

Quality Uncompromised

# ROTEL

# Technical Manual

## STEREO/MONO POWER AMPLIFIER **RB-951**

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### Specification

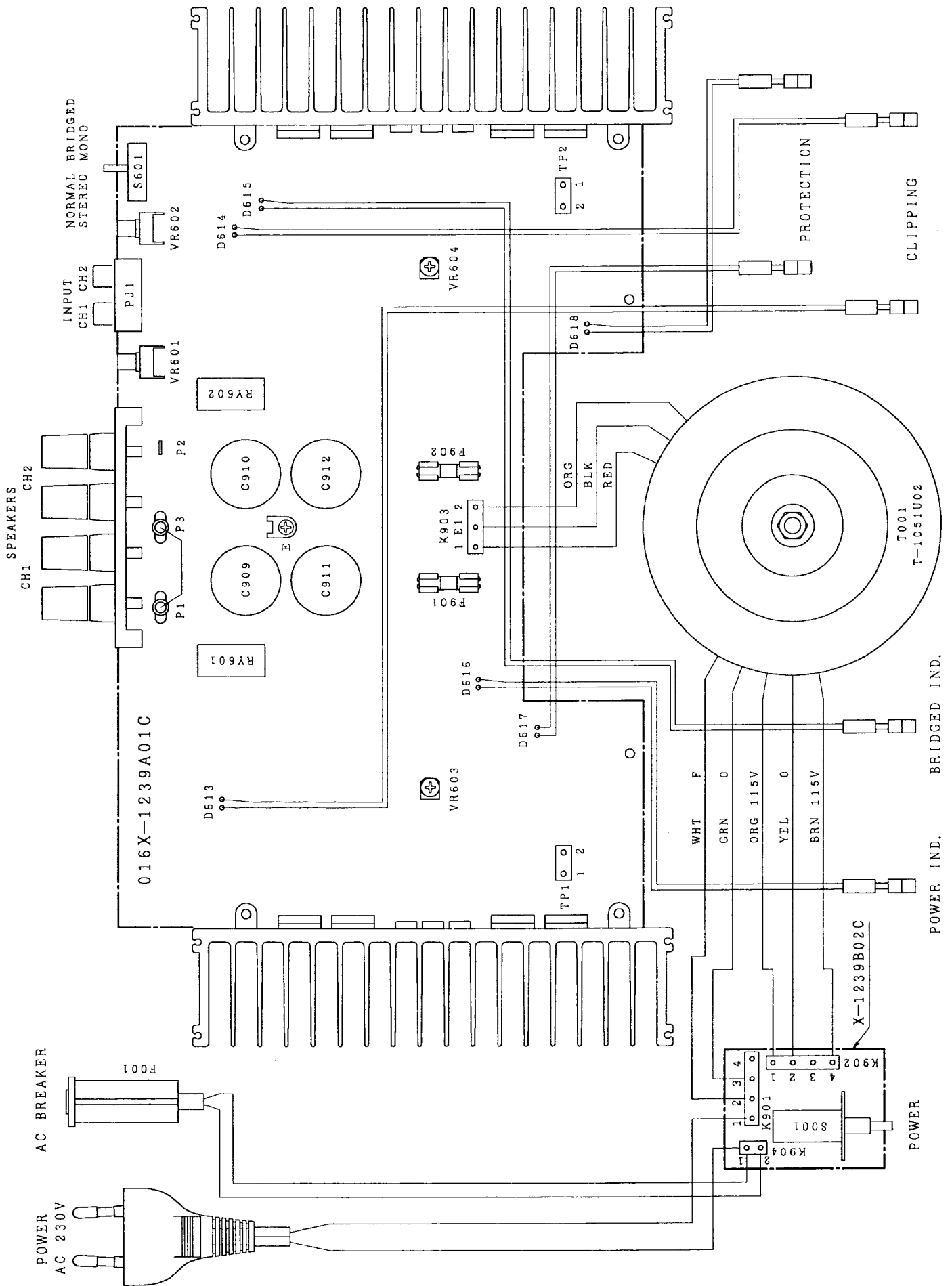
Continuous Power Output	(20-20 kHz, $\leq 0.03\%$ , 8 ohms)	50 watts/ch
Bridged Mono Power Output	(20-20 kHz, $\leq 0.1\%$ THD, 8 ohms)	150 watts
Total Harmonic Distortion	(20 Hz-20 kHz, 8 ohms)	$\leq 0.03\%$
Intermodulation Distortion	(60 Hz : 7 kHz, 4:1)	$\leq 0.03\%$
Frequency Response		15-100,000 Hz, $\pm 1$ dB
Damping Factor	(20-20,000 Hz, 8 ohms)	280
Speaker Impedance	(Normal mode)	4 ohms minimum
Signal to Noise Ratio	(IHF A network)	116 dB
Input Impedance/Sensitivity		32 k Ohms/1.5 volt
Auto Turn On (if activated)		10 mV input
Auto Turn Off Delay (no signal)		5 minutes
Power Requirements		115 Volts, 60 Hz or 230 Volts, 50 Hz
Power Consumption		200 Watts
Dimensions (W,H,D)		440 x 92 x 334 mm 17.38 x 3.63 x 13.19"
Weight (Net)		6.8 kg, 15 lbs.

