



# Technical Manual

STEREO POWER AMPLIFIER

# RB-1080v03

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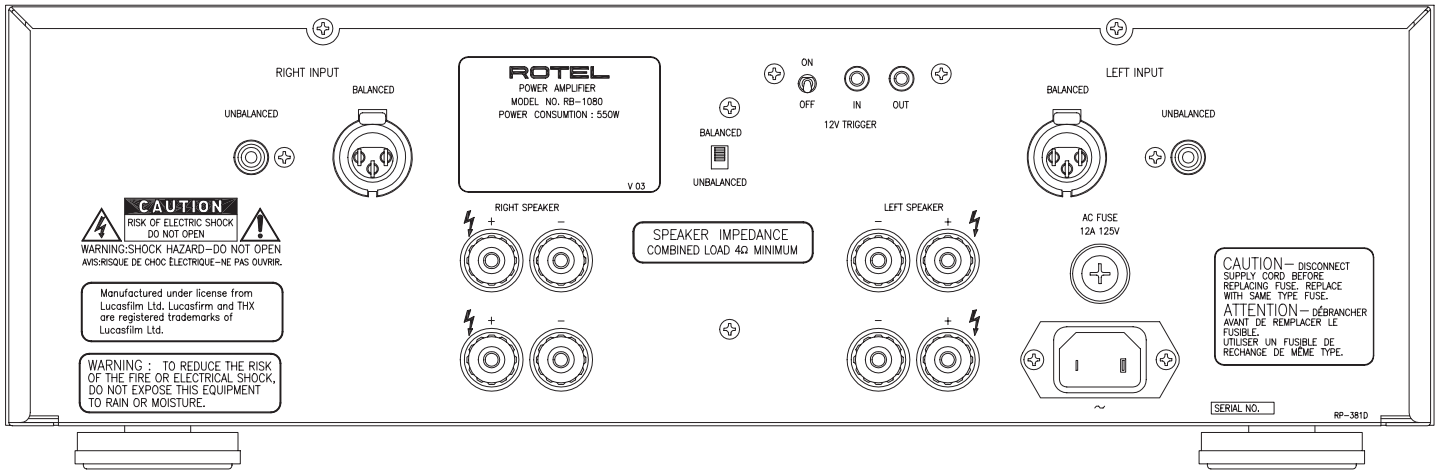
### Specifications

<b>Continuous Power Output (20-20 kHz, &lt; 0.03%)</b>	200 watts/ch into 8 ohms
<b>Total Harmonic Distortion (20Hz-20kHz, 8 ohms)</b>	< 0.03%
<b>Intermodulation Distortion (60 Hz : 7 kHz, 4:1)</b>	< 0.03%
<b>Frequency Response (+0.5 dB, -3 dB)</b>	15Hz-100kHz
<b>Damping Factor (20-20,000 Hz, 8 ohms)</b>	1000
<b>Speaker Impedance</b>	4 ohms minimum
<b>Signal to Noise Ratio (IHF A network)</b>	116 dB
<b>Input Impedance/Sensitivity</b>	32 k Ohms/1.5 volt
<b>Power Requirements</b>	120 Volts, 60 Hz (U.S. version) 230 Volts, 50 Hz (European version)
<b>Power Consumption</b>	550 Watts
<b>Dimensions (W x H x D)</b>	432 x 139 x 400 mm 17 <sup>15</sup> / <sub>16</sub> x 5 <sup>1</sup> / <sub>2</sub> x 15 <sup>3</sup> / <sub>4</sub> in
<b>Weight (net)</b>	16.8 kg, 37.03 lb.

