

# ROTEL *hiFi*

## RDA-985

### DTS SURROUND DECODER

# Technical Manual

#### TABLE OF CONTENTS

Wiring Diagram .....	2
PC Board Ass'y Parts List .....	3,4
Printed Circuit Boards .....	5,6
Schematic Diagram .....	7,8

#### THE ROTEL CO.,LTD.

4F,BUNZAN-SHINSEN-BLDG 10-10, SHINSEN-CHO, SHIBUYAKU TOKYO JAPAN

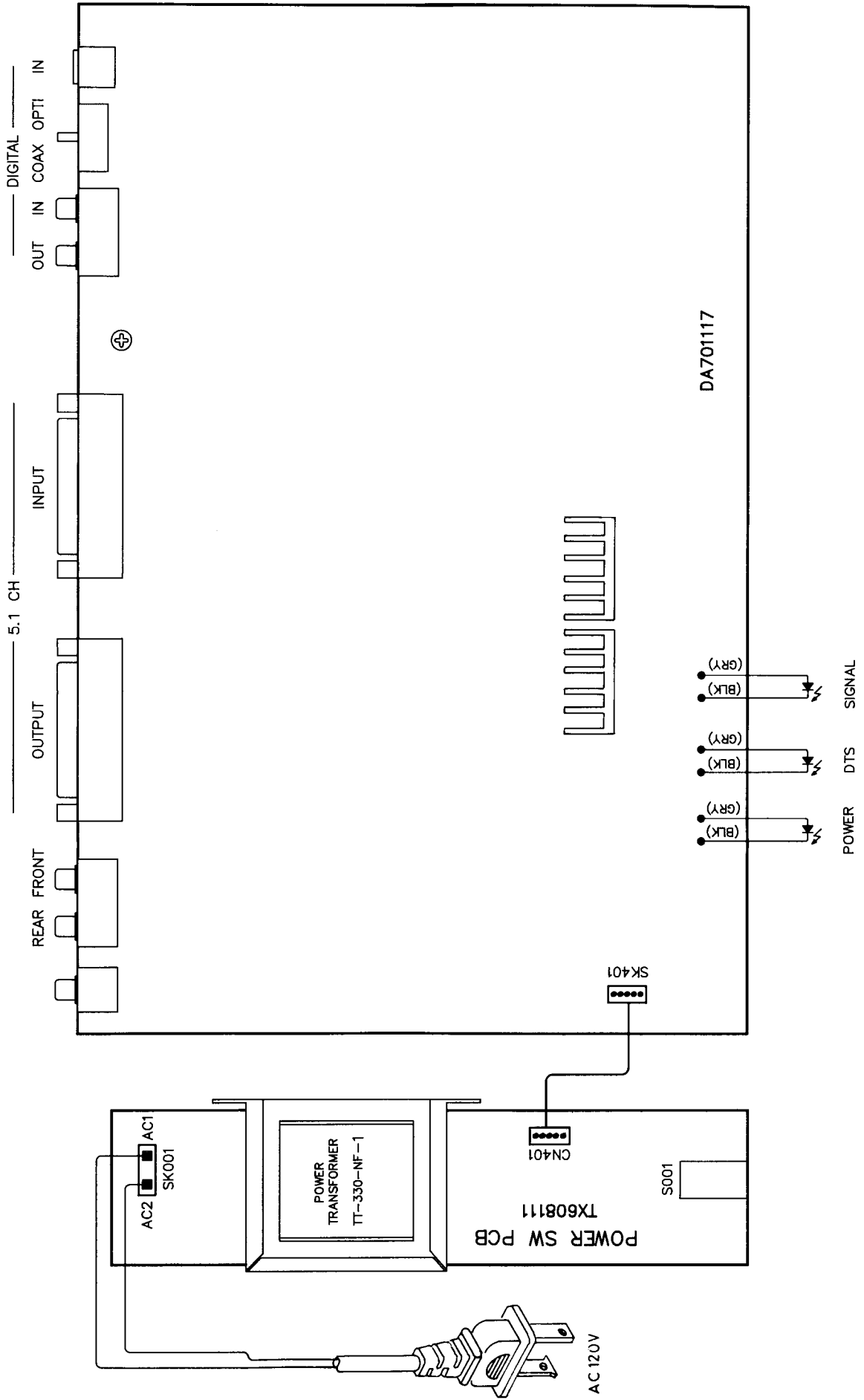
#### ROTEL ELECTRONICS CO.,LTD.