**THE ROTEL CO., LTD**

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

Serial. NO. Beginning
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# Wiring Diagram



# Parts List

SYMBOL	PARTS NO.	DESCRIPTION
<b>X-1239-01 PCB ASSEMBLY</b>		
C601, 602	043 LTC50V101	CAP, CERA. 50V100PF
C603, 604	043 LTC50V221	CAP, CERA. 50V220PF
C605, 606	041 GS10V101-B	CAP, ELEC. 10V100UF
C607, 608	043 LTC50V331	CAP, CERA. 50V330PF
C609, 610	043 LTC50V151	CAP, CERA. 50V150PF
C611, 612	043 LTC50V103	CAP, CERA. 50V0.01UF
C613, 614	044 T1HMSATF104J	CAP, FILM 50V0.1UF
C615, 616	043 LTC50V150	CAP, CERA. 50V15PF
C617, 618	041 GS25V100-B	CAP, ELEC. 25V10UF
C619, 620	041 GS25V101-B	CAP, ELEC. 25V100UF
C621, 622	041 GS50V330-B	CAP, ELEC. 50V33UF
C623, 624	041 GS50V100-B	CAP, ELEC. 50V10UF
C625	043 LTC50V473	CAP, CERA. 50V0.047UF
C701, 702	041 GS50V0R1-B	CAP, ELEC. 50V0.1UF
C703, 704	041 GS25V100-B	CAP, ELEC. 25V10UF
C705	041 GS16V471-B	CAP, ELEC. 16V470UF
C706	042 LTP50V103J	CAP, MYLAR 50V0.01UF
C710	042 LTP50V183J	CAP, MYLAR 50V0.018UF
C901-908	043 LTC500V103	CAP, CERA. 500V0.01UF
C909-912	041 63USP6800MD35	CAP, ELEC. 63V6800UF
C913, 914	041 GS50V4R7-B	CAP, ELEC. 50V4.7UF
D601-608	034 LT1N4148-86	DIODE
D609, 610	034 LT1N4003-TB	DIODE
D621, 622	034 TRD5.6JST1	ZENER DIODE
D701-703	034 LT1N4148-86	DIODE
D911, 912	034 RS403L	POWER DIODE
F901, 902	036 5ST6.3	MINI FUSE 250V6. 3A
IC601, 602	031 MPC1237HA	IC
IC701	031 LNJM555D	IC
L601, 602	021 TRL-332	COIL
Q601-608	032 LT2SA1016KAA-FG	TRANSISTOR
Q609, 610	032 L2SB631K-EF	TRANSISTOR
Q611, 612	032 LT2SC1941-T-KL	TRANSISTOR
Q627-632	032 LT2SC536KAA-FG	TRANSISTOR
Q633-636	032 LT2SA608KAA-FG	TRANSISTOR
Q701-704	032 LT2SC536KAA-FG	TRANSISTOR
R601, 602	054 LTMF1001	R, METAL 1K
R603, 604	054 LTMF4702	R, METAL 47K
R605, 606	054 LTMF1500	R, METAL 150R
R607, 608	054 LTMF4700	R, METAL 470R
R609, 610	054 LTMF1501	R, METAL 1.5K
R611, 612	054 LTMF6801	R, METAL 6. 8K
R613-616	054 LTMF7500	R, METAL 750R
R617-620	054 LTMF1002	R, METAL 10K
R621, 622	054 LTMF47R0	R, METAL 47R
R623, 624	054 LTMF1000	R, METAL 100R
R625, 626	054 LTMF4700	R, METAL 470R
R627, 628	054 LTMF1000	R, METAL 100R
R629, 630	054 LTMF6801	R, METAL 6.8K
R631, 632	054 LTMF2201	R, METAL 2.2K

