

Quality Uncompromised

**ROTEL**®

# Technical Manual

## STEREO POWER AMPLIFIER **RB-971**

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### Specification

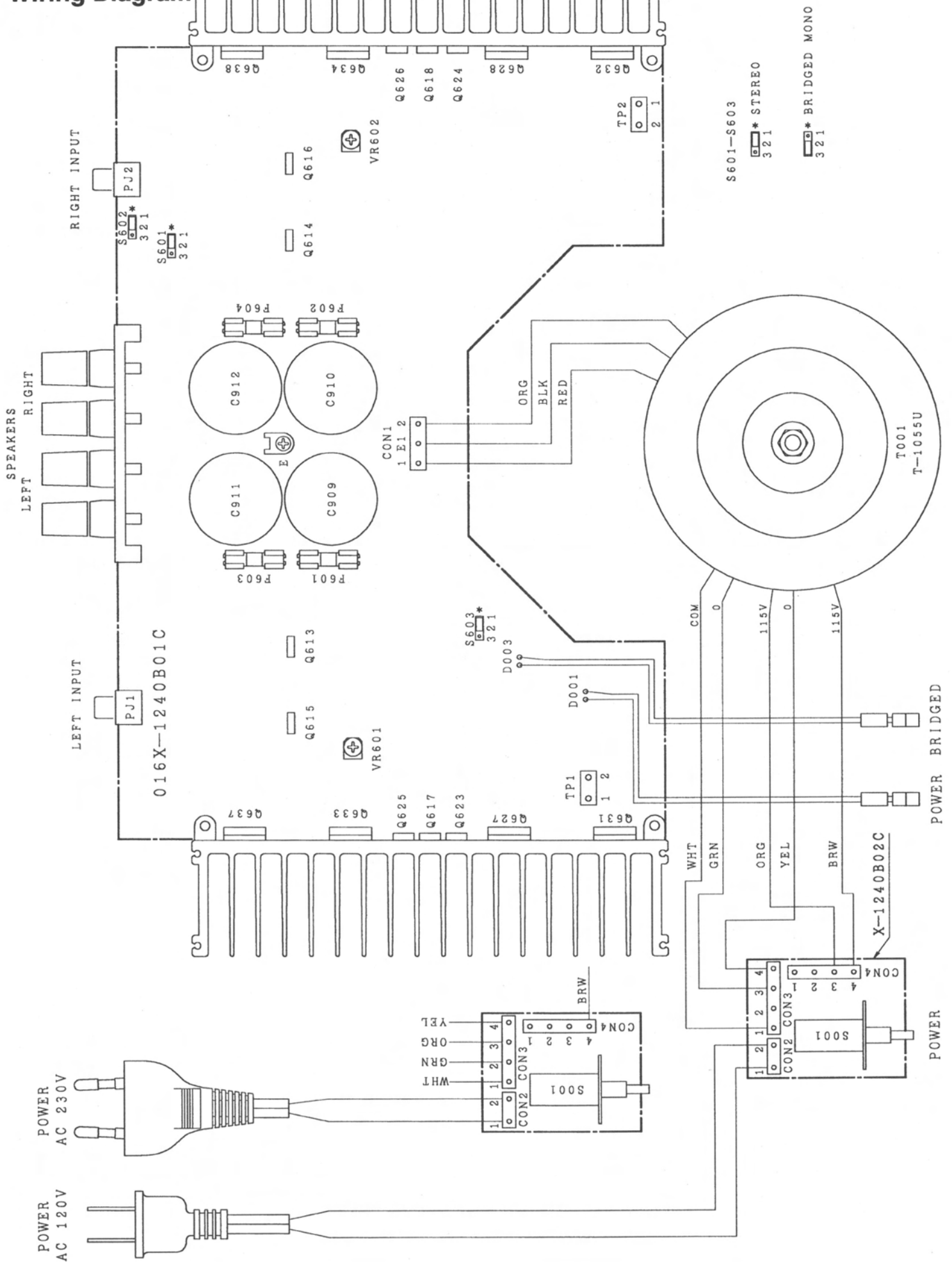
Continuous Power Output	(20-20 kHz, $\leq 0.03\%$ , 8 ohms)	70 watts/ch.
	(20-20 kHz, $\leq 0.05\%$ , 4 ohms)	95 watts/ch.
Bridged Mono Power Output	(20-20 kHz, $\leq 0.1\%$ THD, 8 ohms)	180 watts
Total Harmonic Distortion	(20 Hz-20 kHz, 8 ohms)	$\leq 0.03\%$
Intermodulation Distortion	(60 Hz : 7 kHz, 4:1)	$\leq 0.03\%$
Frequency Response		10-100,000 Hz, $\pm 1$ 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)	116 dB
Input Impedance/Sensitivity		33 k Ohms/1.0 volt
Power Requirements		115 Volts, 60 Hz or 230 Volts, 50 Hz
Power Consumption		250 Watts
Dimensions (W, H, D)		440 x 92 x 334 mm 17.38 x 4.76 x 13.3"
Weight (net)		7.2 kg., 15.84 lb.