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

MN20002383

Y-311-98071M/RT-S


# Wiring Diagram













# Parts List

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

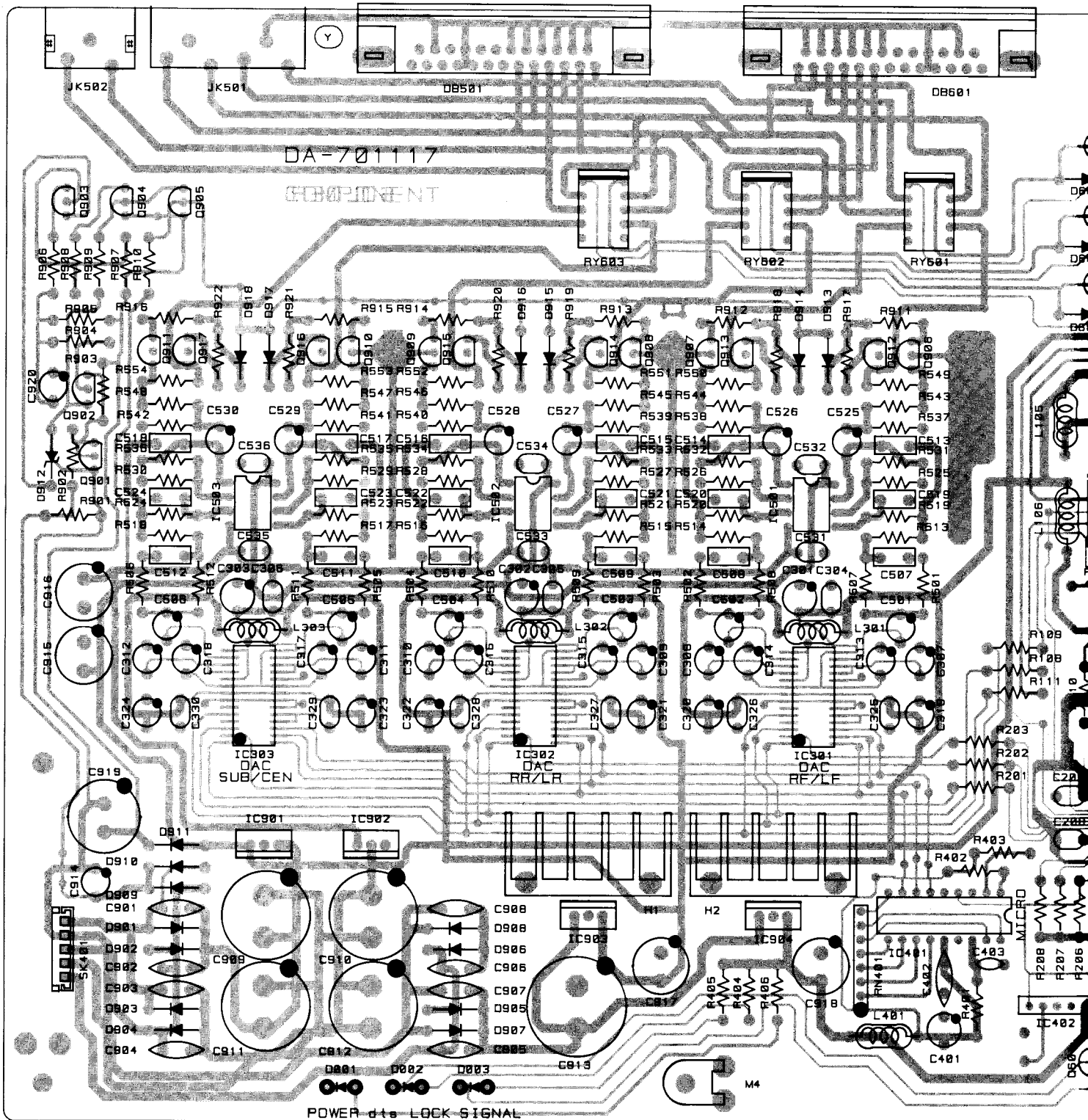
SYMBOL	PARTS NO.	DESCRIPTION
DA701117 PCB ASSEMBLY		
R101	RL87509615	R,METAL MK2075RFE
R102	RL81003618	R,METAL MK2100KFE
R103	RL82201618	R,METAL MK202K2FE
R104,105	RM51002810	R,METAL 10K 1/4W F
R106	RL81000617	R,METAL MK2100RFE
R107	RL81001610	R,METAL MK2001KFE
R108 -111	RM52219817	R,METAL 22.1 1/4W F
R112	RL87509615	R,METAL MK2075RFE
R201 -203	RM52219817	R,METAL 22.1 1/4W F
R204 -211	RM51002810	R,METAL 10K 1/4W F
R401	RM58252818	R,METAL 82.5K 1/4W F
R402,403	RM51002810	R,METAL 10K 1/4W F
R404 -406	RM53320810	R,METAL 332 1/4W F
R407	RM52219817	R,METAL 22.1 1/4W F
R408	RM52212811	R,METAL 22.1K 1/4W F
R409	RM51002810	R,METAL 10K 1/4W F
R501 -506	RL81003618	R,METAL MK2100KFE
R507 -512	RL84700614	R,METAL MK2470RFE
R513 -524	RL83601616	R,METAL MK203K6FE
R525 -536	RL81002614	R,METAL MK2010KFE
R537 -542	RL81003618	R,METAL MK2100KFE
R543 -554	RL82200614	R,METAL MK2220RFE
R601	RM51002810	R,METAL 10K 1/4W F
R602	RM52212811	R,METAL 22.1K 1/4W F
R603	RM51500810	R,METAL 150 1/4W F
R604	RM51002810	R,METAL 10K 1/4W F
R605	RM52212811	R,METAL 22.1K 1/4W F