## THE ROTEL CO., LTD

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

Serial. NO.	3061001~
Beginning	7491200



SYMBOL	PARTS NO.	DESCRIPTION
<b>016 X-1177F01T-02T PCB ASSY</b>		
	501 X-1177-C	PCB ASSY (MAIN L CH/ R CH)
H35-38	019 TO-126	MICA SHEET TBM-51W-15 #9524
Q613,614	033 A1209-ST	TRANSISTOR 2SA1209-ST
Q615,616	033 C2911-ST	TRANSISTOR 2SC2911-ST
Q607-610	033 TA1016-FG	TRANSISTOR 2SA1016KAA-FG
Q611,612	033 TA1016-FG	TRANSISTOR 2SA1016KAA-FG
Q621,622	033 TA1208-RST	TRANSISTOR 2SA1208AE-RST
Q601-604	033 TC2362-FG	TRANSISTOR 2SC2362KAA-FG
Q605,606	033 TC2362-FG	TRANSISTOR 2SC2362KAA-FG
Q619,620	033 TC2910-RST	TRANSISTOR 2SC2910AE-RST
D609-612	034 T1N4004-TB	DIODE 1N4004-F
D601-608	034 T1N4148-86	DIODE 1N4148TAP-50
TH601,602	034 TTC-503	THERMISTOR 50K
FU601-604	036 5ST8-R	FUSE 250V8A
C611,612	041 35ZA10MTZ	ELECTROLYTIC CAPACITOR 35V10uF
C601,602	041 35ZA4R7MTZ	ELECTROLYTIC CAPACITOR 35V4.7uF
C607,608	041 EEUFC1E101SB	ELECTROLYTIC CAPACITOR 25V100uF
C623-626	041 VZ2A102	ELECTROLYTIC CAPACITOR 100V1000uF
C609,610	044 FSC160V331H	STYROL CAPACITOR 160V330pF
C627,628	044 FSC160V471H	STYROL CAPACITOR 160V470pF
C613-616	044 FSC160V561H	STYROL CAPACITOR 160V560pF
C603,604	044 TFKP2-2A681H	P.P CAPACITOR FKP2-100V680pF
VR601,602	051 SFR001-222	SEMI-FIXED RESISTOR VM6CKPH1S-2.2K
R663,664	054 1WS10JF	MOF RESISTOR 1W 10
R659-662	054 2WS6.8KJF	MOF RESISTOR 2W 6.8K
R635-654	054 MPC78-0.22F	SQUARE TYPE RESISTOR 2W 0.22
R665,666	054 TMF3300	METAL FILM RESISTOR 1/4W 330
R631,632	054 TMFR4001K	METAL FILM RESISTOR 1/4W 1K
R607-610,615-618	054 TMFR401K5	METAL FILM RESISTOR 1/4W 1.5K
C609,610	054 TMFR4033K	METAL FILM RESISTOR 1/4W 33K
R627,628	054 TMFR403K9	METAL FILM RESISTOR 1/4W 3.9K
R621,622	054 TMFR4047K	METAL FILM RESISTOR 1/4W 47K
R633,634	054 TMFR4047R	METAL FILM RESISTOR 1/4W 47
R625,626	054 TMFR406K8	METAL FILM RESISTOR 1/4W 6.8K
R623,624,629,630	054 TMFR4100R	METAL FILM RESISTOR 1/4W 100
R657,658	054 TMFR415K4	METAL FILM RESISTOR 1/4W 15.4K
R611,612,619,620,667-670	054 TMFR4220R	METAL FILM RESISTOR 1/4W 220
R613,614	054 TMFR4560R	METAL FILM RESISTOR 1/4W 560
R601,602	054 TRC55C1001F	RESISTOR RC55C 1K
R603,604	054 TRC55C3302F	RESISTOR RC55C 33K
R605,606	054 TRC55C4700F	RESISTOR RC55C 470
PJ602	066 4TR-2487#7	1P PIN JACK (RED)
PJ601	066 4TR-2487#8	1P PIN JACK (WHT)
K601-604	068 4TR-2787#3	PC JOINER CONNECTOR BASE
TP1,TP3 (TP2,TP4)	068 C-3683#1	PCB TERMINAL 2P P5.0 TP WD-01 I-502NA
(Q617,618)	068 C-4349A04	TR HOUSING WITH WIRE
OUT1,OUT2	069 C-4446A00	PCB TERMINAL Y-105
<b>016 X-1237A02-06 PCB ASSY</b>		
	501 X-1237-B	PCB ASSY (BALANCED, MUTE)
Q901,902	019 TO-126	MICA SHEET TBM-51W-15 #9524
IC501,502	031 OPA134PA	IC (OPE AMP)

