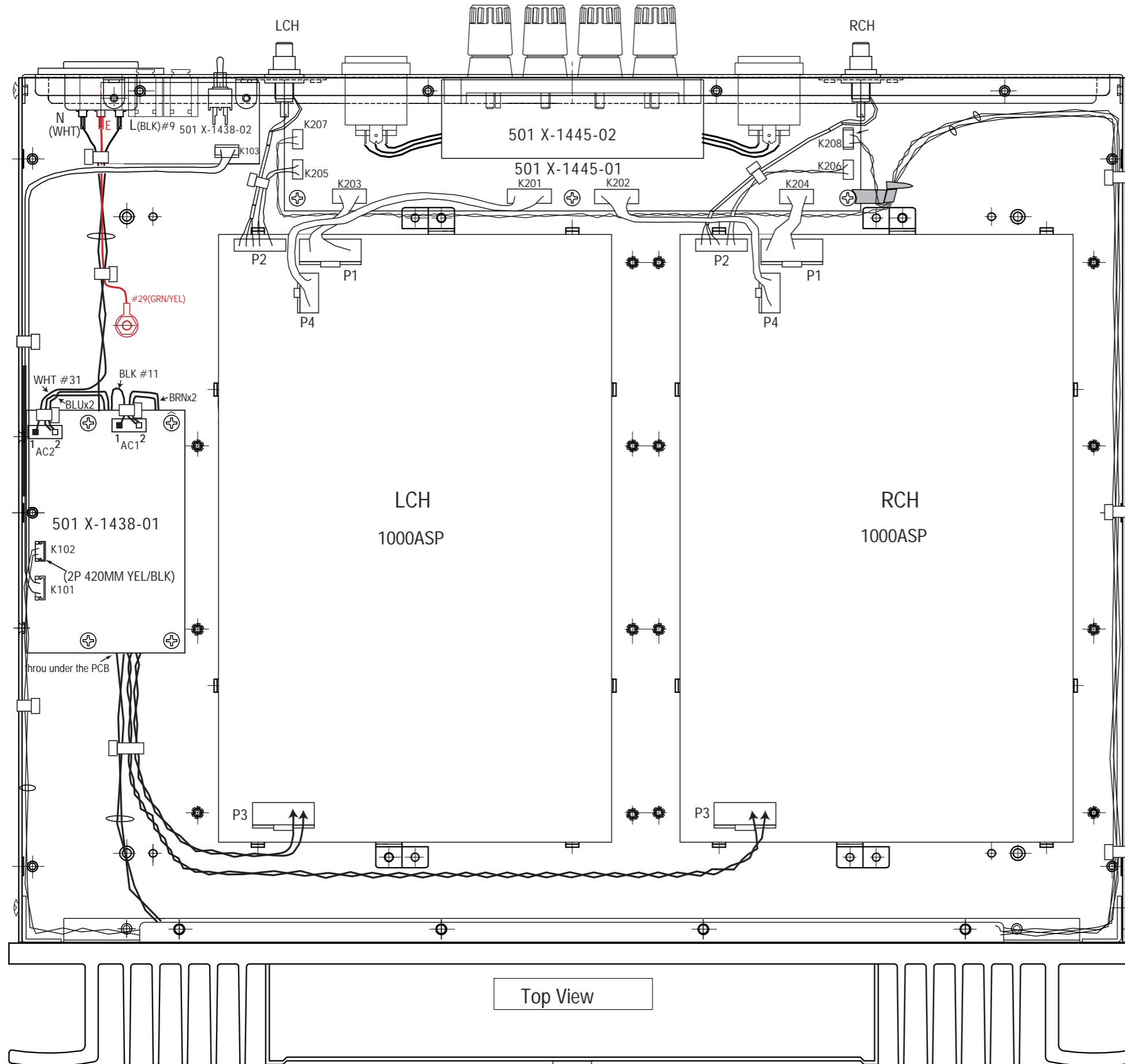
1. find the FUSE in the 092 ICEPOWER1000ASP.
2. Set the Fuse to the destination country voltage on the PCB.
3. Replace the fuse value to the destination. 5HT10-R for 115V and 5HT6.3 for 230V on both PCB's.
4. Rewire the Jumper wire on the PCB 016 X-1438A01. Use J101 for 115V and J102 for 230V.

