



Technical Manual

COMPACT DISC PLAYER RCD-961

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Specification

Total Harmonic Distortion+Noise	0.0045% @ 1kHz
Intermodulation Distortion	0.0045% @ 1kHz
Frequency Response (±0.5dB)	20-20,000 Hz
Channel Balance	±0.5 dB
Phase Linearity	±0.5 degree
Channel Separation	> 98 dB @ 1kHz
Signal to Noise Ratio	> 100 dB
Dynamic Range	> 96 dB
Digital to Analog Converters	18 bit equivalent, multi-level Delta-Sigma DAC with 8x oversampling digital filter and HDCD
Speed Accuracy, Wow & Flutter	Quartz Crystal Precision
Output Impedance	100 ohms
Digital Output	0.5 volts, Peak to Peak
Load Impedance	75 ohms
Power requirement	
USA Version	AC 115 volts 60 Hz
European Version	AC 230 volts 50 Hz
Power consumption	20 watts
Dimensions (W x H x D)	17 ³ / ₈ x 27 ⁷ / ₈ x 127 ¹ / ₁₆ inches
	440 x 72 x 316 mm
Weight (net)	5.4 kg, 11.9 lb.

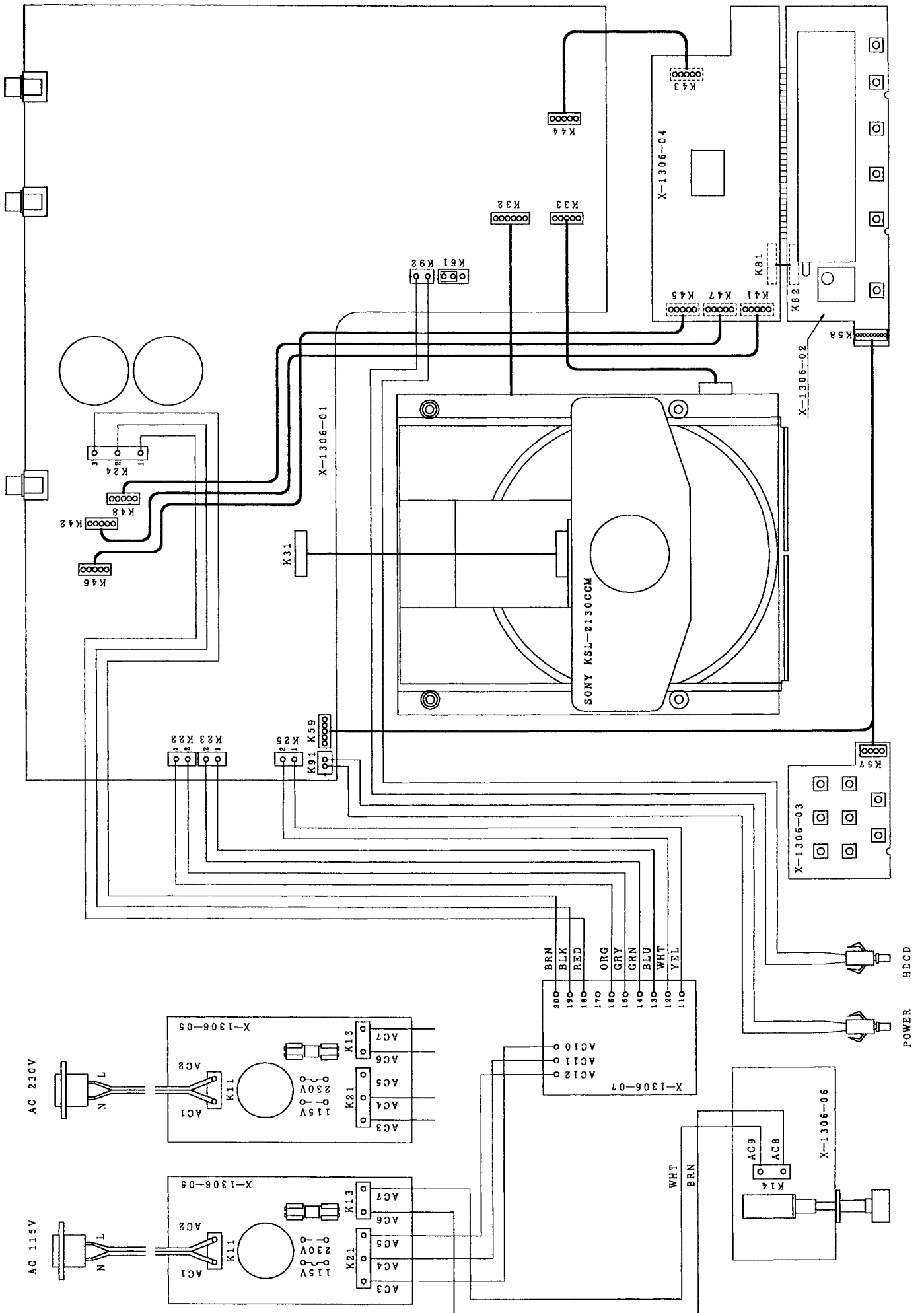
THE ROTEL CO., LTD

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

Serial. NO. Beginning

Y-344A-01035C/S-S

Wiring Diagram



Parts List-1

SYMBOL	PARTS NO.	DESCRIPTION
	X-1306-01 PCB ASSEMBLY	
C101	041 TVX1E101	CAPACITOR ELEC.25V100UF
C102	043 TC50V103	CAPACITOR CERA.50V0.01UF
C103.104	044 TBF014D0104J	CAPACITOR FILM 63V0.1UF
C105.106	041 TVX1E470	CAPACITOR ELEC.25V47UF
C107	041 TVX1E101	CAPACITOR ELEC.25V100UF
C108	044 TBF014D0102J	CAPACITOR FILM 63V1000PF
C109	043 TC50VCH150	CAPACITOR CERA.50V15PF
C151	041 TVX1E101	CAPACITOR ELEC.25V100UF
C152	043 TC50V103	CAPACITOR CERA.50V0.01UF
C153.154	044 TBF014D0104J	CAPACITOR FILM 63V0.1UF
C155	043 TC50V471	CAPACITOR CERA.50V470PF
C156	044 TBF014D0104J	CAPACITOR FILM 63V0.1UF
C157	044 TBF014D0472J	CAPACITOR FILM 63V4700PF
C158	043 TC50V471	CAPACITOR CERA.50V470PF
C159	044 TBF014D0152J	CAPACITOR FILM 63V1500PF
