

TECHNICAL MANUAL

ROTEL RCD-865BX

COMPACT DISC PLAYER

TABLE OF CONTENTS

Safety Caution.....	1
Chassis Layout	2
PC Board Ass'y Parts List.....	3
Wiring Diagram.....	5
Printed Circuit Boards.....	6
Schematic Diagram.....	11
Disassembly Diagram	15

THE ROTEL CO., LTD.

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

ROTEL ELECTRONICS CO., LTD.

ROTEL BLDG., 3F. NO. 35, FUSING N. ROAD, TAIPEI, TAIWAN, REPUBLIC OF CHINA

MN20001822

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

THIS SET EMPLOYS A LASER. THEREFORE, BE SURE TO FOLLOW CAREFULLY THE INSTRUCTIONS BELOW WHEN SERVICING.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

LASER WARNING LABEL

THE LABEL SHOWN BELOW ARE AFFIXED.

WARNING LABEL

CAUTION

INVISIBLE LASER RADIATION WHEN OPEN
DO NOT STARE INTO BEAM

DANGER

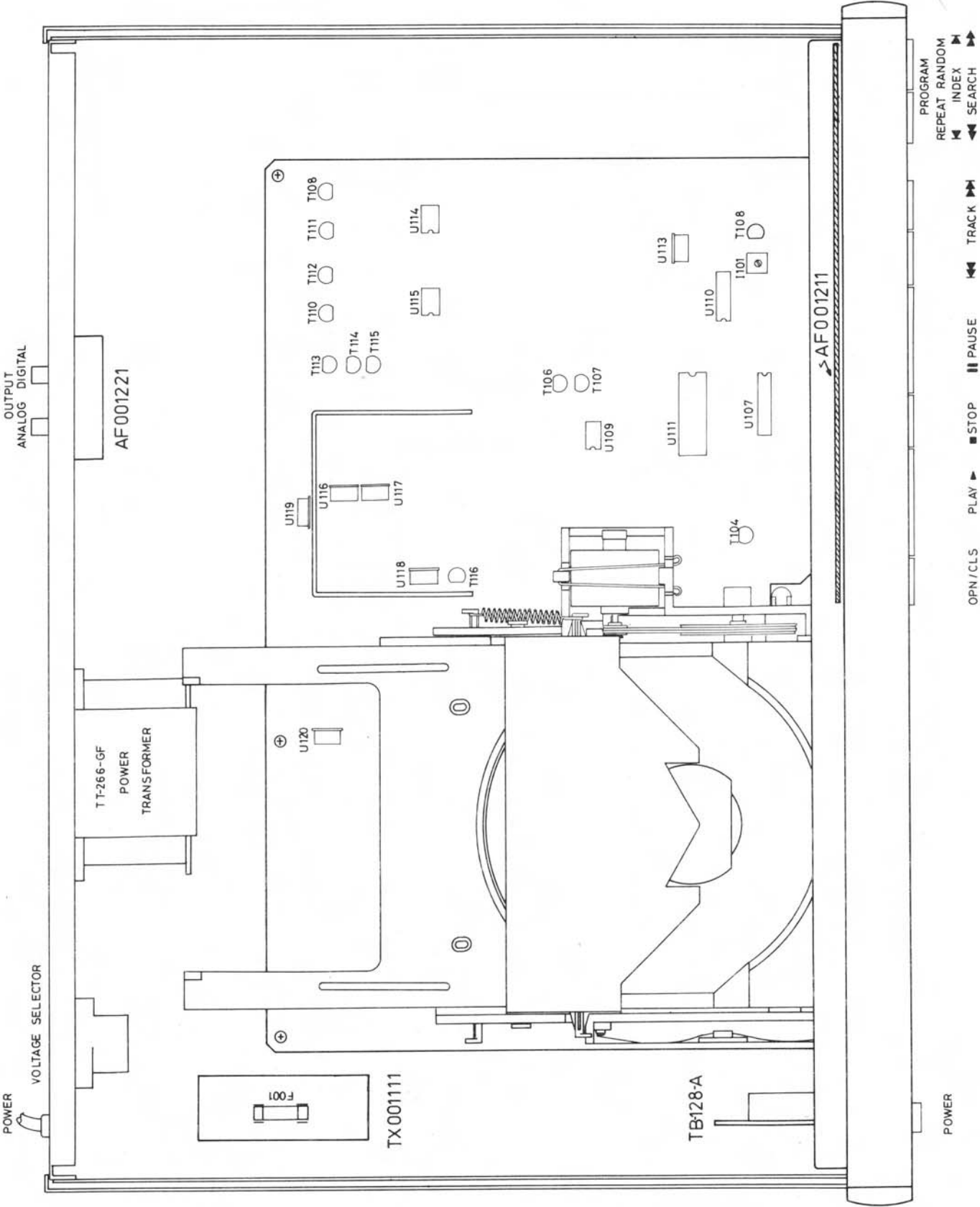
INVISIBLE LASER RADIATION WHEN OPEN
AVOID DIRECT EXPOSURE TO BEAM

ALIGNMENT PROCEDURE FOR THE LASER CURRENT AND THE FOCUS OFFSET

- NOTE 1. This alignment must be done only if or the monoboard or the CDM is replaced for service purpose.
- NOTE 2. The given measurement data are only for alignment after service. When checking monokits for these data, different values can be found. This is normal and gives no reason for malfunction.
- NOTE 3. The used test disc must be a SONY type 4 (YEDS 18).
- A. Turn the laser variable resistor R302 in a position that the total resistance of R302 plus R135 is 1 kohm.

Turn the focus variable resistor R301 in the middle position.
 - B. Switch the power ON and verify that the display light up.
 - C. Place the test disc in the tray. The test disc must be clean (no finger prints) and may not be damaged.
 - D. Connect a DC voltmeter over resistor R115, switch the power on, press the PLAY button and check the reading of the DC voltmeter.
 - E. While the monokit is playing, adjust the laser current with variable resistor R302 at a value of 50 mV +/-2 mV.
 - F. Switch the power off and connect a DC voltmeter over capacitor C135, switch the power on, press the PLAY button and check the reading of the DC voltmeter.
 - G. While the monokit is playing, adjust the focus offset with variable resistor R301 at a value of 400 mV +/-20 mV.
- REMARK: It is normal that the focus readout is not stable, but is varying within certain range.

Chassis Layout



Parts List

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

SYMBOL	PARTS NO.	DESCRIPTION
	AF001211	PCB ASSEMBLY
R101	RD24702822	R,CARBON 47K J 1/4W
R102,103	RD21001821	R,CARBON 1K J 1/4W
R104,105	RD24701829	R,CARBON 4.7K J 1/4W
R106	RD21503826	R,CARBON 150K J 1/4W
R107	RD21002825	R,CARBON 10K J 1/4W
R108	RD24701829	R,CARBON 4.7K J 1/4W
R109,110	RD22202822	R,CARBON 22K J 1/4W
R111	RD24702822	R,CARBON 47K J 1/4W
R112,113	RD22202822	R,CARBON 22K J 1/4W
R114	RD24700825	R,CARBON 470 J 1/4W
R115,116	RD24708824	R,CARBON 4.7 J 1/4W
C101	CC02009458	CAP,CERAMIC 0.02uF 50V
C102	CE02206508	CAP,ELEC. 22uF 50V
C103	CC02011430	CAP,CERAMIC 200P 50V
D101	DD20000193	DIODE RD-15E
D102	DD10000100	DIODE IN4148
D103	IC00002030	REMOTE RECEIVER SBX1610-02
D104-107	DD10000100	DIODE IN4148
IC101	IC00002272	IC TMS3763CNL
Q101	TR30000327	TRANSISTOR 2SC536G
Q102	TR10000126	TRANSISTOR 2SA608K
S01-S14	SH62000240	KEY BOARD SW 4TR-2343
FL101	DD40001142	FL TUBE 6-MT-139G
	AF001221	PCB ASSEMBLY
	JP01000073	1P PIN JACK W/SW 4TR-2487#2
	JP02000181	2P PIN JACK 4TR-2166#3
	TB-128-A	PCB ASSEMBLY
C001	CK00000035	SPARK KILLER DE7150F472M Δ
S001	SH40000120	POWER SW C-3600B-T Δ
	TX-001111	PCB ASSEMBLY
F001	FU24000033	FUSE 250V UL/CSA 5MF 500mA (C,U,A) Δ
	FU23000220	FUSE 250V 200mA S Δ
	TX-903113	PCB ASSEMBLY (REMOTE CONTROL HANDSET RRT-7)
R1	RD21002825	R,CARBON 10K J 1/4W
R2	RD25601820	R,CARBON 5.6K J 1/4W
R3	RD26809826	R,CARBON 68 J 1/4W
R5	RD21000828	R,CARBON 100 J 1/4W
C1	CE01005064	CAP,ELEC. 100uF 6.3V
D1	DD40000484	INFRARED EMITTING DIODE LTE4208
IC1	IC00002170	IC SAA3010T
X1	LF00000336	CERALOCK FILTER CSB429PB
Q1	TR30000121	TRANSISTOR 2SC2274
Q2	TR10000126	TRANSISTOR 2SA608K
	SE00000084	BATTERY UM3 1.5Vx2
	SP30000264	BATTERY COVER 4TTJ-3#1
	TN10003446	COSMETIC CASE 4TTJ-10#17
	AB00000286	BOTTOM COVER 3TTJ-2#1
	AU00000853	UPPER COVER 3TTJ-1#1
	KB20002656	RUBBER BUTTON RRT-7 4TTJ-5#9 20 KEY
	OM10001181	ALUM. BOTTOM PLATE 4TTJ-21
	LG00000127	BATTERY TERMINAL 4TTJ-9
	NP00001597	NAME PLATE 4TTJ-12#3
	OM70000235	FILTER BOARD 3TTJ-20
	SN00000260	BATTERY SPRING 4TTJ-8

