



# Technical Manual

## STEREO POWER AMPLIFIER RB-981

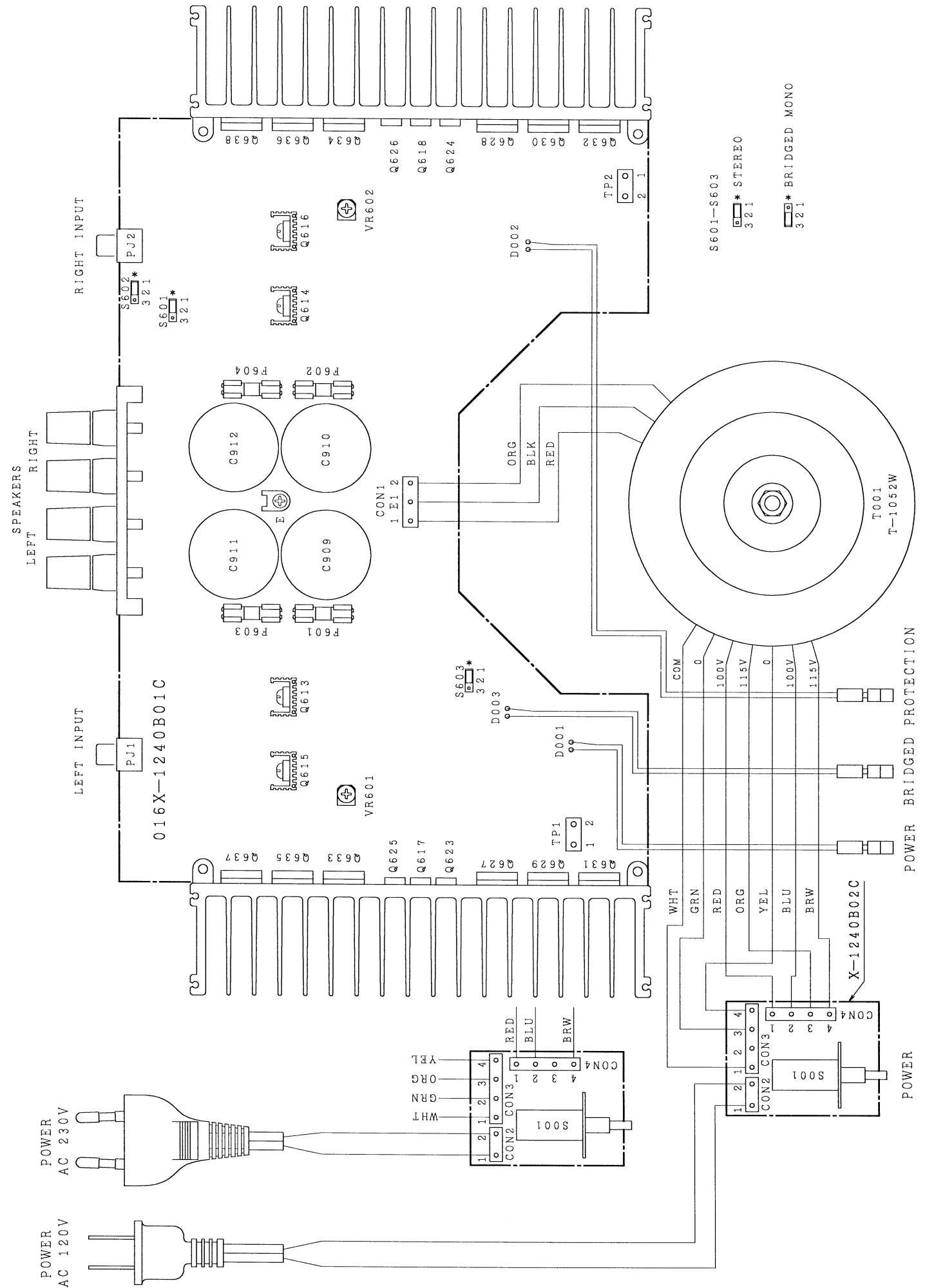
### Table of Contents

- Specification.....1
- Wiring Diagram.....2
- Parts List.....3
- Adjustment.....4
- PCB Assembly.....5,6
- Schematic Diagram.....7,8