C160	044 TBF014D0473J	CAPACITOR FILM 63V0.047UF
C161	043 TC50V101	CAPACITOR CERA.50V100PF
C162	044 TBF074D0474J	CAPACITOR FILM 63V0.47UF
C163	044 TBF014D0103J	CAPACITOR FILM 63V0.01UF
C164	041 TVX1E101	CAPACITOR ELEC.25V100UF
C165	043 TC50V103	CAPACITOR CERA.50V0.01UF
C167.168	044 TBF074D0105J	CAPACITOR FILM 63V1UF
C169-171	043 TC50V103	CAPACITOR CERA.50V0.01UF
C201	041 TVX1E470	CAPACITOR ELEC.25V47UF
C202	043 TC50V103	CAPACITOR CERA.50V0.01UF
C203	041 TVX1E470	CAPACITOR ELEC.25V47UF
C204	044 TBF014D0473J	CAPACITOR FILM 63V0.047UF
C205	043 TC50VCH470	CAPACITOR CERA.50V47PF
C206	043 TC50V103	CAPACITOR CERA.50V0.01UF
C207	043 TC50VCH470	CAPACITOR CERA.50V47PF
C251	041 TVX1C102	CAPACITOR ELEC.16V1000UF
C252	043 TC50V103	CAPACITOR CERA.50V0.01UF
C253	044 TBF014D0682J	CAPACITOR FILM 63V6800PF
C254	043 TC50VCH270	CAPACITOR CERA.50V27PF
C255	044 TBF014D0152J	CAPACITOR FILM 63V1500PF
C256	044 TBF074D0334J	CAPACITOR FILM 63V0.33UF
C257	044 TBF014D0104J	CAPACITOR FILM 63V0.1UF
C258	043 TC50VCH270	CAPACITOR CERA.50V27PF
C509	043 TC50V103	CAPACITOR CERA.50V0.01UF
C511	041 TVX1E470	CAPACITOR ELEC.25V47UF
C513	044 TBF014D0104J	CAPACITOR FILM 63V0.1UF
C601	041 TEEUFC1E221B	CAPACITOR ELEC.25V220UF
C602	046 T50V473K	CAPACITOR CERA.50V0.047UF
C631	041 20SG22M+F	CAPACITOR ELEC.20V22UF
C632	046 T50V473K	CAPACITOR CERA.50V0.047UF
C633.634	043 TC50VCH220	CAPACITOR CERA.50V22PF
C651	041 25BGF47M	CAPACITOR ELEC.25V47UF
C652	046 T50V473K	CAPACITOR CERA.50V0.047UF
C661.662	041 25BGF47M	CAPACITOR ELEC.25V47UF
C663.664	046 T50V473K	CAPACITOR CERA.50V0.047UF
C665-668	041 50BGF10M	CAPACITOR ELEC.50V10UF
C701.702	044 FSC160V101H	CAPACITOR STYROL 160V100PF
C707.708	044 PP400V1000PF	CAPACITOR FILM 400V1000PF
C711.712	044 PP630V560PF	CAPACITOR FILM 630V560PF
C713.714	044 PP400V1000PF	CAPACITOR FILM 400V1000PF