SYMBOL	PARTS NO.	DESCRIPTION
Q801,802,803	032 TC2362-FG	TRANSISTOR 2SC2362KAA-FG
Q902	033 B631-EF	TRANSISTOR 2SB631K-EF
Q901	033 D600-EF	TRANSISTOR 2SD600K-EF
D802	034 RD10EB	ZENER DIODE RD10E-AZ(B3)
D901,902	034 RD16EB	ZENER DIODE RD16E-AZ(B3)
D803,804,805,806	034 T1N4004-TB	DIODE 1N4004-F
D801,807,808	034 T1N4148-86	DIODE 1N4148TAP-50
C505-508	041 EEUFC1E101SB	ELECTROLYTIC CAPACITOR 25V100uF
C901,902	041 EEUFC1E471B	ELECTROLYTIC CAPACITOR 25V470uF
C802	041 TUTES1E101-7TF	ELECTROLYTIC CAPACITOR 25V100uF
R803	041 TUTES1H010-7TF	ELECTROLYTIC CAPACITOR 50V1uF
C801,804	041 TUTES2A220-7TF	ELECTROLYTIC CAPACITOR 100V220uF
C803	041 TUTES2A221-7TS	ELECTROLYTIC CAPACITOR 100V220uF
C501,502,503,504	044 S50V100PJ	STYROL CAPACITOR 50V100pF
R804	053 CR14-224J-A	CARBON RESISTOR 1/4W 220K
R803,805,807,811,812	053 CR14-104J-A	CARBON RESISTOR 1/4W 100K
R813,814	053 CR14-183J-A	CARBON RESISTOR 1/4W 18K
R817,818	053 CR14-273J-A	CARBON RESISTOR 1/4W 27K
R815,816	053 CR14-332J-A	CARBON RESISTOR 1/4W 3.3K
R806	053 CR14-333J-A	CARBON RESISTOR 1/4W 33K
R901,902	054 1WS2.2KJF	MOF RESISTOR 1W 2.2K
R903,904	054 1WS5.6KJF	MOF RESISTOR 1W 5.6K
R801,809	054 1WS6.8KJF	MOF RESISTOR 1W 6.8K
R509,510	054 TMFR4001K	METAL FILM RESISTOR 1/4W 1K
R505,506,507,508	054 TMFR4010K	METAL FILM RESISTOR 1/4W 10K
R501,502,503,504	054 TMFR4022K	METAL FILM RESISTOR 1/4W 22K
RY901	063 EA2-24NU	RELAY
S901	064 4TR-2341	SLIDE SWITCH SS010-P022BAb-PA9
DJ1,DJ2	066 C-4575B01	3P CANNON JACK YKF52-5006V
K802	068 4TR-2787#3	PC JOINER CONNECTOR BASE 3P
K507,508	068 4TR-2787#5	PC JOINER CONNECTOR BASE 5P
CON1,CON3,CON4,CON5	068 C-3683#1	WRAPPING TERMINAL 2P
CON6	068 C-3683#3	WRAPPING TERMINAL 4P
CON2	068 C-4422A01	WRAPPING TERMINAL 2P
D002	068 TD02SG	2P CONNECTOR WAFER
1,2	069 C-4370A00	PCB TERMINAL Y-102
	<b>016 X-1283B00 PCB ASSY</b>	
	501 X-1283-D	PCB ASSY (POWER SWITCH)
C001	019 C-4357A03	CAPACITOR COVER (S) H=22
C001	044 DE2E3KH472MA3B	SPARK KILLER 4700pF
S901	061 C-4176A07	POWER SWITCH TV-8
	<b>016 X-1291E01-02 PCB ASSY</b>	
	501 X-1291	PCB ASSY (TRIGGER, SUB TRANSFORMER)
T101	022 T-1075N02	SUB TRANSFORMER
IC101	031 PC817X2	IC (PHOTO COUPLER) PC817X2J000F
Q101	032 TC3708-ST	TRANSISTOR 2SC3708AA-ST
D102,103,104,106	034 T1N4148-86	DIODE 1N4148TAP-50
D105	034 TRD12JST1	ZENER DIODE 12V (AB2)
D101	034 W02M	POWER DIODE 200V1.5A
F101	036 5ST500-R	FUSE 250V500MA
F903	036 R251-250L	FUSE F250MA
C101	041 TUTES1E471-7TS	ELECTROLYTIC CAPACITOR 25V470uF

