



# Technical Manual

## STEREO POWER AMPLIFIER RB-991

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### Specification

Continuous Power Output	(20-20 kHz, $\leq 0.03\%$ , 8 ohms) (20-20 kHz, $\leq 0.05\%$ , 4 ohms)	200 watts/ch. 300 watts/ch.
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		$\geq 10-100,000$ Hz, $\pm 1$ dB
Damping Factor	(20-20,000 Hz, 8 ohms)	$\geq 500$
Speaker Impedance		4-16 ohms
Signal to Noise Ratio	(IHF A network)	120 dB
Input Impedance/Sensitivity	(RCA Inputs)	33 k Ohms/1.0 volt 33k Ohms/1.0 volt
Power Requirements		115 Volts, 60 Hz or 230 Volts, 50 Hz
Power Consumption		550 Watts
Dimensions (W, H, D)		440 x 127 x 385 mm 17.38 x 4.76 x 15.16"
Weight (net)		16.7 kg., 36.74 lb.

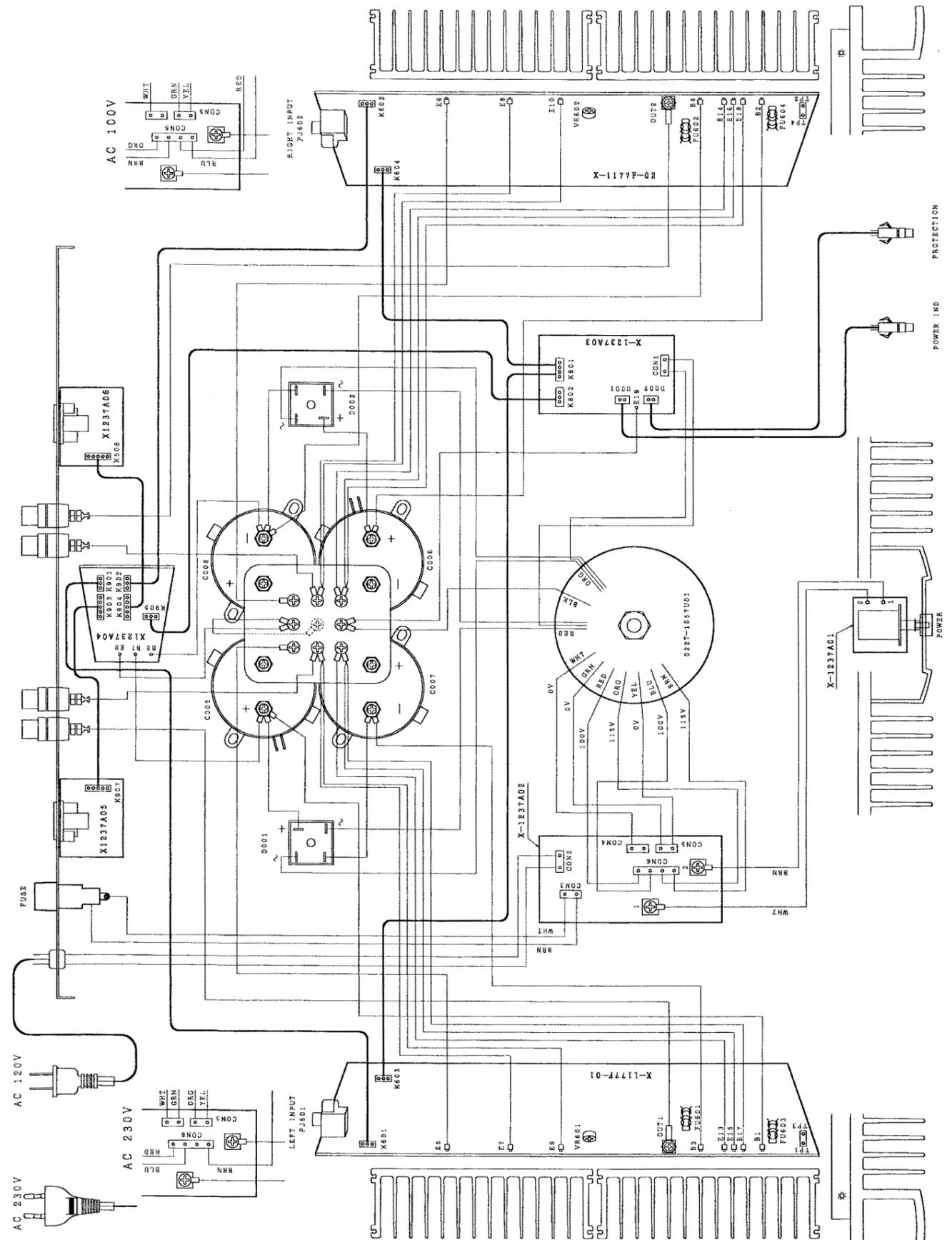
### THE ROTEL CO., LTD

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

Serial. NO.  
Beginning

Y-310A-98061M/S-S

### Wiring Diagram



## Parts List

SYMBOL	PARTS NO.	DESCRIPTION
<b>X-1177-01,02 PCB ASSEMBLY</b>		
C601,602	041 50BGF4R7M	CAP,ELEC.50V4.7UF
C603,604	044 TFKP2-100V681H	CAP,FILM 100V680PF
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
C623-626	041 UVX2A102MRAY	CAP,ELEC.100V1000UF
C627,628	044 LFSC160V471H	CAP,STYROL 160V470PF
D601-608	034 LT1N4148-86	DIODE
D609-612	034 LT1N4003-TB	DIODE
FU601-604	036 5ST6.3	MINI FUSE 250V6.3A
Q601-606	033 LT2SC2362KAA-FG	TRANSISTOR
Q607-612	033 LT2SA1016KAA-FG	TRANSISTOR
Q613,614	033 2SA1142-EPQ	TRANSISTOR
Q615,616	033 2SC2682-EPQ	TRANSISTOR
Q619,620	033 LT2SC2910AE-RST	TRANSISTOR
Q621,622	033 LT2SA1208AE-RST	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
R635-654	054 MPC78-0.22F	R,PLATE 2W 0.22R
R657,658	054 LTMK2022KFECZ	R,METAL 1% 22K
R659-662	054 2WS6.8KJF	R,METAL 2W 6.8K
R663,664	054 LTMK2010RFECZ	R,METAL 1% 10R
R665,666	054 LTMF3300	R,METAL 330R
R667-670	054 LTMK2220RFECZ	R,METAL 1% 220R