SYMBOL	PARTS NO.	DESCRIPTION
C717.718	041 16BGF100M	CAPACITOR ELEC.16V100UF
C731.732	044 100UPZ103J	CAPACITOR FILM 100V0.01UF
C741-744	041 25BGF100M	CAPACITOR ELEC.25V100UF
C901	043 TC500V103	CAPACITOR CERA.500V0.01UF
C903	043 TC500V103	CAPACITOR CERA.500V0.01UF
C905	043 TC500V103	CAPACITOR CERA.500V0.01UF
C906	041 UTES1V101-FB	CAPACITOR ELEC.35V100UF
C907	041 VX1C332	CAPACITOR ELEC.16V3300UF
C908	041 TVX1E101	CAPACITOR ELEC.25V100UF
C909	043 TC50V103	CAPACITOR CERA.50V0.01UF
C910.911	041 UTES1H100-FB	CAPACITOR ELEC.50V10UF
C921.922	043 TC500V103	CAPACITOR CERA.500V0.01UF
C923	041 UTES1H010-FB	CAPACITOR ELEC.50V1UF
C924	041 UTES1E101-FB	CAPACITOR ELEC.25V100UF
C931	041 UTES1H010-FB	CAPACITOR ELEC.50V1UF
C932	041 TVX1E101	CAPACITOR ELEC.25V100UF
C941	043 TC50V103	CAPACITOR CERA.50V0.01UF
C951-954	043 TC500V103	CAPACITOR CERA.500V0.01UF
C955.956	041 50USP472	CAPACITOR ELEC.50V4700PF
C959.960	046 T50V473K	CAPACITOR CERA.50V0.047UF
C963	041 TEEUFC1E221B	CAPACITOR ELEC.25V220UF
C965	041 TEEUFC1E221B	CAPACITOR ELEC.25V220UF
C967	046 T50V473K	CAPACITOR CERA.50V0.047UF
C981.982	041 25BGF100M	CAPACITOR ELEC.25V100UF
C987.988	046 T50V473K	CAPACITOR CERA.50V0.047UF
D511	034 TRD4.7JST1	ZENER DIODE
D731	034 T1N4148-86	DIODE
D901	034 T1N4003-TB	DIODE
D903.904	034 T1N4003-TB	DIODE
D905	034 TRD20JST1	ZENER DIODE
D921.922	034 T1N4003-TB	DIODE
D923	034 TRD6.2JST1	ZENER DIODE
D951-954	034 T1N4003-TB	DIODE
K31	068 16FMN-BTRK	FFC 16P CONNECTOR
L101	021 TRL-395	MICRO INDUCTOR 4.7UH
L151.152	021 TRL-395	MICRO INDUCTOR 4.7UH
L201	021 TRL-395	MICRO INDUCTOR 4.7UH
L202	021 TRL-377A	DIGITAL OUTPUT COIL
L601	021 TRL-395	MICRO INDUCTOR 4.7UH
L631	021 TRL-395	MICRO INDUCTOR 4.7UH
L651	021 TRL-392	MICRO INDUCTOR 33UH
L661.662	021 TRL-392	MICRO INDUCTOR 33UH
M4	017 C-4490A02	SUB HEAT SINKER
M5	017 4TR-2792#3	SUB HEAT SINKER
R105.106	054 TMF1503	RESISTOR METAL 150K
R107	054 TMF4702	RESISTOR METAL 47K
R108.109	054 TMF2202	RESISTOR METAL 22K
R110	054 TMF1002	RESISTOR METAL 10K
R111	054 TMF10R0	RESISTOR METAL 10R
R112	054 TMF12R0	RESISTOR METAL 12R
R151	054 TMF1001	RESISTOR METAL 1K
R152	054 TMF1000	RESISTOR METAL 100R
R153	054 TMF1003	RESISTOR METAL 100K
R154	054 TMF1502	RESISTOR METAL 15K
R155	054 TMF1003	RESISTOR METAL 100K

Parts List-2

SYMBOL	PARTS NO.	DESCRIPTION
R156	054 TMF3302	RESISTOR METAL 33K
R157	054 TMF1502	RESISTOR METAL 15K
R158	054 TMF1002	RESISTOR METAL 10K
R159.160	054 TMF3301	RESISTOR METAL 3.3K
R161	054 TMFR4100R	RESISTOR METAL 1% 100R
R162	054 TMF1004	RESISTOR METAL 1M
R163	054 TMF1003	RESISTOR METAL 100K
R164	054 TMF1002	RESISTOR METAL 10K
R165-167	054 TMFR4100R	RESISTOR METAL 1% 100R
R168.169	054 TMF1000	RESISTOR METAL 100R
R201	054 TMF3300	RESISTOR METAL 330R
R202	054 TMFR4027R	RESISTOR METAL 1% 27R
R203	054 TMFR4075R	RESISTOR METAL 1% 75R
R251	054 TMF3903	RESISTOR METAL 390K
R252	054 TMF1503	RESISTOR METAL 150K
R254	054 TMF1503	RESISTOR METAL 150K
R255	054 TMF4R70	RESISTOR METAL 4.7R
R256	054 1WS2.2JF	RESISTOR METAL 1W 2.2R
R511	054 1WS4.7JF	RESISTOR METAL 1W 4.7R
R601	053 CR14-821J-A	RESISTOR CARBON 820R
R602	053 CR14-473J-A	RESISTOR CARBON 47K
R603	053 CR14-104J-A	RESISTOR CARBON 100K
R631	054 TMFR4001M	RESISTOR METAL 1% 1M
R633	054 TMFR4018R	RESISTOR METAL 1% 18R
R635	054 TMFR4039R	RESISTOR METAL 1% 39R
R701.702	054 TMF1/4-4700F	RESISTOR MRS25 470R
R703.704	054 TMF1/4-1003F	RESISTOR MRS25 100K
R705.706	054 TMF1/4-3301F	RESISTOR MRS25 3.3K
R707.708	054 TMF1/4-1202F	RESISTOR MRS25 12K
R711.712	054 TMF1/4-1501F	RESISTOR MRS25 1.5K
R713.714	054 TMF1/4-1201F	RESISTOR MRS25 1.2K
R715.716	054 TMF1/4-2701F	RESISTOR MRS25 2.7K
R717.718	054 TMF1/4-5603F	RESISTOR MRS25 560K
R719.720	054 TMF1/4-1000F	RESISTOR MRS25 100R
R731	053 CR14-821J-A	RESISTOR CARBON 820R
R732	053 CR14-223J-A	RESISTOR CARBON 22K
R901	054 TMF1002	RESISTOR METAL 10K
R902	053 CR14-331J-A	RESISTOR CARBON 330R
R921	053 CR14-223J-A	RESISTOR CARBON 22K
R922.923	053 CR14-103J-A	RESISTOR CARBON 10K
R924	053 CR14-563J-A	RESISTOR CARBON 56K
R925	053 CR14-104J-A	RESISTOR CARBON 100K
R926	053 CR14-563J-A	RESISTOR CARBON 56K
S731	063 A24W-K	RELAY(MUTE)
T101	032 TB764-EF	TRANSISTOR(2SB764-EF)
T601	032 TC536-FG	TRANSISTOR(2SC536K-FG)
T731	032 TA1016-FG	TRANSISTOR(2SA1016K-FG)
T901	032 TA608-FG	TRANSISTOR(2SA608K-FG)
T921-923	032 TC536-FG	TRANSISTOR(2SC536K-FG)
U101	031 CXA1821M	IC(RF AMP)
U151	031 CXD2545Q	IC(DSP)
U201	031 TC74HCU04AP	IC(HEX INVERTER)
U251	031 BA6392FP	IC(MOTOR BTL DRIVE)
U511	031 LB1641	IC(MOTOR DRIVE)
U601	031 PCM1732U	IC(D/A CONVERTER WITH HDCD)