### Specification

Continuous Power Output	(20-20 kHz, ≤ 0.03%, 8 ohms)	130 watts/ch.
	(20-20 kHz, ≤ 0.05%, 4 ohms)	170 watts/ch.
Bridged Mono Power Output	(20-20 kHz, ≤ 0.1% THD, 8 ohms)	360 watts
Total Harmonic Distortion	(20 Hz-20 kHz, 8 ohms)	≤ 0.03%
Intermodulation Distortion	(60 Hz : 7 kHz, 4:1)	≤ 0.03%
Frequency Response		10-100,000 Hz, ±1 dB
Damping Factor	(20-20,000 Hz, 8 ohms)	500
Speaker Impedance	(Normal mode)	4 ohms minimum
	(Bridged mode)	8 ohms minimum
Signal to Noise Ratio	(IHF A network)	120 dB
Input Impedance/Sensitivity		33 k Ohms/1.0 volt
Power Requirements		115 Volts, 60 Hz or 230 Volts, 50 Hz
Power Consumption		400 Watts
Dimensions (W, H, D)		440 x 121 x 327 mm 17.38 x 4.76 x 12.87"
Weight(net)		10.3 kg., 22.66 lb.

### Wiring Diagram



THE ROTEL CO., LTD

BUNZAN-SHINSEN-BLD. 4F 10-10 SHINSEN-CHO, SHIBUYA-KU,  
TOKYO 150-0045, JAPAN

Serial. NO.  
Beginning

## Parts List

SYMBOL	PARTS NO.	DESCRIPTION
<b>X-1240-01 PCB ASSEMBLY</b>		
C601,602	041 50BGF4R7M	CAP, ELEC. 50V4. 7UF
C603,604	044 TFKP2-100V681H	CAP, FILM 100V680PF
C605,606	044 LFSC160V221H	CAP, STYROL 160V220PF
C607,608	041 25BGF100M	CAP, ELEC. 25V100UF
C609,610	044 LFSC160V331H	CAP, STYROL 160V330PF
C611,612	041 50BGF10M	CAP, ELEC. 50V10UF
C613-616	044 LFSC160V561H	CAP, STYROL 160V560PF
C617,618	044 LFSC160V471H	CAP, STYROL 160V470PF
C623,624	044 MKT18-100V104K	CAP, FILM 100V0. 1UF
C802	041 GS25V101-B	CAP, ELEC. 25V100UF
C803	041 GS63V221-D	CAP, ELEC. 63V220UF
C804	041 GS63V220-B	CAP, ELEC. 63V220UF
C901-908	043 LTC500V103	CAP, CERA. 500V0. 01UF
C909-912	041 ALC20S1023XX	CAP. ELEC. 63V10000UF
D601-608	034 LT1N4148-86	DIODE
D609-612	034 LT1N4003-TB	DIODE
D801	034 LT1N4148-86	DIODE
D802	034 TRD6. 2JST1	ZENER DIODE
D803-806	034 LT1N4003-TB	DIODE
D807,808	034 LT1N4148-86	DIODE
D901,902	034 LBR84	POWER DIODE
F601-604	036 5ST5	MINI FUSE 250V5A
PJ1	066 L4TR-2487#8	1P PIN JACK(WHT)
PJ2	066 L4TR-2487#7	1P PIN JACK(RED)
Q601-606	033 LT2SC2362KAA-FG	TRANSISTOR
Q607-612	033 LT2SA1016KAA-FG	TRANSISTOR
Q613,614	033 L2SA1209-ST	TRANSISTOR
Q615,616	033 L2SC2911-ST	TRANSISTOR
Q619,620	033 T2SC3478T-LKU	TRANSISTOR
Q621,622	033 T2SA1376T-LKU	TRANSISTOR
Q801-803	033 LT2SC2362KAA-FG	TRANSISTOR
R601,602	054 LEE10-102	R, METAL 1K
R603,604	054 LEE10-333	R, METAL 33K
R605,606	054 LEE10-471	R, METAL 470R
R607-610	054 LTMK201K5FECZ	R, METAL 1% I. 5K
R611,612	054 LTMK2220RFECZ	R, METAL 1% 220R
R613,614	054 LTMF1/4-5600F	R, MRS25 560R
R615-618	054 LTMK201K5FECZ	R, METAL 1% I. 5K
R619,620	054 LTMK2220RFECZ	R, METAL 1% 220R
R621,622	054 LTMK2047KFECZ	R, METAL 1% 47K
R623,624	054 LTMK2100RFECZ	R, METAL 1% 100R
R625,626	054 LTMF1/4-6801F	R, MRS25 6. 8K
R627,628	054 LTMF1/4-3901F	R, MRS25 3. 9K
R629,630	054 LTMK2100RFECZ	R, METAL 1% 100R
R631,632	054 LTMK2001KFECZ	R, METAL 1% 1K
R633,634	054 LTMK2047RFECZ	R, METAL 1% 47R
R635-646	054 NIR2-0. 22JF	R, METAL 2W 0.22R
R647,648	054 2WS10JF	R, METAL 2W 10R
R651,652	054 LTMK2018KFECZ	R, METAL 1% 18K
R653,654	054 LTMF3300	R, METAL 330R
R655-658	054 LTMK2220RFECZ	R, METAL 1% 220R

