ROTEL hifi

SURROUND SOUND PROCESSOR

RSP-960AX

TECHNICAL MANUAL

TABLE OF CONTENTS

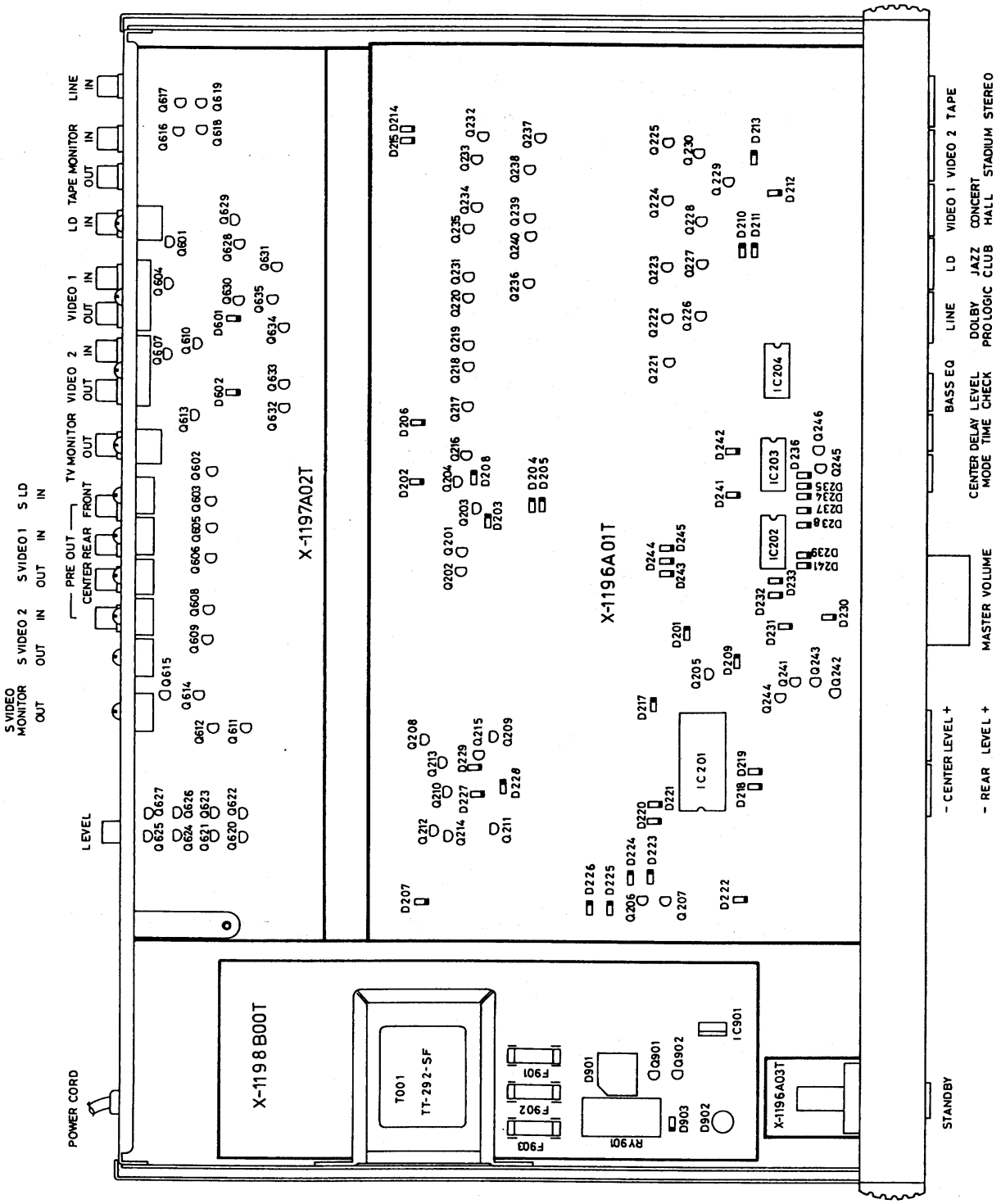
Chassis Layout..... 1
Specifications..... 2
PC Board Ass'y Parts List..... 4
Schematic Diagram..... 9
Wiring Diagram.....14
Printed Circuit Boards.....15

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

MN20002073

SEP - 3 1993

Chassis Layout



Specifications (Typical Values)

Sensitivity (Input 1 kHz; Output 1V; Auto Bal. off)

	FRONT	CENTER	REAR
DOLBY	300 mV	73 mV	50 mV
JAZZ	250 mV		100 mv
HALL	420 mV		50 mv
STADIUM	670 mV		120 mV
STEREO	420 mV		

Delay Time - Rear Speaker (Dolby) ..... 20 / 30 mS

Bass Equalization (Input 100 Hz) - Front Speaker (Stereo) ..... +8 dB

Frequency Response (Center Mode: Wide)

	FRONT	CENTER	REAR
DOLBY	20-55 kHz, (+0 -1 dB)	35-25 k, (+0 -1 dB)	30-6.5 kHz, (+0 -3 dB)
JAZZ	100Hz(-9.5dB),10kHz(-4.5dB)		
HALL	11- 110 kHz, (+0 -1 dB)		
STADIUM	100Hz(-4dB),10kHz(+3dB)		5-120 kHz, (+0 -3 dB)
STEREO	11-110 kHz, (+0 -1 dB)		

Hum and Noise (Input Short, Din Audio / IHF A)

	FRONT	CENTER	REAR
DOLBY	84 / 85 dB	75 / 76 dB	57 / 58 dB
JAZZ	100 / 102 dB		60 / 60 dB
HALL	100 / 102 dB		65 / 65 dB
STADIUM	94 / 95 dB		90 / 92 dB
STEREO	100 / 102 dB	81 / 83 dB	91 / 94 dB

Harmonic Distortion (Input 1 kHz; Output 1 V; 80 kHz filter on)

	FRONT	CENTER	REAR
DOLBY	0.025 %	0.035 %	0.35 %
JAZZ	0.0045 %		
HALL	0.0045 %		
STADIUM	0.0060 %		0.01 %
STEREO	0.0045 %		

Overload (Input 1 kHz; Output 1 V; Distortion 1 %)

	FRONT	CENTER	REAR
DOLBY	3.0V	> 2.0 V	1.5 V
JAZZ	>3.0 V		
HALL	> 3.0 V		
STADIUM	>3.0 V		> 2.0 V
STEREO	> 3.0 V		

Residual Noise (Din Audio / IHF A)

FRONT	CENTER	REAR
5 / 4 uV	25 / 20 uV	23 / 20 uV

Channel Separation (Center Rear VR -10 dB)

	FRONT	CENTER	REAR
DOLBY - L or R	-35 dB	-46 dB	-36 dB
Center	-35 dB		-36 dB
Rear	-45 dB	-32 dB	
JAZZ - L or R	-67 dB		
Rear			
HALL - L or R	-67 dB		
Rear			
STADIUM- L or R	-6.6 dB		+0.5 / -5.5, -5.5 / +0.5 dB
Rear	-8.5 dB		
STEREO - L or R	69 dB		

SUB WOOFER

Sensitivity (Output 1 V; Flat filter on) (Dolby)

FRONT	CENTER	REAR
145 mV	33 mV	

Frequency Response (Input Stereo, L ch)

FLAT	80 Hz	120 Hz
9-33 kHz, (+0 -1 dB)	80 Hz, (-3 dB)	120 Hz, (-3 dB)

Hum and Noise (1 V, 0 dB, Din Audio / IHF A)

FLAT	80 Hz	120 Hz
68 / 69 dB	85 / 106 dB	83 / 100 dB

Harmonic Distortion (Input Stereo, L ch)

FLAT	80 Hz	120 Hz
0.040%, 1 kHz	0.025%, 20 Hz	0.025 %, 20 Hz

Residual (Volume min) (Din Audio / IHF A) ..... 8 uV / 7 uV

VIDEO SELECTOR

Sensitivity (Output Level 1 V, 75 ohm load) ..... 1 V

Frequency Response (Output Level 1 V, 75 ohm load) ..... 10 Hz - 10 MHz, -1 dB

Overload (Input 4 MHz; Output 75 ohm load) 3 V

Signal to Noise (Output 75 ohm load; 0dB = 1 V) ..... -125 dB

GENERAL

Power Consumption ..... 120 V, 50/60 Hz
230 V, 240 V, 50/60 Hz

Overall Dimensions ..... 440(W) x 92(H) x 329(D) mm 17-3/8"(W) x 4-13/16"(H) x 13"(D)

Weight ..... 6.0 kg / 13.2 lbs

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

Parts List

NOTE:THE COMPONENTS INDENTIFIED BY ⚠ MARK ARE FOR SAFFTY.REPLACE ONLY WITH ORIGINAL PARTS.DO NOT SUBSTITUTE.

