

ROTEL *hifi*

STEREO POWER AMPLIFIER

RB-930AX

TECHNICAL MANUAL

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THE ROTEL CO., LTD.

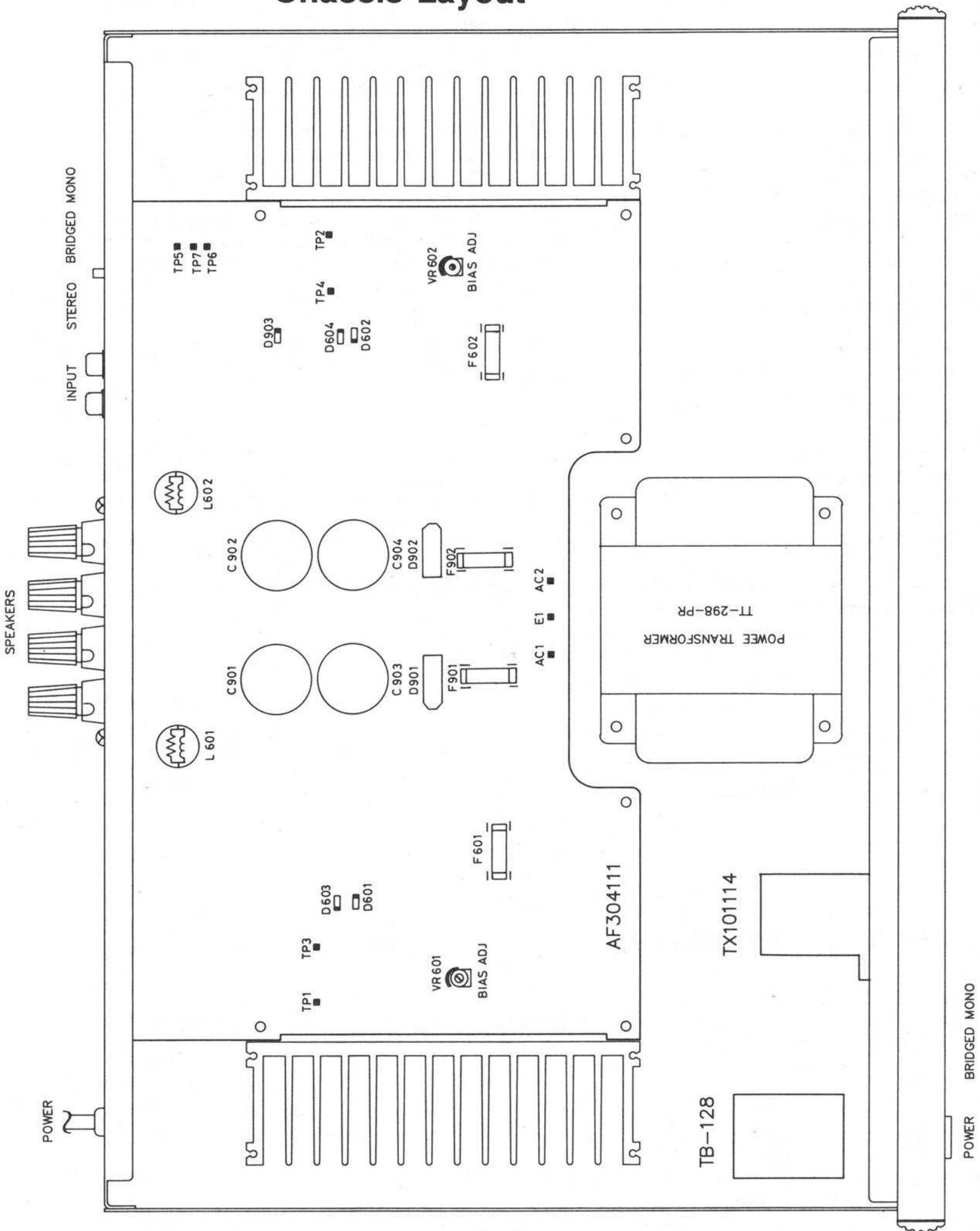
1-36-8, OHOKAYAMA, MEGURO-KU, TOKYO 152, JAPAN

ROTEL ELECTRONICS CO., LTD.