SYMBOL	PARTS NO.	DESCRIPTION
R633, 634	054 LTMF3302	R, METAL 33K
R635, 636	054 LTMF1801	R, METAL 1.8K
R637, 638	054 LTMF1003	R, METAL 100K
R639, 640	054 LTMF6801	R, METAL 6.8K
R641-644	054 LTMF2200	R, METAL 220R
R645-652	054 2WS0.22JF	R, METAL 2W 0.22R
R653, 654	054 1WS10JF	R, METAL 1W 10R
R655	054 LTMF1002	R, METAL 10K
R656	054 LTMF6801	R, METAL 6.8K
R657, 658	054 LTMF5602	R, METAL 56K
R661, 662	054 LTMF1001	R, METAL 1K
R663-666	054 LTMF1502	R, METAL 15K
R667, 668	054 LTMF3300	R, METAL 330R
R669, 670	054 LTMF8200	R, METAL 820R
R671, 672	054 LTMF2202	R, METAL 22K
R673, 674	054 LTMF1502	R, METAL 15K
R675, 676	054 LTMF1201	R, METAL 1.2K
R677, 678	054 LTMF4701	R, METAL 4.7K
R679, 680	054 LTMF8200	R, METAL 820R
R681, 682	054 LTMF3302	R, METAL 33K
R683, 684	054 LTMF4702	R, METAL 47K
R685, 686	054 LTMF1003	R, METAL 100K
R687, 688	054 LTMF1203	R, METAL 120K
R689, 690	054 LTMF1003	R, METAL 100K
R691	054 LTMF6801	R, METAL 6.8K
R692	054 LTMF47R0	R, METAL 47R
R695, 696	054 LTMF4703	R, METAL 470K
R701, 702	054 LTMF1003	R, METAL 100K
R703	054 LTMF2203	R, METAL 220K
R704	054 LTMF1203	R, METAL 120K
R705	054 LTMF1002	R, METAL 10K
R706	054 LTMF1000	R, METAL 100R
R707	054 LTMF4702	R, METAL 47K
R708, 709	054 LTMF1003	R, METAL 100K
R710	054 LTMF1004	R, METAL 1M
R711	054 LTMF4702	R, METAL 47K
R712	054 LTMF5603	R, METAL 560K
R717	054 LTMF1003	R, METAL 100K
RY601, 602	063 DG24D2-OS(M)	RELAY
S601	064 L4TR-2294	SLIDE SWITCH
S602-608	068 TD-03SG	3P CONNECTOR WAFER
TH601, 602	034 TD5C350D	THERMISTOR
VR601, 602	051 4TR-2981	VARIABLE RESISTOR 50KB
VR603, 604	051 LVM6CKPV1S2.2K	SEMI-FIXED RESISTOR
	066 L4TR-2709#2	2P PIN JACK
	067 4TR-3090	SPEAKER TERMINAL
	068 DM-2GM-O	2P SHORT SOCKET
	069 C-3417A	FUSE CLIP

# Parts List

SYMBOL	PARTS NO.	DESCRIPTION
<b>X-1239-02 PCB ASSEMBLY</b>		
C001	044 DE7150F472M	SPARK KILLER
S001	061 LC-4176A01T	POWER SWITCH
<b>X-1239-03 PCB ASSEMBLY</b>		
C707	041 GS63V1101-D	CAP, ELEC. 63V100UF
D704	034 LT1N4148-86	DIODE
D705, 706	034 LT1N4003-TB	DIODE
Q705	032 LT2SC536KAA-FG	TRANSISTOR
R713	054 IWS3.3KF	R, METAL 1W 3.3K
R714	054 IWS1.2KF	R, METAL 1W 1.2K
R715	054 LTMF8201	R, METAL 8.2K
R716	054 LTMF2202	R, METAL 22K
RY701	063 DH24D2-O(M)	RELAY
<b>HEAT SINKER ASSEMBLY</b>		
Q613-616	033 L2SD600K-EF	TRANSISTOR
Q617, 618	033 L2SB631K-EF	TRANSISTOR
Q619-622	033 L2SD1047-DE	POWER TRANSISTOR
Q623-626	033 L2SB817-DE	POWER TRANSISTOR
	019 TO-220	INSULATION SHEET(S)

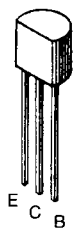
SYMBOL	PARTS NO.	DESCRIPTION
	019 TO-3P	INSULATION SHEET(L)
<b>OTHERS</b>		
	011 TFP-797	FRONT PANEL ASSY
	012 LATQF-15	POWER BUTTON 14X14
	014 C-4550A08	UPPER COVER
	014 L4TR-2797#2	ORNAMENT SIDE BOARD
	014 RM4-07A00	BOTTOM BOARD
	015 RP-332A	REAR CHASSIS
	017 RL4-08A00	HEAT SINKER BOARD
	019 LATSH-19#2	PLASTIC FOOT 50F
	019 4TR-2823#2	PLASTIC FOOT 24F
	022 T-1051U02	POWER TRANSFORMER
	072 L4TR-670#4	AC CORD for STD
	072 LC-3763	AC CORD for AUSTRALIA
	072 C-4572A01	AC CORD for UK
	072 L4TR-1037	AC CORD for CEE
	081 RL4-21B00	INSIDE CARTON
	081 TZ-165	STYROL SIDE MOULDING