SYMBOL	PARTS NO.	DESCRIPTION
U631	031 TC74HCU04AP	IC(HEX INVERTER)
U701.702	031 OPA2604AP	IC(OPE DUAL)
U901	031 NJM7805FA	IC(REGULATOR +5VDC)
U931	031 NJM7805FA	IC(REGULATOR +5VDC)
U961	031 NJM7805FA	IC(REGULATOR +5VDC)
U981	031 NJM7815FA	IC(REGULATOR +15VDC)
U982	031 NJM7915FA	IC(REGULATOR -15VDC)
X631	023 HC49U-002	CRYSTAL(16.9344MHZ)
	019 TO-220	INSULATION SHEET
	066 4TR-2487#5	1P PINJACK(BLK)
	066 4TR-2487#21	1P PINJACK(RED)
	066 4TR-2487#22	1P PINJACK(WHT)
	X-1306-02 PCB ASSEMBLY	
C352	041 UTES1A101-FB	CAPACITOR ELEC.10V100UF
D351	034 TRD6.2JST1	ZENER DIODE
O351	035 6BT209GK	FL TUBE
R351	054 TMF5601	RESISTOR METAL 5.6K
R352-354	054 TMF1801	RESISTOR METAL 1.8K
S351-356	061 4TR-2343	TACT SWITCH
U351	031 SBX3010-52B	IC(REMOTE EYE)
	X-1306-03 PCB ASSEMBLY	
R301	054 TMF1002	RESISTOR METAL 10K
R302	054 TMF2702	RESISTOR METAL 27K
R303	054 TMF1002	RESISTOR METAL 10K
R304	054 TMF2702	RESISTOR METAL 27K
R305	054 TMF1801	RESISTOR METAL 1.8K
R306	054 TMF2702	RESISTOR METAL 27K
R307	054 TMF3901	RESISTOR METAL 3.9K
S301-308	061 4TR-2343	TACT SWITCH
	X-1306-04 PCB ASSEMBLY	
C401	043 TC50V103	CAPACITOR CERA.50V0.01UF
C402	041 UTES1E101-FB	CAPACITOR ELEC.25V100UF
C403	043 TC50V103	CAPACITOR CERA.50V0.01UF
C404	041 UTES1A101-FB	CAPACITOR ELEC.10V100UF
C405	041 UTES1H2R2-FB	CAPACITOR ELEC.50V2.2UF
C406.407	043 TC50VCH330	CAPACITOR CERA.50V33PF
C408	043 TC50V103	CAPACITOR CERA.50V0.01UF
D401.402	034 T1N4148-86	DIODE
K81	068 MB9P-90S	CONNECTOR WAFER
K83	068 MB2P-90S	CONNECTOR WAFER
L401	021 TRL-395	MICRO INDUCTOR 4.7UH
R401.402	053 CR16-104J-A	RESISTOR CARBON 100K
R403-417	053 CR16-103J-A	RESISTOR CARBON 10K
R423	054 SE8102J	THICK FILM RS NETWORK 1K
R424	054 SE8104J	THICK FILM RS NETWORK 100K
R425	054 TMF4702	RESISTOR METAL 47K
U401	031 CXP82440A-1	IC(CXP82440A-179Q)
X401	023 CSA10.0MHZ	CERAMIC RESONATOR