R606	RM51500810	R,METAL 150 1/4W F
R607	RM51002810	R,METAL 10K 1/4W F
R608	RM52212811	R,METAL 22.1K 1/4W F
R609	RM51500810	R,METAL 150 1/4W F
R610	RM51002810	R,METAL 10K 1/4W F
R611	RM52212811	R,METAL 22.1K 1/4W F
R901	RM51002810	R,METAL 10K 1/4W F
R902	RM52212811	R,METAL 22.1K 1/4W F
R903	RM51002810	R,METAL 10K 1/4W F
R904	RM51000812	R,METAL 100 1/4W F
R905	RM55622817	R,METAL 56.2K 1/4W F
R906 -908	RM51002810	R,METAL 10K 1/4W F
R910	RM51004817	R,METAL 1M 1/4W F
R909	RM52212811	R,METAL 22.1K 1/4W F
R911 -922	RM52212811	R,METAL 22.1K 1/4W F
C101	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C102	CE41005257	CAP. ELEC. 25V 100uF
C103	CE43306467	CAP. ELEC. 50V 33uF
C104	CQ61009420	CAP. M.P. 63V 10000PF
C105	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C106	CE41005257	CAP. ELEC. 25V 100uF
C107	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C108	CE41005257	CAP. ELEC. 25V 100uF
C109	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C110	CE41005257	CAP. ELEC. 25V 100uF
C111	CC61011413	CAP. LAYAR CER. T50V 101J
C112,113	CQ61009420	CAP. M.P. 63V 10000PF
C114	CQ64709427	CAP. M.P. 63V 47000PF
C115	CC64709439	CAP. LAYAR CER. 50V0.047 U
C116	CE41005257	CAP. ELEC. 25V 100uF
C117	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C118,119	CE41005257	CAP. ELEC. 25V 100uF