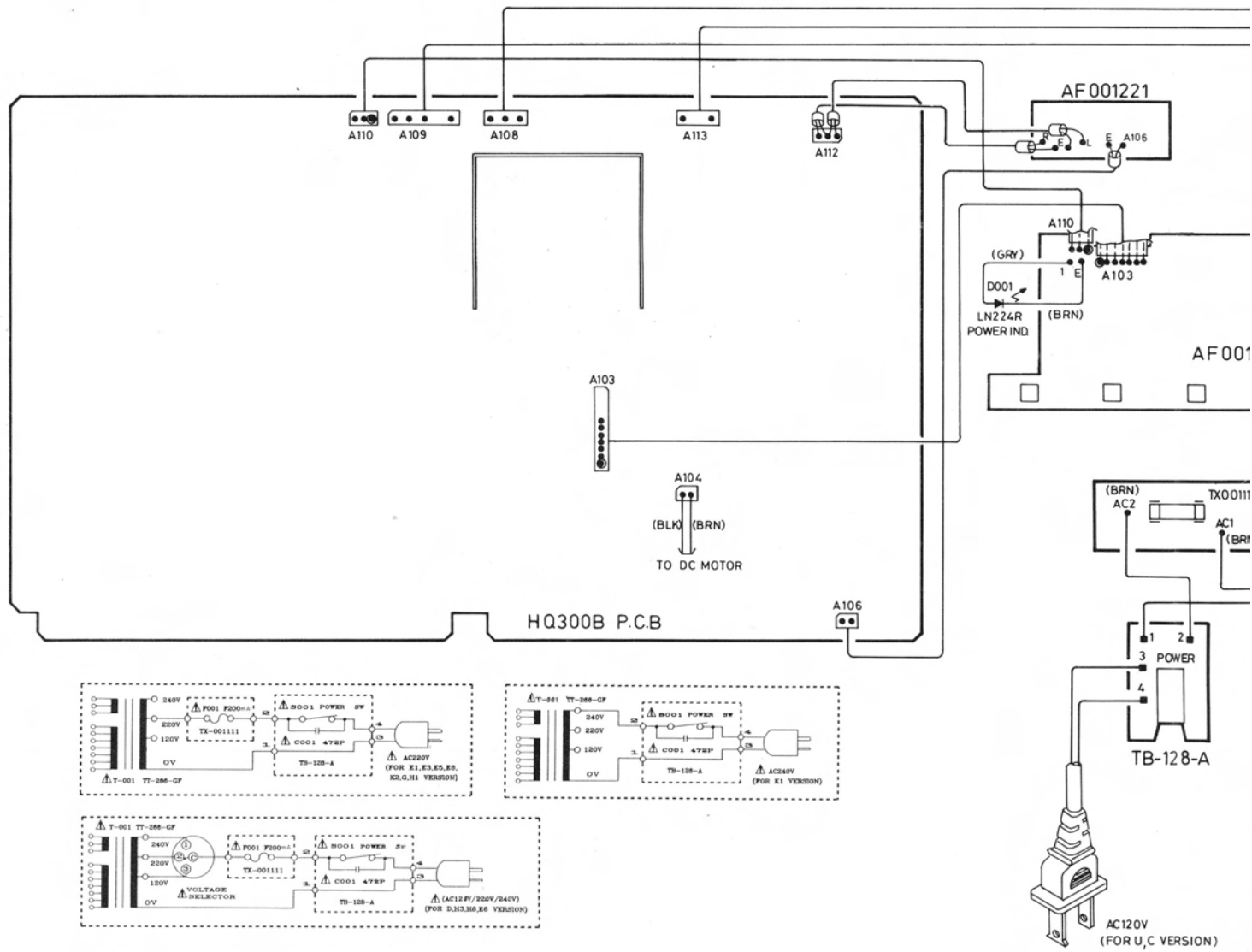
SYMBOL	PARTS NO.	DESCRIPTION
		OTHERS
	AF50000029	FRONT CHASSIS 2TSF-3B#2
	AM00001835	CHASSIS BODY 2TSF-2H#2
	AR50000058	PRINTED REAR CHASSIS TRP-557
	DI00000474	COMPACT DISC MONOKIT HQ-300B
	PT26607105	POWER TRANSFORMER TT-266-GF Δ
	FT00000138	RUBBER FOOT 4TR-2274 40Fx8
	CD00000218	AC CORD SPT-2 AWG#18 4TR-670#4 (U,C,A) Δ
	CD00000292	AC POWER CORD UP-401F 4TR-2631#1 (D) Δ
	CD00000048	AC POWER CORD 4TR-1037 (H,E,K2) Δ
	CD00000085	AC POWER CORD C-2504A (K1) Δ
	CD00000115	AC POWER CORD C-3763-T (G) Δ
	VC00000048	VOLTAGE SELECTOR C-4304A01 FS907B (U,C,A,D,H3,H6,E6) Δ
	AA50000041	FRONT PANEL 2TSF-1B#3
	AW00000400	PANEL WINDOW 4TR-2655#2
	BU00000876	PUSH RING 4TSF-6
	BU00001080	POWER BUTTON RING 4TSZ-11
	BU00000992	TACT BUTTON RING 4TSF-15
	KB20002530	PUSH BUTTON 4TSF-5 5x19
	KB20002577	TACT BUTTON 4TSF-14 11.5x159
	KB20002644	TACT BUTTON 1 KEY 4TQC-1
	OM10000085	ORNAMENTAL SIDE PLATE 3TTF-6 H=80MM
	OM10000863	FL ORNAMENTAL PLATE 4TSF-8 TFP-551
	OM10000875	FUNCTION PVC PLATE 4TSF-12 TFP-552
	OM10000991	PLASTIC DOOR 3TSF-13
	OM10001132	ALUMINUM DOOR 4TSF-7#2
	OM70000065	PUSH BUTTON CONNECTOR 4TTL-15
	AG00000238	REMOTE CONTROL HANDSET RRT-7
	AU00000890	UPPER COVER 3TTF-15#4
	KB20001561	PUSH BUTTON 4TR-2176 14x14
	PL00000770	STYROL SIDE MOULDING 2TTF-9A TZ-165
	TN10003367	INSIDE CARTON 4TR-2377#12