SYMBOL	PARTS NO.	DESCRIPTION
	X-1195A00T	PCB ASSEMBLY
R1-16	RM51001816	R,METAL 1K 1/4W F
R17-30	RM54753813	R,METAL 475K 1/4W F
R31	RM53322818	R,METAL 33K2 1/4W F
R32	RM51004817	R,METAL 1M 1/4W F
R33,34	RM51003813	R,METAL 100K 1/4W F
R35	RM54752810	R,METAL 47K5 1/4W F
R36,37	RM51001816	R,METAL 1K 1/4W F
R38-41	RM54752810	R,METAL 47K5 1/4W F
R42,43	RM51003813	R,METAL 100K 1/4W F
R44,45	RM53322818	R,METAL 33K2 1/4W F
R46,47	RM52212811	R,METAL 22K1 1/4W F
R48,49	RM51002810	R,METAL 10K 1/4W F
R50-57	RM54752810	R,METAL 47K5 1/4W F
R58,59	RM51002810	R,METAL 10K 1/4W F
R60-65	RM54752810	R,METAL 47K5 1/4W F
R66,67	RM52741819	R,METAL 2K74 1/4W F
R68,69	RM56811816	R,METAL 6K81 1/4W F
R70,71	RM52211818	R,METAL 2K21 1/4W F
R72,73	RM55111811	R,METAL 5K11 1/4W F
R74,75	RM51001816	R,METAL 1K 1/4W F
R76,77	RM51002810	R,METAL 10K 1/4W F
R78,79	RM51003813	R,METAL 100K 1/4W F
R80,81	RM51002810	R,METAL 10K 1/4W F
R82,83	RM58251814	R,METAL 8K25 1/4W F
R84,85	RM53321814	R,METAL 3K32 1/4W F
R86	RM51005810	R,METAL 10M 1/4W F
R87,88	RM54752810	R,METAL 47K5 1/4W F
R89,90	RM57501811	R,METAL 7K5 1/4W F
R91,92	RM51502817	R,METAL 15K 1/4W F
R93-95	RM52212811	R,METAL 22K1 1/4W F
R96,97	RM51502817	R,METAL 15K 1/4W F
R98	RM52212811	R,METAL 22K1 1/4W F
R99	RM55111811	R,METAL 5K11 1/4W F
R100-102	RM51003813	R,METAL 100K 1/4W F
R103	RM55111811	R,METAL 5K11 1/4W F
R104,105	RM52212811	R,METAL 22K1 1/4W F
R106-108	RM51003813	R,METAL 100K 1/4W F
R109,110	RM52212811	R,METAL 22K1 1/4W F
R111-114	RM54752810	R,METAL 47K5 1/4W F
R115,116	RM52212811	R,METAL 22K1 1/4W F
R117	RM51003813	R,METAL 100K 1/4W F
R118,119	RM52001812	R,METAL 2K 1/4W F
R120,121	RM51001816	R,METAL 1K 1/4W F
R122,123	RM51003813	R,METAL 100K 1/4W F
R124	RM53322818	R,METAL 33K2 1/4W F
R125	RM51003813	R,METAL 100K 1/4W F
R126	RM51004817	R,METAL 1M 1/4W F
R127	RM51003813	R,METAL 100K 1/4W F
R128	RM51004817	R,METAL 1M 1/4W F
R129	RM53322818	R,METAL 33K2 1/4W F
R130	RM51003813	R,METAL 100K 1/4W F
R131	RM54752810	R,METAL 47K5 1/4W F
R132	RM51003813	R,METAL 100K 1/4W F
R133-135	RM52213815	R,METAL 221K 1/4W F
R136	RM54752810	R,METAL 47K5 1/4W F
R137	RM56810812	R,METAL 681 1/4W F
R138	RM56811816	R,METAL 6K81 1/4W F
R139,140	RM54752810	R,METAL 47K5 1/4W F
R141,142	RM56810812	R,METAL 681 1/4W F
R143,144	RM56811816	R,METAL 6K81 1/4W F
R145,146	RM51003813	R,METAL 100K 1/4W F
R147,148	RM51001816	R,METAL 1K 1/4W F
R149,150	RM52212811	R,METAL 22K1 1/4W F
R151	RM51001816	R,METAL 1K 1/4W F
R152	RM51003813	R,METAL 100K 1/4W F
R153-155	RM53322818	R,METAL 33K2 1/4W F
R156,157	RM51003813	R,METAL 100K 1/4W F
R158,159	RM51001816	R,METAL 1K 1/4W F

SYMBOL	PARTS NO.	DESCRIPTION
R160-163	RM52212811	R,METAL 22K1 1/4W F
R164	RM51001816	R,METAL 1K 1/4W F
R165	RM51003813	R,METAL 100K 1/4W F
R166	RM53652818	R,METAL 36K5 1/4W F
R167	RM56811816	R,METAL 6K81 1/4W F
R168	RM56810812	R,METAL 681 1/4W F
R169	RM54752810	R,METAL 47K5 1/4W F
R170	RM51001816	R,METAL 1K 1/4W F
R171	RM53652818	R,METAL 36K5 1/4W F
R172-175	RM51004817	R,METAL 1M 1/4W F
R176,177	RM52212811	R,METAL 22K1 1/4W F
R178,179	RM51002810	R,METAL 10K 1/4W F
R180,181	RM52431818	R,METAL 2K43 1/4W F
R182,183	RM54752810	R,METAL 47K5 1/4W F
R184,185	RM51001816	R,METAL 1K 1/4W F
R186	RM51003813	R,METAL 100K 1/4W F
R187-189	RM54752810	R,METAL 47K5 1/4W F
R921,922	RM91001128	R,METAL 1K 1W J
C1	CC05009457	CAP,CERAMIC 0.047uF 50V
C2	CE01007504	CAP,ELEC. 1uF 50V
C3	CM01008423	CAP,MYLAR 104 J 50V
C4,5	CE01005258	CAP,ELEC. 100uF 25V
C6	CE04705255	CAP,ELEC. 470uF 25V
C7	CC31009465	CAP,CERAMIC 0.01uF 50V
C8-11	CE01007504	CAP,ELEC. 1uF 50V
C12,13	CS41011422	CAP,STYROL 100P 50V
C14-17	CE01007504	CAP,ELEC. 1uF 50V
C18,19	CS41011422	CAP,STYROL 100P 50V
C20,21	CM05609427	CAP,MYLAR 563 J 50V
C22,23	CM02210428	CAP,MYLAR 222 J 50V
C24,25	CE01006251	CAP,ELEC. 10uF 25V
C26,27	CE01007504	CAP,ELEC. 1uF 50V
C28,29	CM01009427	CAP,MYLAR 103 J 50V
C30,31	CM02210428	CAP,MYLAR 222 J 50V
C32,33	CE01006251	CAP,ELEC. 10uF 25V
C34,35	CE01007504	CAP,ELEC. 1uF 50V
C36,37	CE01006251	CAP,ELEC. 10uF 25V
C38,39	CS41011422	CAP,STYROL 100P 50V
C40,41	CE01006251	CAP,ELEC. 10uF 25V
C42,43	CE01007504	CAP,ELEC. 1uF 50V
C44,45	CY21008428	CAP,LAYER 50MSA104J
C46,47	CE01005106	CAP,ELEC. 100uF 10V
C48	CE04707252	CAP,ELEC. 4.7uF 25V
C49,50	CY22208425	CAP,LAYER 50MSA224J
C51	CE01006251	CAP,ELEC. 10uF 25V
C52-54	CM01009427	CAP,MYLAR 103 J 50V
C55	CE01005106	CAP,ELEC. 100uF 10V
C56	CY21008428	CAP,LAYER 50MS
C57-59	CE01006251	CAP,ELEC. 10uF 25V
C60	CM01008423	CAP,MYLAR 104 J 50V
C61	CY21008428	CAP,LAYER 50MSA104J
C62-65	CM02209426	CAP,MYLAR 223 J 50V
C66,67	CY21008428	CAP,LAYER 50MSA104J
C68,69	CS46811428	CAP,STYROL 680P 50V
C70,71	CY21008428	CAP,LAYER 50MSA104J
C72-76	CY23308427	CAP,LAYER 50MSA334J
C77	CY22208425	CAP,LAYER 50MSA224J
C78	CE04707252	CAP,ELEC. 4.7uF 25V
C79	CM01008423	CAP,MYLAR 104 J 50V
C80	CE01007504	CAP,ELEC. 1uF 50V
C81	CC31009465	CAP,CERAMIC 0.01uF 50V
C82	CE04705255	CAP,ELEC. 470uF 25V
C83-86	CE01006251	CAP,ELEC. 10uF 25V
C87	CM01008423	CAP,MYLAR 104 J 50V
C88	CE01007504	CAP,ELEC. 1uF 50V
C89	CC31009465	CAP,CERAMIC 0.01uF 50V
C90	CE04705255	CAP,ELEC. 470uF 25V
C91-97	CE01006251	CAP,ELEC. 10uF 25V
C98	CS43311421	CAP,STYROL 330P 50V

Parts List

SYMBOL	PARTS NO.	DESCRIPTION
C99	CE01006251	CAP,ELEC. 10uF 25V
C100,101	CE01007504	CAP,ELEC. 1uF 50V
C102-105	CE01006251	CAP,ELEC. 10uF 25V
C106,107	CE01007504	CAP,ELEC. 1uF 50V
C108	CS43311421	CAP.STYROL 330P 50V
C109,110	CE01006251	CAP,ELEC. 10uF 25V
C111,112	CE01007504	CAP,ELEC. 1uF 50V
C113	CM03909420	CAP,MYLAR 393 J 50V
C114	CM08209424	CAP,MYLAR 823 J 50V
C115	CM05609427	CAP,MYLAR 563 J 50V
C116	CM02709423	CAP,MYLAR 273 J 50V
C117,118	CE01006251	CAP,ELEC. 10uF 25V
C119,120	CE01005106	CAP,ELEC. 100uF 10V
C121,122	CM02209426	CAP,MYLAR 223 J 50V
C123,124	CE01006251	CAP.ELEC. 10uF 25V
C125,126	CE01007504	CAP,ELEC. 1uF 50V
C921-924	CE01005258	CAP,ELEC. 100uF 25V
C925-928	CE01007504	CAP,ELEC. 1uF 50V
C929,930	CE01005106	CAP,ELEC. 100uF 10V
C931,932	CE01007504	CAP,ELEC. 1uF 50V
Q1-3	TR30000327	TRANSISTOR 2SC536G-NP
Q4-9	TR30000583	TRANSISTOR 2SC2878(A,B)
Q921	TR40000136	TRANSISTOR 2SC1666(Q,R)
Q922	TR20000129	TRANSISTOR 2SB1133(Q,R)
D1-9	DD80000021	DIODE IN4148-86
D921,922	DD20000090	DIODE RD15E
IC1	IC00001486	IC TC9152P
IC2,3	IC00001772	IC LC4966
IC4-7	IC00002296	IC NJM5532DD
IC8	IC00000019	IC NJM4558DD
IC9	IC00002661	IC SSM2120
IC10	IC00000019	IC NJM4558DD
IC11	IC00002673	IC SSM2404
IC12,13	IC00001486	IC TC9152P
IC14,15	IC00002685	IC TC9176P
IC16-18	IC00000019	IC NJM4558DD
IC19,20	IC00002296	IC NJM5532DD
IC21	IC00001772	IC LC4966
IC921	IC00002077	IC HA17806
IC922	IC00002648	IC NJM79M06A
VR1	RV10001735	R,VARIABLE 4TR-2934 50KAx1
VR2	RV10001723	R,VARIABLE with MOTOR 4TR-2931 50KAx5
	X-1196A01T PCB ASSEMBLY	
R201	RM51003813	R,METAL 100K 1/4W F
R202	RM54752810	R,METAL 47K5 1/4W F
R203,204	RM51003813	R,METAL 100K 1/4W F
R205	RM54752810	R,METAL 47K5 1/4W F
R206	RM51003813	R,METAL 100K 1/4W F
R207	RM54752810	R,METAL 47K5 1/4W F
R208,209	RM51003813	R,METAL 100K 1/4W F
R210	RM51502817	R,METAL 15K 1/4W F
R211	RM54752810	R,METAL 47K5 1/4W F
R212	RM51003813	R,METAL 100K 1/4W F
R213	RM51001816	R,METAL 1K 1/4W F
R214	RM51002810	R,METAL 10K 1/4W F
R215-217	RM54752810	R,METAL 47K5 1/4W F
R218	RM51002810	R,METAL 10K 1/4W F
R219	RM51003813	R,METAL 100K 1/4W F
R220	RM56812810	R,METAL 68K1 1/4W F
R221	RM51003813	R,METAL 100K 1/4W F
R222	RM56812810	R,METAL 68K1 1/4W F
R223-226	RM54752810	R,METAL 47K5 1/4W F
R227,228	RM51502817	R,METAL 15K 1/4W F
R229	RM54751816	R,MNETAL 4K75 1/4W F
R230,231	RM51003813	R,METAL 100K 1/4W F
R232-234	RM54752810	R,METAL 47K5 1/4W F
R235,236	RM51003813	R,METAL 100K 1/4W F