3F-2, NO.35, FU HSING NORTH ROAD, TAIPEI, TAIWAN, REPUBLIC OF CHINA

MN20002103

Chassis Layout



Specifications

Continuous Power Output	30 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion..
DIN Output	55 watts per channel (1kHz, 4 ohms, 1% THD)
Peak Current	20A (0.1 ohms, 10 μ sec, 1 pulse)
Power Output (BTL).....	90 watts (mono) min. RMS driven into 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.
Total Harmonic Distortion	No more than 0.03% (continuous rated power output)
(20 to 20,000 Hz)	No more than 0.03% (continuous 1/2 rated power output).
	No more than 0.03% (1 watt per channel power output, 8 ohms).
Intermodulation Distortion.....	No more than 0.05% (continuous rated power output)
(60 Hz : 7 kHz= 4:1)	No more than 0.05% (continuous 1/2 rated power output).
	No more than 0.05% (1 watt per channel power output, 8 ohms).
Output (Speakers)	8 ohms min (bridged mono mode); 4-16 ohms (stereo mode)
Damping Factor.....	180 (20 to 20,000 Hz, 8 ohms)
Input Sensitivity/Impedance.....	1.0 V / 27 kohms
Overload Level (THD 0.5 %, 1 kHz).....	5 V
Frequency Response	15 to 100,000 Hz, +0 dB, -1.0 dB
Signal to Noise Ratio (IHF, A network).....	116 dB

GENERAL

Power Requirement.....	120 V/60 Hz, 220-240 V/50 Hz (depending on destination)
Power Consumption.....	180 watts
Dimension (overall)	440 (W) x 92 (H) x 334 (D) mm
	7-3/8" x 3-5/8" x 13-3/16"
Weight (net).....	6.5 kg / 14.3 lbs

* Measured pursuant to the Federal Trade Commission's Trade Regulation Rule or, Power Claims for Amplifiers (applicable to the USA only).

NOTE: Specifications and design are subject to possible modification without notice.

Power Amplifier Bias Adjustment

Instruments:DC milli-voltmeter

Notes:Prior to Bias Adjustment,run about 5 minutes with rated output (8 ohm) and warm up power Transistor and Heat Sink.
Set Volume Control to minimum.

Step	Coupling		Adjust	Adjust for
	Plus Lead	Minus Lead		
1	TP1	TP3	VR601	DC milli-voltmeter reads 4 mV
2	TP2	TP4	VR602	