Parts List

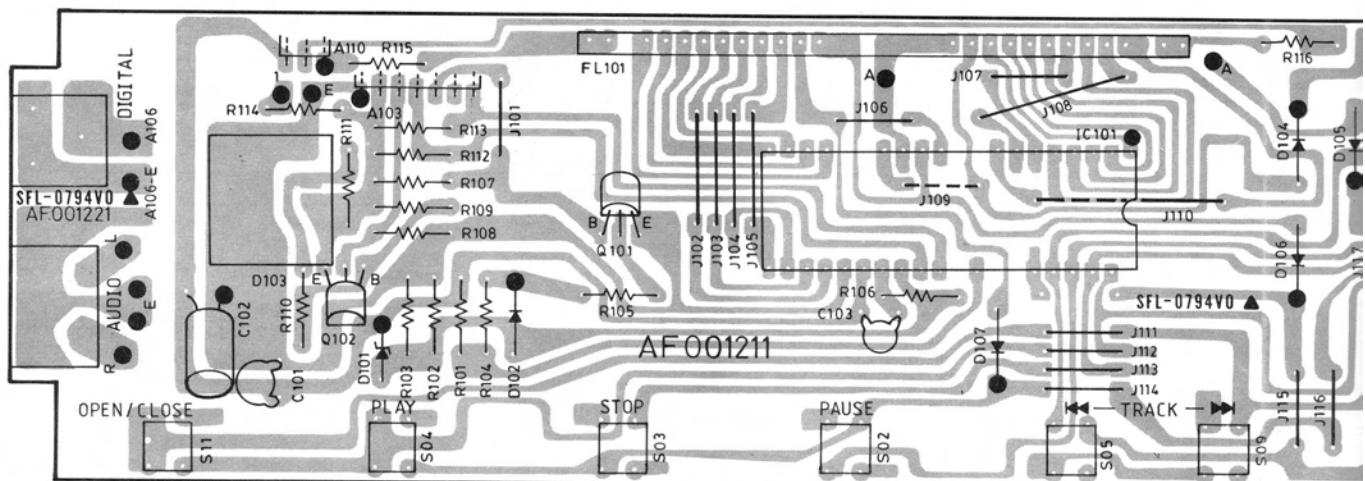
SYMBOL	PARTS NO.	DESCRIPTION
	HQ300B PCB	
D101	058 40004	DIODE 1N4002
D102	058 40004	DIODE 1N4002
D103	058 40009	ZENER HZ7C2 (7V5)
D104	058 40009	ZENER HZ7C2 (7V5)
D105	058 40002	DIODE 1N4148
D106	058 40002	DIODE 1N4148
D107	058 40004	DIODE 1N4002
D108	058 40004	DIODE 1N4002
D109	058 40004	DIODE 1N4002
D110	058 40014	ZENER HZ4B2 (3V9)
D111	058 40002	DIODE 1N4148
D112	058 40004	DIODE 1N4002
D113	058 40002	DIODE 1N4148
D114	058 40002	DIODE 1N4148
D115	058 40004	DIODE 1N4002
D116	058 40004	DIODE 1N4002
D117	058 40004	DIODE 1N4002
D118	058 40004	DIODE 1N4002
D119	058 40004	DIODE 1N4002
D120	058 40006	DIODE HZ5B1 (4V7)
D121	058 40004	DIODE 1N4002
D122	058 40004	DIODE 1N4002
D123	058 40004	DIODE 1N4002
D124	058 40004	DIODE 1N4002
D125	058 40013	ZENER HZ15-3 (15V)
D126	058 40004	DIODE 1N4002
D127	058 40022	ZENER HZ6C2 (6V2)
I101	198 40001	DIG OUT TRANSFORMER
I102	089 31479	COIL LAL04 4MUH7 PM10
I103	089 41152	COIL LAL04 1500MUH PH10
I104	089 41152	COIL LAL04 1500MUH PM10
M101	040 40001	SPRING CLIP
M102	079 40001	SILICON GREASE
M103	081 40003	HEAT SINK
M104	099 40039	A-B-C LABEL
M105	179 40001	TACT SWITCH (4.3MM)
T101	201 40012	TRANS BC338-25
T102	201 40002	TRANS BC558B
T103	201 40002	TRANS BC558B
T104	201 40006	TRANS BF450
T105	201 40001	TRANS BC548B
T106	201 40012	TRANS BC338-25
T107	201 40011	TRANS BC328-25
T108	201 40013	TRANS BC338-40
T109	201 40013	TRANS BC338-40
T110	201 40013	TRANS BC338-40
T111	201 40013	TRANS BC338-40
T112	201 40013	TRANS BC338-40
T113	201 40001	TRANS BC548B
T114	201 40002	TRANS BC558B
T115	201 40015	TRANS BC548C
T116	201 40004	TRANS BC328-16
U101	088 44011	IC TDA 8809T/C2
U102	088 43048	IC TCA0372-DP2
U103	088 44010	IC TDA 8808T/C3
U104	088 42003	IC 74HCT00
U105	088 43048	IC TCA0372-DP2
U106	088 44015	IC SAA7310GP
U107	088 41002	IC UPD41416-20 16Kx4
U108	088 44021	IC MC68HC05C8/P110 (ZC99685P)
U109	088 44009	IC NJM5534DD
U110	088 42002	IC 74HCT08P
U111	088 44007	IC SAA7220P/B
U112	088 44016	IC SAA7321GP
U113	088 43012	IC MC7805ACT (5V2)

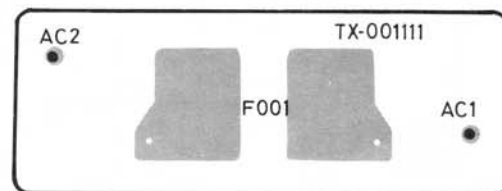
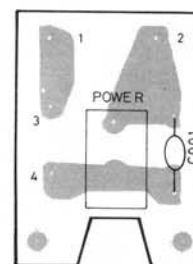
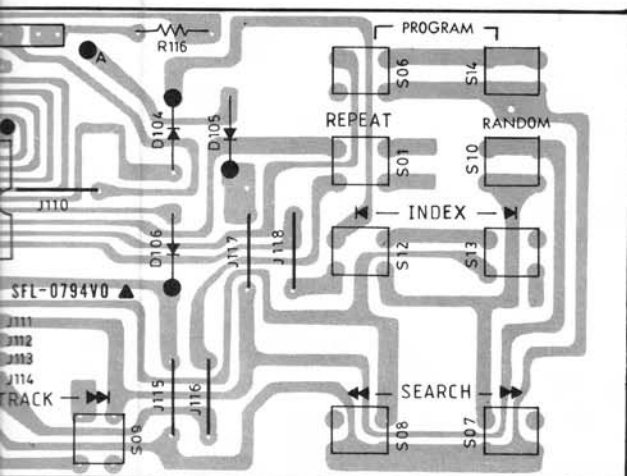
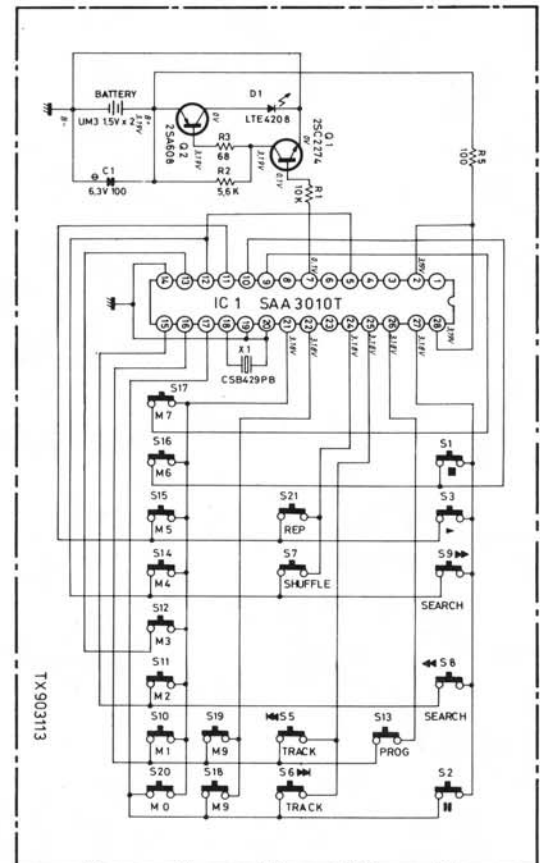
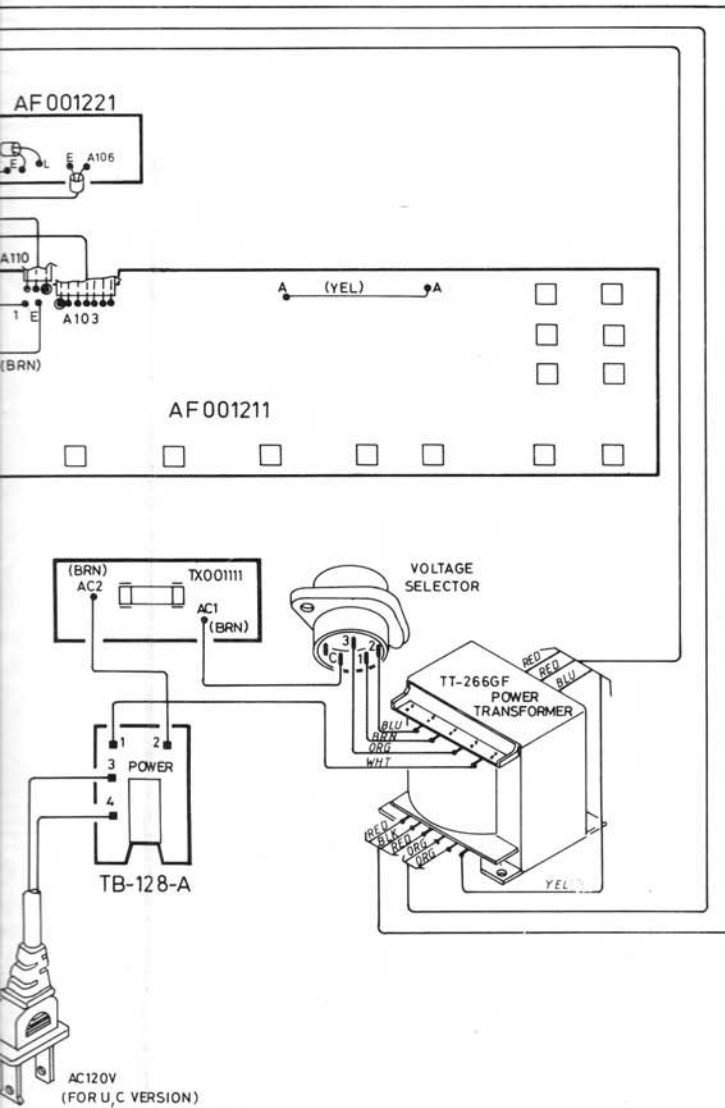
SYMBOL	PARTS NO.	DESCRIPTION
U114	088 44031	IC XR5534A
U115	088 44031	IC XR5534A
U116	088 43035	IC MC79M15CT
U117	088 43023	IC MC78M15CT
U118	088 43033	IC MC79M05CT
U119	088 43012	IC MC7805ACT (5V2)
U120	088 43022	IC MC78M12CT
X101	148 40002	CER RES 4.0000MHZ
X102	052 42002	CRYSTAL 11.2896MHZ HC-49/U