SYMBOL	PARTS NO.	DESCRIPTION
R237	RM54752810	R,METAL 47K5 1/4W F
R238	RM53322818	R,METAL 33K2 1/4W F
R239	RM51003813	R,METAL 100K 1/4W F
R240	RM54752810	R,METAL 47K5 1/4W F
R241	RM51003813	R,METAL 100K 1/4W F
R242	RM54752810	R,METAL 47K5 1/4W F
R243	RM51003813	R,METAL 100K 1/4W F
R244	RM54752810	R,METAL 47K5 1/4W F
R245	RM51003813	R,METAL 100K 1/4W F
R246	RM54752810	R,METAL 47K5 1/4W F
R247	RM51003813	R,METAL 100K 1/4W F
R248	RM54752810	R,METAL 47K5 1/4W F
R249	RM51003813	R,METAL 100K 1/4W F
R250	RM54752810	R,METAL 47K5 1/4W F
R251	RM51003813	R,METAL 100K 1/4W F
R252	RM54752810	R,METAL 47K5 1/4W F
R253	RM51003813	R,METAL 100K 1/4W F
R254	RM54752810	R,METAL 47K5 1/4W F
R255	RM51003813	R,METAL 100K 1/4W F
R256	RM54752810	R,METAL 47K5 1/4W F
R257	RM51003813	R,METAL 100K 1/4W F
R258	RM54752810	R,METAL 47K5 1/4W F
R259-268	RM51003813	R,METAL 100K 1/4W F
R269	RM54752810	R,METAL 47K5 1/4W F
R270	RM51003813	R,METAL 100K 1/4W F
R271	RM54752810	R,METAL 47K5 1/4W F
R272	RM51003813	R,METAL 100K 1/4W F
R273	RM54752810	R,METAL 47K5 1/4W F
R274	RM51003813	R,METAL 100K 1/4W F
R275	RM54752810	R,METAL 47K5 1/4W F
R276	RM51003813	R,METAL 100K 1/4W F
R277	RM54752810	R,METAL 47K5 1/4W F
R278-288	RM51003813	R,METAL 100K 1/4W F
R289-291	RM52212811	R,METAL 22K1 1/4W F
R292	RM55112815	R,METAL 51K1 1/4W F
R293	RM51503810	R,METAL 150K 1/4W F
R294,295	RM52212811	R,METAL 22K1 1/4W F
R296,297	RM51003813	R,METAL 100K 1/4W F
R298	RM52212811	R,METAL 22K1 1/4W F
R299	RM51003813	R,METAL 100K 1/4W F
R300	RM52212811	R,METAL 22K1 1/4W F
R301-303	RM51003813	R,METAL 100K 14/W F
R304,305	RM54752810	R,METAL 47K5 1/4W F
C201	CC32211432	CAP,CERAMIC 220P 25V
C202	CE04707252	CAP,ELEC. 4.7uF 25V
C203	CE01338508	CAP,ELEC. 0.33uF 50V
C204,205	CC32211432	CAP,CERAMIC 220P 50V
C206	CC31009465	CAP,CERAMIC 0.01uF 50V
C207	CE01005106	CAP,ELEC. 100uF 10V
C208-211	CE01007504	CAP,ELEC. 1uF 50V
C212-214	CC31009465	CAP,CERAMIC 0.01uF 50V
C215	CN01007507	CAP,NP 0.47uF 50V
D201	DD20000144	DIODE RD10E
D202-222	DD80000021	DIODE IN4148-86
D223	DD20000181	DIODE RD6.2E
D224	DD80000021	DIODE IN4148-86
D225	DD20000181	DIODE RD6.2E
D226	DD80000021	DIODE IN4148-86
D227,228	DD20000181	DIODE RD6.2E
D229-238	DD80000021	DIODE IN4148-86
D239	DD20000168	DIODE RD5.6E
D240	DD80000021	DIODE IN4148-86
D241,242	DD20000168	DIODE RD5.6E
D243-245	DD80000021	DIODE IN4148-86
Q201	TR10000126	TRANSISTOR 2SA608KF
Q202	TR30000327	TRANSISTOR 2SC536G-NP
Q203	TR10000126	TRANSISTOR 2SA608KF
Q204-207	TR30000327	TRANSISTOR 2SA608KF
Q209	TR30000327	TRANSISTOR 2SC536G-NP
Q210,208	TR10000126	TRANSISTOR 2SA608KF
Q211	TR30000327	TRANSISTOR 2SC536GF
Q212,213	TR10000254	TRANSISTOR 2SA1345

Parts List

NOTE:THE COMPONENTS INDENTIFIED BY ⚠ MARK ARE FOR SAFFTY.REPLACE ONLY WITH ORIGINAL PARTS.DO NOT SUBSTITUTE.

SYMBOL	PARTS NO.	DESCRIPTION
Q214,215	TR30000327	TRANSISTOR 2SC536G-NP
Q216-225	TR10000126	TRANSISTOR 2SA608KF
Q226-230	TR30000327	TRANSISTOR 2SC536G-NP
Q231-235	TR10000126	TRANSISTOR 2SA608KF
Q236-244	TR30000327	TRANSISTOR 2SC536G-NP
Q245,246	TR10000126	TRANSISTOR 2SA608KF
IC201	IC00001759	IC LC6522C-3433
IC202	IC00002727	IC TC4532BP
IC203	IC00002715	IC TC4555BP
IC204	IC00002703	IC TC74HC 4060AP
X201	LF00000294	CERAMIC FILTER CSB 800J
	X-1196A02T	PCB ASSEMBLY
R351-360	RM51001816	R,METAL 1K 1/4W F
R361-363	RM54750812	R,METAL 475 1/4W F
R364	RM51820815	R,METAL 182 1/4W F
R365-372	RM54750812	R,METAL 475 1/4W F
D351-363	DD40001002	LED LTL4213
S2-S9	SH60000240	KEY BOARD SW 4TR-2343
S10-19	SH60000197	KEY BOARD SW C4177A02
	X-1196A03T	PCB ASSEMBLY
S1	SH11000227	1 KEY PUSH SW 4TR-2306
R002	RM54650812	R,METAL 475 1/4W F
	X-1196A04T	PCB ASSEMBLY
IC361	IC00002030	IC REMOTE RECEIVER SBX1610-02
	X-1197A01T	PCB ASSEMBLY
R401	RM54752810	R,METAL 47K5 1/4W F
R402	RM51001816	R,METAL 1K 1/4W F
R403	RM51821819	R,METAL 1K82 1/4W F
R404,405	RM54751816	R,METAL 4K75 1/4W F
R406	RM51001816	R,METAL 1K 1/4W F
R407	RM54752810	R,METAL 47K5 1/4W F
R408	RM54751816	R,METAL 4K75 1/4W F
R409	RM51004817	R,METAL 1M 1/4W F
R410-415	RM58251814	R,METAL 8K25 1/4W F
R416,417	RM51502817	R,METAL 15K 1/4W F
R418	RM54752810	R,METAL 47K5 1/4W F
R419	RM53321814	R,METAL 3K32 1/4W F
R420	RM51001816	R,METAL 1K 1/4W F
R421	RM51823816	R,METAL 182K 1/4W F
R422	RM51001816	R,METAL 1K 1/4W F
R423	RM52743816	R,METAL 274K 1/4W F
R424	RM51541811	R,METAL 1K54 1/4W F
R425	RM56811816	R,METAL 6K81 1/4W F
R426	RM51820815	R,METAL 182 1/4W F
R427,428	RM52212811	R,METAL 22K1 1/4W F
R429	RM56812810	R,METAL 68K1 1/4W F
R430	RM53322818	R,METAL 33K2 1/4W F
R431	RM51003813	R,METAL 100K 1/4W F
R432	RM54753813	R,METAL 475K 1/4W F
R433	RM54752810	R,METAL 47K5 1/4W F
R434	RM51003813	R,METAL 100K 1/4W F
R435	RM54753813	R,METAL 475K 1/4W F
R436	RM54752810	R,METAL 47K5 1/4W F
R437-445	RM51003813	R,METAL 100K 1/4W F
R446	RM54752810	R,METAL 47K5 1/4W F
R447	RM51009815	R,METAL 10 1/4W F
R448,449	RM51002810	R,METAL 10K 1/4W F
R450	RM51009815	R,METAL 10 1/4W F
R451	RM51211811	R,METAL 1K21 1/4W F
R452	RM51002810	R,METAL 10K 1/4W F
R453	RM54753813	R,METAL 475K 1/4W F