## Connecting Fuse 5HT6.3-R for 230V destination



## Connecting Fuses 5HT10-R for 115V Destination

# Wiring Diagram



**Wiring-1**

	CNT ASSY	PCB,etc	1000ASP	X-1445-01	X-1438-01
1	068 C-4897A01 (9P-2P3P 120mm)	PIN JACK (L)	L (P2)	K205	
2	068 C-4897A01 (9P-2P3P 120mm)	PIN JACK (R)	R (P2)	K206	
3	068 C-4896A01 (4P 160mm)	X-1445-01 (K201)	L (P4)		
4	068 C-4896A01 (4P 160mm)	X-1445-01 (K202)	R (P4)		
5	068 C-4896A03 (6P-3P 60mm)	X-1445-01 (K203)	L (P1)		
6	068 C-4896A03 (6P-3P 60mm)	X-1445-01 (K204)	R (P1)		
7	068 C-4588A09 (3P 420mm)	X-1438-02 (K103)			K101
8	068 C-4666A07 (6P 330mm)	1000ASP (L-P3)			AC1-2 (BRN) AC2-2 (BLU)
9	068 C-4666A08 (6P 520mm)	1000ASP (R-P3)			AC1-2 (BRN) AC2-2 (BLU)

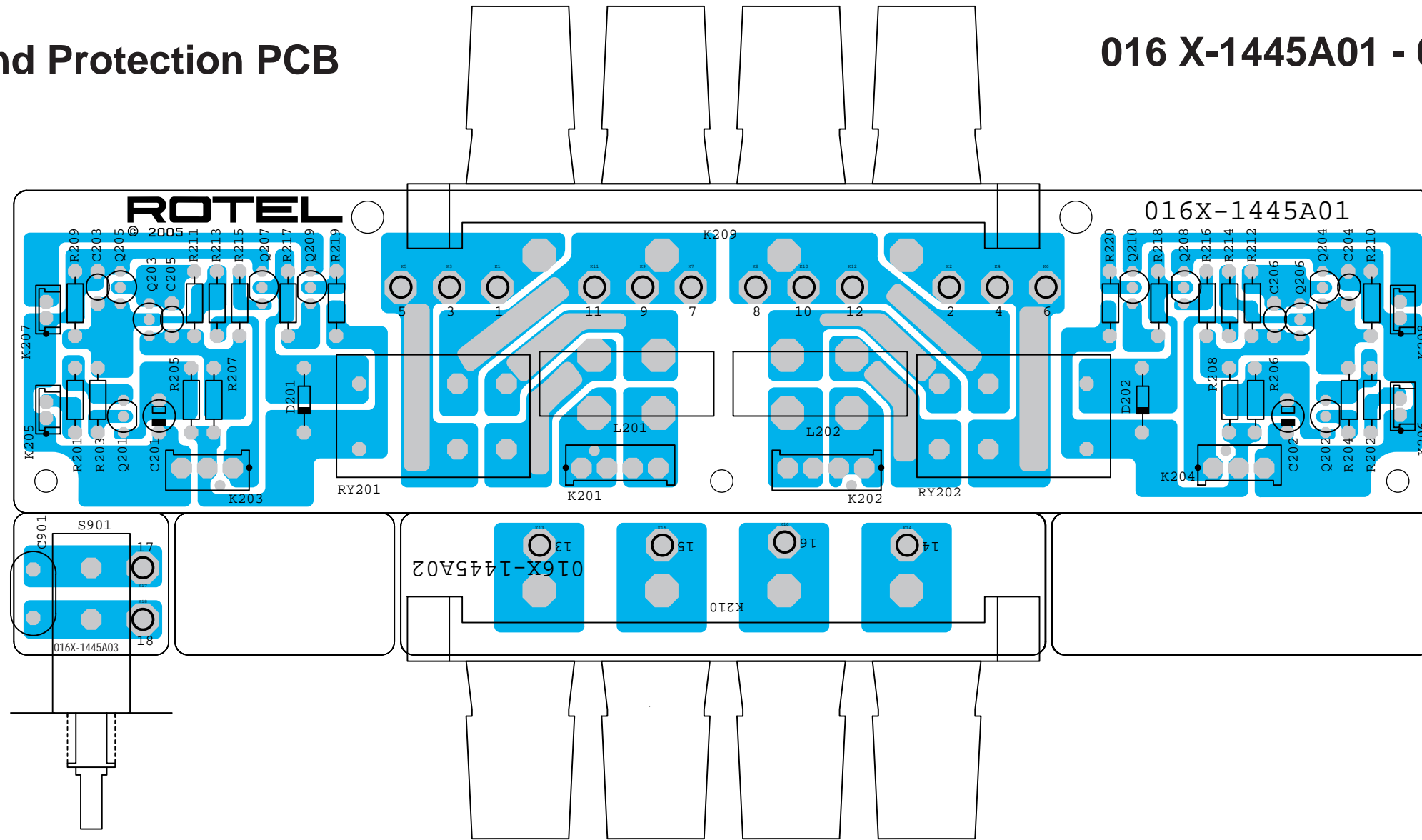
**Wiring-2**

	CNT ASSY	PCB,etc	X-1438-01	X-1445-01	ACINLET
1	068 C-4586A06 (2P 420MM YEL/BLK)	POWER LED	K102		
2	068 C-4586A07 (2P 700MM BLK/ORG)	PROTECTION LED(R)	K208		
3	068 C-4586A08 (2P 900MM BLK/RED)	PROTECTION LED(L)	K207		
4	#9(BLK 500MM)	X-1445-03(18)			L
5	#11(BLK 440MM)	X-1445-03(17)			AC1-1
6	#31(WHT 160MM)	ACINLET(N)			AC2-1
7	#29(GRN/YEL 100MM)	CHASSIS BODY(GND)			E