Parts List-3

SYMBOL	PARTS NO.	DESCRIPTION	SYMBOL	PARTS NO.	DESCRIPTION
X-1306-05 PCB ASSEMBLY					
F001	036 5ST500 ※	MINI FUSE 250VT500mA		034 SEL1124R	LED(RED)1X5
L001	021 TRL-356 ※	LINE CHOKE COIL		069 C-4629A01 ※	AC INLET
	069 C-3417A	FUSE HOLDER		072 C-4620A01 ※	AC CORD SET for STD
				072 C-4622A01 ※	AC CORD SET for AUSTRALIA
				072 C-4623A01 ※	AC CORD SET for U.K
X-1306-06 PCB ASSEMBLY					
C001	044 DE1307E472M ※	SPARK KILLER		072 C-4624A01 ※	AC CORD SET for CEE
S001	061 C-4176A08 ※	POWER SWITCH		072 C-930-T	PIN PLUG SHIELD CORD
				081 TV4-03A00	INSIDE CARTON
				081 TZ-167	STYROL SIDE MOULDING
				092 RR-D94	REMOTE UNIT
				192 KSL-2130RLM	CD LOADER ASSY
OTHERS					
	011 FP-542	FRONT PANEL ASSY			
	012 RV4-09A00	PUSH BUTTON 14F			
	012 RZ3-10A00	TACT BUTTON 8KEY			
	012 RZ3-11A00	TACT BUTTON 6KEY			
	014 4TR-2797#1	ORNAMENT SIDE BOARD			
	014 C-4550A03	UPPER COVER			
	014 FP-488	PLASTIC DOOR			
	014 RZ3-08A01	BOTTOM BOARD			
	015 RP-389	REAR CHASSIS			
	019 4TSH-19#2	PLASTIC FOOT 50F			
	022 T-1060N01 ※	POWER TRANSFORMER			
	034 LTL1214A	LED(RED)2F			

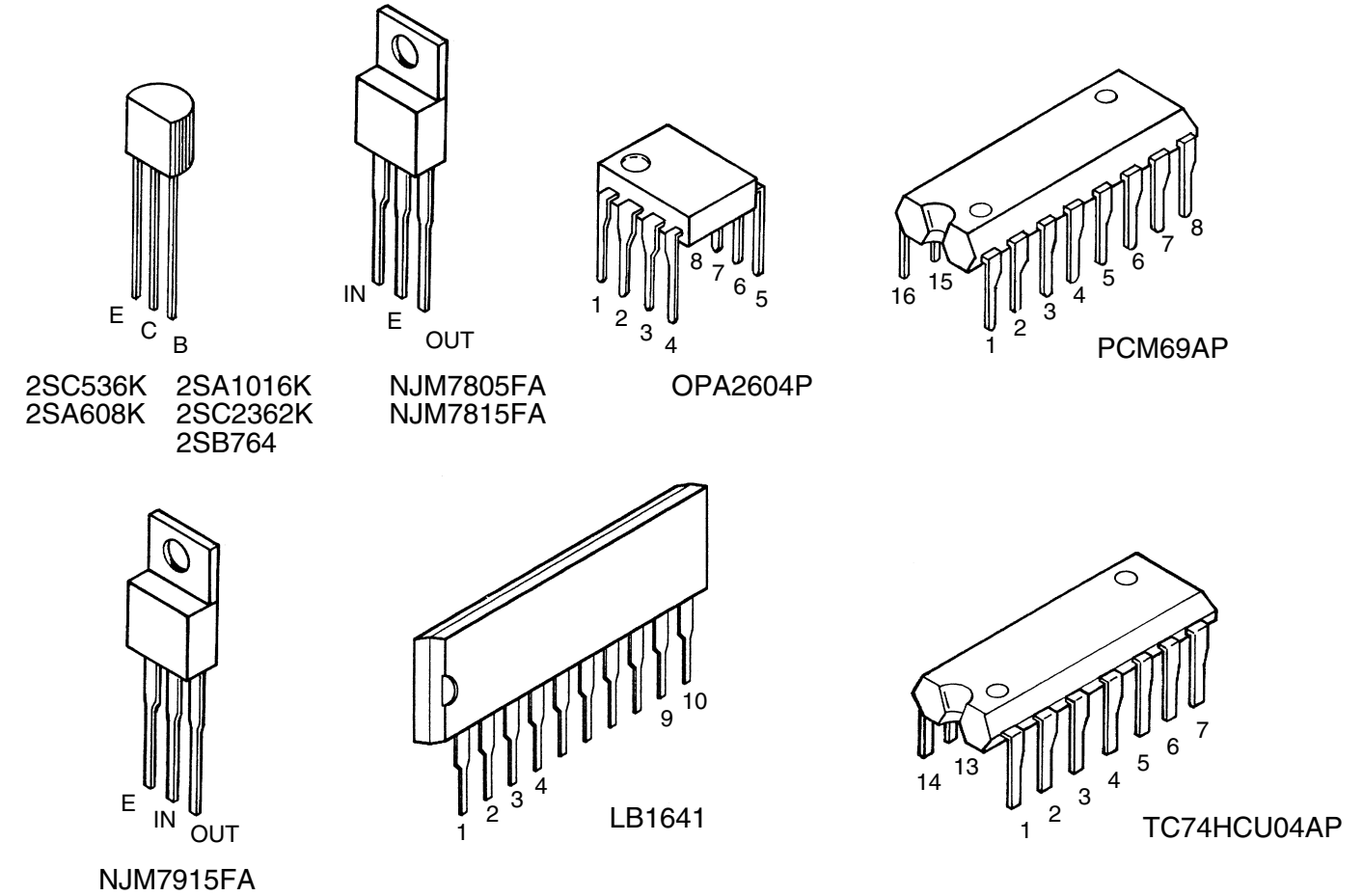
NOTE ON SAFETY : Symbol ※ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ※ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