SYMBOL	PARTS NO.	DESCRIPTION
R454	RM54752810	R,METAL 47K5 1/4W F
R455	RM54753813	R,METAL 475K 1/4W F
R456-459	RM51003813	R,,ETAL 100K 1/4W F
R460	RM51002810	R,METAL 10K 1/4W F
R461	RM54753813	R,METAL 475K 1/4W F
R462	RM54752810	R,METAL 47K5 1/4W F
R463	RM51003813	R,METAL 100K 1/4W F
R464	RM54752810	R,METAL 47K5 1/4W F
R465,466	RM51003813	R,METAL 100K 1/4W F
R467	RM51002810	R,METAL 10K 1/4W F
R468	RM54753813	R,METAL 475K 1/4W F
R469	RM54752810	R,METAL 47K5 1/4W F
R470	RM51002810	R,METAL 10K 1/4W F
R471-473	RM51003813	R,METAL 100K 1/4W F
R474	RM51002810	R,METAL 10K 1/4W F
R475	RM51003813	R,METAL 100K 1/4W F
R476	RM51002810	R,METAL 10K 1/4W F
R477	RM51003813	R,METAL 100K 1/4W F
R478,479	RM51002810	R,METAL 10K 1/4W F
R480,481	RM51003813	R,METAL 100K 1/4W F
R482	RM51002810	R,METAL 10K 1/4W F
R483	RM54753813	R,METAL 475K 1/4W F
R484,485	RM51003813	R,METAL 100K 1/4W F
R486	RM54752810	R,METAL 47K5 1/4W F
R487	RM51003813	R,METAL 100K 1/4W F
R488	RM54752810	R,METAL 47K5 1/4W F
R489	RM51003813	R,METAL 100K 1/4W F
R490-494	RM54752810	R,METAL 47K5 1/4W F
R495	RM51003813	R,METAL 100K 1/4W F
R496	RM54752810	R,METAL 47K5 1/4W F
R497	RM51003813	R,METAL 100K 1/4W F
R498-500	RM54752810	R,METAL 47K5 1/4W F
R501,502	RM52211818	R,METAL 2K21 1/4W F
R503-506	RM54752810	R,METAL 47K5 1/4W F
R507	RM51003813	R,METAL 100K 1/4W F
R508	RM51002810	R,METAL 10K 1/4W F
R509	RM54753813	R,METAL 475K 1/4W F
R510	RM54752810	R,METAL 47K5 1/4W F
R511	RM51002810	R,METAL 10K 1/4W F
R512	RM54753813	R,METAL 475K 1/4W F
R513	RM54752810	R,METAL 47K5 1/4W F
R514	RM51003813	R,METAL 100K 1/4W F
R515	RM54752810	R,METAL 47K5 1/4W F
R516	RM51003813	R,METAL 100K 1/4W F
R517	RM54752810	R,METAL 47K5 1/4W F
R518	RM51003813	R,METAL 100K 1/4W F
R519	RM54752810	R,METAL 47K5 1/4W F
R520-522	RM51003813	R,METAL 100K 1/4W F
R523	RM54752810	R,METAL 47K5 1/4W F
R524-526	RM51003813	R,METAL 100K 1/4W F
R527	RM55621813	R,METAL 5K62 1/4W F
R528,529	RM51003813	R,METAL 100K 1/4W F
R530	RM54752810	R,METAL 47K5 1/4W F
R531	RM52212811	R,METAL 22K1 1/4W F
R532-543	RM51003813	R,METAL 100K 1/4W F
R544	RM53921817	R,METAL 3K92 1/4W F
R545	RM91000926	R,METAL 100 1/2W J
C401	CE01006251	CAP,ELEC. 10uF 25V
C402,403	CM01209428	CAP,MYLAR 123 J 50V
C404	CM01510426	CAP,MYLAR 152 J 50V
C405	CE01006251	CAP,ELEC. 10uF 25V
C406	CS43310428	CAP,STYROL 3300P 50V
C407	CE01006251	CAP,ELEC. 10uF 25V
C408,409	CC01012437	CAP,CERAMIC 10P 50V
C410	CC31009465	CAP,CERAMIC 0.01uF 50V
C411	CE04705103	CAP,ELEC. 470uF 10V
C412	CE04707252	CAP,ELEC. 4.7uF 25V
C413,414	CC32212436	CAP,CERAMIC 22P 50V
C415-417	CE01007504	CAP,ELEC. 1uF 50V

Parts List

SYMBOL	PARTS NO.	DESCRIPTION
C418,419	CM05610429	CAP,MYLAR 562 J 50V
C420,421	CM04710428	CAP,MYLAR 472 J 50V
C422,423	CS44711420	CAP,STYROL 470P 50V
C424,425	CE01006251	CAP,ELEC. 10uF 25V
C426,427	CE01007501	CAP,ELEC. 1uF 50V
C428	CM04710428	CAP,MYLAR 472 J 50V
C429	CM04709426	CAP,MYLAR 473 J 50V
C430	CM05610429	CAP,MYLAR 562 J 50V
C431	CE01007504	CAP,ELEC. 1uF 50V
C432	CS44711420	CAP,STYROL 470P 50V
C433,434	CE01007504	CAP.ELEC. 1uF 50V
C435	CE01006251	CAP,ELEC. 10uF 25V
C436	CE02205255	CAP,ELEC. 220uF 25v
C437	CM04709426	CAP,MYLAR 473 J 50V
C438	CM01009427	CAP,MYLAR 103 J 50V
C439	CE01006251	CAP,ELEC. 10uF 25V
C440	CE01008508	CAP,ELEC. 0.1uF 50V
C441	CE01338508	CAP,ELEC. 0.33uF 50V
C442	CE01005258	CAP,ELEC. 100uF 25V
C443,444	CS32211432	CAP,STYROL 220P 50V
C445,446	CC31009465	CAP,CERAMIC 0.01uF 50V
C447	CE01007504	CAP,ELEC. 1uF 50V
C448	CC31009465	CAP,CERAMIC 0.01uF 50V
C449	CC05009457	CAP,CERAMIC 0.047uF 50V
C450	CE04705255	CAP,ELEC. 470uF 25V
C451	CC31010431	CAP,CERAMIC 0.001uF 50V
C452	CC05009457	CAP,CERAMIC 0.047uF 50V
C453	CE04708508	CAP,ELEC. 0.47uF 50V
C454	CC31010431	CAP,CERAMIC 0.001uF 50V
C455	CC05009457	CAP,CERAMIC 0.047uF 50V
C456	CC31010431	CAP,CERAMIC 0.001uF 50V
C457,458	CC31009465	CAP,CERAMIC 0.01uF 50V
C459,460	CE01007504	CAP,ELEC. 1uF 50V
C461	CC31010431	CAP,CERAMIC 0.001uF 50V
C462	CC05009457	CAP,CERAMIC 0.047uF 50V
C463	CC31010431	CAP,CERAMIC 0.001uF 50V
C464-466	CE01007504	CAP,ELEC. 1uF 50V
C467	CC31009465	CAP,CERAMIC 0.01uF 50V
C468	CC31010431	CAP,CERAMIC 0.001uF 50V
C469	CC05009457	CAP,CERAMIC 0.047uF 50V
C470,471	CC31010431	CAP,CERAMIC 0.001uF 50V
C472	CC05009457	CAP,CERAMIC 0.047uF 50V
C473	CC31010431	CAP,CERAMIC 0.001uF 50V
C474	CC31009465	CAP,CERAMIC 0.01uF 50V
C475	CE04707252	CAP,ELEC. 4.7uF 25V
D401-405	DD80000021	DIODE IN4148-86
D406	DD20000181	DIODE RD6.2E
D407-439	DD80000021	DIODE IN4148-86
Q401,403	TR10000254	TRANSISTOR 2SA1345
Q402,404	TR30000327	TRANSISTOR 2SC536G-NP
Q405,407	TR10000254	TRANSISTOR 2SA1345
Q406-415	TR30000329	TRANSISTOR 2SC536G-NP
Q416,417	TR10000126	TRANSISTOR 2SA608KF
Q418-422	TR30000327	TRANSISTOR 2SC536G-NP
Q423,424	TR10000126	TRANSISTOR 2SA608KF
Q425-427	TR30000327	TRANSISTOR 2SC536G-NP
Q428,429	TR10000126	TRANSISTOR 2SA608KF
Q430	TR30000327	TRANSISTOR 2SC536G-NP
Q431,433	TR10000126	TRANSISTOR 2SA608KF
Q432,434	TR30000327	TRANSISTOR 2SC536G-NP
X401	DD60000349	CRYSTAL OSC. 3.579545MHz
IC401	IC00000019	IC NJM4558DD
IC402	IC00002880	IC YM3428
IC403	IC00000512	IC uPC 78L05
IC404,405	IC00002296	IC NJM5532DD
IC406	IC00000172	IC NE646B
IC407	IC00000019	IC NJM4558DD
IC408,409	IC00002697	IC TC9185P
IC410	IC00002260	IC LB1641
IC411-414	IC00001528	IC TC4013BP

SYMBOL	PARTS NO.	DESCRIPTION
	X-1197A02T	PCB ASSEMBLY
R601,602	RM57509810	R,METAL 75R 1/4W F
R603	RM55629812	R,METAL 56.2 1/4W F
R604	RM57509810	R,METAL 75R 1/4W F
R605,606	RM55629812	R,METAL 56.2 1/4W F
R607-610	RM57509810	R,METAL 75R 1/4W F
R611,612	RM55629812	R,METAL 56.2 1/4W F
R613,614	RM57509810	R,METAL 75R 1/4W F
R615-618	RM55629812	R,METAL 56.2 1/4W F
R619-633	RM56811816	R,METAL 6K81 1/4W F
R634	RM56819815	R,METAL 68R1 1/4W F
R635	RM51003813	R,METAL 100K 1/4W F
R636,638	RM57501811	R,METAL 7K5 1/4W F
R637,639	RM54752810	R,METAL 47K5 1/4W F
R640,641	RM52211818	R,METAL 2K21 1/4W F
R642,643	RM53929816	R,METAL 39R2 1/4W F
R644	RM55629812	R,METAL 56R2 1/4W F
R645,646	RM56819815	R,METAL 68R1 1/4W F
R647	RM51003813	R,METAL 100K 1/4W F
R648	RM57501811	R,METAL 7K5 1/4W F
R649	54752810	R,METAL 47K5 1/4W F
R650	RM57501811	R,METAL 7K5 1/4W F
R651	RM54752811	R,METAL 47K5 1/4W F
R652,653	RM52211818	R,METAL 2K21 1/4W F
R654,655	RM53929816	R,METAL 39R2 1/4W F
R656	RM55629812	R,METAL 56.2 1/4W F
R657,658	RM56819815	R,METAL 68R1 1/4W F
R659	RM51003813	R,METAL 100K 1/4W F
R660	RM57501811	R,METAL 7K5 1/4W F
R661	RM54752811	R,METAL 47K5 1/4W F
R662	RM57501811	R,METAL 7K5 1/4W F
R663	RM54752811	R,METAL 47K5 1/4W F
R664,665	RM52211818	R,METAL 2K21 1/4W F
R666,6671	RM53929816	R,METAL 39R2 1/4W F
R668	RM55629812	R,METAL 56.2 1/4W F
R669	RM56819815	R,METAL 68R1 1/4W F
R670,671	RM54758811	R,METAL 4R75 1/4W F
R672	RM52212811	R,METAL 22K1 1/4W F
R673	RM51003813	R,METAL 100K 1/4W F
R674	RM52212811	R,METAL 22K1 1/4W F
R675,676	RM51003813	R,METAL 100K 1/4W F
R677,679	RM52212811	R,METAL 22K1 1/4W F
R678-681	RM51003813	R,METAL 100K 1/4W F
R682,684	RM52212811	R,METAL 22K1 1/4W F
R683	RM51003813	R,METAL 100K 1/4W F
R685	RM51002810	R,METAL 10K 1/4W F
R686	RM52212811	R,METAL 22K1 1/4W F
R687	RM51003813	R,METAL 100K 1/4W F
R688	RM52212811	R,METAL 22K1 1/4W F
R689,690	RM51003813	R,METAL 100K 1/4W F
R691	RM52212811	R,METAL 22K1 1/4W F
R692	RM51002810	R,METAL 10K 1/4W F
R693	RM51003813	R,METAL 100K 1/4W F
R694	RM52212811	R,METAL 22K1 1/4W F
C601-609	CC34712436	CAP,CERAMIC 47P 50V
C610	CE04706168	CAP,ELEC. 47uF 16V
C611	CE02206259	CAP,ELEC. 22uF 25V
C612,613	CE04705103	CAP,ELEC. 470uF 10V
C614	CE04706168	CAP,ELEC. 47uF 16V
C615	CE02206259	CAP,ELEC. 22uF 25V
C616	CE04706168	CAP,ELEC. 47uF 16V
C617	CE02206259	CAP,ELEC. 22uF 25V
C618,619	CE04705103	CAP,ELEC. 470uF 10V
D601,602	DD80000021	DIODE IN4148-86
Q601-615	TR30000583	TRANSISTOR 2SC2878(A,B)
Q616,619	TR30000327	TRANSISTOR 2SC536G-NP
Q617,618	TR10000126	TRANSISTOR 2SA608KF
Q620,623	TR30000327	TRANSISTOR 2SC536G-NP
Q621,622	TR10000126	TRANSISTOR 2SA608KF