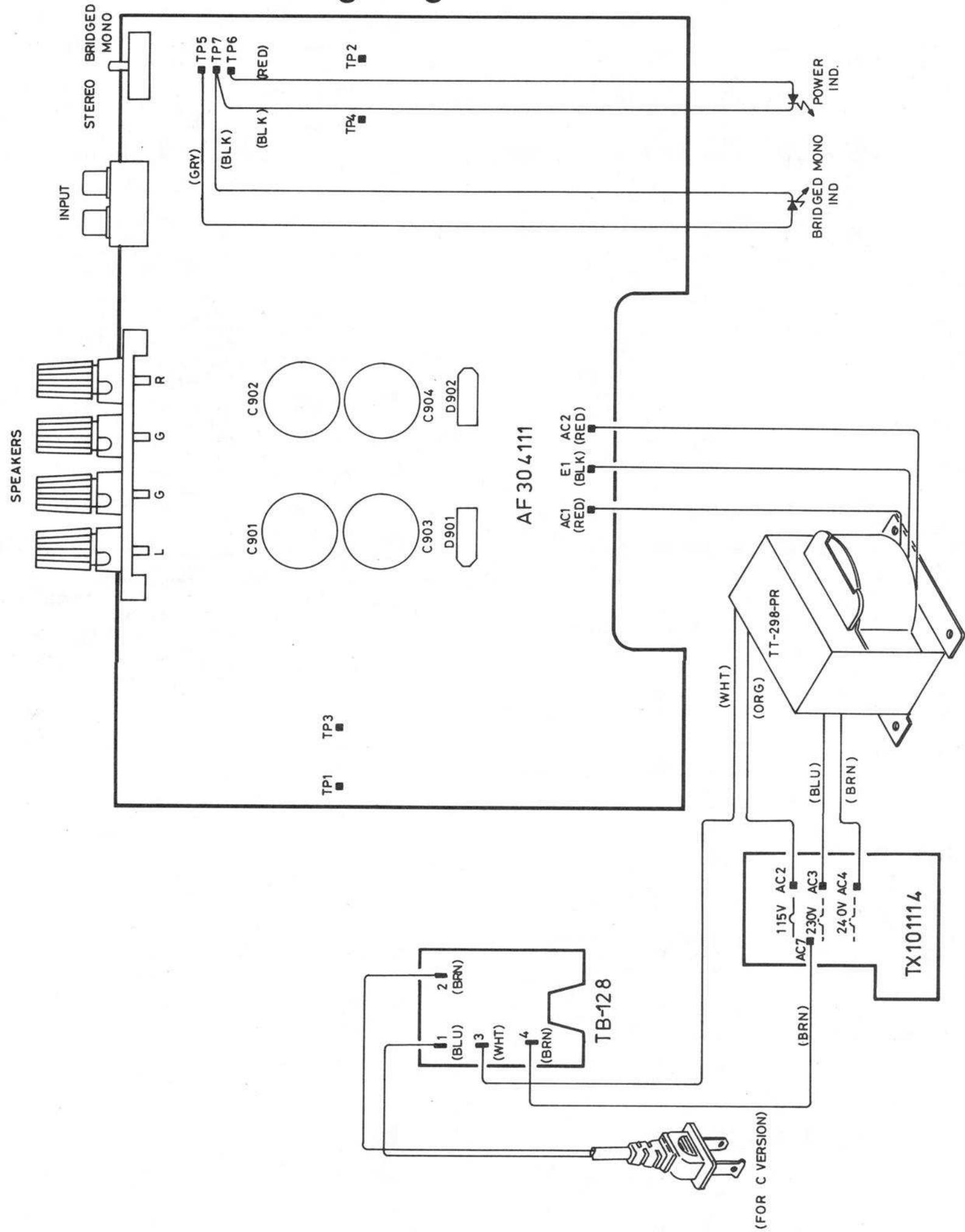
Parts List

NOTE: THE COMPONENTS IDENTIFIED BY \triangle MARK ARE FOR SAFETY. REPLACE ONLY WITH ORIGINAL PARTS. DO NOT SUBSTITUTE.

SYMBOL	PARTS NO.	DESCRIPTION
AF304111 PCB ASSEMBLY		
R601, 602	RM51001816	R, METAL 1K 1/4W F
R603, 604	RM54752810	R, METAL 47k5 1/4W F
R605, 606	RM51501813	R, METAL 1K5 1/4W F
R607, 608	RM54750812	R, METAL 475 1/4W F
R609, 610	RM56811816	R, METAL 6K81 1/4W F
R611, 612	RM54750812	R, METAL 475 1/4W F
R613, 614	RM51002810	R, METAL 10K 1/4W F
R615, 616	RM51000812	R, METAL 100 1/4W F
R617, 618	RM56811816	R, METAL 6K81 1/4W F
R619, 620	RM52211818	R, METAL 2K21 1/4W F
R621, 622	RM54759815	R, METAL 47.5 1/4W F
R623, 624	RM53322818	R, METAL 33K2 1/4W F
R625, 626	RM52210814	R, METAL 221 1/4W F
R627, 628	RM52210814	R, METAL 221 1/4W F
R629-632	RM90228220	R, METAL OXIDE FILM 2W 0.22J
R633, 634	RM53322818	R, METAL 33K2 1/4W F
R635, 636	RM58251814	R, METAL 8K25 1/4W F
R637	RM58251814	R, METAL 8K25 1/4W F
R638, 639	RM53320810	R, METAL 332 1/4W F
R640	RM51821819	R, METAL 1K82 1/4W F
R641-644	RM90228220	R, METAL OXIDE FILM 2W 0.22J
R645, 646	RM91009127	R, METAL OXIDE FILM 1W 10J
C601, 602	CE01006500	CAP, ELEC. 50V 10uF
C605, 606	CE01005064	CAP, ELEC. 6.3V 100uF
C607, 608	CC33311434	CAP, CERAMIC 50V 330P
C609, 610	CC31511432	CAP, CERAMIC 50V 150P
C611, 612	CC31009465	CAP, CERAMIC 50V 0.01uF