Safety Caution

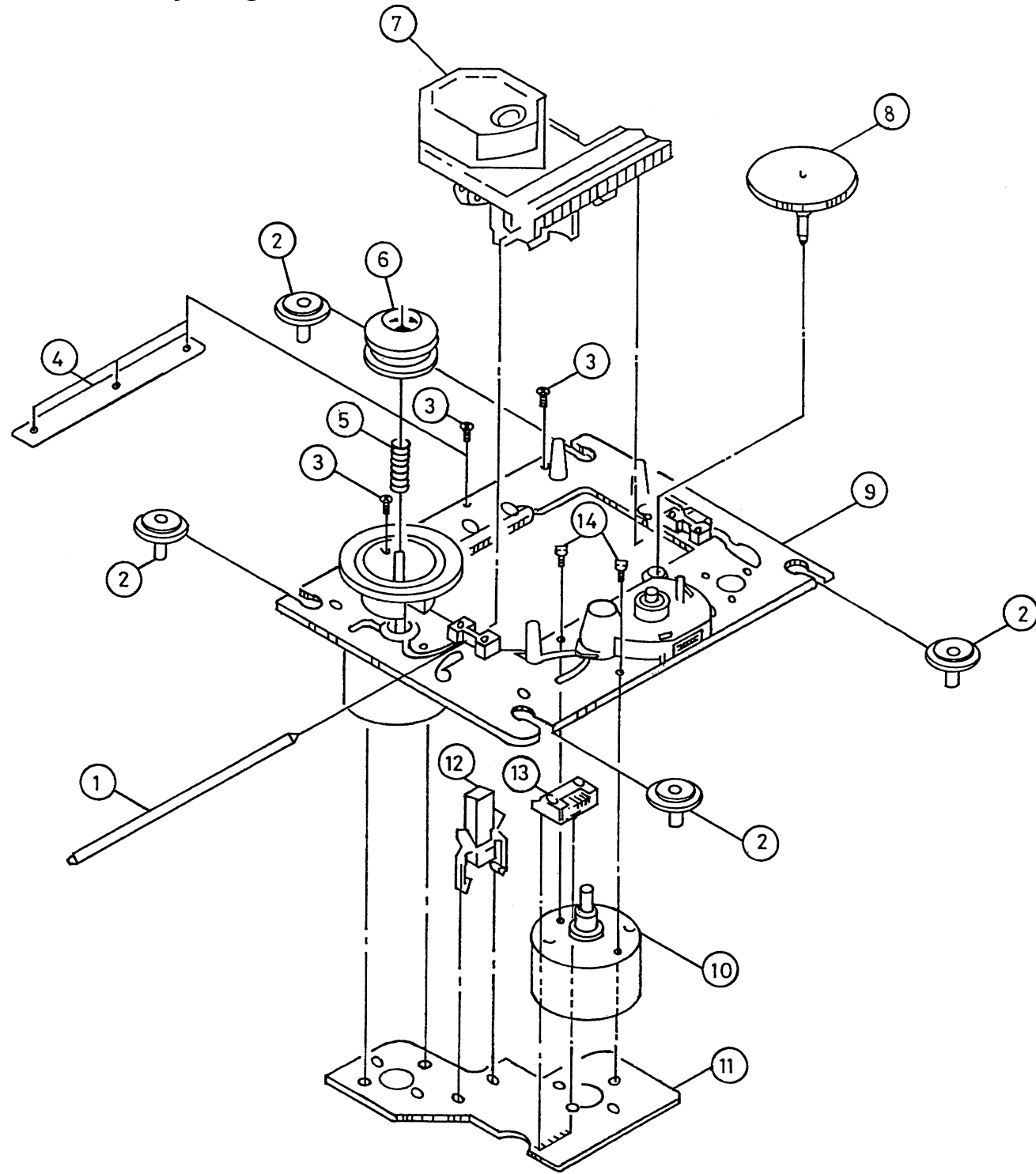
Cautions during Inspection and Repair

- Keep in mind the safety warnings
The safety instructions are shown as the labels or printings on the exterior, the inside chassis or the parts, etc. Refer to the instructions when proceeding with inspection or repair.
- Use only the specified parts for replacement
The selected parts are used at critical area to reduce fire hazard or electrical shock. So when replacing these parts where designaged with  marks or ※ marks on the schematic diagram or the parts list, ensure to use only the same parts.
- Ensure to dress back the AC (Mains) cord to the original position
If for some reason, the AC cord is moved or partially disassembled, ensure to re-route or assemble back to the original position. The AC cord area is protected and secured by tubing and insulation materials for the sake of safety, so that no loose wire will touch and cause fire hazard and electrical shock.
- Check for safety aspects after inspection or repair
Ensure all parts, such as screws or wires, removed during inspection or repair are secured back to the original positions, and check visually for any anomaly. Also check for any electrical leakage or resistance to maintain the safety.

