



# Technical Manual

# STEREO POWER AMPLIFIER RB-06

# Temporary

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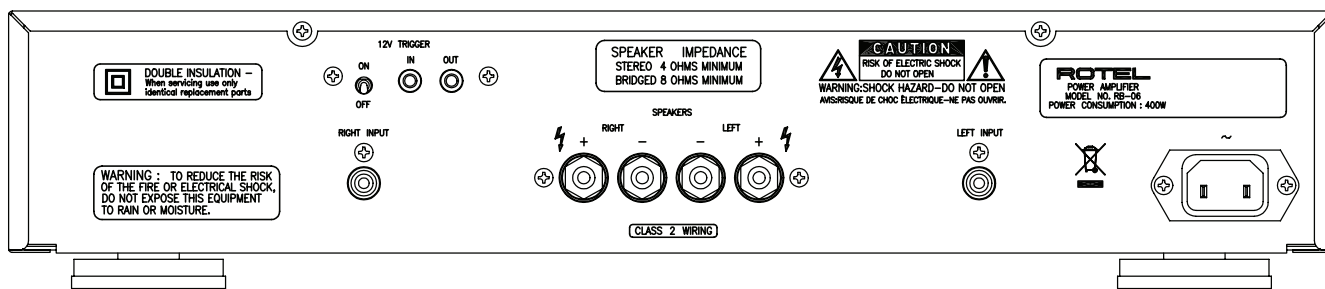
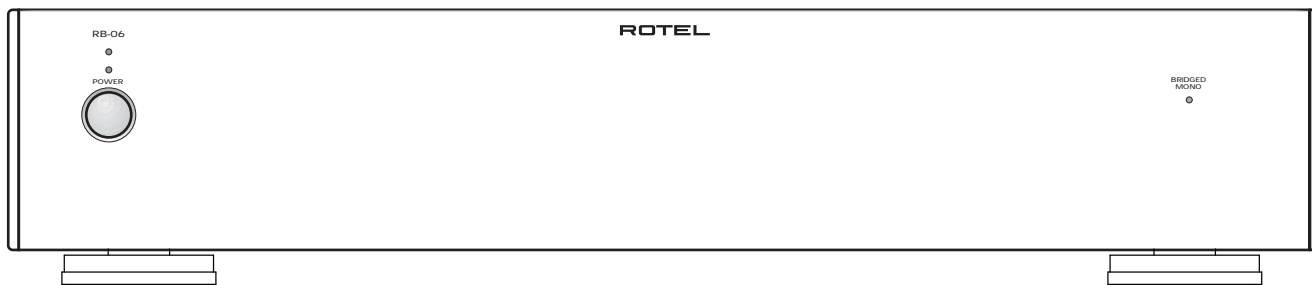
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### Specifications

<b>Continuous Power Output</b> (20-20 kHz, < 0.03%, 8 ohms)	70 watts/ch
<b>Bridged Mono Power Output</b> (20-20 kHz, < 0.1%, 4 ohms)	180 watts (200 watts at 1kHz)
<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 ( ±1dB)</b>	10Hz-100kHz
<b>Damping Factor (20-20,000 Hz, 8 ohms)</b>	500
<b>Speaker Impedance (Normal mode)</b>	4 ohms minimum
<b>Signal to Noise Ratio (IHF A network)</b>	116 dB
<b>Input Impedance/Sensitivity</b>	33 k Ohms/1.0 volt
<b>Power Requirements</b>	
<b>USA Version</b>	120 Volts, 60 Hz
<b>European Version</b>	230 Volts, 50 Hz
<b>Power Consumption</b>	250 Watts
<b>Dimensions (W x H x D)</b> 17 <sup>1</sup> / <sub>8</sub> x 3 <sup>5</sup> / <sub>8</sub> x 13 <sup>3</sup> / <sub>16</sub> ins.	437 x 92 x 334 mm
<b>Panel Height</b>	80 mm / 2 <sup>5</sup> / <sub>32</sub> "
<b>Weight (net)</b>	7.5 kg, 16.54 lb.