SYMBOL	PARTS NO.	DESCRIPTION
C102	044 DE1307E472M	SPARK KILLER 4700pF
(R103)	053 CR14-152J-A	CARBON RESISTOR 1/4W 1.5K
R105	053 CR14-221J-A	CARBON RESISTOR 1/4W 220
R102	053 CR14-333J-A	CARBON RESISTOR 1/4W 33K
(R103)	053 CR14-472J-A	CARBON RESISTOR 1/4W 4.7K
R101	054 1WS120JF	MOF RESISTOR 1W 120
R104	054 1WS1KJF	MOF RESISTOR 1W 1K
RY101	063 OZT-SS-112LM1	RELAY 12V TV8
S101	064 C-4613A01	TOGGLE SWITCH 200MDP1T2B2M7RE
TJ101,TJ102	065 YKB21-5406N	3.5Φ JACK (ST)
K102	068 B2B-EH	2P CONNECTOR WAFER
K101	068 B3B-EH	3P CONNECTOR WAFER
AC3.AC4	068 C-3681#1	WRAPPING TERMINAL 2P
AC1.AC5,AC2	068 C-4422A01	WRAPPING TERMINAL 2P P=10
<b>HEAT SINKER ASSY</b>		
	501 X-1177-C	HEAT SINKER ASSY
	017 PX3-06A00	HEAT SINKER BOARD
	019 TO-3P	MICA SHEET TBM-51W-15 #9043
Q617,618	032 D1953	TRANSISTOR 2SD1953
Q623-632	033 A1492-OPY	TRANSISTOR 2SA1492-OPY
Q633,634	033 B817P-DE	TRANSISTOR 2SB817P-DE
Q637-646	033 C3856-OPY	TRANSISTOR 2SC3856-OPY
Q635,636	033 D1047P-DE	TRANSISTOR 2SD1047P-DE
<b>OTHERS</b>		
	011 FP-530-B	BLACK PANEL ASSY
	011 FP-530-S	SILVER PANEL ASSY
	011 RV4-02A05	H/S PANEL
	012 RV4-09A00	PUSH BUTTON 14Φ (BLACK)
	012 RV4-09A01	PUSH BUTTON 14Φ (SILVER)
	013 RV4-05A00	PANEL HOLDER (BLACK)
	013 RV4-05A01	PANEL HOLDER (SILVER)
	014 RV3-07B01	UPPER COVER
	015 RP-381D	REAR CHASSIS
	019 4TSH-19#2	PLASTIC FOOT 50Φ (BLACK)
	019 RV4-10A00	14Φ BUTTON RING (BLACK)
	019 RV4-10A01	14Φ BUTTON RING (SILVER)
T001	022 T-1037W04	POWER TRANSFORMER
D01,02	034 BR154	POWER DIODE 400V15A
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLU) 1X5
F001*	036 3AG125V12A	LONG FUSE 125V12A (for 120V)
F001*	036 5ST8	MINI FUSE 250V 8A (for 230V)
C002,003,004,005	041 ALS30S1077XX	EELECTROLYTIC CAPACITOR 80V15000uF
C691,692	044 KT18-2A104K	M.P CAPACITOR MKT1818-410/015
R001	054 2WS100JF	MOF RESISTOR 2W 100
R691.692	054 2WS10JF	MOF RESISTOR 2W 10
	067 C-4717A01	SPEAKER TERMINAL (RED)
	067 C-4717A02	SPEAKER TERMINAL (BLK)
(F001)*	069 C-4200A01	FUSE HOLDER LONG for 120V
(F001)*	069 C-4595A00	FUSE HOLDER MINI for 230V
	069 C-4637A00	AC 3P INLET 0707-1-CW (FASTON)
	072 4TR-2489	3.5mm PLUG SHIELD CORD (12V TRIG)

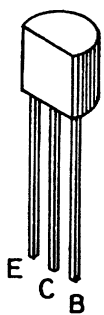
SYMBOL	PARTS NO.	DESCRIPTION
	072 C-4392A04	AC CORD SET (SJT AWG14) for U.S.A.
	072 C-4393A04	AC CORD SET for EUROPE
	072 C-4423A04	AC CORD SET for AUSTRALIA
	072 C-4639A02	AC CORD SET for U.K.
	081 RV4-15A03	INSIDE CARTON
	081 RV4-16A03	SHIPPING CARTON
	081 ZE-200	ETHAFOAM MOULDING
	082 OMRB-1080-61	OWNER'S MANUAL

Instruments : DC millivoltmeter

Notes : Prior to Bias Adjustment, run about 5minutes with rated output(8ohms) and warm up Power Transistor and Heat Sink. Set input off.

Step	Coupling	Location	Adjust	Adjust for
1	TP 3 - TP 1	X-1177-01 PCB	VR601	DC millivoltmeter reads 7mV
2	TP 4 - TP 2	X-1177-02 PCB	VR602	

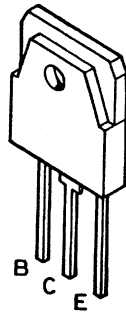
## Case Outline



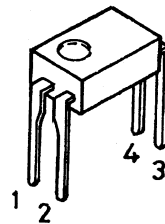
2SA1016K  
2SA1208  
2SC2362K  
2SC3708  
2SC2910



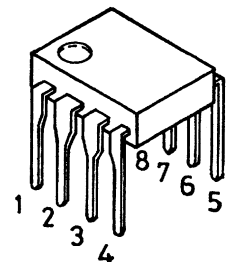
2SB631K  
2SA1209  
2SD1953  
2SD600K  
2SC2911