C613, 614	CM01008423	CAP, MYLAR 50V 104
C615, 616	CC32211432	CAP, CERAMIC 50V 220P
C617, 618	CC01512434	CAP, CERAMIC 50V 15P
Q601-608	TR10000023	TRANSISTOR 2SA1016F/G
Q609, 610	TR10000047	TRANSISTOR 2SB631KE
Q611, 612	TR30000169	TRANSISTOR 2SC1941K
Q613-616	TR40000069	TRANSISTOR 2SD600KE
Q617, 618	TR10000047	TRANSISTOR 2SB631KE
Q619-624	TR40000045	TRANSISTOR 2SD1047D/E
Q625, 626	TR20000040	TRANSISTOR 2SB817D/E
D601-604	DD80000021	DIODE IN4148
VR601, 602	RV40000022	SEMI-FIXED RES. VM6CKPV-1S-B 2.2K
L601, 602	LC23310002	ANTI-PARASITIC COIL TRL-331
F601, 602	FU25000028	FUSE 125V 4A UL \triangle
	FU23000190	FUSE 250V T4A S \triangle
R901	RM51821819	R, METAL 1K82 1/4W F
D901, 902	DD10000020	DIODE PBL-403
C901-904	CE56804451	CAP, ELEC. 50LPSS68000M
C905-912	CC01009256	CAP, CERAMIC 250V 0.01uF
D903	DD20000181	DIODE RD-6.2E
F901, 902	FU25000041	FUSE 125V 6A UL \triangle
	FU23000219	FUSE 250V T6.3A S \triangle
C002	CC05009465	CAP, CERAMIC 50V 0.047uF
VR1, VR2	RV10001760	R, VARIABLE 4TR-2981 50KBx1
S1	SH20000319	SLIDE SWITCH 4TR-2294
TB128-A PCB ASSEMBLY		
S001	SH40000120	POWER SWITCH C-3600B-T \triangle
C001	CK00000035	SPARK KILLER DE7150F472M \triangle
OTHERS		
AB00000717		BOTTOM BOARD 3TQZ-5#1
AF20000179		FRONT CHASSIS 2TTF-2C
AM00002098		CHASSIS BODY 2TR-2966#2
AR20000711		PRINTED REAR CHASSIS TRP-630
PT29811200		POWER TRANSFORMER TT-298-PR \triangle