Wiring Diagram

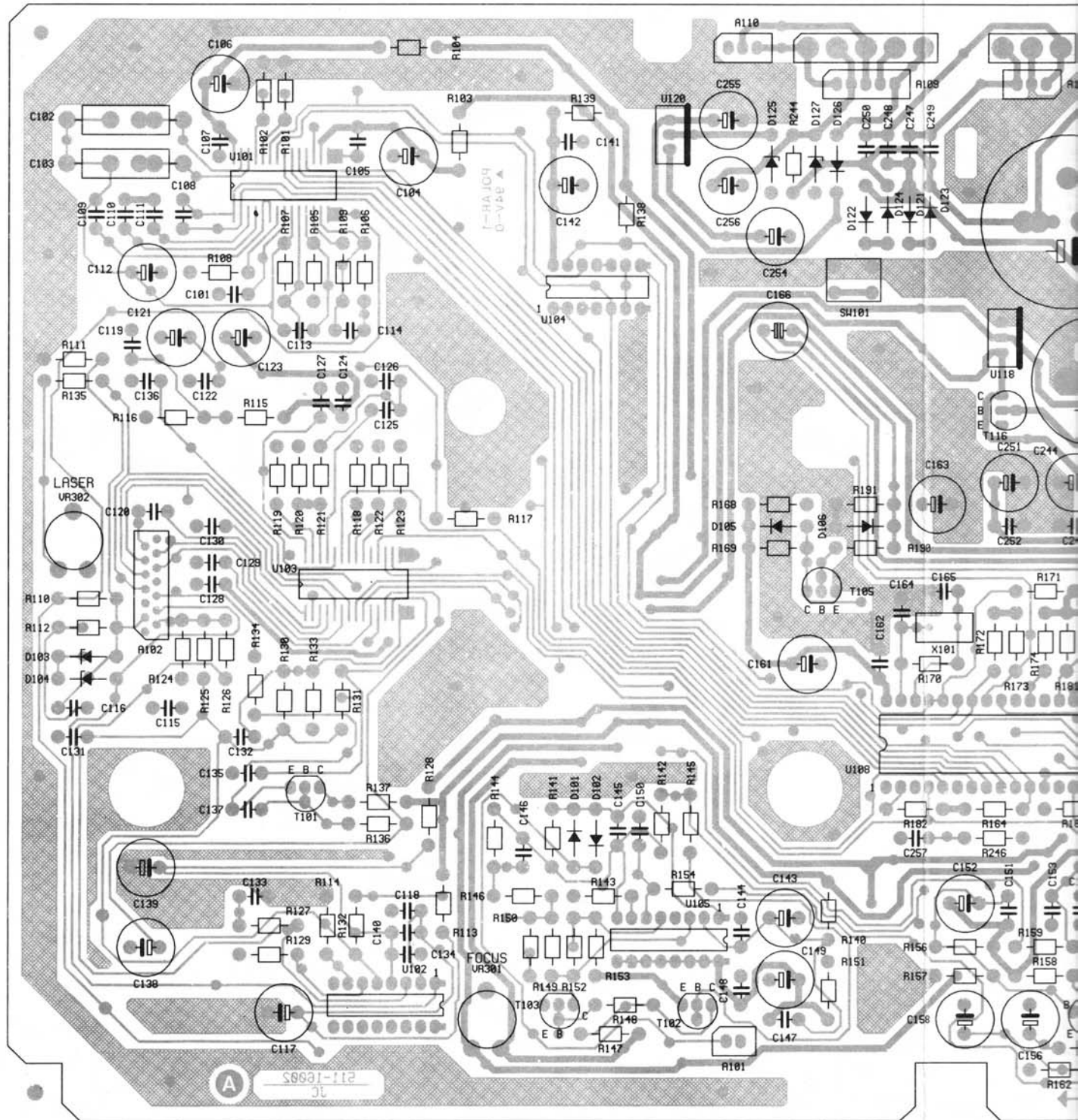


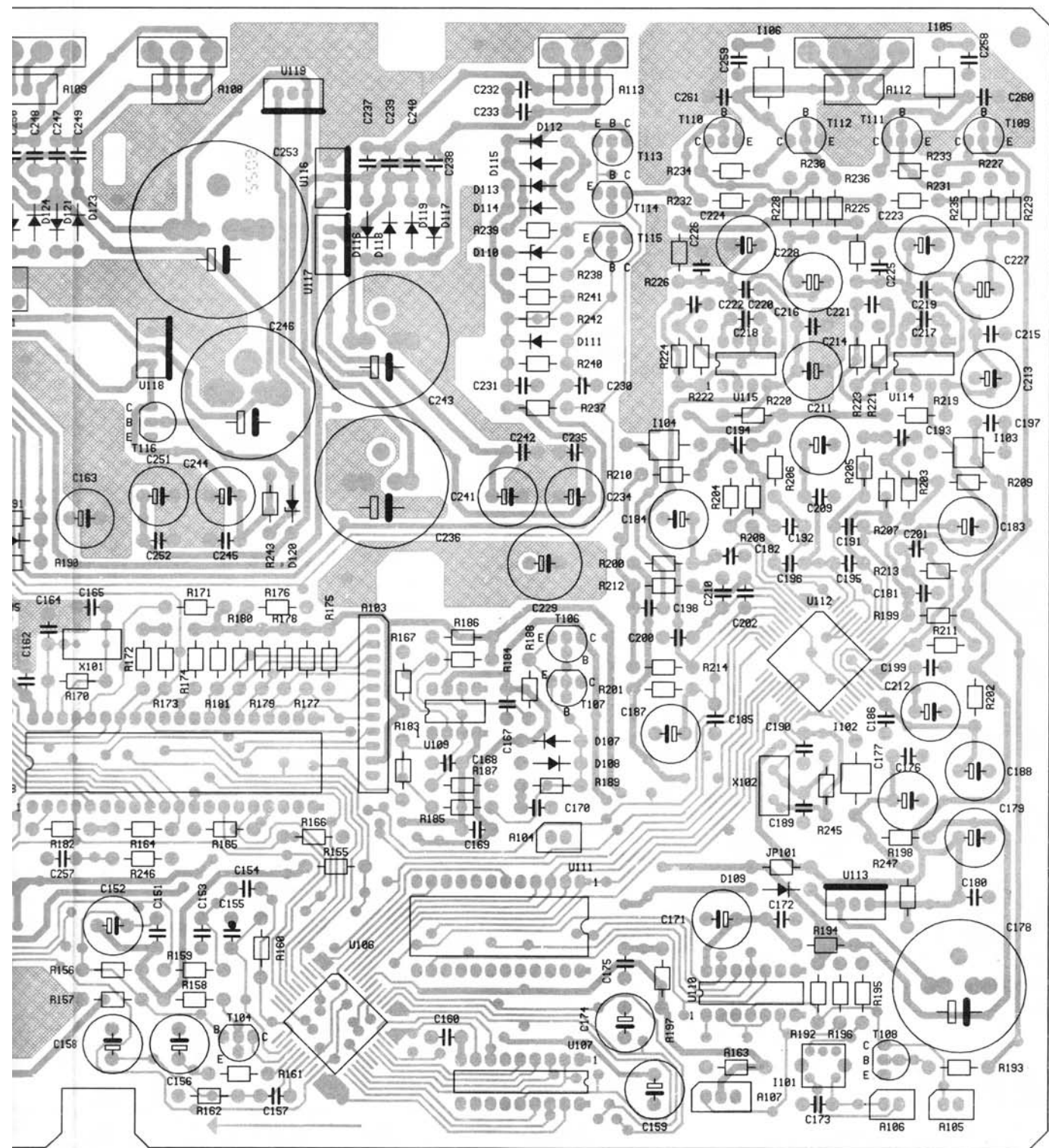
Printed Circuit Boards