**THE ROTEL CO., LTD**

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

Serial. NO.  
Beginning

# Wiring Diagram



# 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
C803, 804	041 GS50V4R7-B	CAP, ELEC. 50V4.7UF
C901-908	043 LTC500V103	CAP, CERA. 500V0.01UF
C909-912	041 ALC20S1022DF	CAP, ELEC. 50V8200UF
D601-608	034 LT1N4148-86	DIODE
D609-612	034 LT1N4003-TB	DIODE
D803, 805	034 LT1N4003-TB	DIODE
D901, 902	034 LBR84	POWER DIODE
F601-604	036 5ST3.15	MINI FUSE 250V3.15A
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 L2SB631K-EF	TRANSISTOR
Q615, 616	033 L2SD600K-EF	TRANSISTOR
Q619, 620	033 T2SC3478T-LKU	TRANSISTOR
Q621, 622	033 T2SA1376T-LKU	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% 1.5K
R611, 612	054 LTMK2220RFECZ	R, METAL 1% 220R
R613, 614	054 LTMF1/4-5600F	R, MRS25 560R
R615-618	054 LTMK201K5FECZ	R, METAL 1% 1.5K
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, 636	054 NIR2-0.22JF	R, METAL 2W 0.22R
R639-422	054 NIR2-0.22JF	R, METAL 2W 0.22R
R645, 646	054 NIR2-0.22JF	R, METAL 2W 0.22R
R647, 648	054 IWS10JF	R, METAL 1W 10R
R651, 652	054 LTMK2012KFECZ	R, METAL 1% 12K
R653, 654	054 LTMF3300	R, METAL 330R
R655-658	054 LTMK2220RFECZ	R, METAL 1% 220R
R661	054 LTMK2012KFECZ	R, METAL 1% 12K
R810, 819	054 1WS6.8KJF	R, METAL 1W 6.8K
S601-603	068 TD-03SG	3P CONNECTOR WAFER

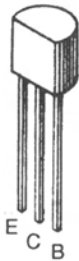
SYMBOL	PARTS NO.	DESCRIPTION
VR601, 602	051 LVM6CKPV1S2.2K	SEMI-FIXED RESISTOR
	067 4TR-3090	SPEAKER TERMINAL
	068 DM-2GM-O	2P SHORT SOCKET
	069 C-3417A	FUSE CLIP
<b>X-1240-02 PCB ASSEMBLY</b>		
C001	044 DE7150F472M	SPARK KILLER
S001	061 LC-4176A01T	POWER SWITCH
<b>HEAT SINKER ASSEMBLY</b>		
Q617, 618	032 2SD1953	TRANSISTOR
Q623, 624	033 2SC4793-M	TRANSISTOR
Q625, 626	033 2SA1837-M	TRANSISTOR
Q627, 628	033 L2SD1047-DE	POWER TRANSISTOR
Q631, 632	033 L2SD1047-DE	POWER TRNSNISTOR
Q633, 634	033 L2SB817-DE	POWER TRANSISTOR
Q637, 638	033 L2SB817-DE	POWER TRANSISTOR
	017 RM4-18A00	HEAT SINKER BOARD
	019 TO-220	INSULATION SHEET (S)
	019 TO-3P	INSULATION SHEET (L)
<b>OTHERS</b>		
	011 TFP-802	FRONT PANEL ASSY
	012 L4TQF-15	POWER BUTTON 14X14
	014 C-4550A08	UPPER COVER
	014 L4TR-2797#2	ORNAMENT SIDE BOARD
	014 RM4-07A00	BOTTOM BOARD
	015 RP-333A	REAR CHASSIS
	019 LATSH-19#2	PLASTIC FOOT 50F
	019 4TR-2823#2	PLASTIC FOOT 24F
	022 T-1055U01	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 RM4-21A00	INSIDE CARTON
	081 TZ-165	STYROL SIDE MOULDING