Case Outlines

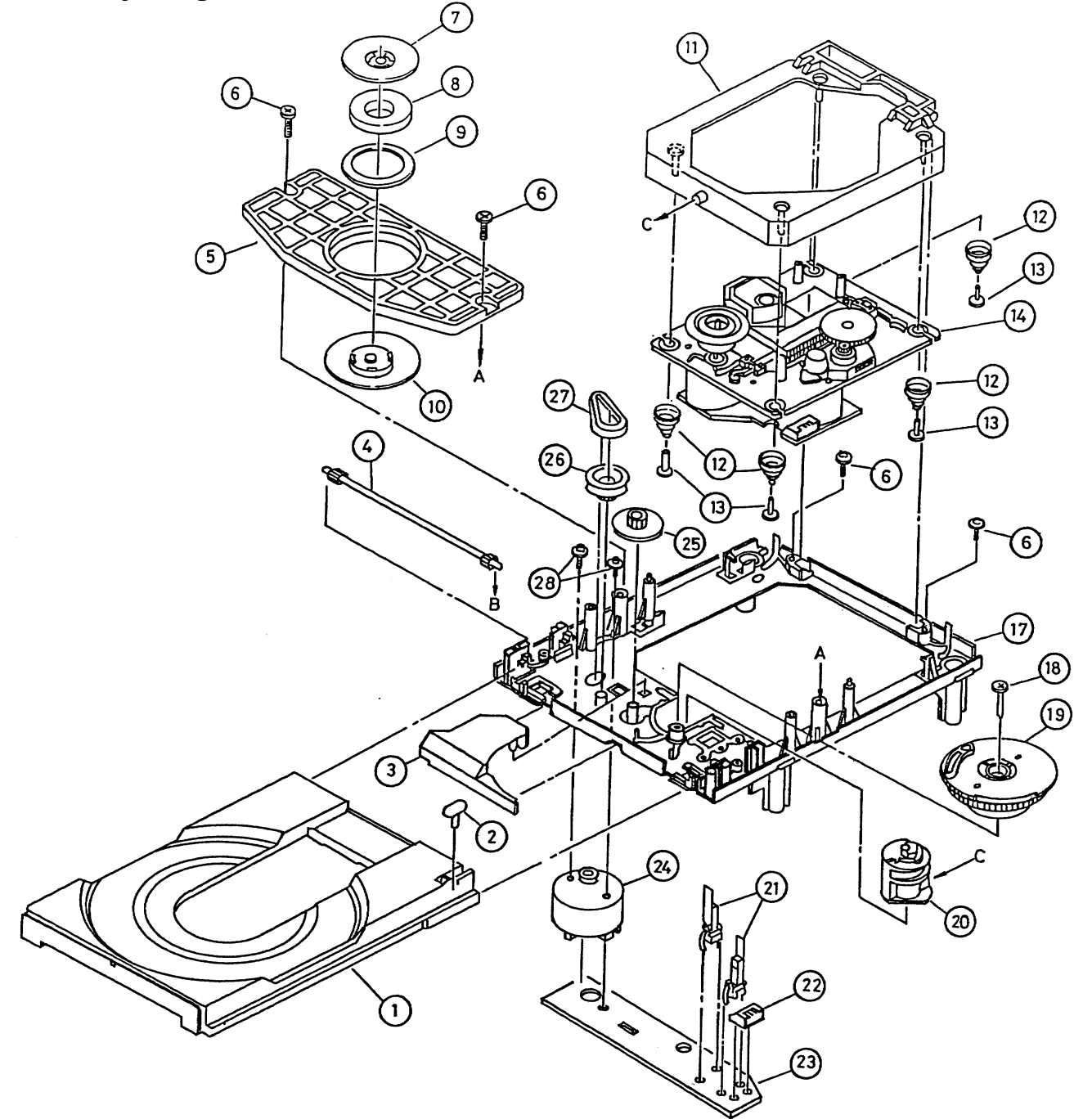


Disassembly Diagram-1

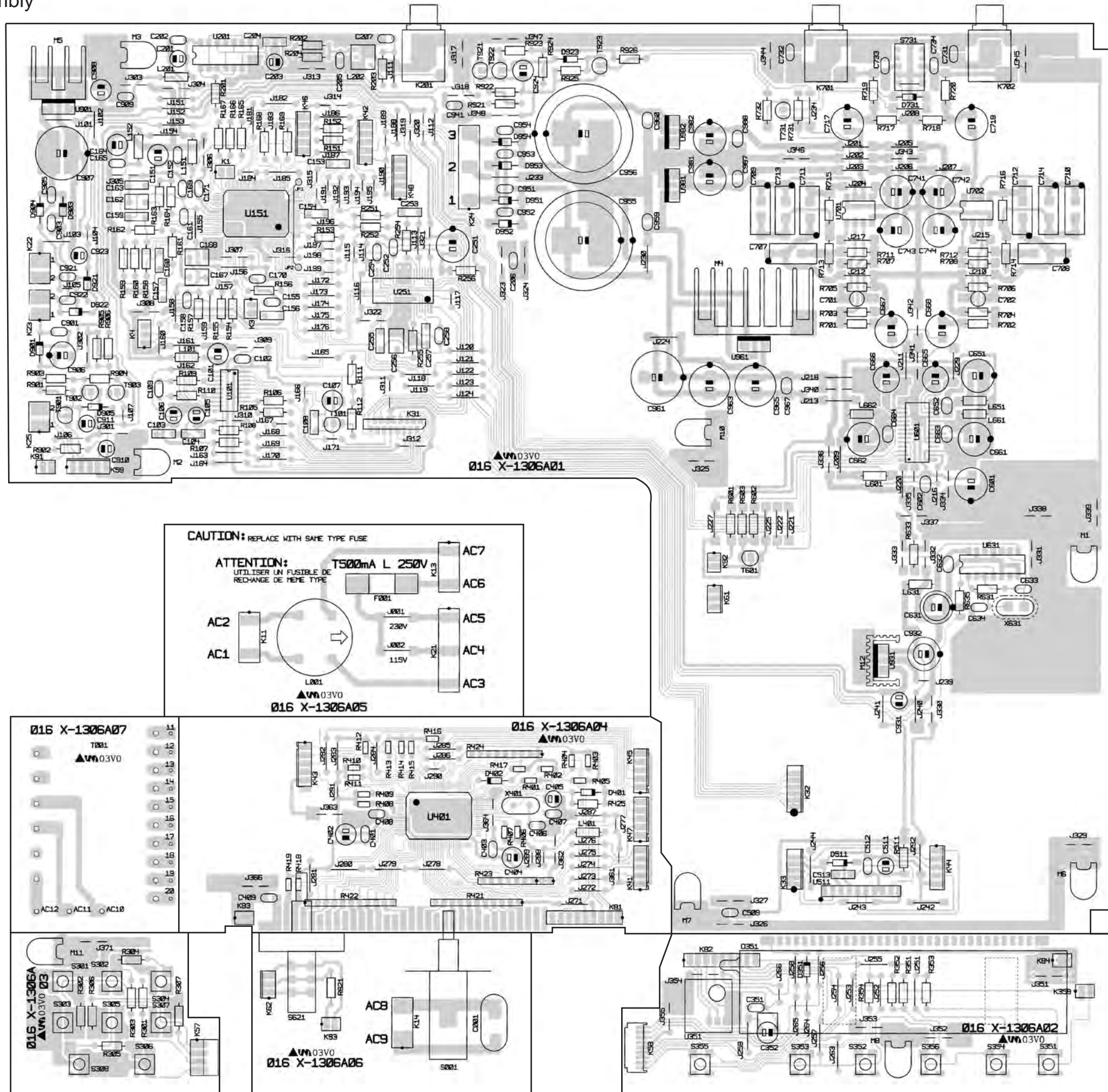


ITEM	DESCRIPTION	SPEC. NO.
1	CHAFT(S). SLED	2-625-464-(01)
2	INSULATOR(S)	2-625-538-(01)
3	SCREW(2X5). TAPPING(S)	2-641-386-(01)
4	REINFORCEMENT(S)	2-625-625-(01)
5	SPRING(S). COMPRESSION	2-626-465-(01)
6	RING(LO)(S). CENTER	2-626-477-(01)
7	PICK UP KSS 213C	
8	GEAR(A)(S)	2-626-462-(01)
9	CHASSIS ASS'Y(MB). TT	X-2625-133-(2)
10	GEARASS'Y(MB). MOTOR	X-2625-132-(1)
11	PC BOARD. MOTOR(6P)(S)	1-639-678-(13)
12	SWITCH LEAF	1-572-085-(12)
13	PIN. CONNECTOR 6P	1-564-722-(11)
14	SCREW+P 2X3	7-621-255-(15)

Disassembly Diagram-2



ITEM	DESCRIPTION	SPEC. NO.	ITEM	DESCRIPTION	SPEC. NO.
1	TRAY(S)	2-625-550-(03)	17	CHASSIS(S). OUTSERT MAIN	2-625-552-(06)