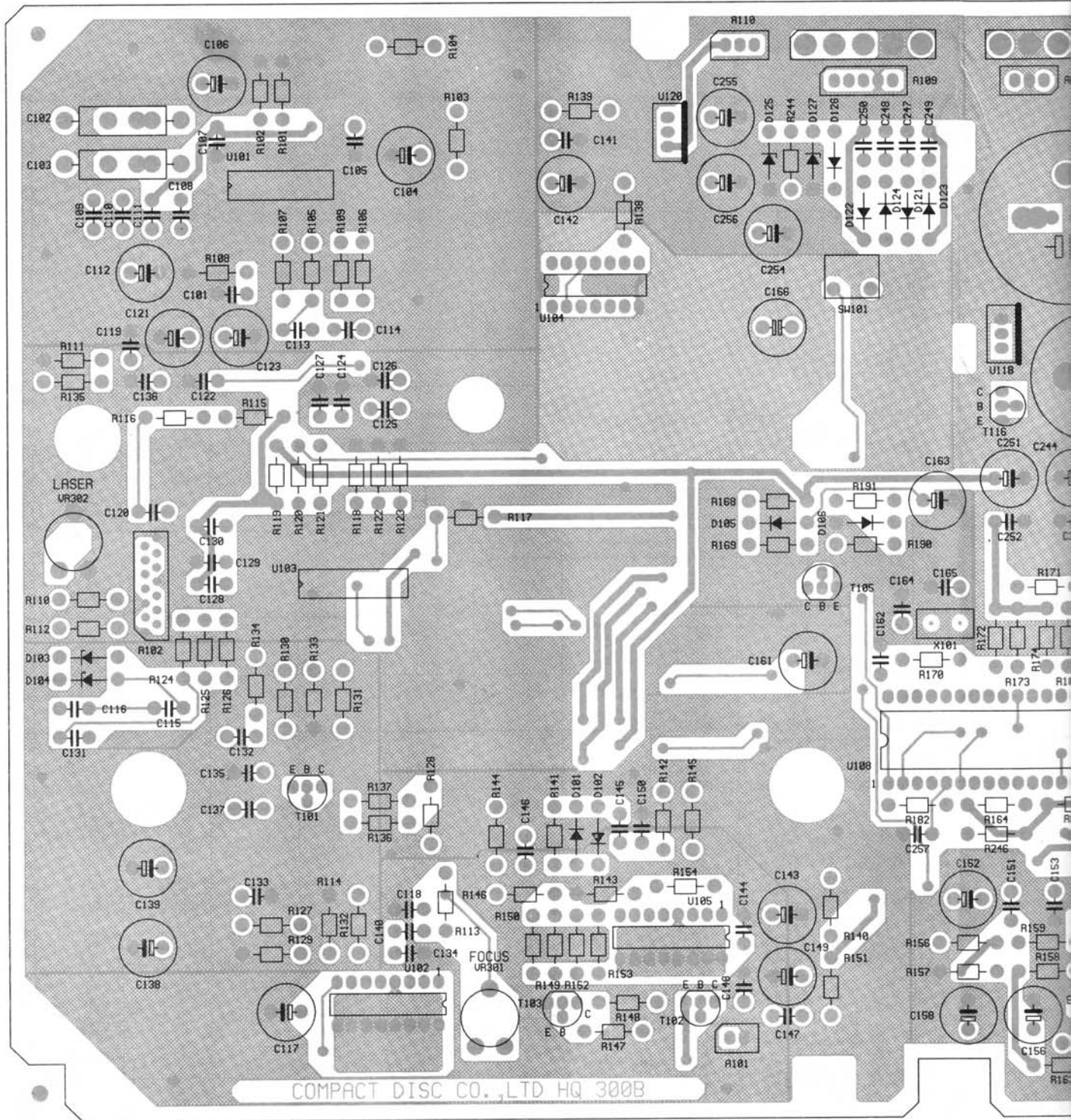


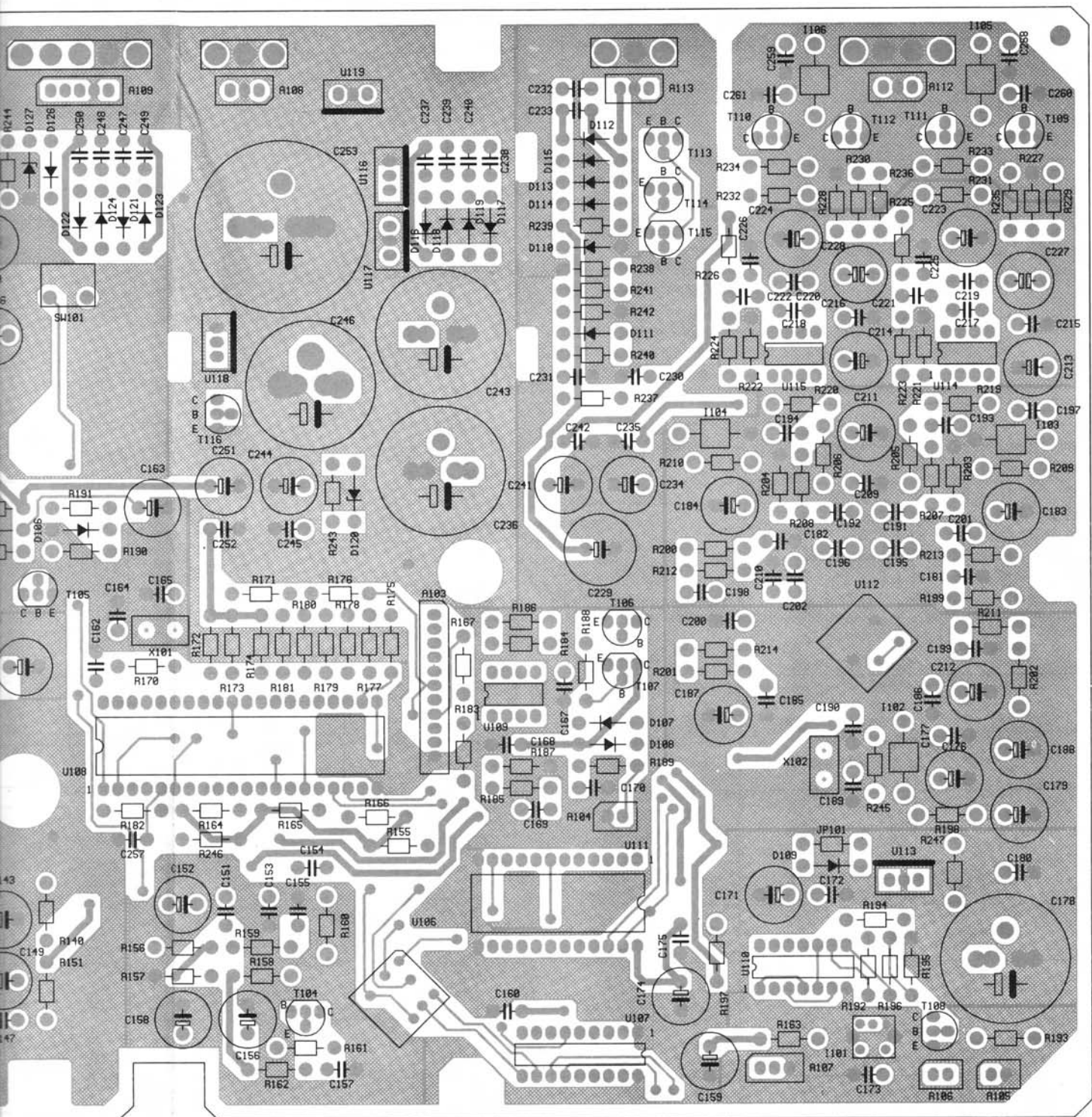
Printed Circuit Boards





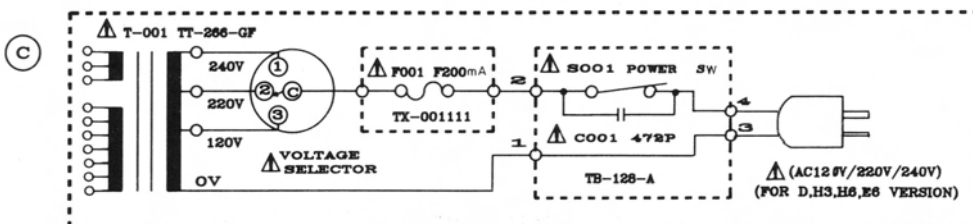