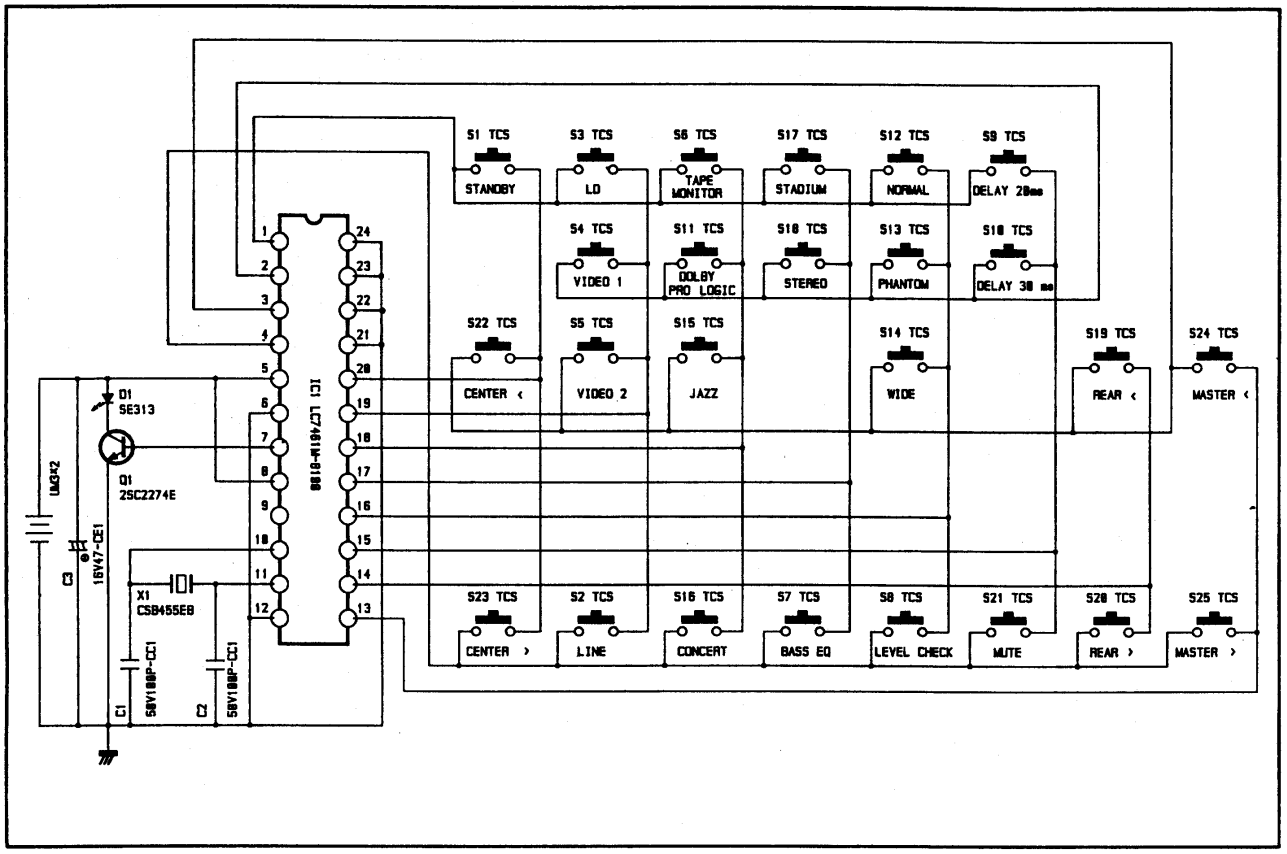
Parts List

SYMBOL	PARTS NO.	DESCRIPTION
Q624,627	TR30000327	TRANSISTOR 2SC536G-NP
Q625,630	TR10000126	TRANSISTOR 2SA608KF
Q629,631	TR30000327	TRANSISTOR 2SC536G-NP
Q632,633	TR10000126	TRANSISTOR 2SA608KF
Q634	TR30000327	TRANSISTOR 2SC536G-NP
Q635	TR10000126	TRANSISTOR 2SA608KF
	X-1198A00T PCB ASSEMBLY	
R901	RM21003819	R,METAL 100K 1/4W M
R902	RM24753811	R,METAL 475K 1/4W M
R903	RM94700923	R,METAL 470 1/2W J
R904	RM93900126	R,METAL 390 1W J
C901,902	CE54704477	CAP,ELEC. 50RSP4700A
C903-906	CC01009256	CAP,CERAMIC 0.01uF 250V ⚠
C907	CE01005106	CAP,ELEC. 100uF 10V
C908	CE01007504	CAP,ELEC. 1uF 50V
C909	CE01006251	CAP,ELEC. 10uF 25V
C910	CE01004503	CAP,ELEC. 1000uF 50V ⚠
C911-914	CC01009256	CAP,CERAMIC 0.01uF 250V ⚠
C001	CK00000035	SPARK KILLER DE7150F472M ⚠
T001	PT29214106	POWER TRANSFORMER TT-292-SF ⚠
D901	DD10000380	DIODE BRIDGE PBPC604 ⚠
D902	DD10000123	DIODE W02 ⚠
D903	DD10000068	DIODE IN4003
RY901	LY00000289	RELAY VB24SMCU-E ⚠
F901-903	FU25000077	FUSE 250V T1A UL/CSA ⚠
	FU23000207	FUSE 250V T1A S ⚠
IC901	IC00002077	IC LM7806
Q901	TR30000327	TRANSISTOR 2SC536G-NP
Q902	TR30000121	TRANSISTOR 2SC2274E/F
	OTHERS	
	AB00000687	BOTTOM BOARD QD4-05A00T
	AF60000014	FRONT CHASSIS QD3-03A00T
	AM00002049	SUB CHASSIS QD3-04A00T
	AR60000011	PRINTED REAR CHASSIS TRP-623
	AS01000397	SIDE CHASSIS QD-07A00T
	KB10001308	KNOB 4TR-1972#3 BLK
	DD40000095	LED SEL1124R
	BC00000787	CYLINDER BUSH 4TVL-8#16 6Fx19H
	BC00000799	CYLINDER BUSH 4TVL-8#17 6Fx23H
	FT00000229	PLASTIC FOOT 4TSH-19#2 50Fx14H
	SB00000844	PVC SHIELD PLATE 4TR-2958
	SB00000856	PVC SHIELD PLATE 4TR-2982
	SP10006211	PCB SUPPORT PK4-28A00T
	SR00001217	RUBBER SAPCER 4TR-2900#2
	CD00000218	AC CORD SPT-2 AWG#18 4TR-670#4 (U,C,A,J) ⚠
	CD00000322	AC POWER CORD 4TR-2757#1 (D) ⚠
	CD00000048	AC POWER CORD 4TR-1037 (H,E,K2,Y) ⚠
	CD00000085	AC POWER CORD C-2504A(K1) ⚠
	CD00000115	AC POWER CORD C-3763-T(G) ⚠
	SC00000027	AC CORD STOPPER SR-4N-4 ⚠
	NP00001949	NAME STICKER 4TR-2828A#1 AC120V TNP-382
	NP00001974	NAME STICKER 4TR-2828A#4 AC120V (C) TNP-385
	NP00001962	NAME STICKER 4TR-2828A#3 AC240V TNP-384
	NP00001998	NAME STICKER 4TR-2828A#5 AC230V TNP-389