TH601,602	034 TTC-503	THERMISTOR
VR601,602	051 LVM6CKPH1S2.2K	SEMI-FIXED RESISTOR
017 C-4378A01		HEAT SINKER
019 TO-126		INSULATION SHEET
066 L4TR-2487#7		1P PINJACK(REDF)
066 L4TR-2487#8		1P PINJACK(WHT)
068 L4TR-2787#3		CONNECTOR BASE
068 LC-4349A04		3P CONNECTOR WIRE
069 C-3417A		FUSE CLIP
069 C-4446A00		SCREW TERMINAL

## Parts List

SYMBOL	PARTS NO.	DESCRIPTION
<b>X-1237-01 PCB ASSEMBLY</b>		
C001	044 DE7150F472M	SPARK KILLER
S001	061 C-4176A07	POWER SWITCH
<b>X-1237-02 PCB ASSEMBLY</b>		
069 C-4370A00		SCREW TERMINAL
<b>X-1237-03 PCB ASSEMBLY</b>		
C801	041 GS100V220-B	CAP,ELEC.100V22UF
C802	041 GS25V101-B	CAP,ELEC.25V100UF
C803	041 GS100V221-D	CAP,ELEC.100V220UF
C804	041 GS100V220-B	CAP,ELEC.100V22UF
D801	034 LT1N4148-86	DIODE
D802	034 RD10EB	ZENER DIODE
D803-806	034 LT1N4003-TB	DIODE
D807,808	034 LT1N4148-86	DIODE
Q801-803	032 LT2SC2362KAA-FG	TRANSISTOR
R801	054 1WS5.6KJF	R,METAL 1W 5.6K
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
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 CR14-332J-A	R,CARBON 3.3K
R817,818	053 CR14-273J-A	R,CARBON 27K
068 L4TR-2787#3		CONNECTOR BASE
<b>X-1237-04 PCB ASSEMBLY</b>		
C901,902	041 25BGF470M	CAP,ELEC.25V470UF
D901,902	054 RD16EB	ZENER DIODE
Q901	033 L2SD600K-EF	TRANSISTOR
Q902	033 L2SB631K-EF	TRANSISTOR
R901,902	054 1WS2.2KJF	R,METAL 1W 2.2K
R903,904	054 1WS5.6KJF	R,METAL 1W 5.6K
RY901	063 EG2-24NU	RELAY
S901	064 4TR-2341	SLIDE SWITCH
017 C-4401A01		HEAT SINKER
019 TO-126		INSULATION SHEET
<b>X-1237-05,06 PCB ASSEMBLY</b>		
C501,502	044 LS50V100PJ	CAP,STYROL 50V100PF
C505-508	041 25BGF100M	CAP,ELEC.25V100UF
IC501,502	031 AD711JN	IC
R501-504	054 LTMK2022KFECZ	R,METAL 1% 22K
R505-508	054 LTMK2010KFECZ	R,METAL 1% 10K
R509,510	054 LTMK2001KFECZ	R,METAL 1% 1K
066 C-4575A01		CANNON CONNECTOR
068 L4TR-2787#5		CONNECTOR BASE