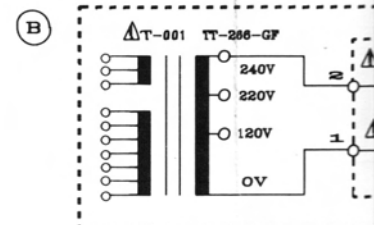
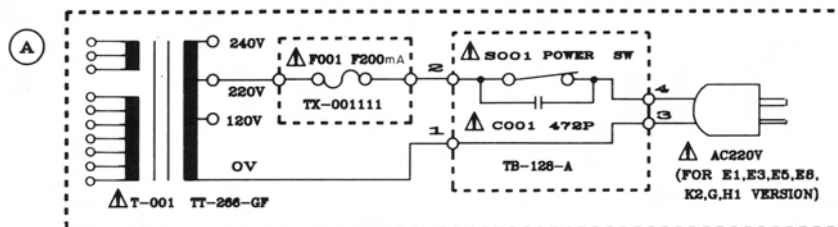
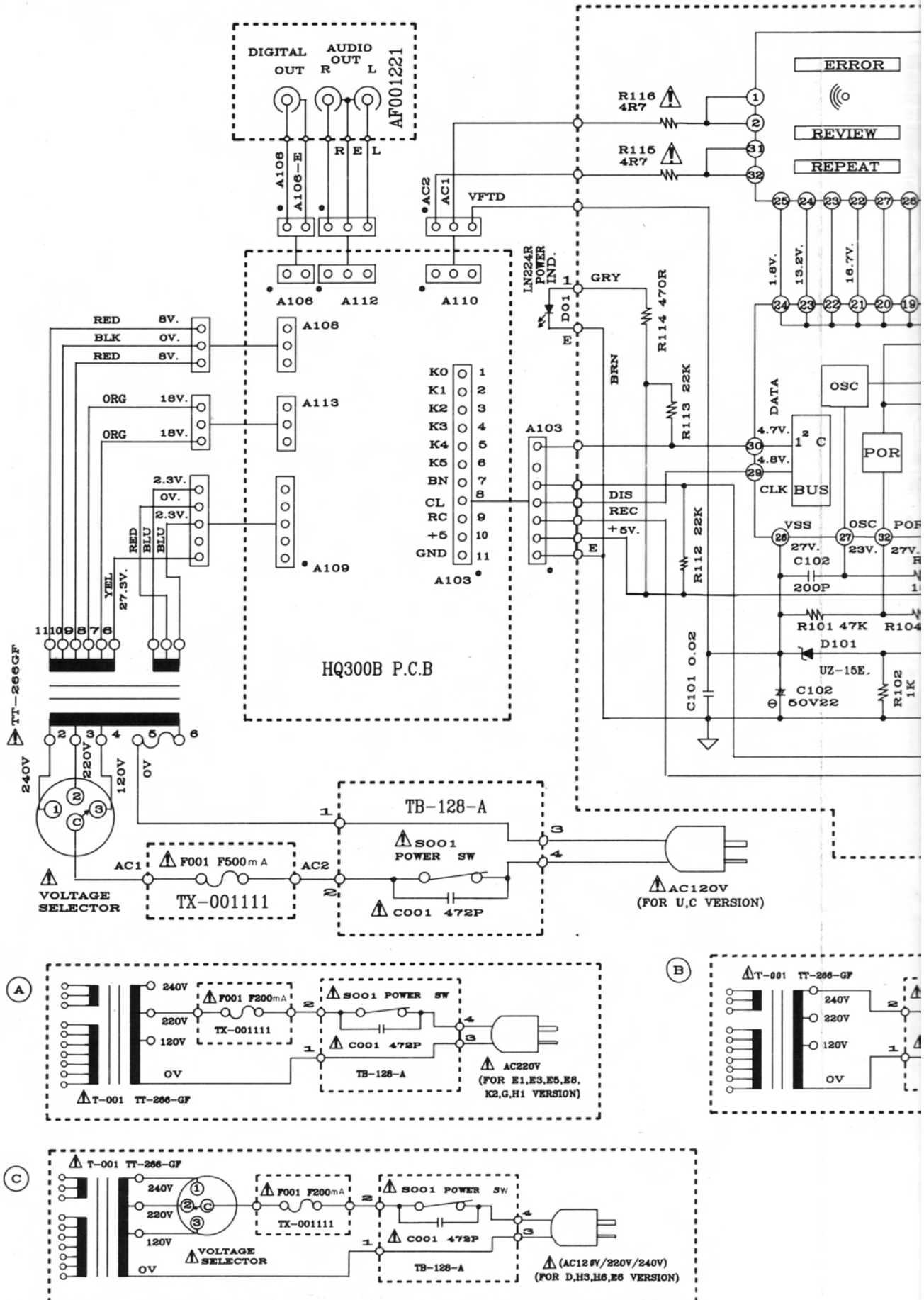
Printed Circuit Boards