SYMBOL	PARTS NO.	DESCRIPTION
R661	054 LTMK2018KFECZ	R, METAL 1% 18K
R801	054 1WS2. 7KJF	R, METAL 1W 2.7K
R802	053 CR14-101J-A	R, CARBON 100R
R803	053 CR14-104J-A	R, CARBON 100K
R804	053 CR14-224J-A	R, CARBON 220K
R805	053 CR14-104J-A	R, CARBON 100K
R806	053 CR14-333J-A	R. CARBON 33K
R807	053 CR14-104J-A	R. CARBON 100K
R808	053 CR14-272J-A	R, CARBON 2.7K
R809, 810	054 1WS6. 8KJF	R, METAL 1W 6.8K
R811, 812	053 CR14-104J-A	R, CARBON 100K
R813, 814	053 CR14-183J-A	R, CARBON 18K
R815, 816	053 CR14-392J-A	R, CARBON 3.9K
R817, 818	053 CR14-273J-A	R, CARBON 27K
R819	054 1WS6. 8KJF	R, METAL 1W 6.8K
RY801	063 EG2-24NU	RELAY
S601-603	068 TD-03SG	3P CONNECTOR WAFER
SP1	067 C-4493A00	SPEAKER TERMINAL
TH601, 602	034 TD5C350D	THERMISTER
VR601, 602	051 LVM6CKPV1S2.2K	SEMI-FIXED RESISTOR
	019 TO-126	INSULATION SHEET
	069 C-3417A	FUSE CLIP
<b>X-1240-02 PCB ASSEMBLY</b>		
C001	044 DE7150F472M	SPARK KILLER
S001	061 LC-4176A02	POWER SWITCH
<b>HEAT SINKER ASSEMBLY</b>		
Q617, 618	032 2SD1953	TRANSISTOR
Q623, 624	033 2SC4381-OY	TRANSISTOR
Q625, 626	033 2SA1667-OY	TRANSISTOR
Q627-632	033 2SC3856 -OPY	POWER TRANSISTOR
Q635 -640	033 2SA1492-OPY	POWER TRANSISTOR
	019 TO-220	INSULATION SHEET(S)
	019 TO-3P	INSULATION SHEET(L)
	017 RM4-08B00	HEAT SINKER BOARD
<b>OTHERS</b>		
	011 TFP-801A	FRONT PANEL ASSY
	012 L4TQF-15	POWER BUTTON 14X14
	014 C-4550A13	UPPER COVER
	014 L4TR-2797#3	ORNAMENT SIDE BOARD
	014 RM4-07A00	BOTTOM BOARD
	015 RP-334	REAR CHASSIS
	019 L4TSH-19#2	PLASTIC FOOT 50F
	019 4TR-2823#2	PLASTIC FOOT 24F
	022 T-1052W04	POWER TRANSFORMER
	072 L4TR-670#5	AC CORD for STD
	072 LC-3763	AC CORD for AUSTRALIA
	072 C-4572A01	AC CORD for UK
	072 C-4573A01	AC CORD for CEE
	081 LTZ-183	STYROL SIDE MOULDING
	081 RM4-11B00	INSIDE CARTON