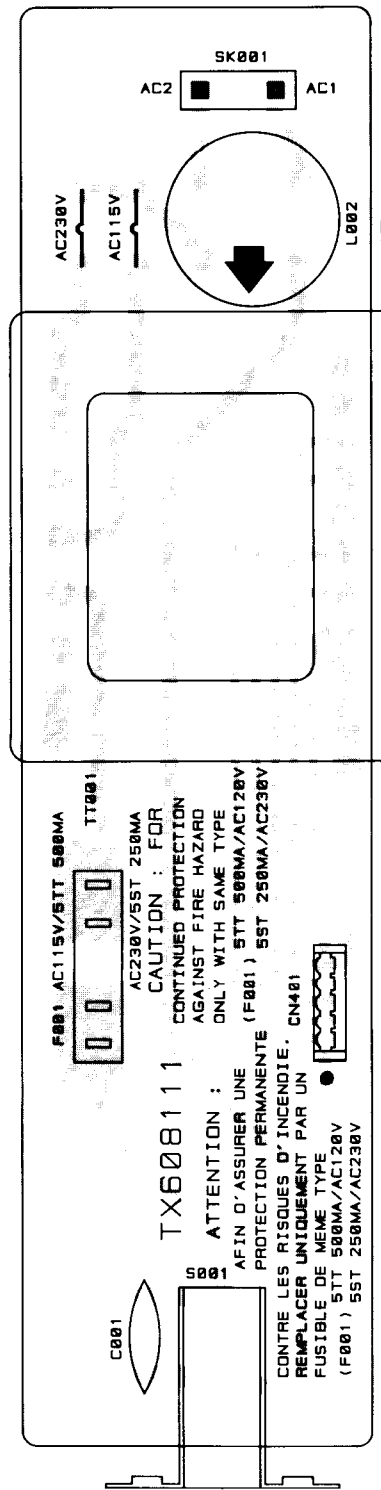
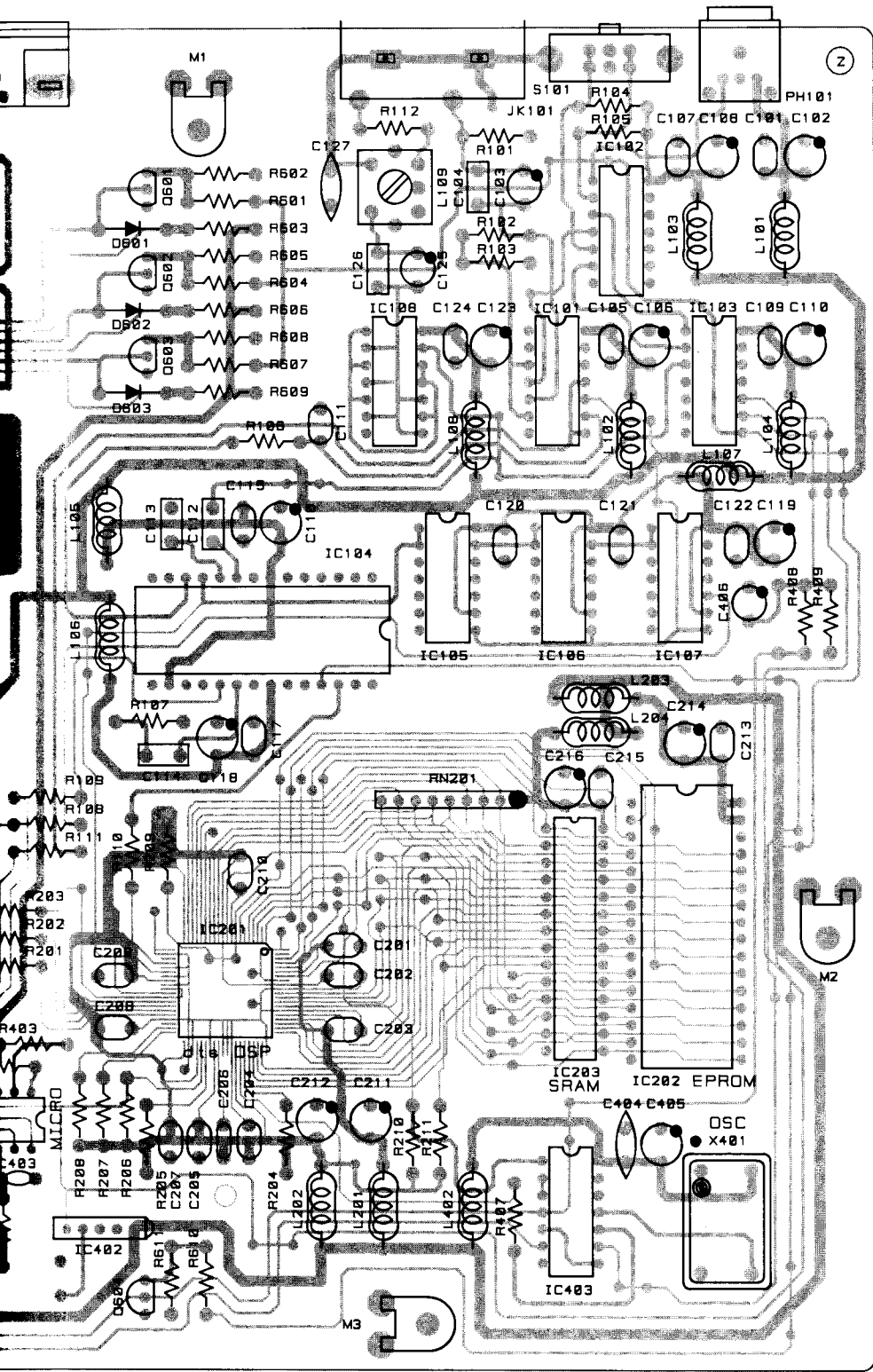
SYMBOL	PARTS NO.	DESCRIPTION
C120 -122	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C123	CE41005257	CAP. ELEC. 25V 100uF
C124	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C125	CE44706258	CAP. ELEC. 25V 47uF
C126	CQ61009420	CAP. M.P. 63V 10000uF
C127	CC45009456	CAP. CERAMIC 50V 0.05uF
C201 -205	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C206	CC64711410	CAP. LAYAR CER. 50V 470P F
C207 -210	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C211 - 212	CE41005257	CAP. ELEC. 25V 100uF
C213	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C214	CE41005257	CAP. ELEC. 25V 100uF
C215	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C216	CE41005257	CAP. ELEC. 25V 100uF
C301 - 303	CE41005257	CAP. ELEC. 25V 100uF
C304 - 306	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C307 - 324	CE41006500	CAP. ELEC. 50V 10uF
C325 - 330	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C401	CE41005257	CAP. ELEC. 25V 100uF
C402	CC45009456	CAP. CERAMIC 50V 0.05uF
C403	CC46812431	CAP. CERAMIC 50V 68PF
C404	CC45009456	CAP. CERAMIC 50V 0.05uF
C405	CE41005257	CAP. ELEC. 25V 100uF
C406	CE41006500	CAP. ELEC. 50V 10uF
C501 - 506	CE41006500	CAP. ELEC. 50V 10uF
C507 - 512	CQ61009420	CAP. M.P. 63V 10000P F