# Adjustment

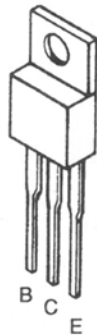
Instruments : DC milli-voltmeter

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	



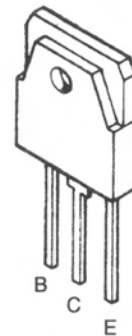
2SA1016K  
2SC2362K  
2SA1376  
2SC3478



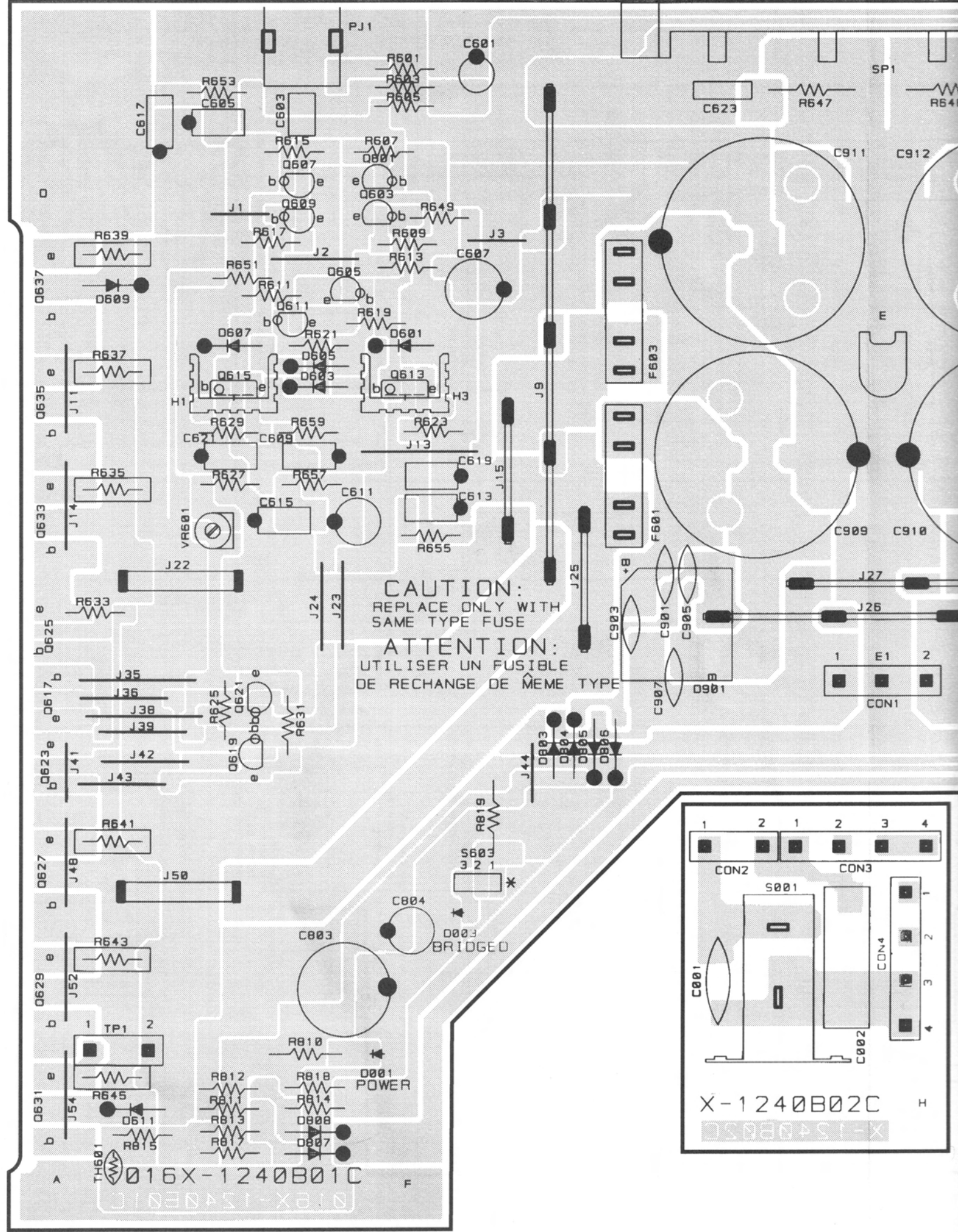
2SA1837  
2SC4793



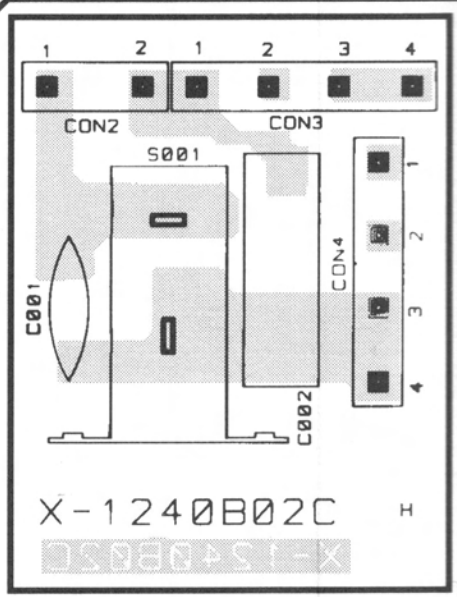
2SB631K  
2SD600K  
2SD1953



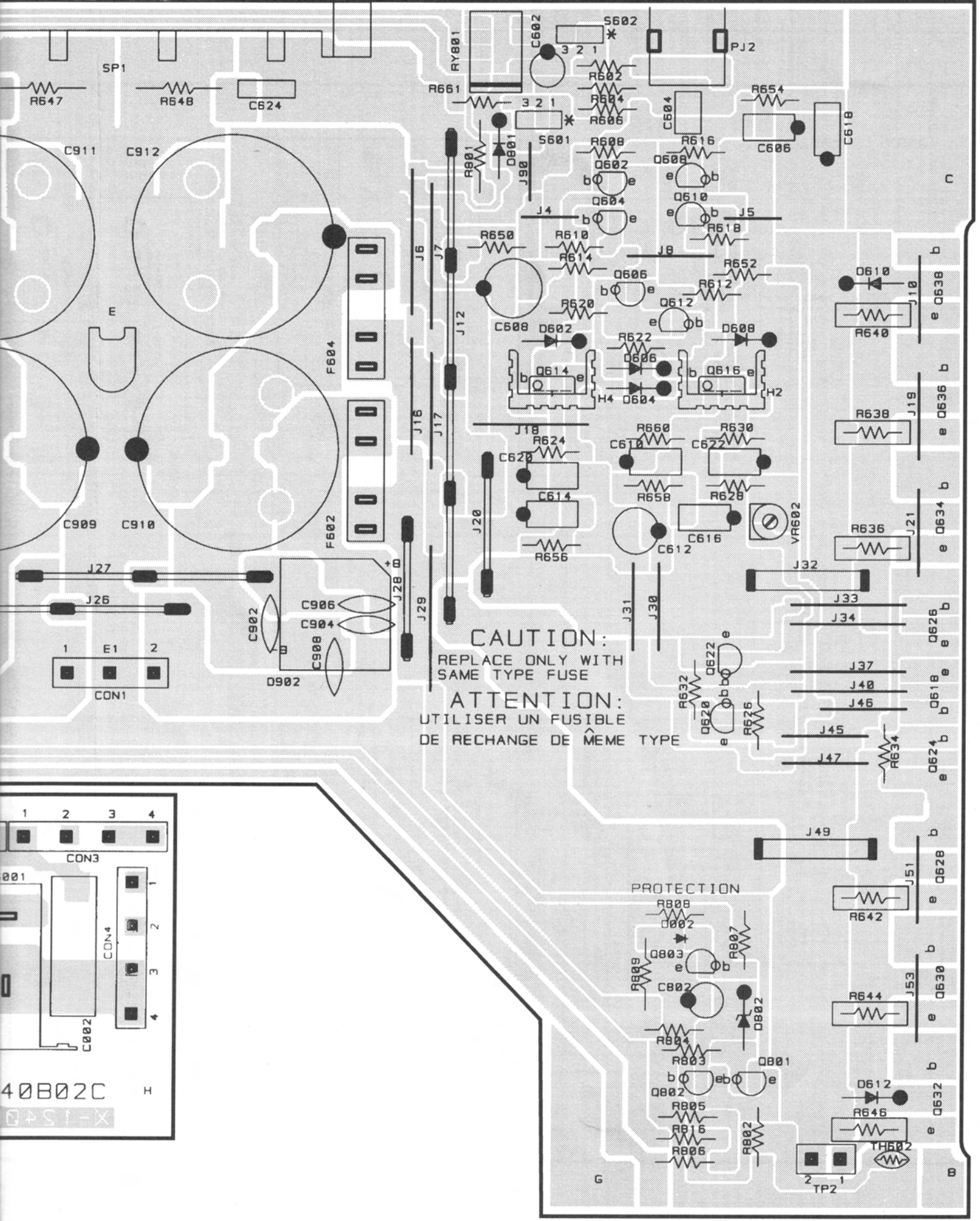
2SB817  
2SD1047



CAUTION:  
 REPLACE ONLY WITH  
 SAME TYPE FUSE  
 ATTENTION:  