**THE ROTEL CO., LTD**  
 SHINSEN-BLD. 4F 10-10 SHINSEN-CHO, SHIBUYA-KU,  
 TOKYO 150-0045, JAPAN

Serial. NO. Beginning
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SYMBOL	PARTS NO.	DESCRIPTION
<b>016 X-1291E01-02 PCB ASSY</b>		
	501 X-1291-F	PCB ASSY (TRIGGER CIRCUIT)
T101	022 T-1075NO2	SUB TRANSFORMER
IC101	031 PC817X2	IC (PHOTO COUPLER) PC817X2
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	FUSE 250V500mA
F903	036 R251-250L	FUSE (AXIAL) F250MA R251.250MRT1L
C101	041 TUTES1E471-TS	ELECTROLYTIC CAPACITOR 25V470uF
C102	044 DE1310E472M-KH	SPARK KILLER 4700pF
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 DC12V 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
AC3.AC4	068 C-3681#1	PCB TERMINAL 2P P=5 TP WD-01 I-502NA
AC1.AC5,AC2	068 C-4422A01	PCB TERMINAL 2P P=10 TP WF-21 I-102NA
<b>016 X-1437A01-02 PCB ASSY</b>		
	501 X-1437	PCB ASSY (MAIN)
(C001)	019 C-4357A03	CAPACITOR COVER (S) H=22
IC661	031 MPC1237HA	IC (PROTECTION) μPC1237HA
Q666	032 TA1016-FG	TRANSISTOR 2SA1016KAA-FG
Q663-665	032 TA608-FG	TRANSISTOR 2SA608KAA-FG
Q661,662	032 TC2362-FG	TRANSISTOR 2SC2362KAA-FG
Q613,614	033 B631-EF	TRANSISTOR 2SB631K-EF
Q615,616	033 D600-EF	TRANSISTOR 2SD600K-EF
Q607-612	033 TA1016-FG	TRANSISTOR 2SA1016KAA-FG
Q621,622	033 TA1376-LK	TRANSISTOR 2SA1376A(T.P)-LK
Q601-606	033 TC2362-FG	TRANSISTOR 2SC2362KAA-FG
Q619,620	033 TC3478-LK	TRANSISTOR 2SC3478A(T.P)-LK
D901,902	034 BR84	POWER DIODE 8A400V
D609-612,805,806	034 T1N4004-TB	DIODE 1N4004-F (AMMO)
D601-608,661-663,664,665	034 T1N4148-86	DIODE 1N4148TAP-50
TH661,662	034 TTC-503	THERMISTOR 50K
F901,902	036 5ST6.3	FUSE 250V6.3A
C611,612	041 35ZA10MTZ	ELECTROLYTIC CAPACITOR 35V10uF
C601,602	041 35ZA4R7MTZ	ELECTROLYTIC CAPACITOR 35V4.7uF
C607,608	041 50ZL100M	ELECTROLYTIC CAPACITOR 50V100uF
C909,910,911,912	041 ALC20S1022DF	ELECTROLYTIC CAPACITOR 50V8200uF
C663	041 TUTES1E101-7TF	ELECTROLYTIC CAPACITOR 25V100uF
C665	041 TUTES1E470-7TF	ELECTROLYTIC CAPACITOR 25V47uF
C664	041 TUTES1H010-7TF	ELECTROLYTIC CAPACITOR 50V1uF
C661,662	041 TUTES1H100-7TF	ELECTROLYTIC CAPACITOR 50V10uF
C803	041 TUTES1H4R7-7TF	ELECTROLYTIC CAPACITOR 50V4.7uF
C901-908	043 TC500V103	CERAMIC CAPASITOR 500V0.01uF
C001	044 DE1307E472M	SPARK KILLER 4700pF
C623,624	044 KT18-2A104K	M.P CAPASITOR MKT1818-410/015
C605,606	044 PP630V220PF	PP CAPASITOR 464-42201(F) 630V220pF
C603,604,609,610	044 PP630V330PF	PP CAPASITOR 464-43301(F) 630V330pF
C613-618	044 PP630V470PF	PP CAPASITOR 464-44701(F) 630V470pF
VR601,602	051 SFR002-222	SEMI-FIXED RESISTOR VM6CKPV1S-2.2K
R686	053 CR14-153J-A	CARBON RESISTOR 1/4W 15K