C513 - 523	CQ61210422	CAP. M.P. 63V 1200P F
C524	CQ62210429	CAP. M.P. 63V 2200P F
C525 - 530	CE44706258	CAP. ELEC. 25V 47uF
C531 - 536	CC64709439	CAP. LAYAR CER. 50V 0.047 U
C901 - 908	CC41009176	CAP. CERAMIC 500V 0.01uF
C909 - 912	CE02204354	CAP. ELEC. 35V 2200uF
C913	CE04704767	CAP. ELEC. 16V 4700uF
C914	CE41007503	CAP. ELEC. 50V 1uF
C915 - 918	CE02205255	CAP. ELEC 25V 220uF
C919	CE04705358	CAP. ELEC. 35V 470uF
C920	CE43306467	CAP. ELEC. 50V 33uF
L101 - 108	LM00000668	MICRO INDUCTOR TRL-392
L109	LM23850008	MICRO INDUCTOR TRL-385
L202	LM00000632	MICRO INDUCTOR 4.7UH
L203	LM00000668	MICRO INDUCTOR TRL-392
L204	LM00000632	MICRO INDUCTOR 4.7UH
L301 - 303	LM00000668	MICRO INDUCTOR TRL-392
L401,402	LM00000668	MICRO INDUCTOR TRL-392
RN201	RN31002087	THICK FILM RS NETWORK A8103J/RA8-103-8K
RN401	RN11002070	THICK FILM RS NETWORK A7103J/RA8-103-7K
RY601 - 603	LY00000540	RELAY EG2-9NU 
S101	SH20000563	SLIDE SW SS010-P022BAM-PA9
PH101	JP01000188	PHOTO JACK GP1F32R
JK101	JP02000375	2P PIN JACK 4TR-3351
JK501	JP04000229	4P PIN JACK 4TR-3260
JK502	JP02000351	2P PIN JACK 4TR-3258
D601 - 603	DD80000021	DIODE IN4148-86
D901 - 911	DD80000010	DIODE IN4003-TB
D912	DD20000478	DIODE RD5.6JS-T1
D913 - 918	DD80000021	DIODE IN4148-86
Q601 - 604	TR31000034	TRANSISTOR 2SC536KF
Q901 - 903	TR31000034	TRANSISTOR 2SC536KF
Q904,905	TR11000015	TRANSISTOR 2SA608K