SYMBOL	PARTS NO.	DESCRIPTION
<b>HEAT SINKER ASSEMBLY</b>		
Q617,618	032 L2SD1953	TRANSISTOR
Q623-632	033 2SA1492-OPY	POWER TRANSISTOR
Q633,634	033 L2SB817-DE	DRIVER TRANSISTOR
Q635,636	033 L2SD1047-DE	DRIVER TRANSISTOR
Q637-646	033 2SC3856-OPY	POWER TRANSISTOR
017 LPX4-06A00		HEAT SINKER
019 TO-3P		INSULATION SHEET
<b>OTHERS</b>		
011 FP-472		SUB PANEL ASSY
011 RV4-02A02		H/S FRONT PANEL
012 RV4-09A00		PUSH KNOB 14F
014 RV3-07A00		UPPER COVER
015 RP-341		REAR CHASSIS
019 L4TSH-19#2		PLASTIC FOOT
022 T-1037W02		POWER TRANSFORMER
034 LBR154		POWER DIODE
036 3AG125V12A		LONG FUSE for STD
036 5ST6.3		MINI FUSE for CEE
041 ALS20S1024XX		CAP,ELEC.80V15000UF

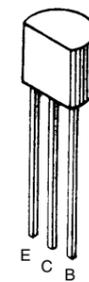
SYMBOL	PARTS NO.	DESCRIPTION
044 MKT18-100V104K		CAP,FILM 100V0.1UF
054 2WS10JF		R,METAL 2W 10R
067 L4TR-2744#1		SPEAKER TERMINAL(REDF)
067 L4TR-2744#2		SPEAKER TERMINAL(BLK)
069 C-1575		MINI MFUSE HOLDER
069 C-4200A01		LONG FUSE HOLDER
071 LEL4		EGG LUG
072 L4TR-670#5		AC CORD for STD
072 LC-3763		AC CORD for AUSTRALIA
072 C-4572A01		AC CORD for UK
072 C-4573A01		AC CORD for CEE
081 RV4-15A00		INSIDE CARTON
081 Z-200		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.

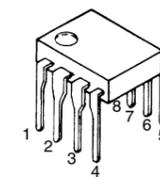
Step	Coupling		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
1	TP 3	TP 1	X-1177-01 PCB	VR601	DC milli-voltmeter reads 7mV
2	TP 4	TP 2	X-1177-02 PCB	VR602	



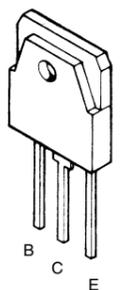
2SAS1016K  
2SC2362K  
2SC2910  
2SA1208