2			18	SCREW+P TP WH 2.D6X16	3-319-501-(51)
3	COVER(S). GEAR	2-625-544-(01)	19	GEAR(S). DRIVE	2-625-547-(03)
4	GEAR(S). TRAY	2-625-535-(01)	20	CAM(S). CONTROL	2-625-545-(04)
5	PLATE(S). CHUCKING	2-626-546-(01)	21	SWITCH. LEAF	1-572-086-(11)
6	SCREW+P TP WH 2.D6X7	2-625-537-(01)	22	PIN. CONNECTOR 5P	1-564-721-(11)
7	YOKE(S). CHUCKING	2-625-537-(01)	23	PC BOARD LOADING	1-640-523-(12)
8	MAGNET	1-452-483-(21)	24	MOTOR ASS'Y. LOADING	X-2625-117-(1)
9	DAMPER(S)	2-625-541-(02)	25	GEAR(S). MIDWAY	2-625-534-(02)
10	PULLEY(G). CHUCKING	2-625-548-(02)	26	PULLEY(S). LOADING	2-625-536-(02)
11	CHASSIS ASS'Y(G). SUB	X-2625-227-(2)	27	BELT. LM	3-653-387-(01)
12	SPRING(S)	2-825-539-(01)	28	SCREW+P 2.D6X2.D5	2-625-279-(01)
13	WASHER BASED SCREW	2-625-730-(01)			
14	DRIVE UNIT KSM-213CCM				



Schematic Diagram