2SA1492  
2SB817  
2SC3856  
2SD1047



PC817B



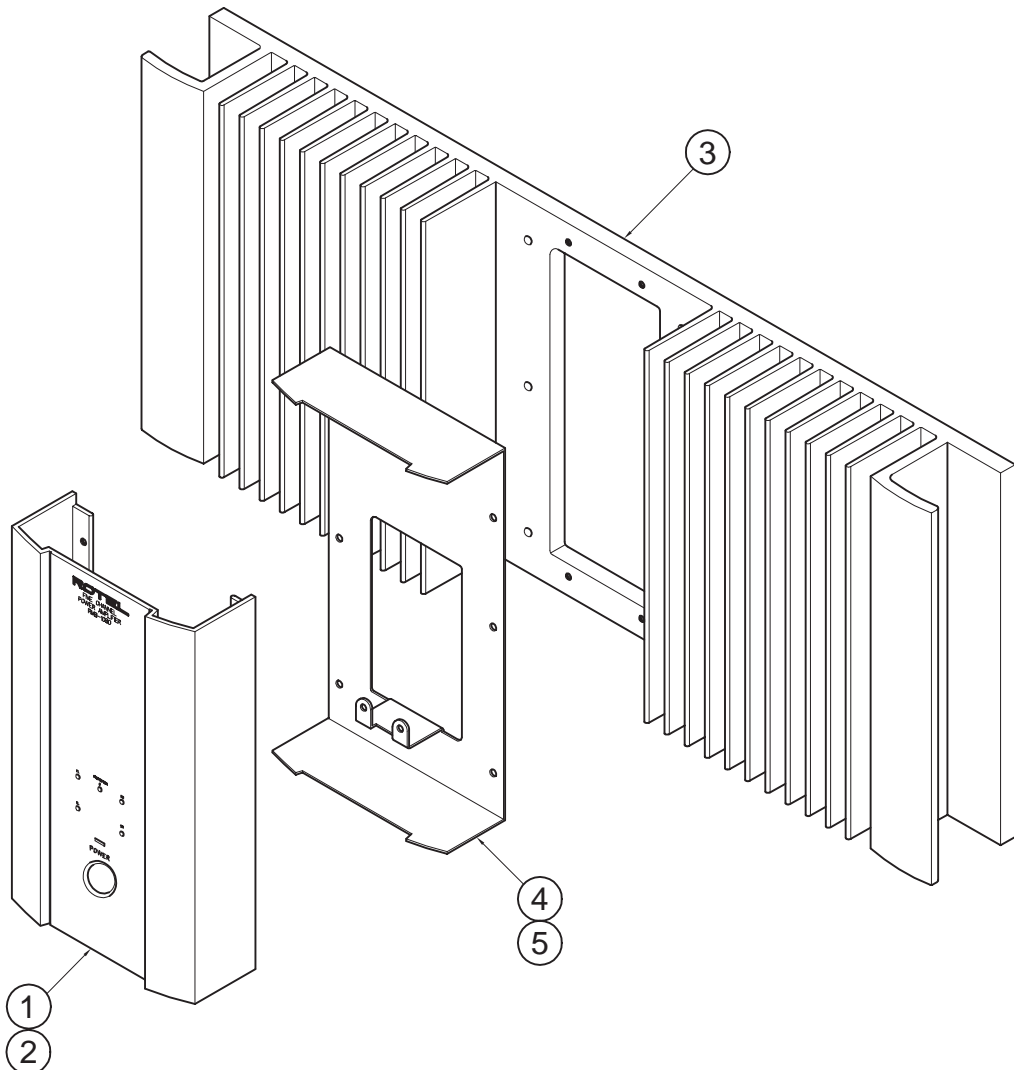
AD711JN  
OPA134PA

# Addendum List for Black and Silver

RB1080/ V02/ V03

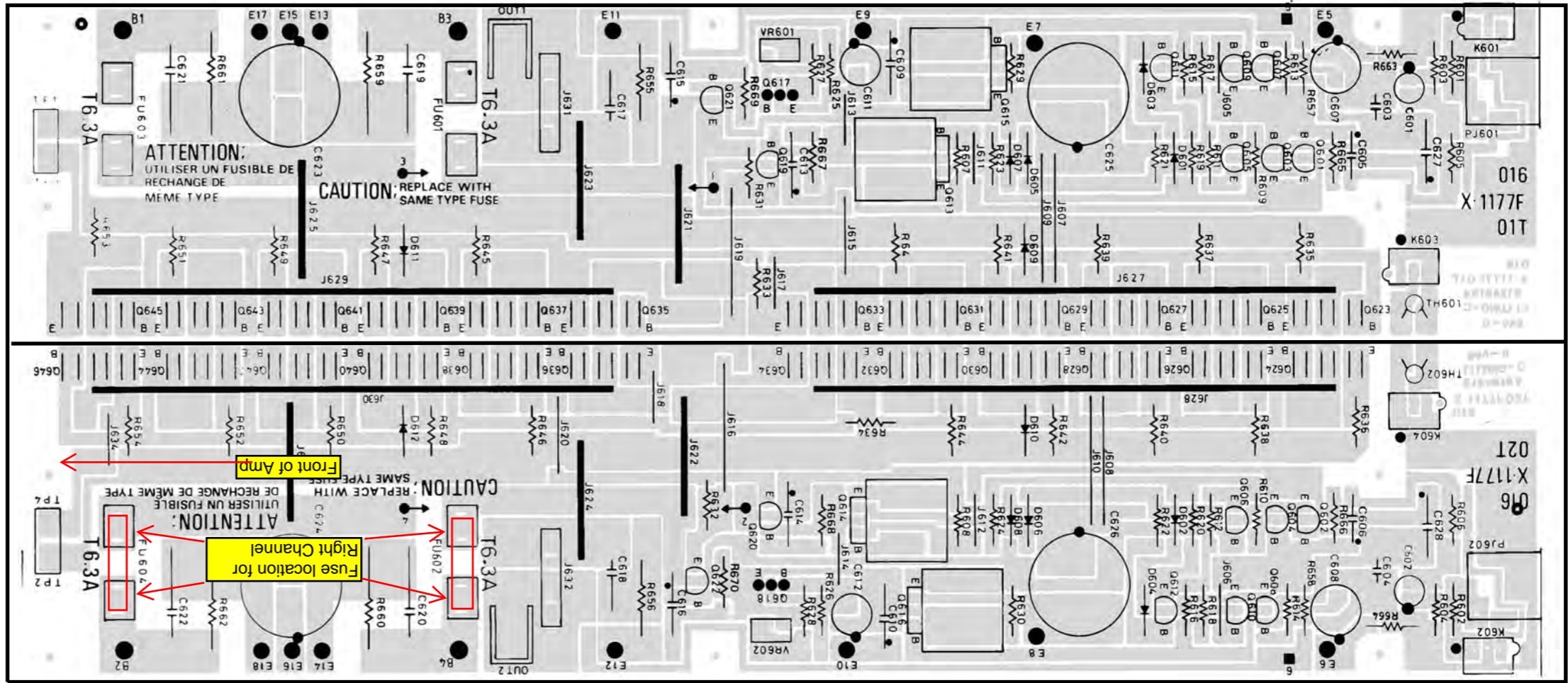
SYMBOL	PARTS	DESCRIPTION
①	011 FP-530-B	BLACK PANEL ASSY
②	011 FP-530-S	SILVER PANEL ASSY
③	011 RV4-02A05	H/S PANEL
	012 RV4-09A00	PUSH BUTTON 14F (BLK)
	012 RV4-09A01	PUSH BUTTON 14F (SLV)
④	013 RV4-05A00	SUB PANEL CHASSIS (BLK)
⑤	013 RV4-05A01	SUB PANEL CHASSIS (SLV)
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLU) 1X5