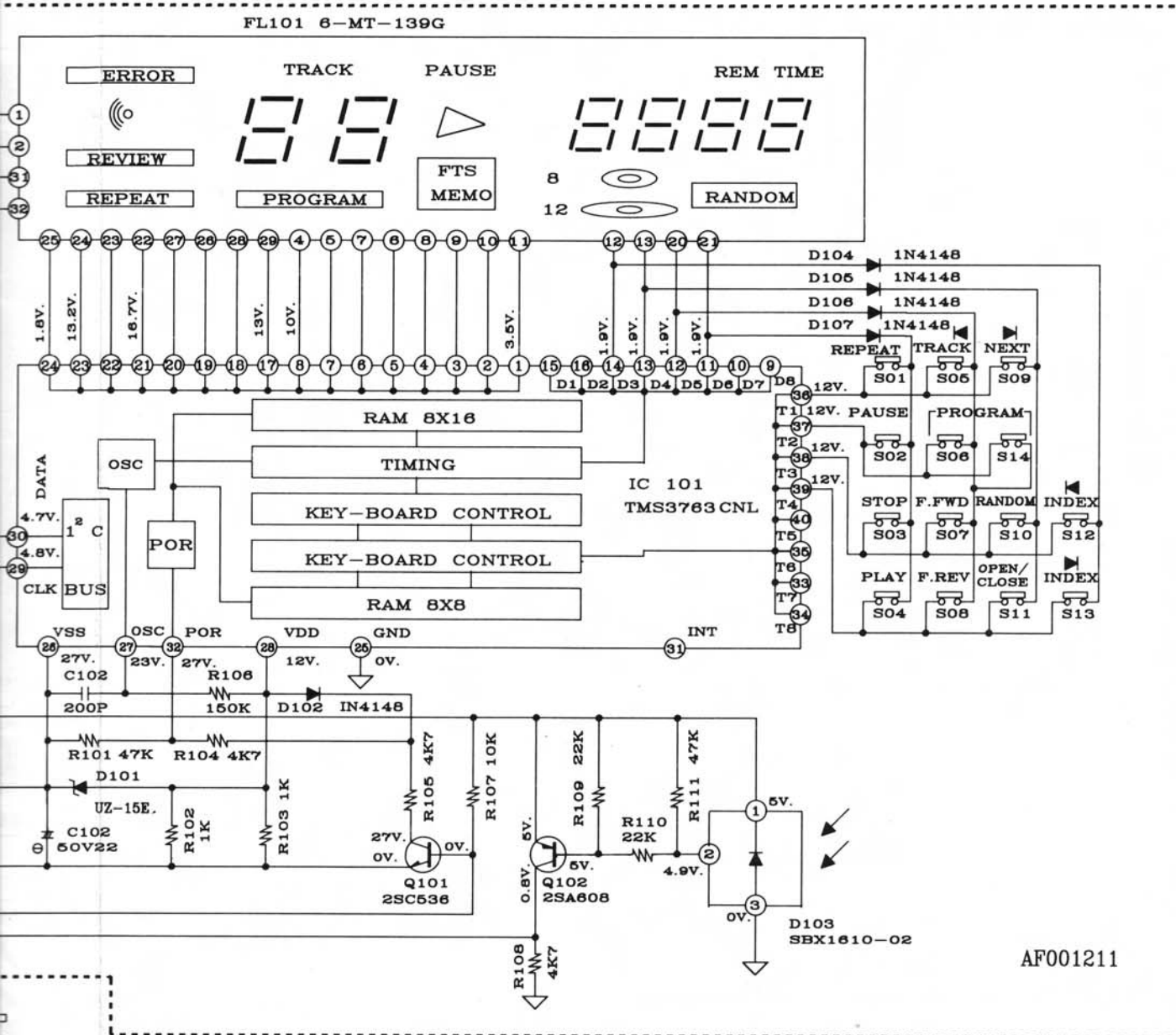




Schematic Diagram

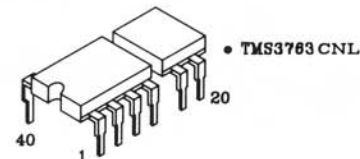
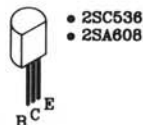
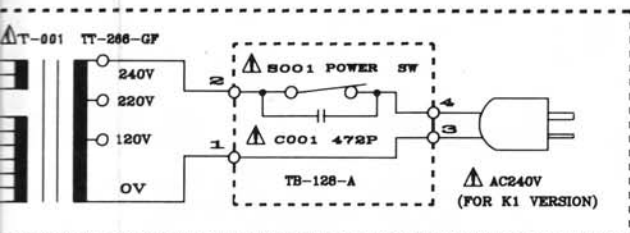
SCHEMATIC DIAGRAM MODEL RCD-865BX (NOT)



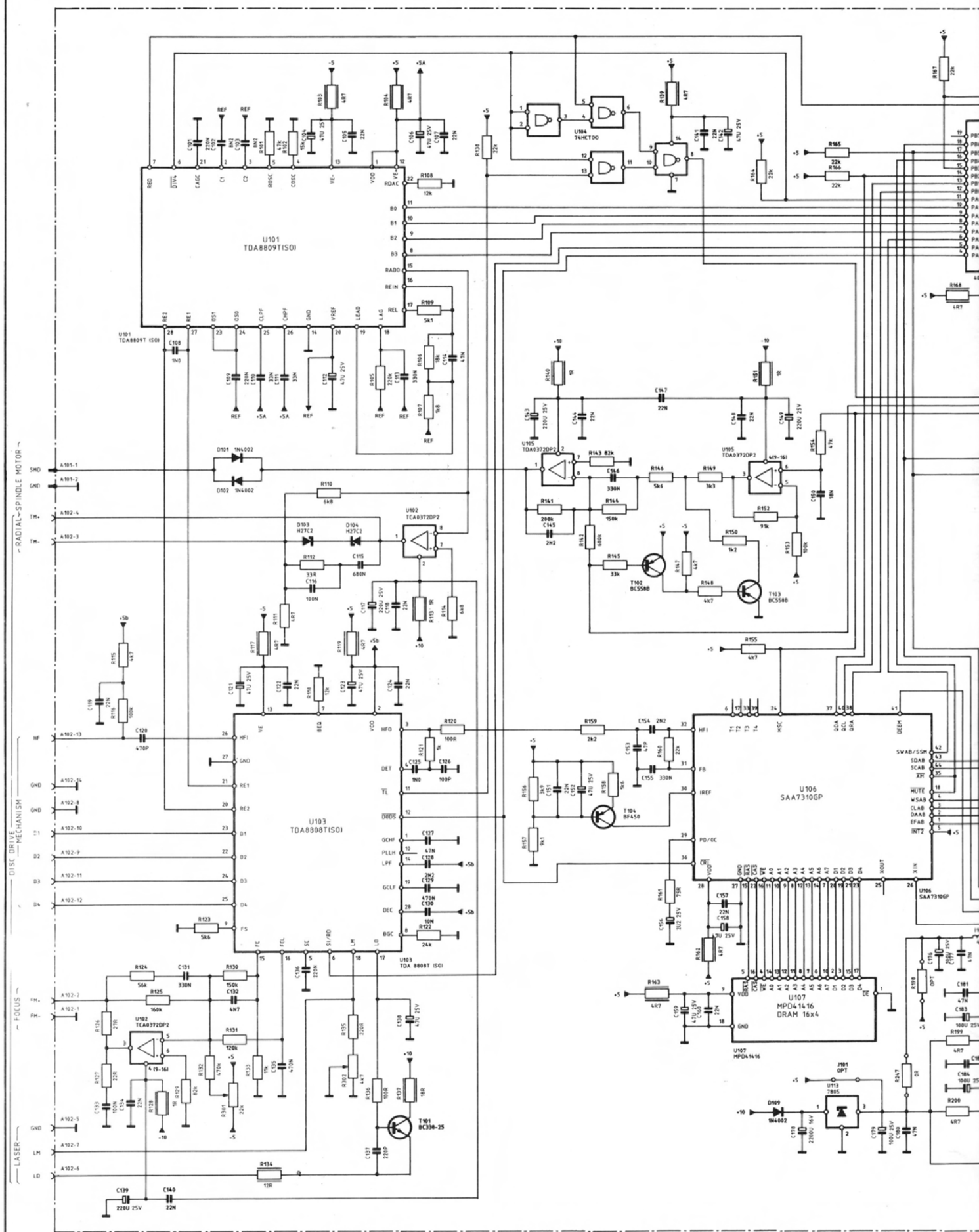


INSTRUCTION FOR SERVICING PERSONNEL:

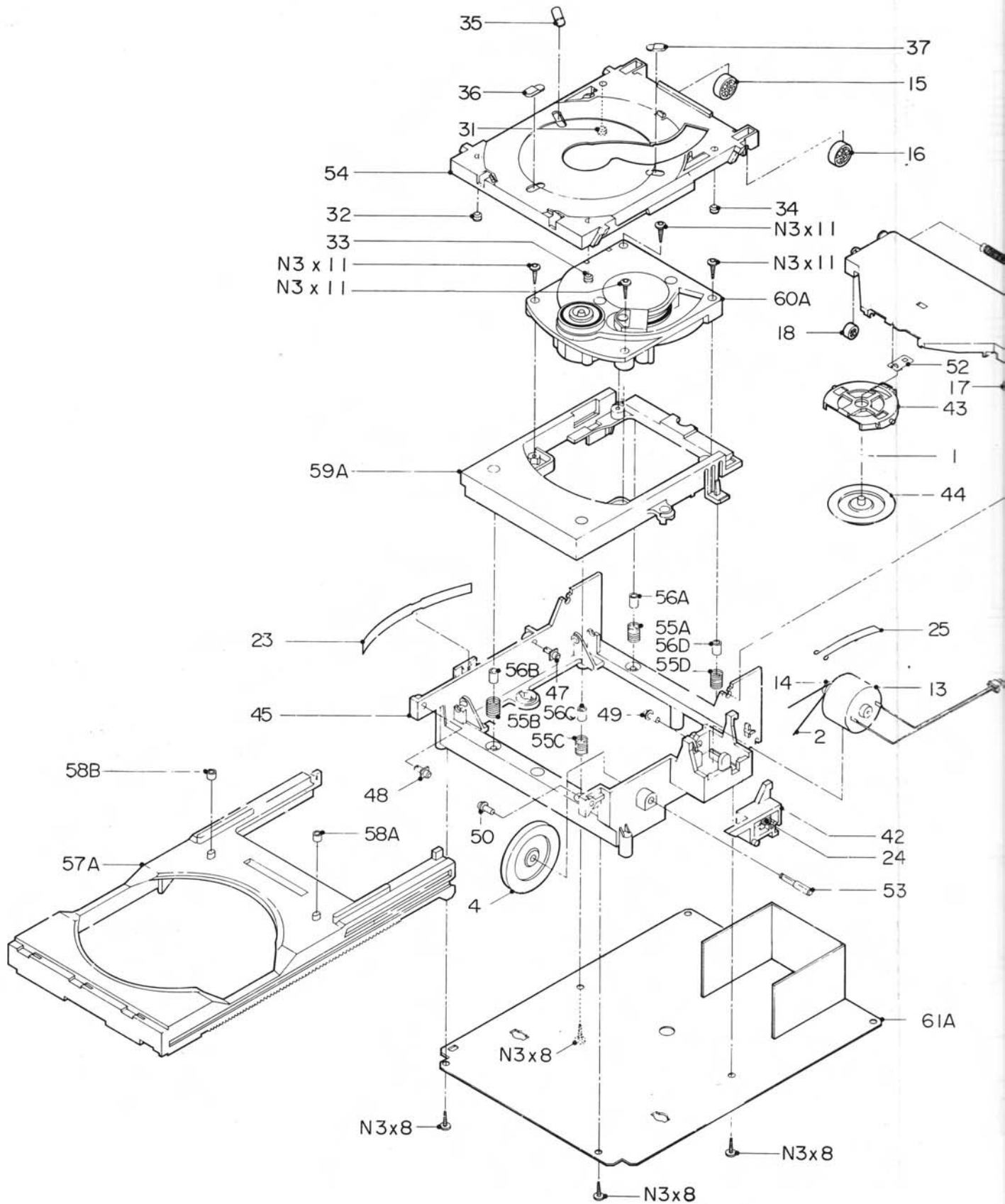
- 1). USE ONLY REPLACEMENT PARTS THAT HAVE THE CRITICAL CHARACTERISTICS RECOMMENDED BY MANUFACTURER.
- 2). MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE AC SUPPLY CIRCUIT BEFORE RETURNING THE UNIT TO THE CUSTOMER.

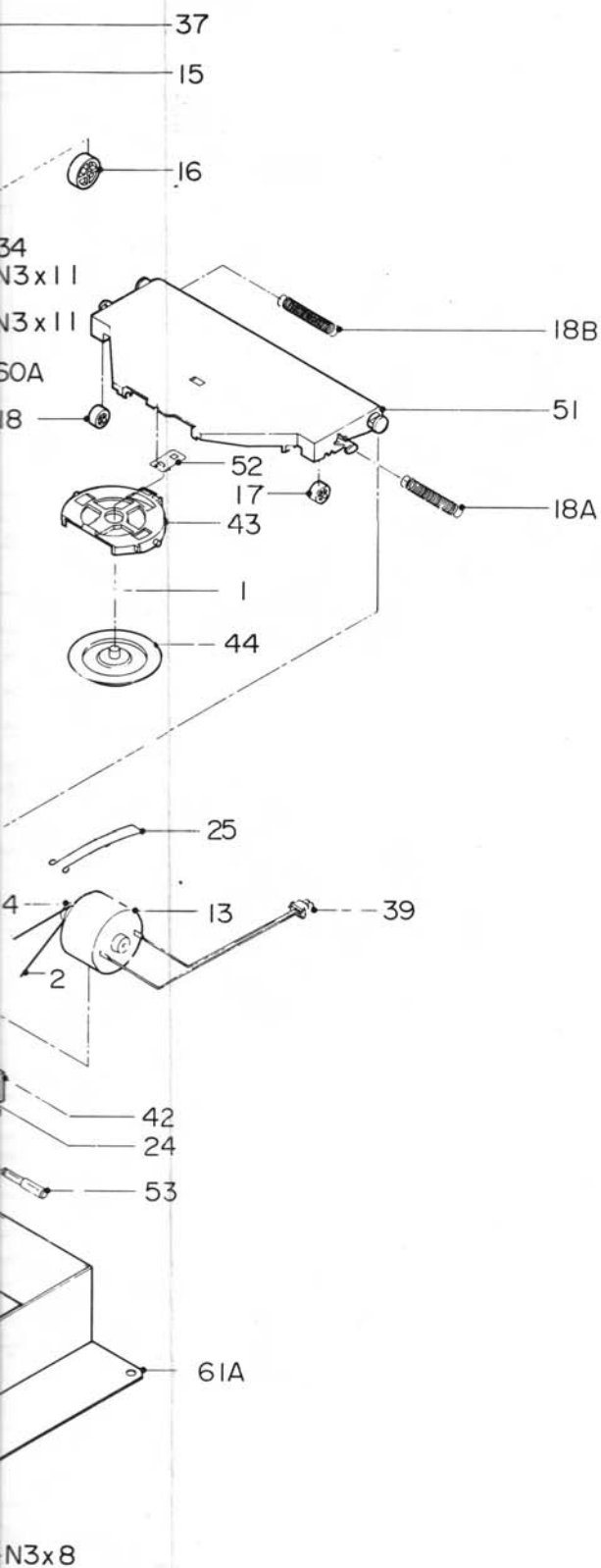


Schematic Diagram



Disassembly Diagram





ITEM	PART NO.	DESCRIPTION
1	013 40001	BALL 3F
2	017 40002	BELT
4	077 30005	GEAR WHEEL
13	118 40001	DC MOTOR
14	139 40003	PULLY (MOTOR)
15,16	151 40001	ROLLER
17,18	151 40002	ROLLER
23	172 30015	FLAT SPRING
24	172 40013	COMPRESSION SPRING
25	172 40014	SPRING
31,32	208 40014	TULE
33 34	208 40001	TULE
35-37	208 40002	ORNAMENTAL TULE
39	241 40003	LEAD ASS'Y
42	255 30003	SWITCH BRACKET
43	258 20004	CENTRING RING
44	258 30003A	CARRIER
45	259 10002	CHASSIS
47,48	271 30003	GUIDE
49,50	271 30004	GUIDE
51	300 10004A	LID
52	300 40005	PIVOT PLATE
53	316 40005	SHAFT
54	317 10003A	LIFT PLATE
18A,18B	172 40018	TENSION SPRING
55A,55B		
55C,55D	172 40016	COMPRESSION SPRING
56A,56B		
56C,56D	078 40002	SUSPENSION GROMMET
58A,58B	078 40003	DAMPING GROMMET
57A	317 10004	TRAY ASS'Y
59A	259 10003A	SUPPORT PIECT
60A	480 32403	CDM4 MINI (DC) ACCESSORY
N3x11	160 40002	PLAST SCR M3x8