SYMBOL	PARTS NO.	DESCRIPTION
R687	054 1WS1.2KJF	MOF RESISTOR 1W 1.2K
R819	054 1WS15KJF	MOF RESISTOR 1W 15K
R647,648	054 2WS10JF	MOF RESISTOR 2W 10
R635,636,639-642,645,646	054 NIR2-0.22JF	NON-INDUCTIVE RESISTOR 2W 0.22
R681,682	054 TMF16-1003	METAL FILM RESISTOR 1/6W 100K
R667,668	054 TMF16-1201	METAL FILM RESISTOR 1/6W 1.2K
R679,680	054 TMF16-1203	METAL FILM RESISTOR 1/6W 120K
R665,666,683,685	054 TMF16-1502	METAL FILM RESISTOR 1/6W 15K
R661,662,675,676	054 TMF16-2702	METAL FILM RESISTOR 1/6W 27K
R673,674	054 TMF16-4701	METAL FILM RESISTOR 1/6W 4.7K
R669,670	054 TMF16-4702	METAL FILM RESISTOR 1/6W 47K
R684	054 TMF16-5602	METAL FILM RESISTOR 1/6W 56K
R671,672,677,678	054 TMF16-6800	METAL FILM RESISTOR 1/6W 680
R663,664	054 TMF16-8203	METAL FILM RESISTOR 1/6W 820K
R631,632	054 TMFR4001K	METAL FILM RESISTOR 1/4W 1K
R603,604,660	054 TMFR4012K	METAL FILM RESISTOR 1/4W 12K
R609,610,617,618	054 TMFR401K5	METAL FILM RESISTOR 1/4W 1.5K
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
R623,624,629,630	054 TMFR4100R	METAL FILM RESISTOR 1/4W 100
R611,612,619,620,655-658	054 TMFR4220R	METAL FILM RESISTOR 1/4W 220
R653,654	054 TMFR4330R	METAL FILM RESISTOR 1/4W 330
R651,652	054 TPR9372-012K	AUDIO RESISTOR 12K
R613,614	054 TPR9372-560R	AUDIO RESISTOR 560
R607,608,615,616	054 TRC55C1501F	METAL FILM RESISTOR 1.5K
R601,602,605,606	054 TRC55C4700F	METAL FILM RESISTOR 470
R625,626	054 TRC55C6801F	METAL FILM RESISTOR 6.8K
S001	061 C-4176A08	POWER SWITCH PS3-22SPA-P7CZ TV-8 (PCB)
RY661	063 DH2TU-24	RELAY DH24D2-OT(M)
PJ2	066 4TR-2487#7	1P PIN JACK AU (RED)
PJ1	066 4TR-2487#8	1P PIN JACK AU (WHT)
SP1	067 C-4493B00	4P SPEAKER TERMINAL (W/HOLE) RBBR
TP1,TP2	068 C-3683#1	PCB TERMINAL 2P P7.5 TP WE-11 I-752NA
CON1	068 C-3683#2	PCB TERMINAL 3P P7.5 TP WE-12 I-753NA
CON3,CON4	068 C-3683#3	PCB TERMINAL 4P P7.5 TP WE-13 I-754NA
D002	068 C-3963#21	LED WIRE 200mm (BRN/BLK)
D003	068 C-3963#24	LED WIRE 200mm (YEL/BLK)
CON2	068 C-4422A01	PCB TERMINAL 2P P10 TP WF-21 I-102NA
S601,602,603	068 TD03SG	CONNECTOR POST 3P
	<b>HEAT SINKER ASSY</b>	
	505 HSRB-06	PCB ASSY
	017 RM4-18B00	HEAT SINKER BOARD
	019 TO-126	INSULATION SHEET #9524
	019 TO-3P	INSULATION SHEET #9043
Q625,Q626	032 A1837	TRANSISTOR 2SA1837
Q623,Q624	032 C4793	TRANSISTOR 2SC4793
Q617,Q618	032 D1953	TRANSISTOR 2SD1953
Q633,Q634,Q637,Q638	033 B817P-DE	TRANSISTOR 2SB817P-DE
Q627,Q628,Q631,Q632	033 D1047P-DE	TRANSISTOR 2SD1047P-DE
	<b>OTHERS</b>	
	011 FP-601-B	BLACK PANEL ASSY
	011 FP-601-S	SILVER PANEL ASSY
	012 RV4-09A00	PUSH BUTTON 14Φ (BLACK)
	012 RV4-09A01	PUSH BUTTON 14Φ (SLIVER)
	014 C-4550A08	UPPER COVER(BLACK)
	014 C-4550A33	UPPER COVER(SLIVER)
	014 C-4906A01	ORNAMENT SIDE BOARD H=80mm (SILVER)
	014 C-4906A02	ORNAMENT SIDE BOARD H=80mm (BLACK)