Panel Assy is included:  
 Knob Ring  
 Power buttons  
 LED

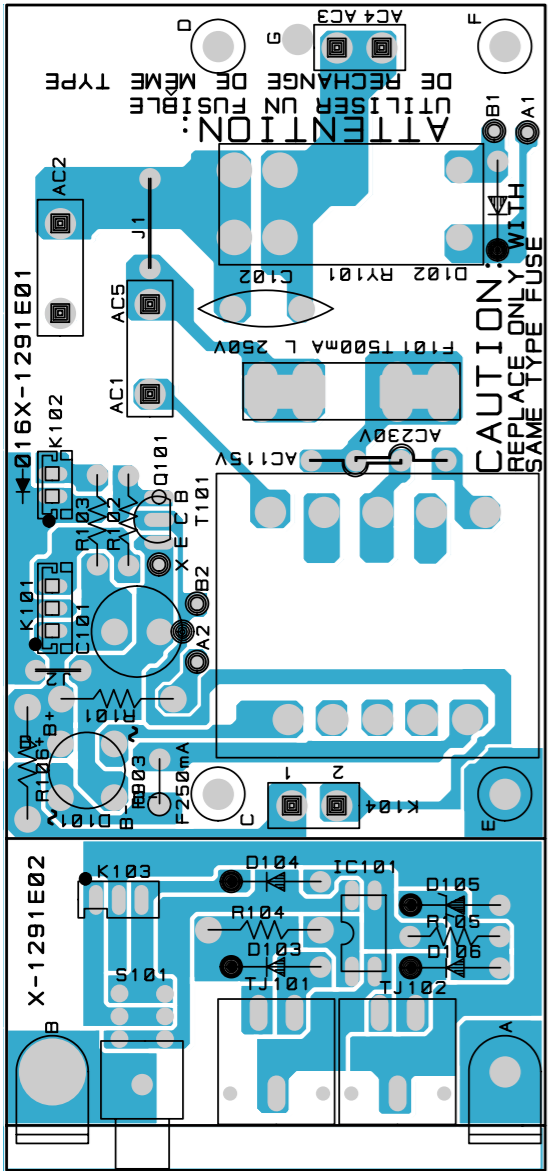




MAIN L CH/ R CH PCB 016 X-1177F01~02

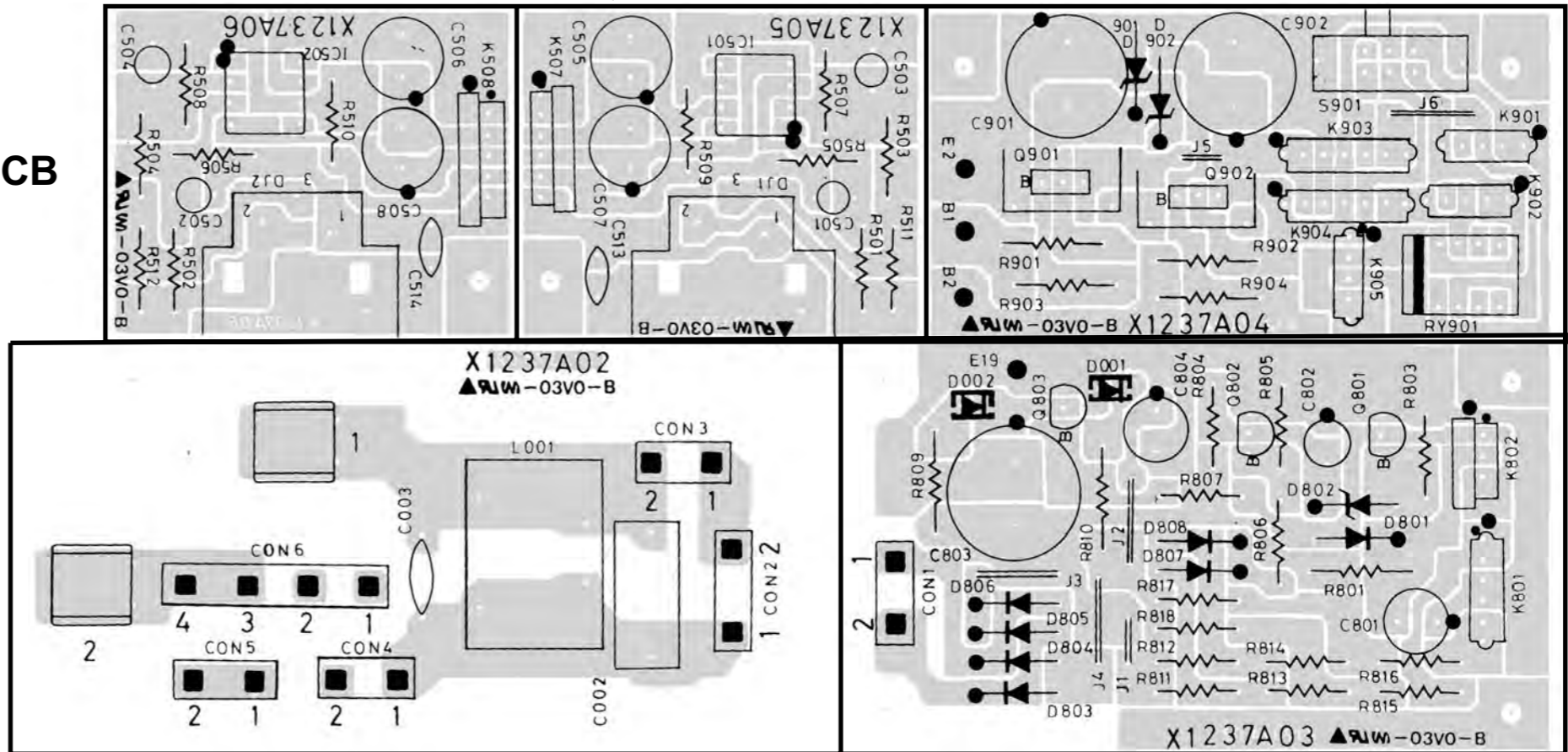
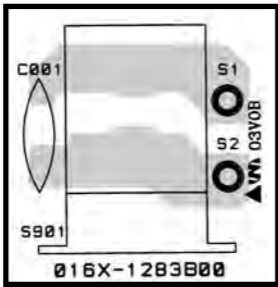