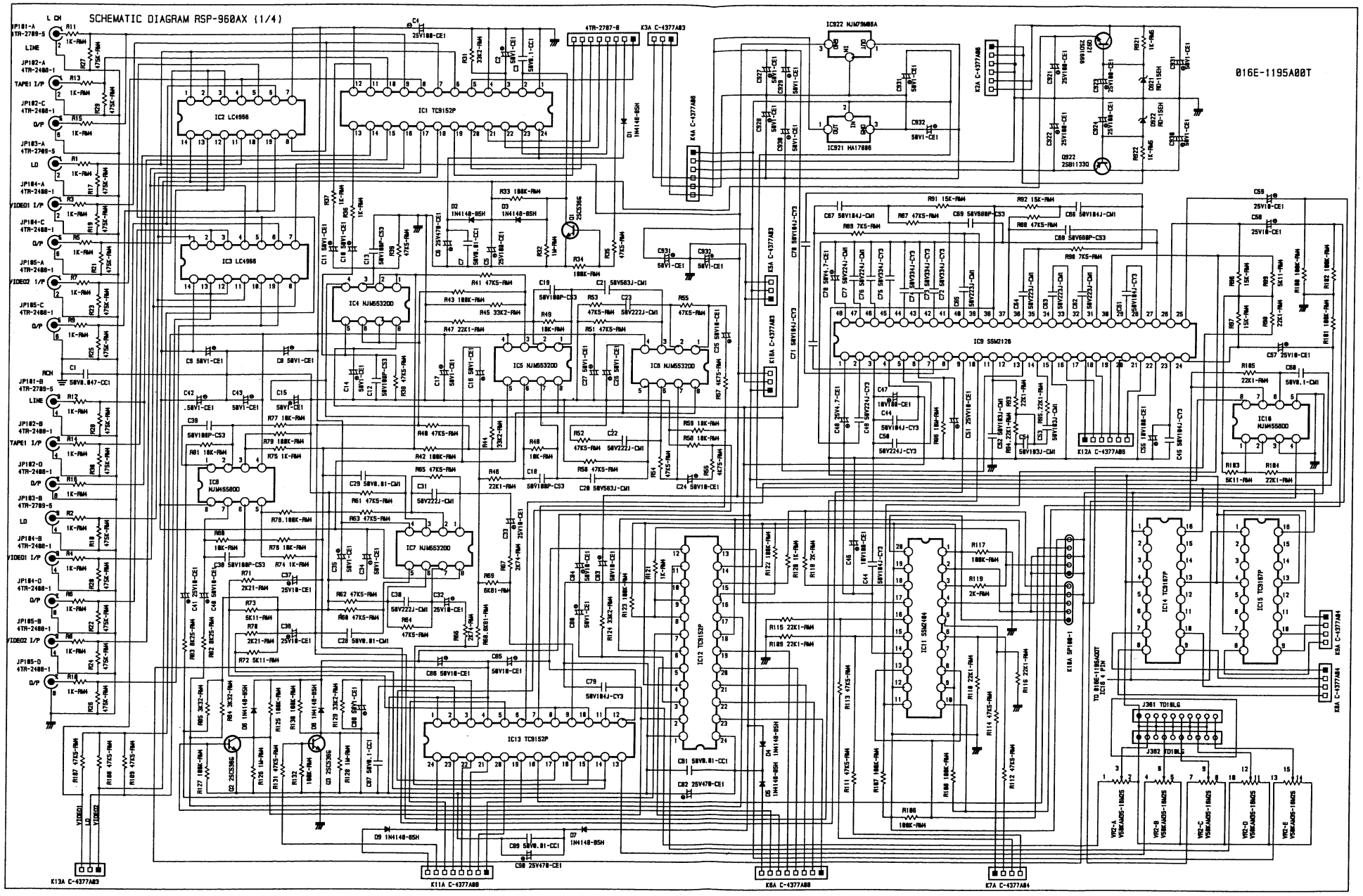
SYMBOL	PARTS NO.	DESCRIPTION
	NP00002012	NAME STICKER 4TR-2828A#6 AC100V TNP-391
	NP00001950	NAME STICKER 4TR-2828A#2 AC220V TNP-383
	AA60000086	FRONT PANEL QD3-01A00T TFP-687
	AW00000654	RJ SENSOR WINDOW PT4-12A00T
	BU00001145	POWER RING W/LED 4TQF-13
	BU00001169	KNOB RING 4TQF-17 39F
	KB20002681	POWER BUTTON 4TQF-15
	KB20002899	5 KEY TACT BUTTON QD3-08A00T
	KB20002905	4 KEY TACT BUTTON QD3-09A00T
	KB20002917	4 KEY TACT BUTTON QD3-10A00T
	OM10001272	ORNAMENTAL SIDE BOARD 4TR-2797#2
	OM70000065	PUSH BUTTON CONNECTOR 4TTL-15
	OM70000260	ACRYLIC LEVER 4TQT-5
	SN00000179	BUTTON SPRING 4TR-1988#2
	AG00000330	REMOTE CONTROL HANDSET RR-907
	AU00001262	TOP COVER POLY 3TTF-5#8
	KB10001795	KNOB 3TQU-5
	SR00000882	UPPER COVER SPACER 4TR-2418
	MN10003025	OWNER'S MANUAL RSP-960AX