 UTILISER UN FUSIBLE  
 DE RECHANGE DE MEME TYPE

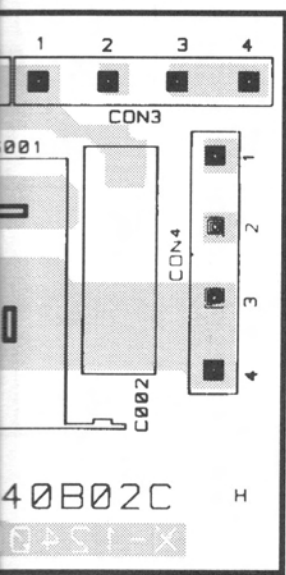


016X-1240B01C  
 050804S1-X

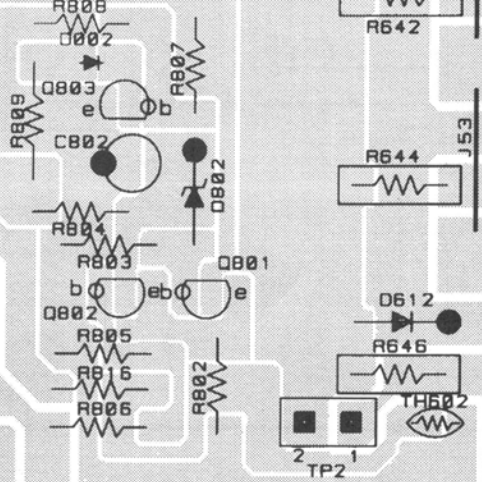


CAUTION:  
 REPLACE ONLY WITH  
 SAME TYPE FUSE

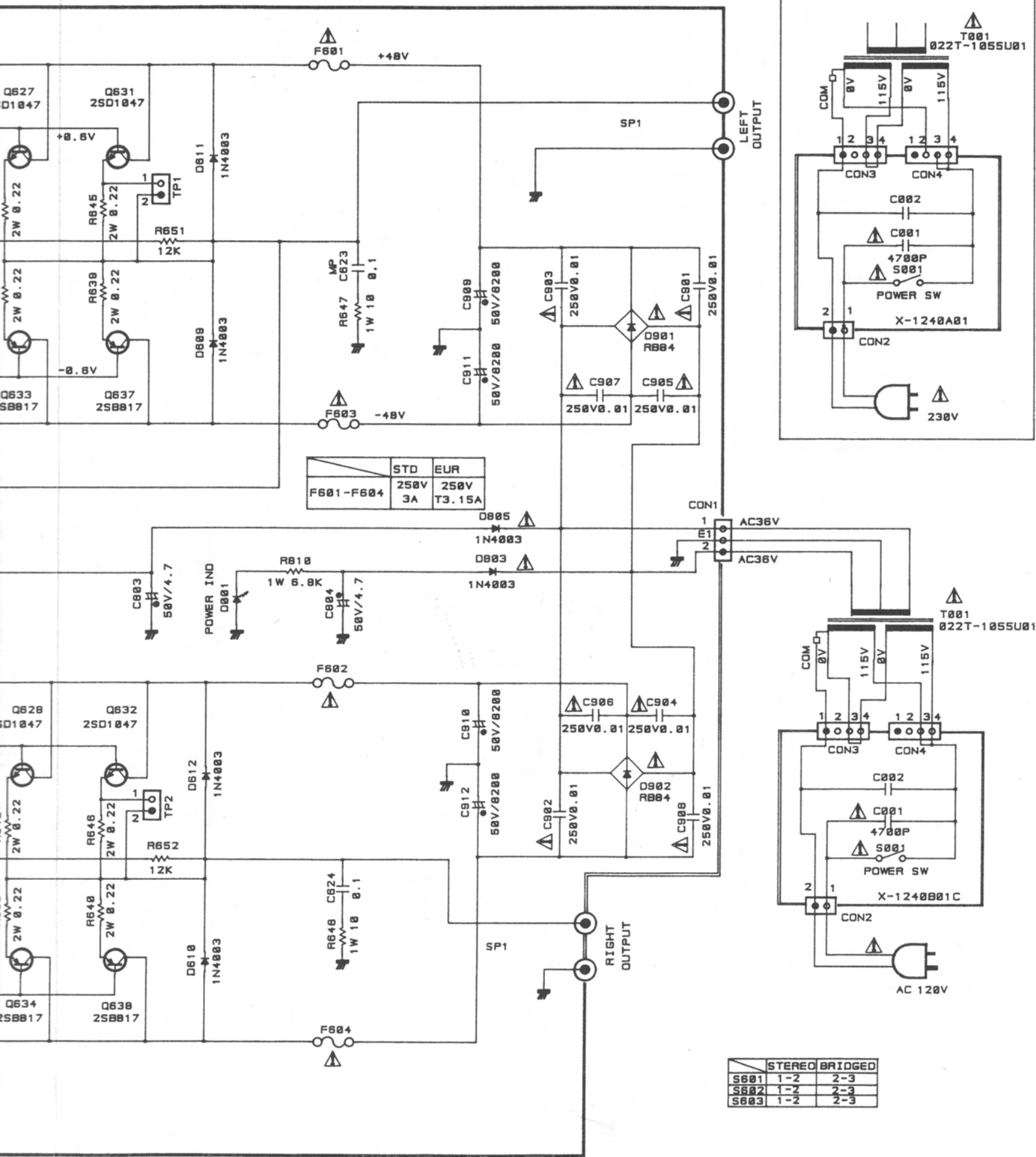
ATTENTION:  
 UTILISER UN FUSIBLE  
 DE RECHANGE DE MEME TYPE



PROTECTION







	STD	EUR
F601-F604	250V 3A	250V T3.15A

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

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