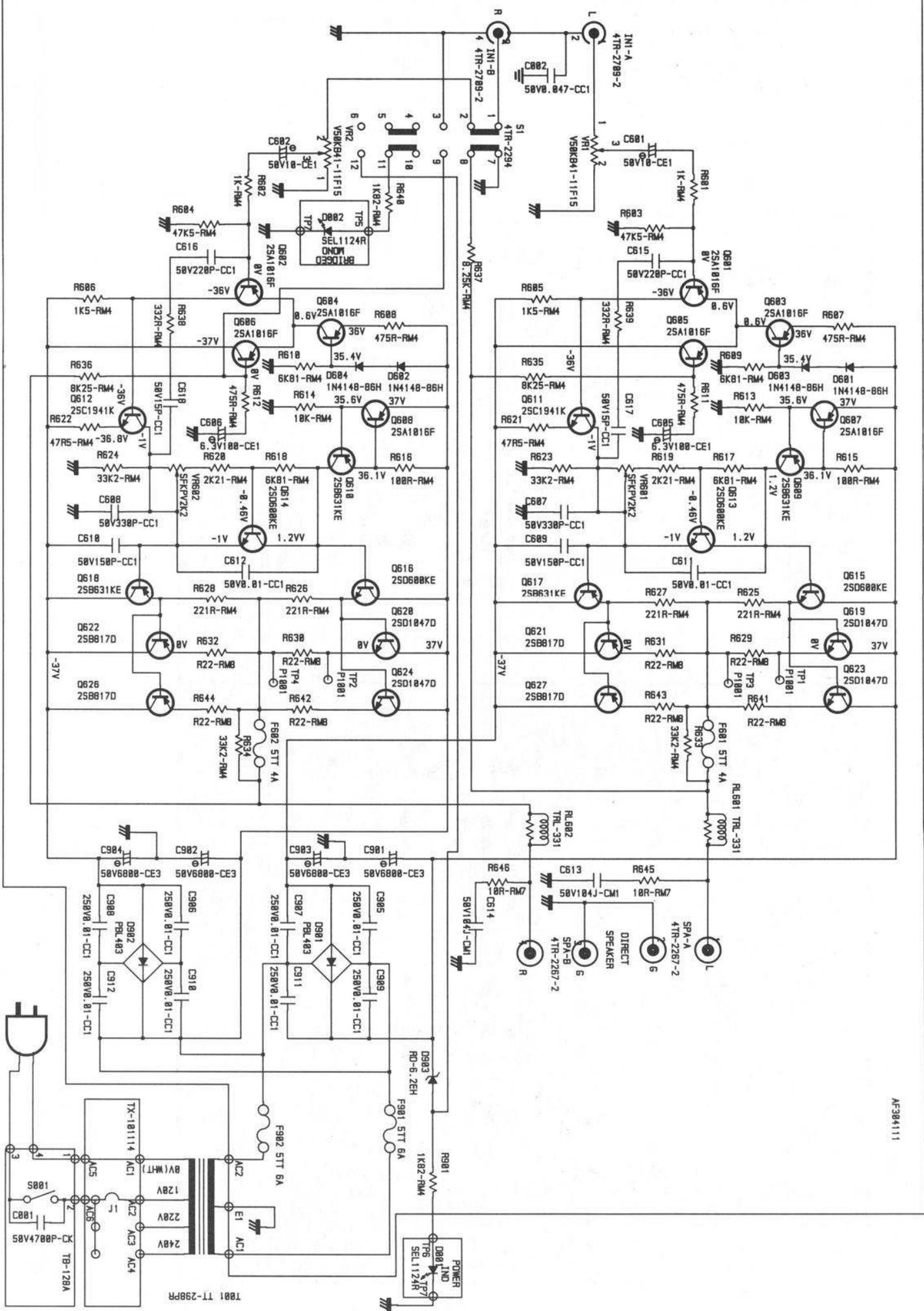
SYMBOL	PARTS NO.	DESCRIPTION
BC00000817		CYLINDER BUSH 4TVL-7#8 6Fx13H
FT00000229		PLASTIC FOOT 4TSH-19#2 50Fx14H
FT00000242		FOOT 4TR-2823#2 24Fx14H
SC00000027		AC CORD STOPPER SR-4N-4 \triangle
CD00000218		AC CORD SPT-2 AWG#18 4TR-670#4 (U, C, A, J) \triangle
CD00000322		AC POWER CORD 4TR-2757(D) \triangle
CD00000048		AC POWER CORD 4TR-1037 (H, E, Y1, Y2, S1) \triangle
CD00000085		AC POWER CORD C-2504A(K1) \triangle
CD00000115		AC POWER CORD C-3763-T(G) \triangle
NP00001949		NAME STICKER 4TR-2828#1 TNP-382 AC120V
NP00001974		NAME STICKER 4TR-2828#4 TNP-385 AC120V-C
NP00001962		NAME STICKER 4TR-2828#3 TNP-384 AC240V
NP00001998		NAME STICKER 4TR-2828#5 TNP-389 AC230V
NP00002012		NAME STICKER 4TR-2828#6 TNP-391 AC100V
NP00001950		NAME STICKER 4TR-2828#2 TNP-383 AC220V
AH20001027		HEAT SINKER BOARD 4TR-2989
AA20000750		FRONT PANEL 2TQH-1#3 TFP-697
BU00001145		POWER RING 4TQF-13 14X14
KB20002681		POWER BUTTON 4TQF-15 14x14
OM10001272		ORNAMENTAL SIDE BOARD 4TR-2797#2
DD40000095		LED SEL1124R
OM70000065		PUSH BUTTON CONNECTOR 4TTTL-15
SN00000179		BUTTON SPRING 4TR-1988A#2 10F
AU00001201		TOP COVER POLY 3TTF-5#7
SR00000882		UPPER COVER 4TR-2418
MN10003062		OWNER'S MANUAL RB-930AX
PL00001142		STYROL SIDE MOULDING 2TTF-9A#3 TZ-165-1

Wiring Diagram



Schematic Diagram

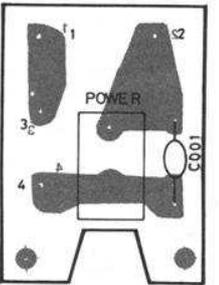
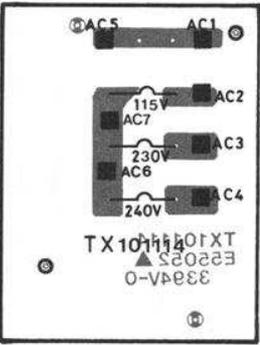
SCHEMATIC DIAGRAM RB-930AX



AF304111

ACIN 4TR-67B-4

Printed Circuit Boards



CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE. (F901, F902) T6, 3A250V T6A125V (F901, F902) T4A250V T4A125V FUSE.

ATTENTION: AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNTOUJOURS PAR UN FUSIBLE DE MEME TYPE. (F901, F902) T6, 3A250V T6A125V (F901, F902) T4A250V T4A125V.

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