REMOTE CONTROL HANDSET

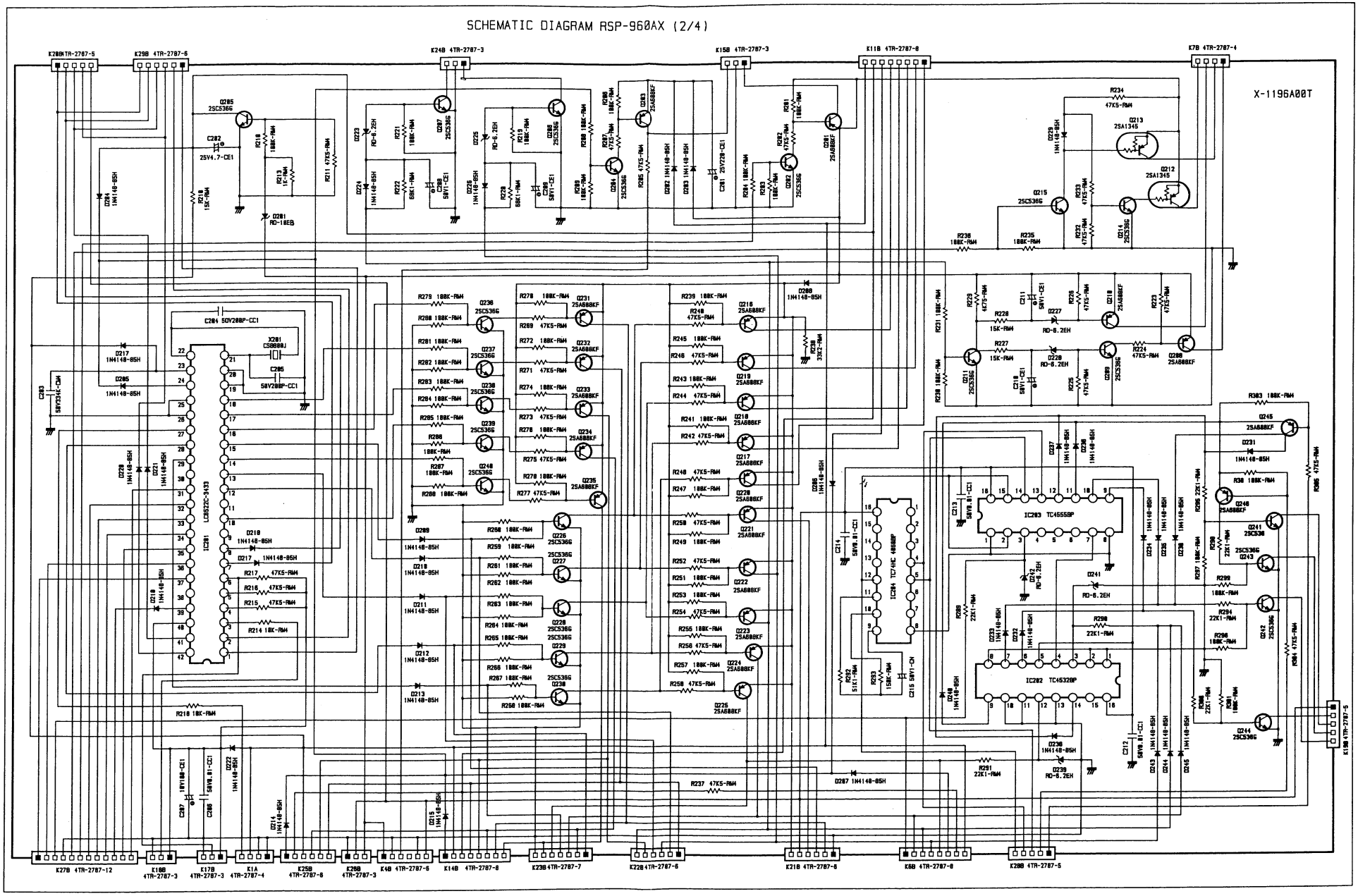
SCHEMATIC DIAGRAM MODEL RR-907



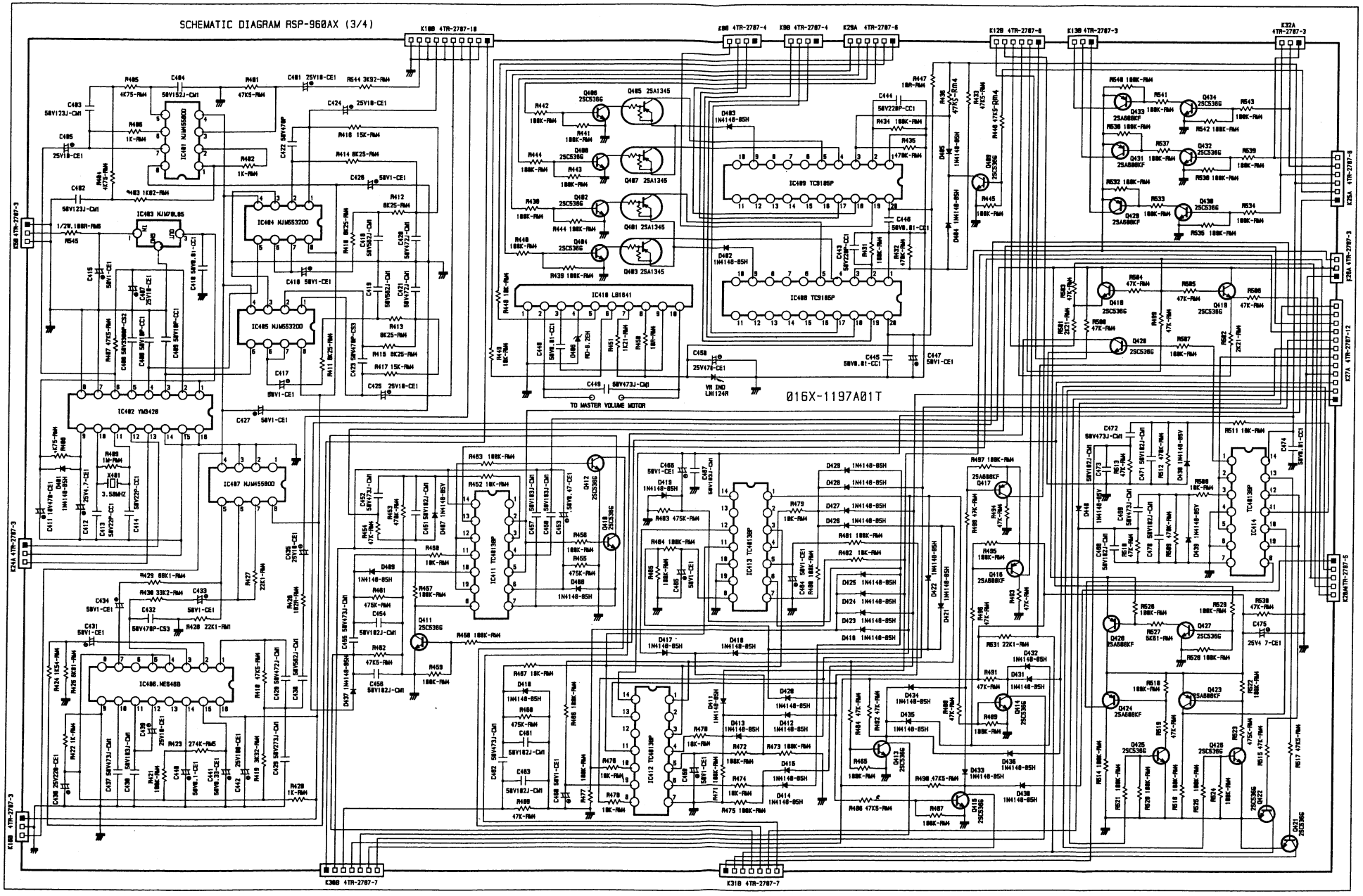
Schematic Diagram

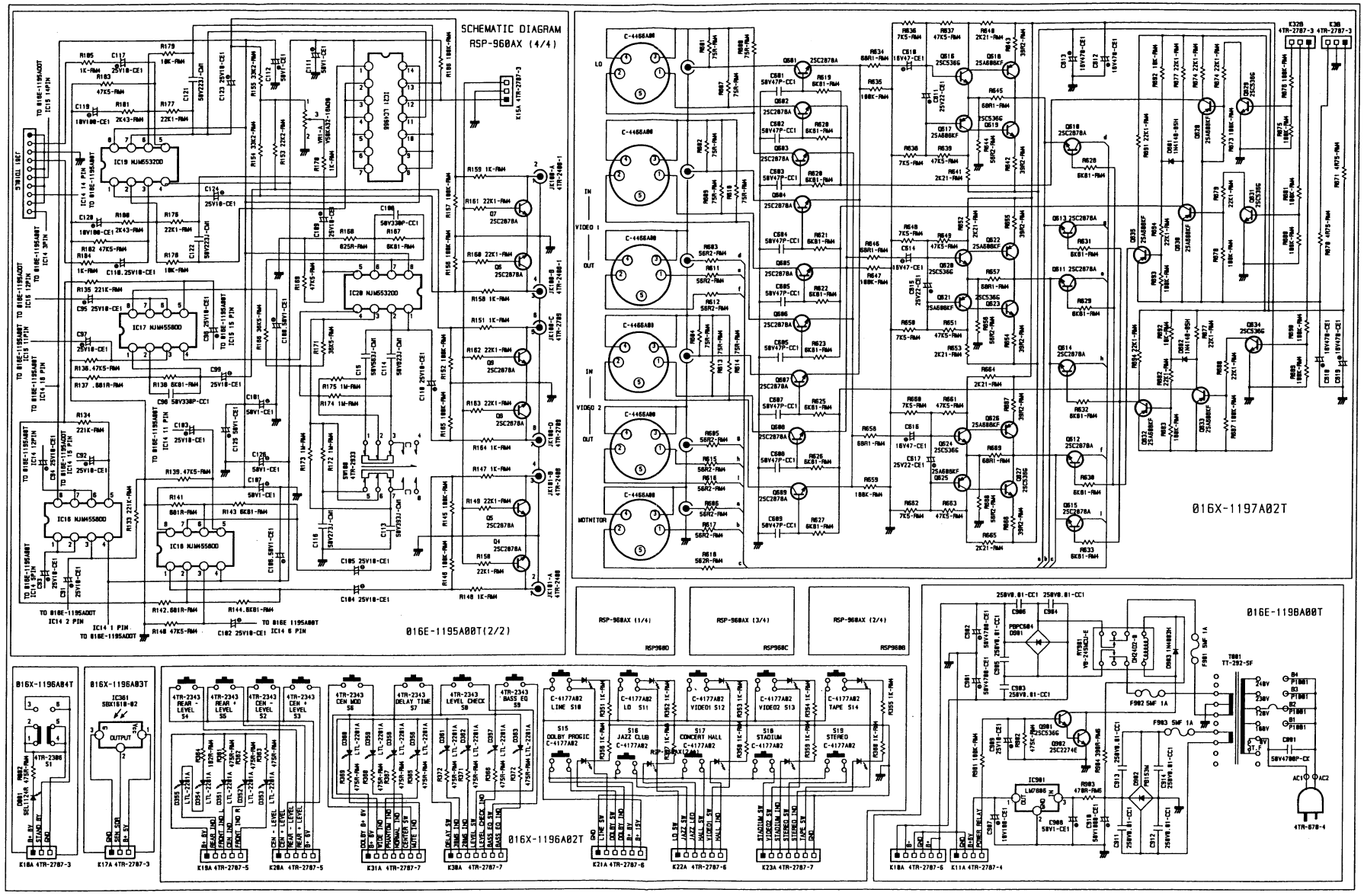


SCHEMATIC DIAGRAM RSP-960AX (2/4)

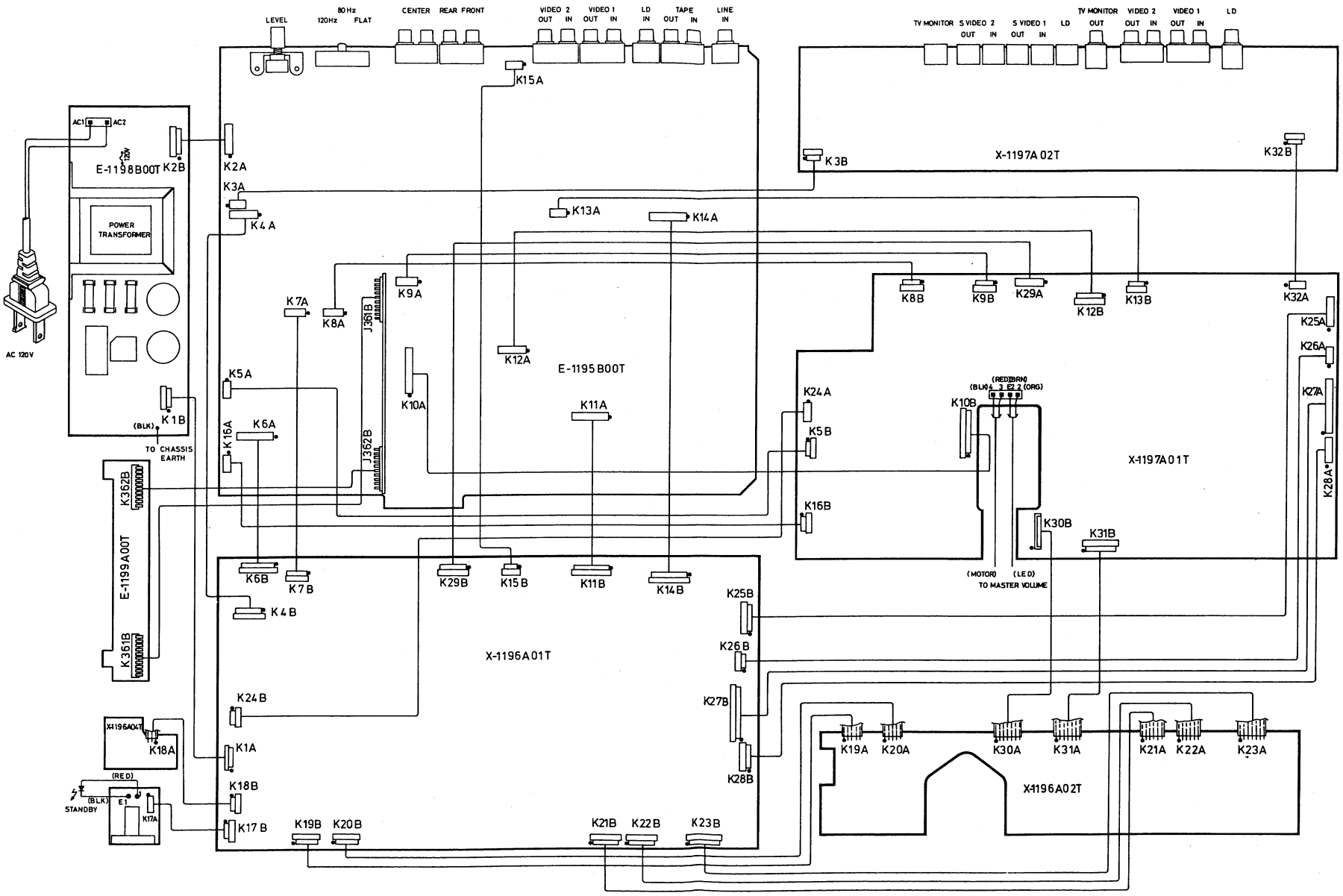


SCHEMATIC DIAGRAM RSP-960AX (3/4)