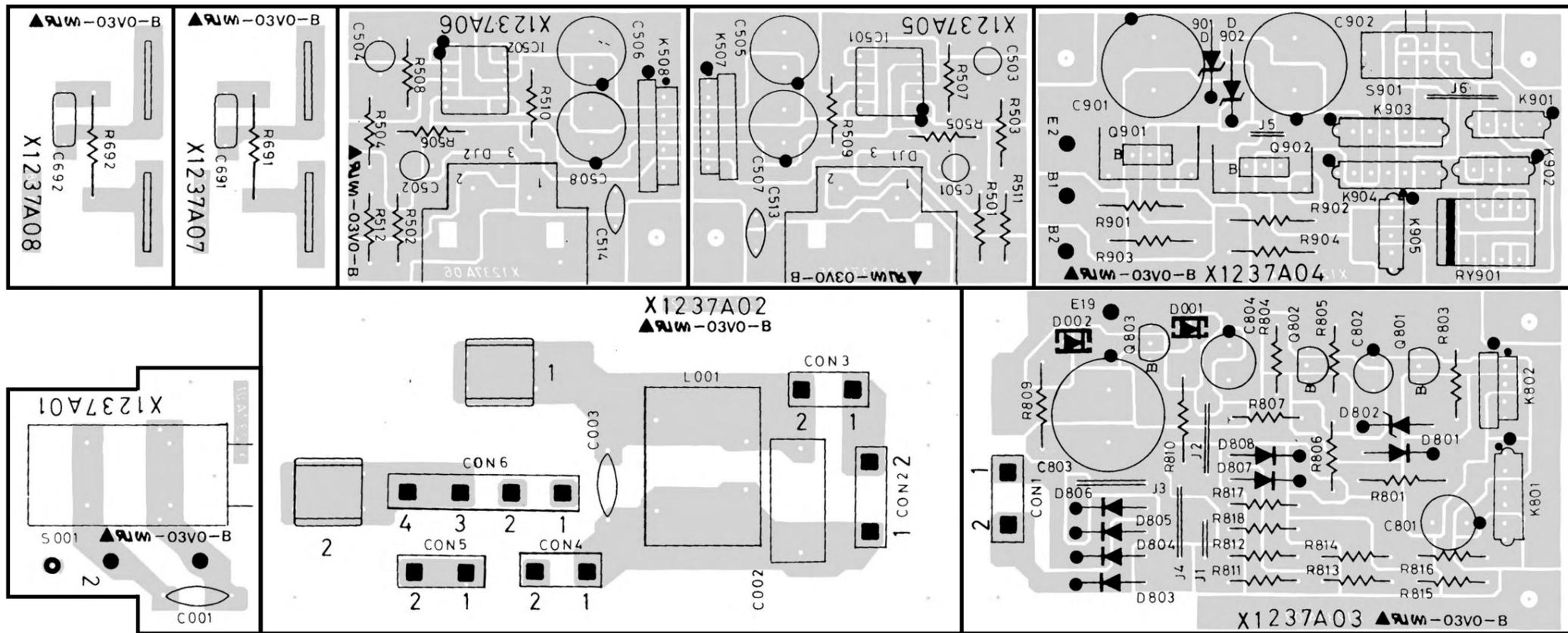
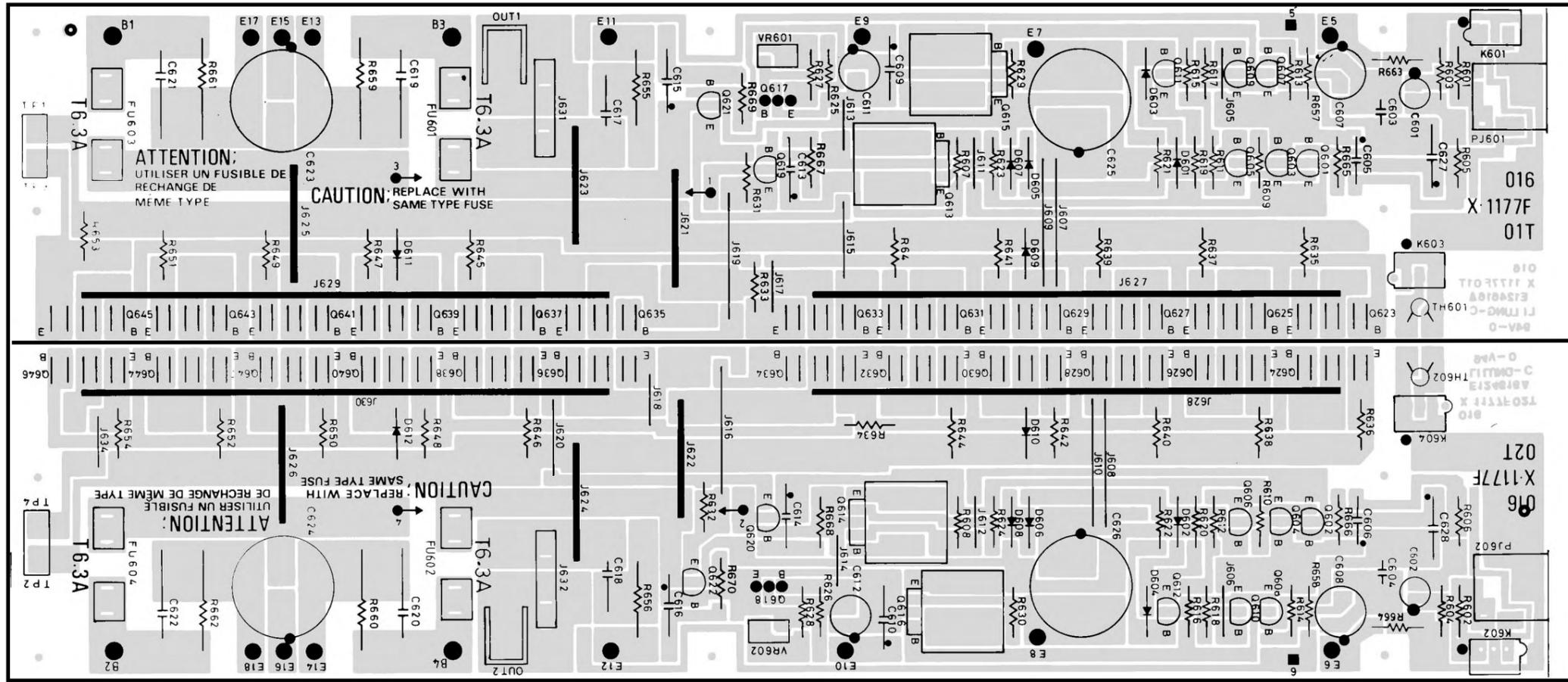
2SB631K  
2SD600K  
2SD1953  
2SA1142  
2SC2682



AD711JN



2SA1492  
2SC3856



# Schematic Diagram