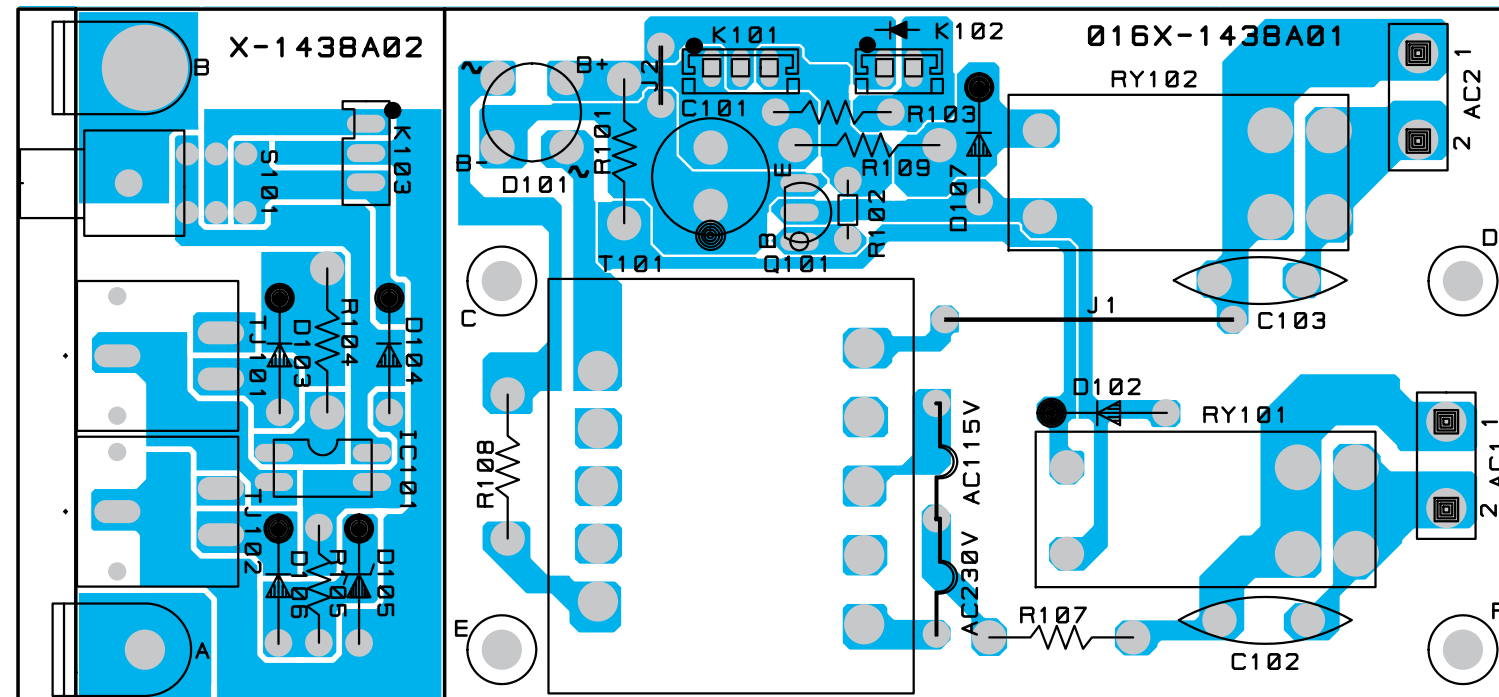
# PCB Assembly

## Output and Protection PCB

016 X-1445A01 - 03

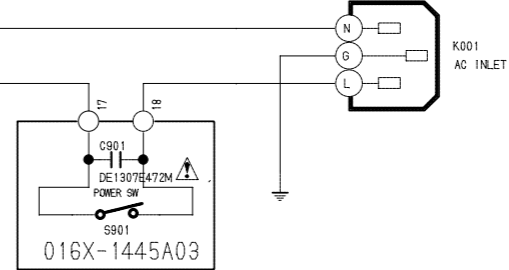
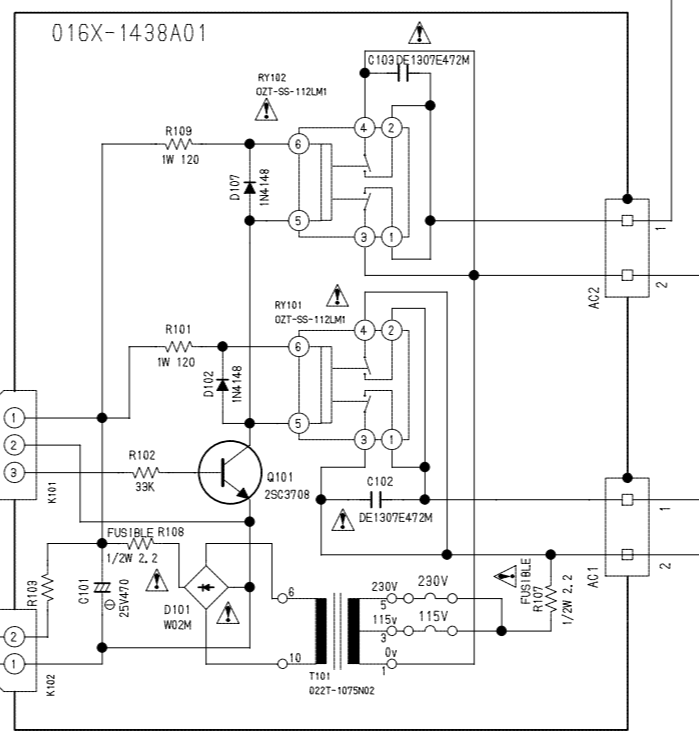
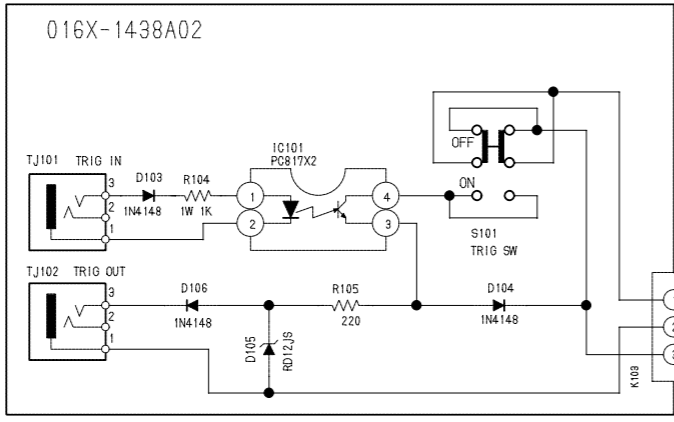