SYMBOL	PARTS NO.	DESCRIPTION
Q906 - 917	TR31000149	TRANSISTOR 2SC2878-A1B
IC101	IC00003689	IC TC74HCU04AP
IC102	IC00004505	IC TC74HC32AP
IC103	IC00002820	IC PC74HCT08P
IC104	IC00004591	IC CS8412-CP
IC105 - 107	IC00003847	IC TC74HC164AP
IC108	IC00003689	IC TC74HCU04AP
IC201	IC00004578	IC DSP156009FJ81
IC202	IC00004580	IC M27C1001-15F1
IC203	IC00004566	IC UM61256FK-15
IC301 - 303	IC00003951	IC PCM1710U
IC401	IC00004608	IC PIC16C54A-04/P
IC402	IC00003793	IC M51953BL
IC501 - 503	IC00001693	IC NE5532AN
IC901	IC00004396	IC NJM7812FA
IC902	IC00004207	IC NJM7912FA
IC903,904	IC00003630	IC NJM7805FA
X401	DD60000507	CRYSTAL OSC CX0-049B-KSS
TX608111 PCB ASSEMBLY		
L002	LC23560006	LINE FILTER COIL TRL-356
C001	CK00000035	SPARK KILLER DE7150F472M 
S001	SW40000120	POWER SW C-3600B-T 
OTHERS		
	AB00000950	BOTTOM BOARD 3TOW-4
	AF60000051	FRONT CHASSIS 3TOW-2
	AR60000138	PRINTED REAR CHASSIS TRP-742
	AS01000350	SIDE CHASSIS 3TOG-1C#2
	AS01000385	SIDE CHASSIS 3TOG-1C#3
	FT00000229	PLASTIC FOOT 4TSH-19#2 50Fx14H
	SB00001381	P.V.C SHIELD BOARD 4TR-3272
	SC00000027	AC CORD STOPPER SR-4N-4 
	SP10007574	P.T SUPPORT RK-4-07A00T
	CD00000218	AC CORD SPT-2 AWG#18 4TR-670#4 
	CD00000322	AC POWER CORD 4TR-2757 
	CD00000048	AC POWER CORD 4TR-1037 
	CD00000115	AC POWER CORD C-3763-T 
	NP00001949	NAME STICKER 120V 4TR-2828A#1 TNP-382
	NP00002012	NAME STICKER 100V 4TR-2828A#6 TNP-391
	NP00002218	NAME STICKER 220 - 240V 4TR-2828A#17 TNP-404
	FU23000360	FUSE 250V 500mA 
	FU23000384	FUSE T250mA 
	AA60000189	FRONT PANEL 3TOW-1 TFP-820
	BU00001145	POWER RING 4TOF-13 14x14
	KB20002681	POWER BUTTON 4TOF-15
	OM10001260	ORNAMENTAL SIDE BOARD 4TR-2797#1
	DD40000095	L.E.D SEL-1124R
	OM70000065	PUSH BUTTON CONNECTOR 4TTL-15
	SN00000179	BUTTON SPRING 4TR-1988A#2 10F
	AU00001468	TOP COVER POLY QN3-03A03T
	SR00000882	UPPER COVER SPACER 4TR-2418

SYMBOL	PARTS NO.	DESCRIPTION
	TN20004247	SHIPPING CARTON 4TOW-12
	TN20004249	SHIPPING CARTON 4TOW-1231 (NON MIT)
	WD00000586	GUARANTEE CARE 4TR-3043C
	AZ00003934	REAR CHASSIS 3TOW-3
	PL00001087	STYROL SIDE MOULDING 2TTE-8B#2 TZ-164-1
	PT33010111	POWER TRANSFORMER TT-330-NF-1 

# Printed Circuit Boards





# Schematic Diagram

## SCHEMATIC DIAGRAM MODEL NO. RDA-985