# Parts List 3/3

RB-06

SYMBOL	PARTS NO.	DESCRIPTION
T001 D001,D002,D003	015 RP-452	REAR CHASSIS
	019 4TR-2823#2	PLASTIC FOOT 24Φ (ABS)
	019 4TSH-19#2	PLASTIC FOOT 50Φ (BLACK)
	022 T-1055U01	POWER TRANSFORMER
	034 SELK1E12W	LED 2F (BLUE)
	069 C-4629A01	AC 2P INLET 6102.3100 (WIRING)
	072 4TR-2489	3.5mm PLUG SHIELD CORD
	072 C-4621A03	AC CORD SET (SJT AWG16) for USA
	072 C-4622A02	AC CORD SET for AUSTRALIA
	072 C-4623A02	AC CORD SET for U.K.
	072 C-4624A03	AC CORD SET for EUROPE
	081 VY3-02A00	INSIDE CARTON
	081 VY3-03A00	SHIPPING CARTON
	081 ZE-210	ETHAFOAM MOULDING
082 OMRB-06	OWNER'S MANUAL	

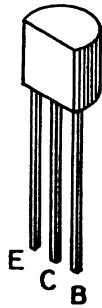
## Adjustment

Instruments : DC milli-voltmeter

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	TP1	X-1437-01 PCB	VR601	DC milli-voltmeter reads 4mV
2	TP2	X-1437-01 PCB	VR602	

## Case Outlines



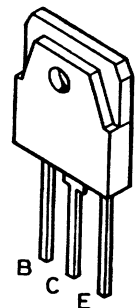
2SA608K  
2SA1016K  
2SA1376A  
2SC536K  
2SC2362K  
2SC3478A