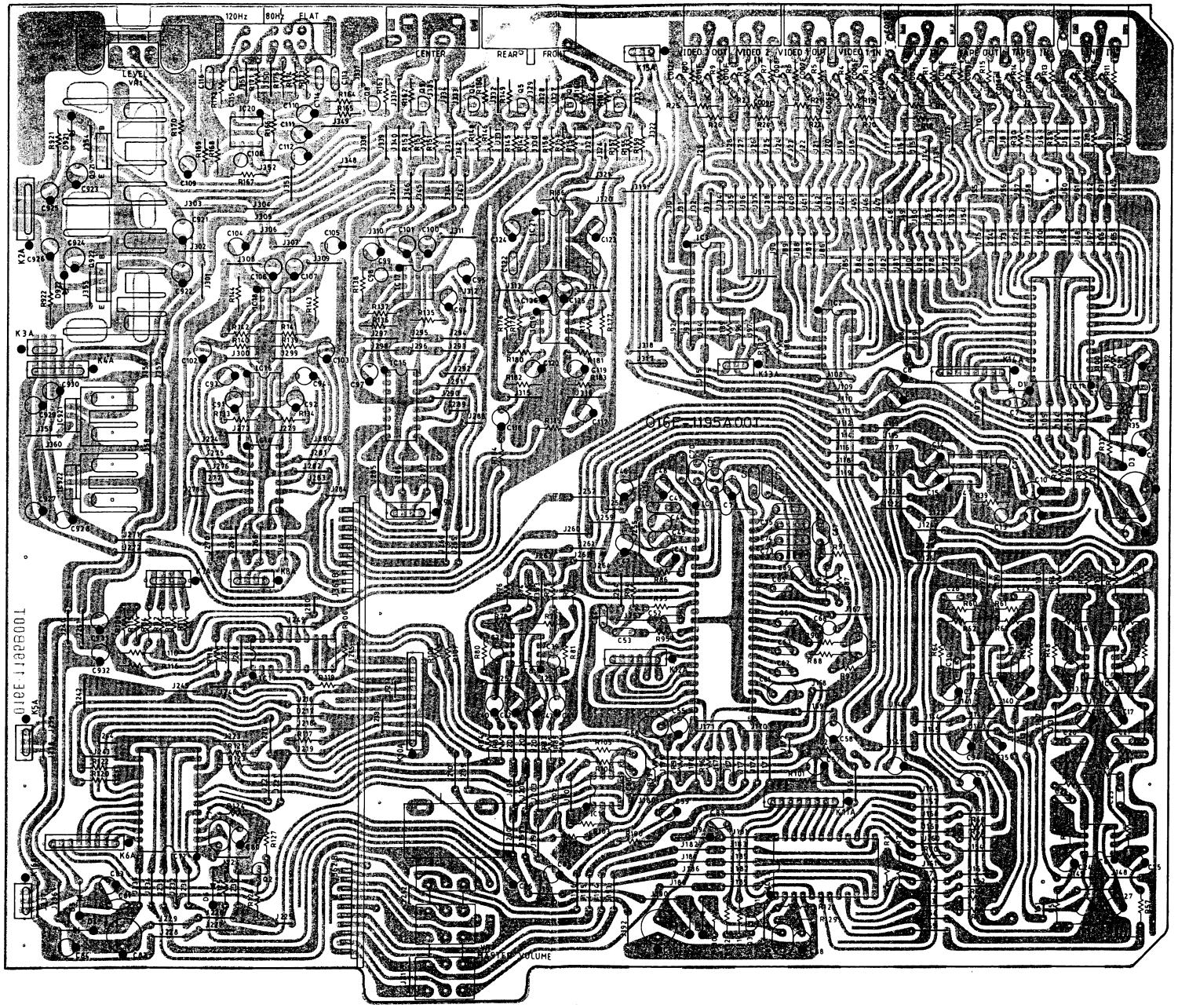


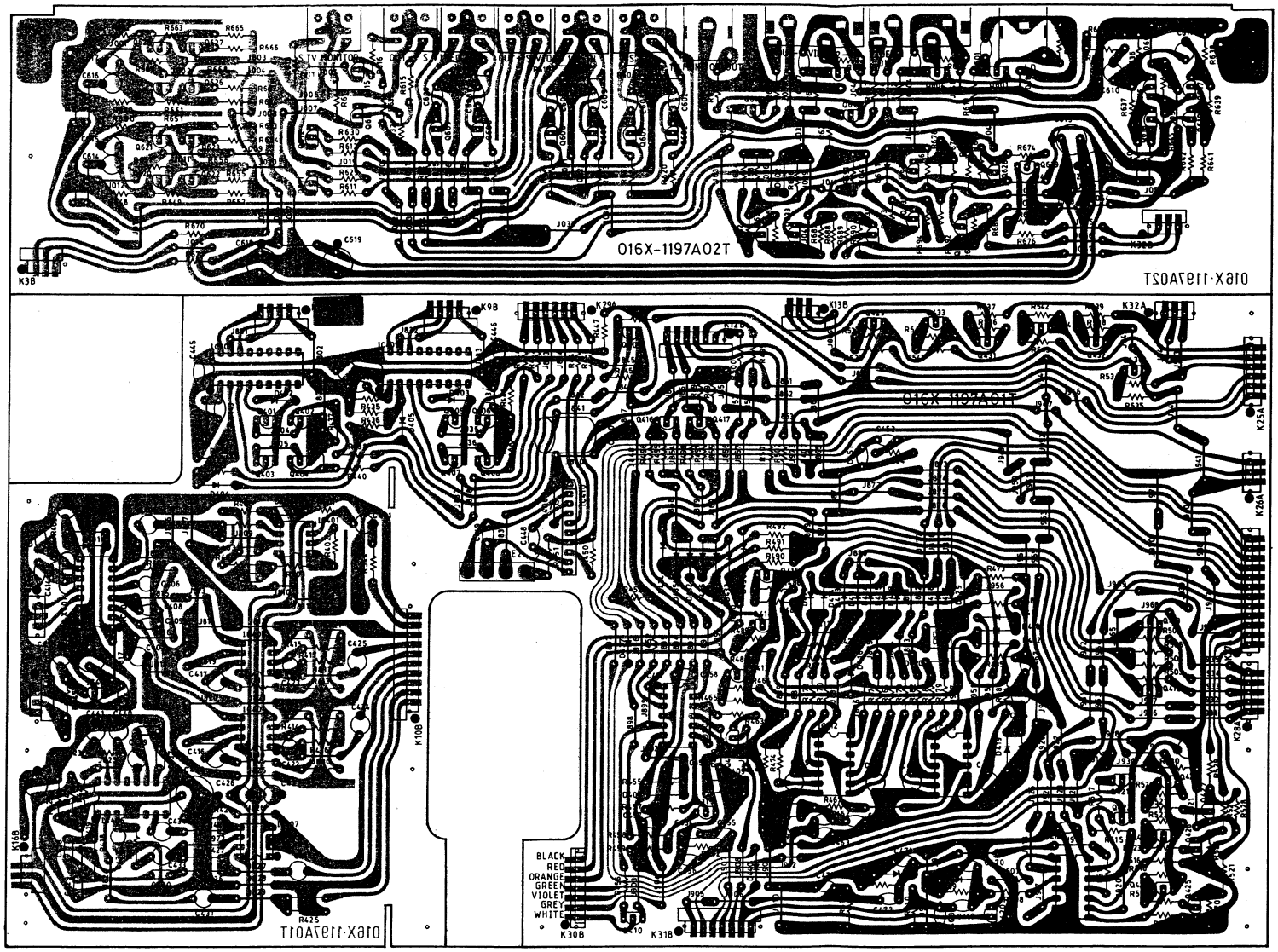

SCHEMATIC DIAGRAM
RSP-960AX (4/4)
016E-1195A00T(2/2)
016X-1197A02T
016E-1196A00T
016X-1196A04T
016X-1196A03T
016X-1196A02T
RSP-960AX (1/4)
RSP-960AX (3/4)
RSP-960AX (2/4)

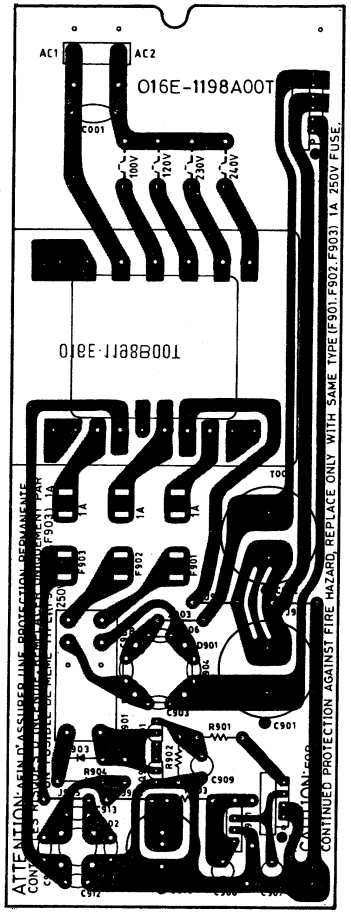
Wiring Diagram

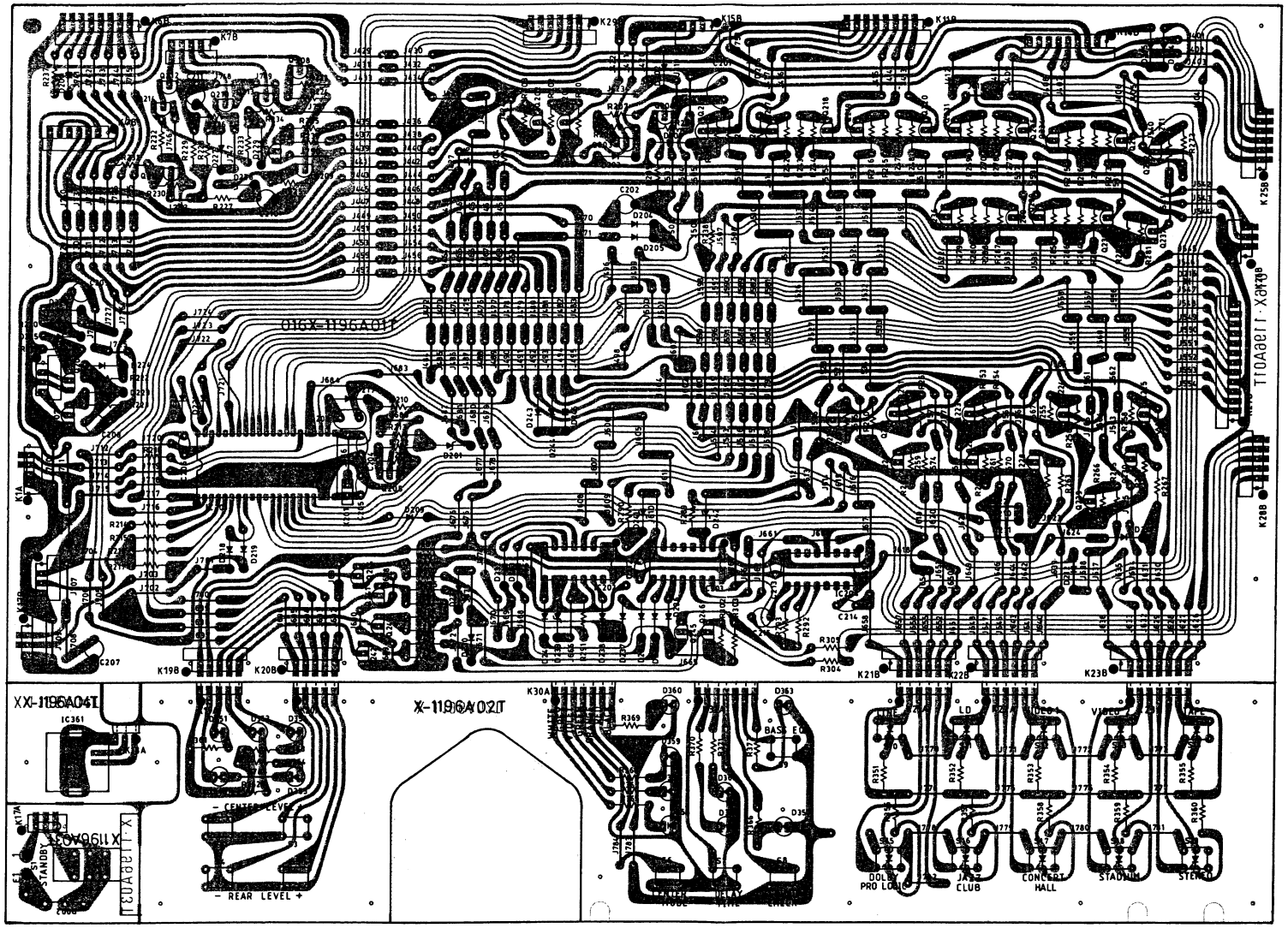
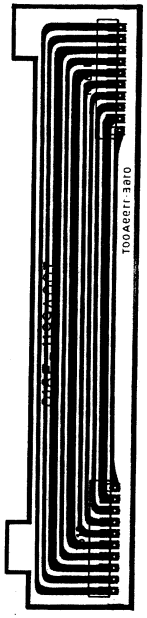


Printed Circuit Boards




016X-1197A02T
BLACK
RED
ORANGE
GREEN
VIOLET
GREY
WHITE


016E-1198A00T
AC1
AC2
100V
120V
230V
240V
ATTENTION: AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE (F901, F902, F903) 1A 250V.
CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE (F901, F902, F903) 1A 250V FUSE.


XX-1196A04T
X-1196A02T
X-1196A03T
T10A8011-X3K10B
T10A8011-X3K10
T10A8011-3810
- CENTER LEVEL
- REAR LEVEL +
STANDBY
BASS EQ
DOLBY PRO LOGIC
JAZZ CLUB
CONCERT HALL
STADIUM
STEREO