TRIGGER, SUB TRANSFORMER PCB 016 X-1291E01~02

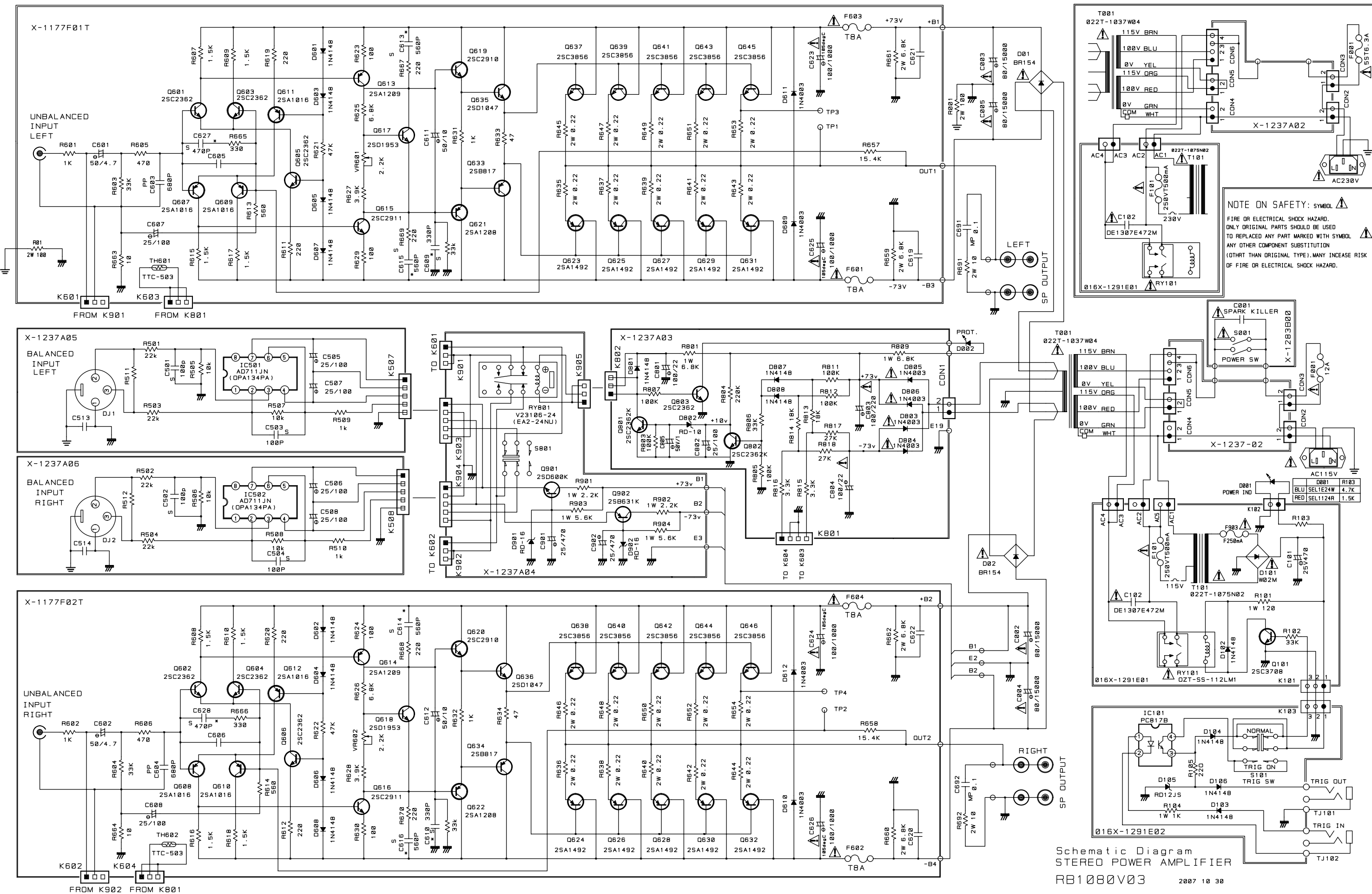


BALANCED, MUTE PCB 016 X-1237A02~06

POWER SWITCH PCB 016 X-1283B00







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

Schematic Diagram  
STEREO POWER AMPLIFIER  
RB1080V03 2007 10 30