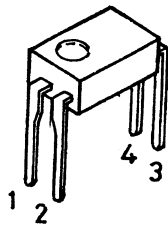
2SB631K  
2SD1953  
2SD600K



2SA1837  
2SC4793

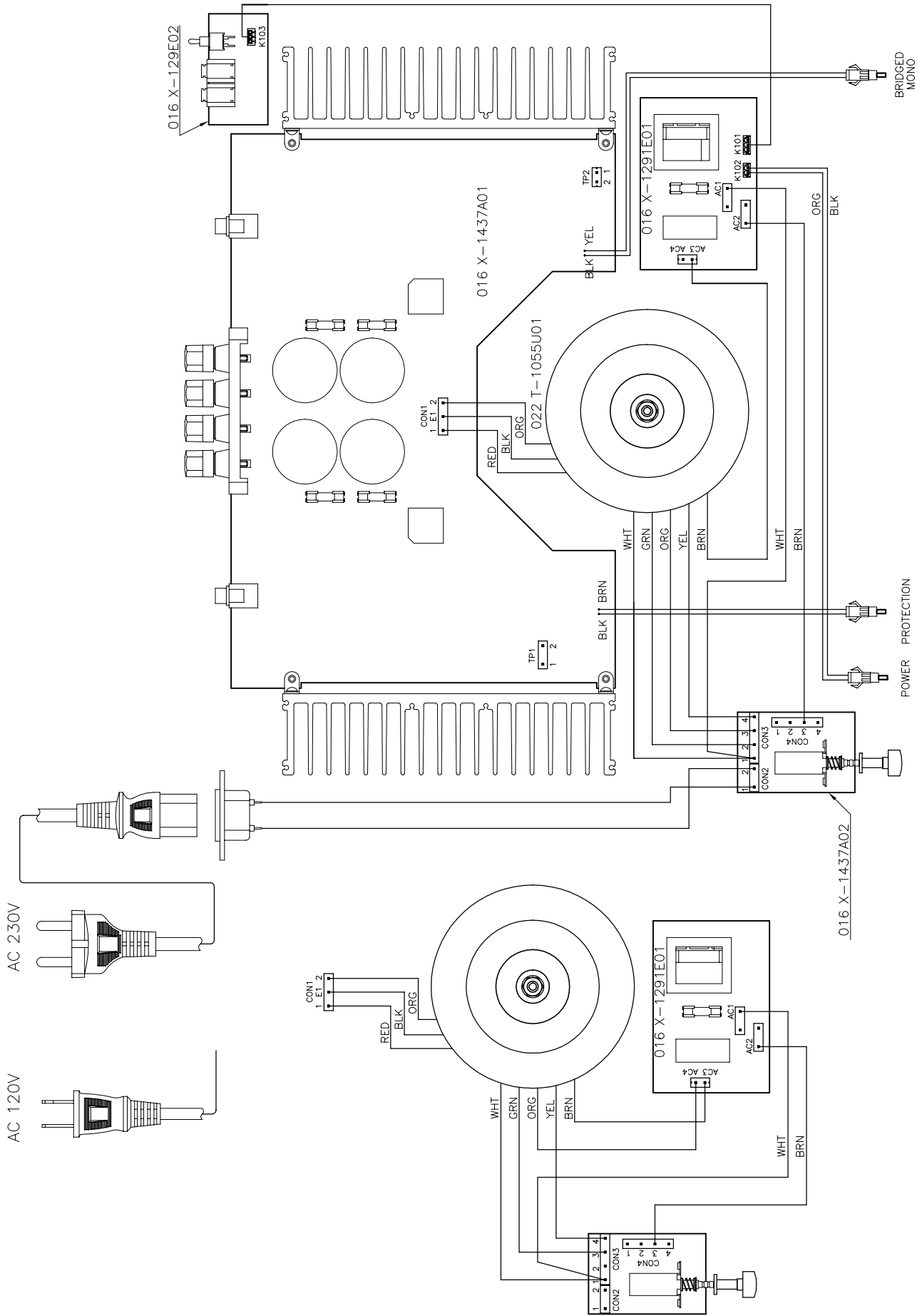