## Adjustment

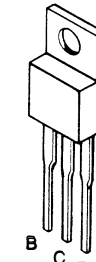
Instruments : DC milli-voltmeter

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
	Plus Lead	Minus Lead			
1	TP1-1	TP1-2	X-1240-01 PCB	VR601	DC milli-voltmeter reads 5mV
2	TP2-1	TP2-2	X-1240-01 PCB	VR602	



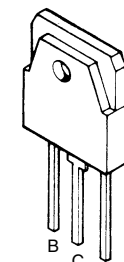
2SA1376  
2SC3478  
2SA1209  
2SC2911  
2SA1016K  
2SC2362K



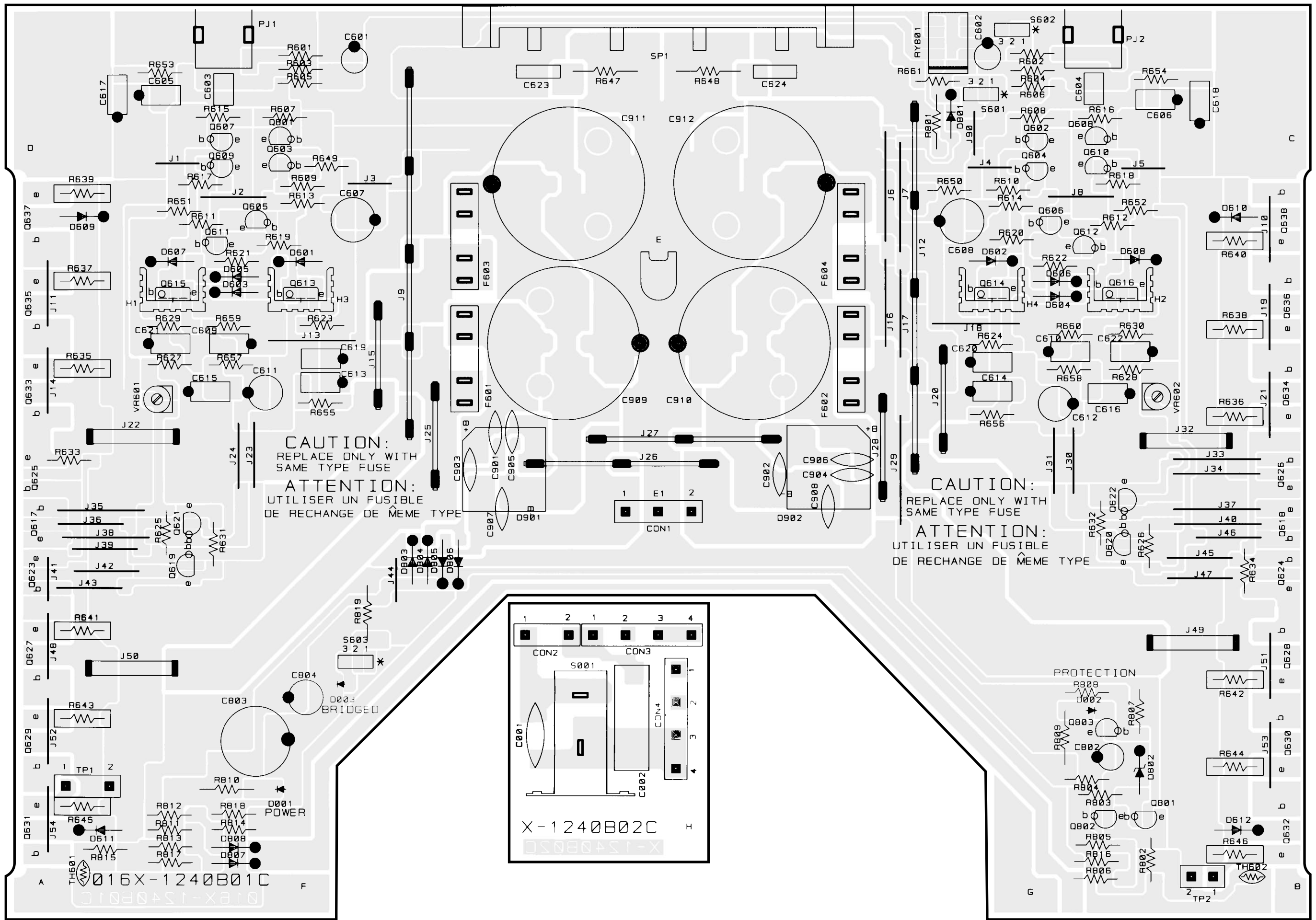
2SA1667  
2SC4381



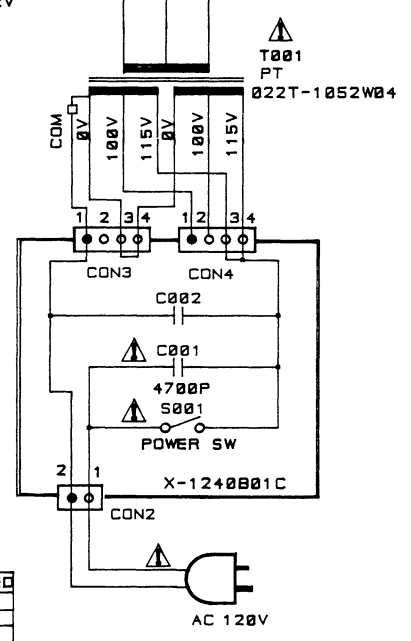