## Adjustment

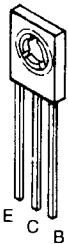
Instruments : DC milli-voltmeter

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

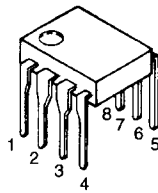
Step	Coupling		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
1	TP1-1	TP1-2	X-1239-01 PCB	VR603	DC milli-voltmeter reads 4mV
2	TP2-1	TP2-2	X-1239-01 PCB	VR604	



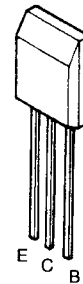
2SC536K  
2SA608K  
2SA1016K



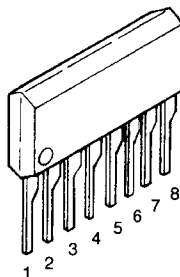
2SB631K  
2SD600K



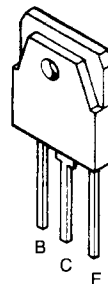
NJM555D



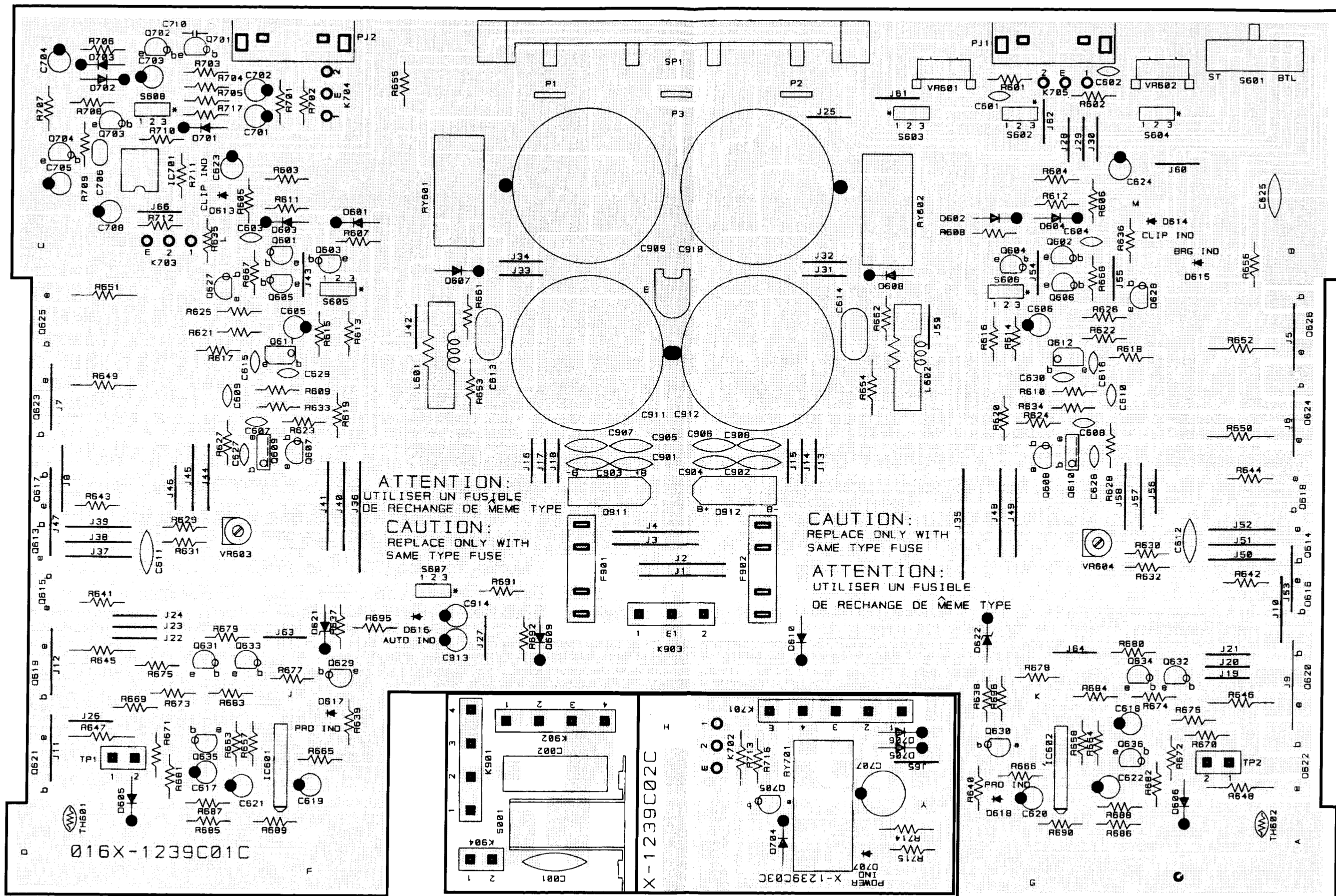
2SC1941



MPC1237HA



2SB817  
2SD1047



# Schematic Diagram