2SB817  
2SD1047



PC817X2

# Wiring Diagram

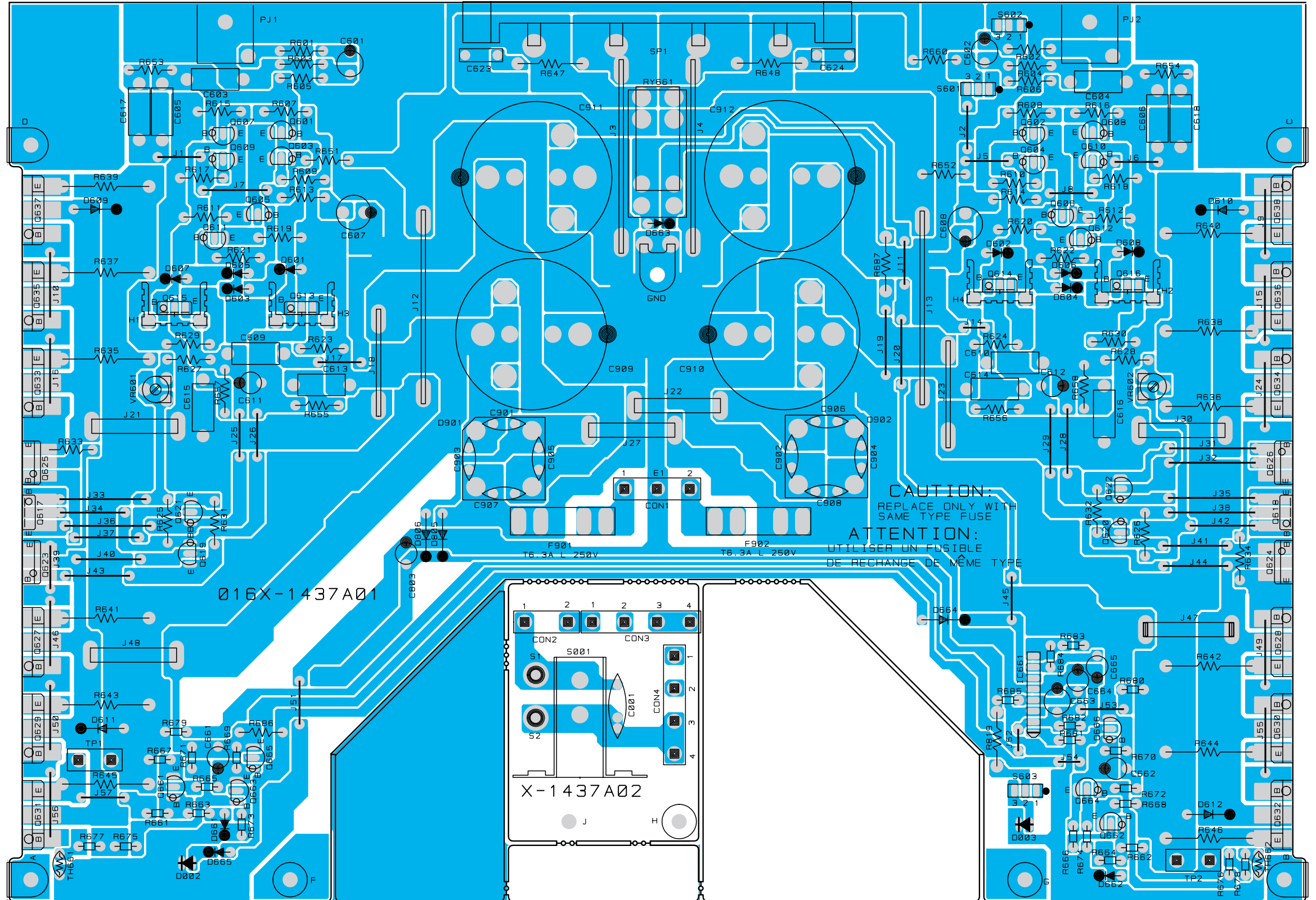
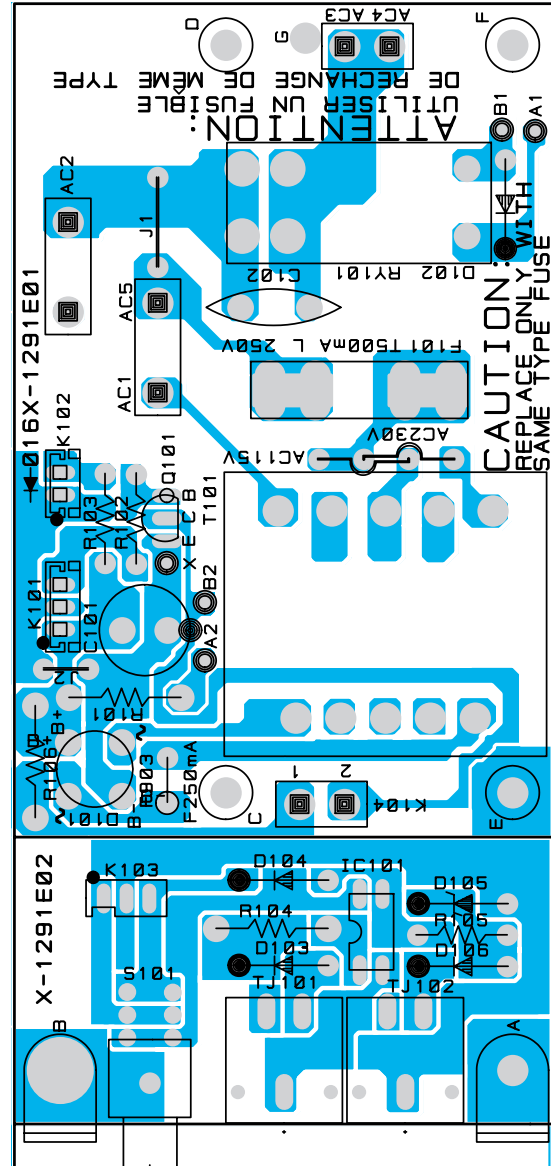