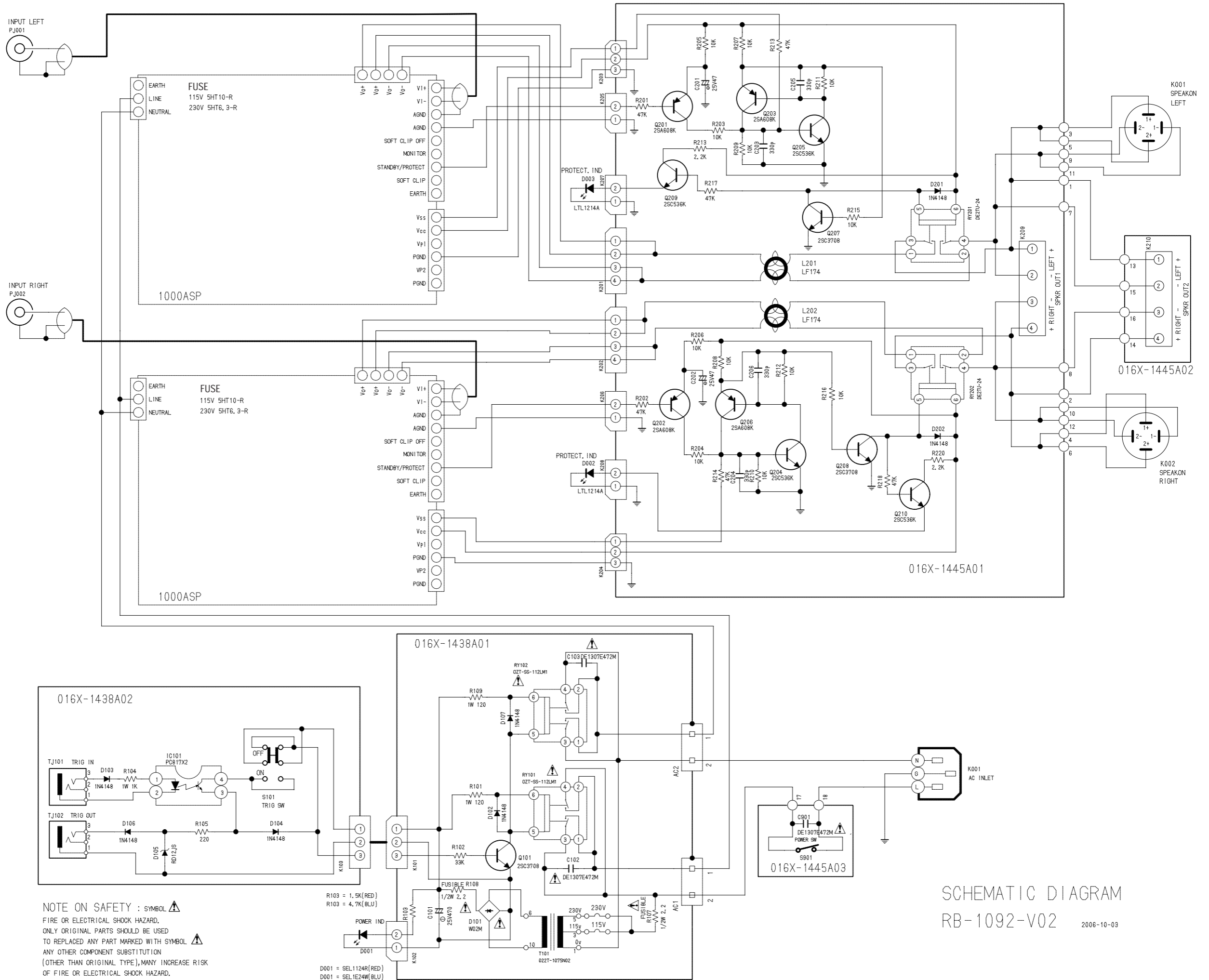




## Sub Transformer PCB 016 X-1438A01 -02





# Schematic Diagram



NOTE ON SAFETY : SYMBOL   
 FIRE OR ELECTRICAL SHOCK HAZARD.  
 ONLY ORIGINAL PARTS SHOULD BE USED  
 TO REPLACED ANY PART MARKED WITH SYMBOL   
 ANY OTHER COMPONENT SUBSTITUTION  
 (OTHER THAN ORIGINAL TYPE),MANY INCREASE RISK  
 OF FIRE OR ELECTRICAL SHOCK HAZARD.

D001 = SEL1124R(RED)  
 D001 = SEL1E24W(BLU)

SCHEMATIC DIAGRAM  
 RB-1092-V02 2006-10-03