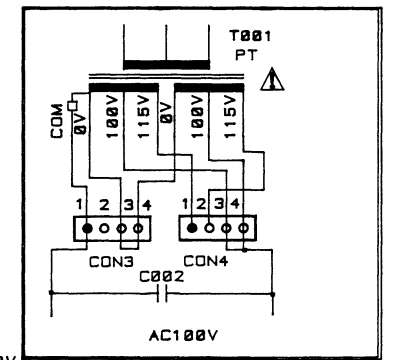
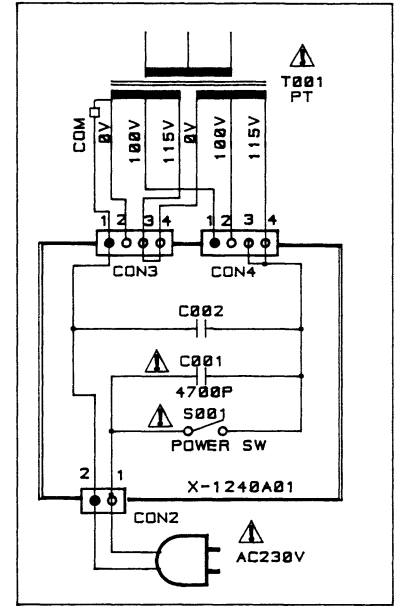
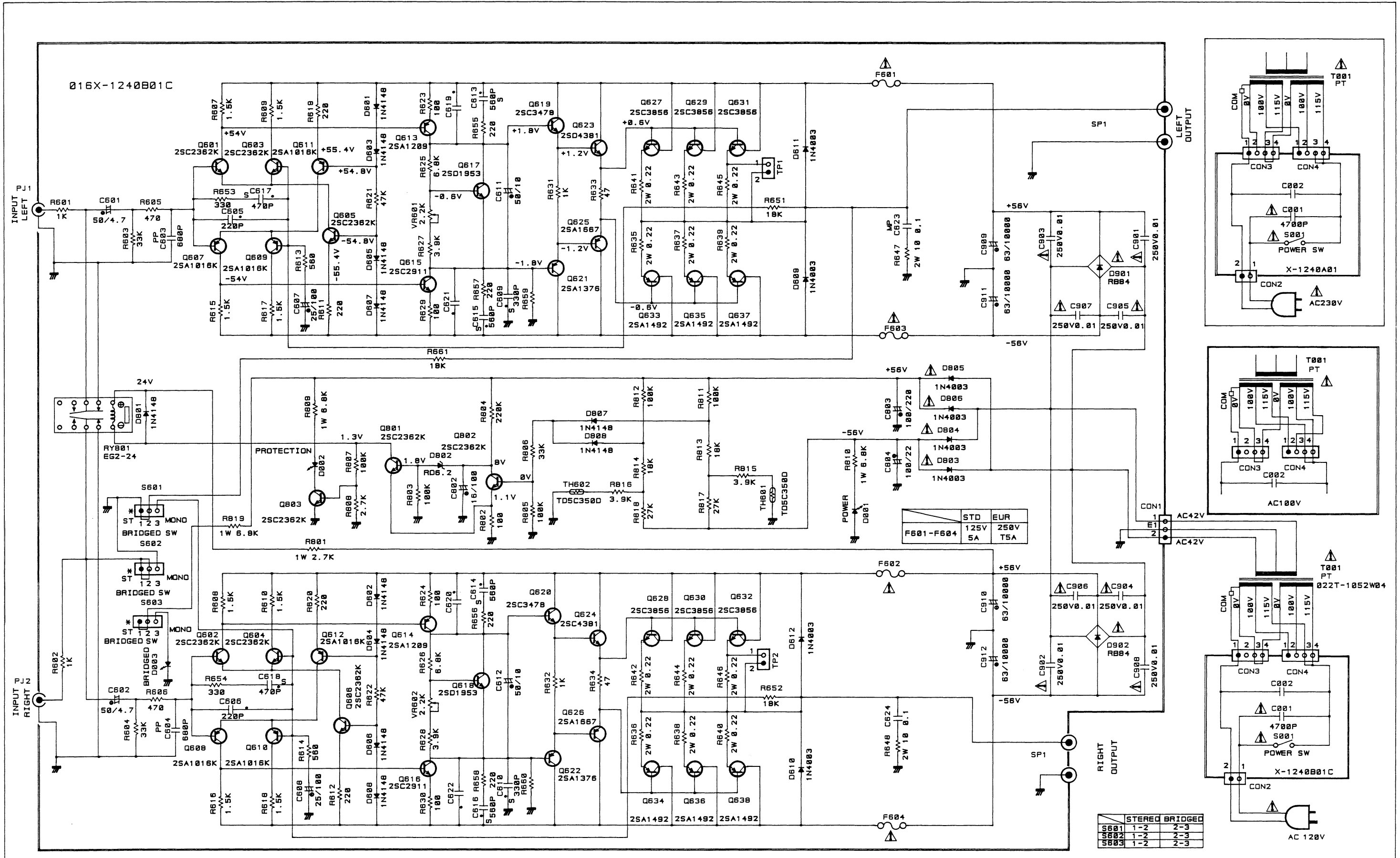
2SD1953



2SA1492  
2SC3856



# Schematic Diagram



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

STEREO POWER AMPLIFIER RB981