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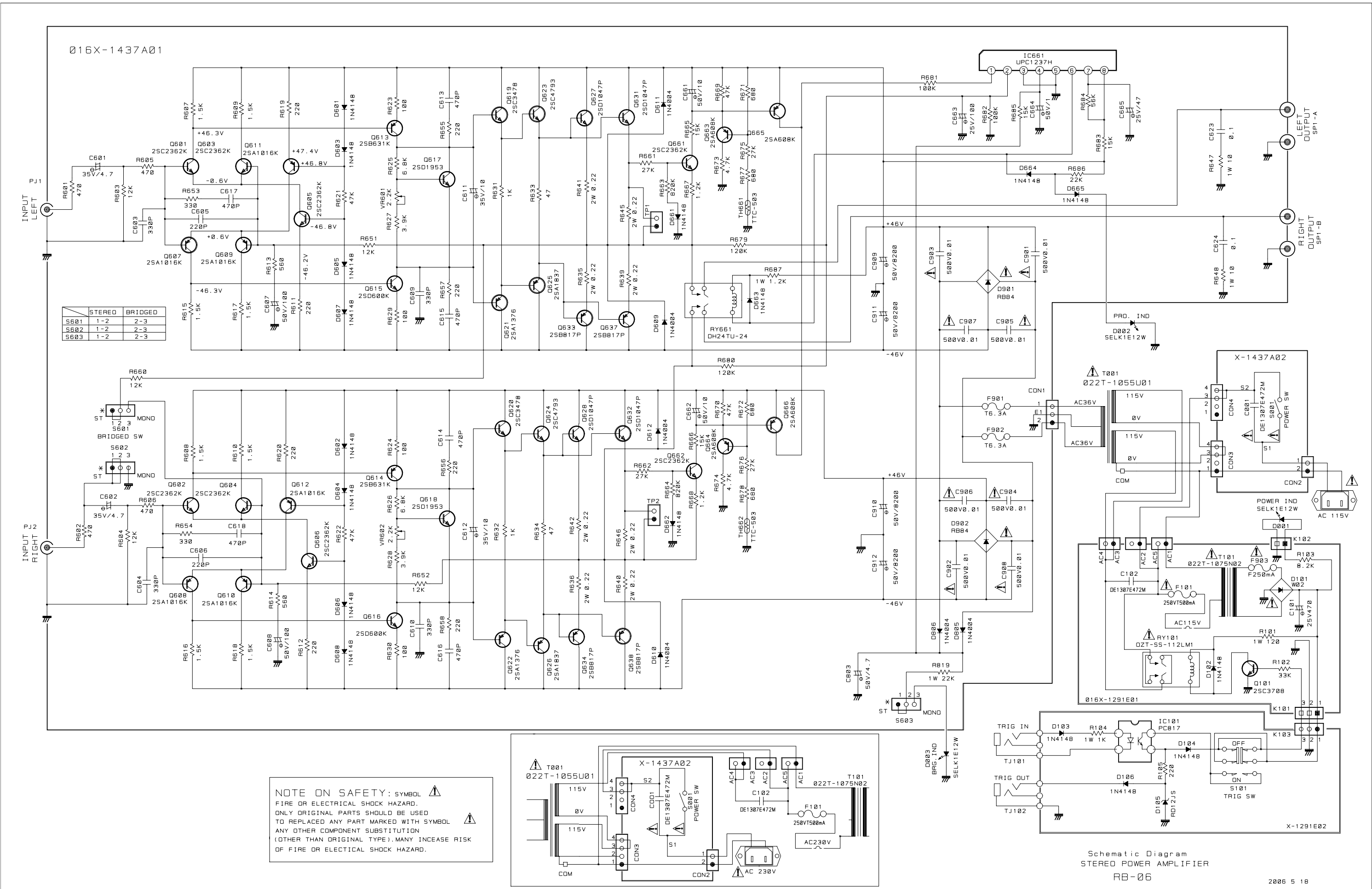


Trigger PCB  
016 X-1291E01 - 02

Main PCB 016 X-1437A01 - 02



# Schematic Diagram



	STEREO	BRIDGED
S601	1-2	2-3
S602	1-2	2-3
S603	1-2	2-3

**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  
 RB-06