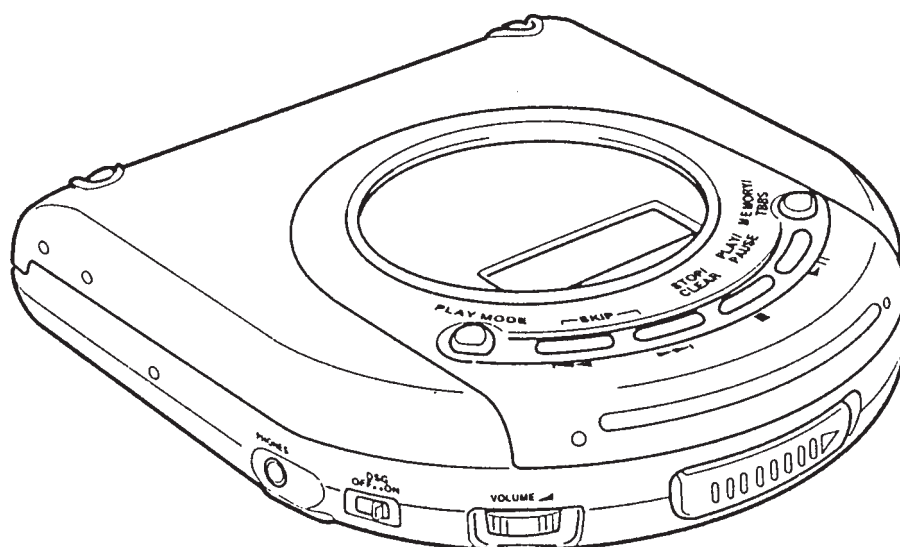


CASIO®

Service Manual

(without price)

PZ-7



Model-B: USA

Model-C: Europe

INDEX

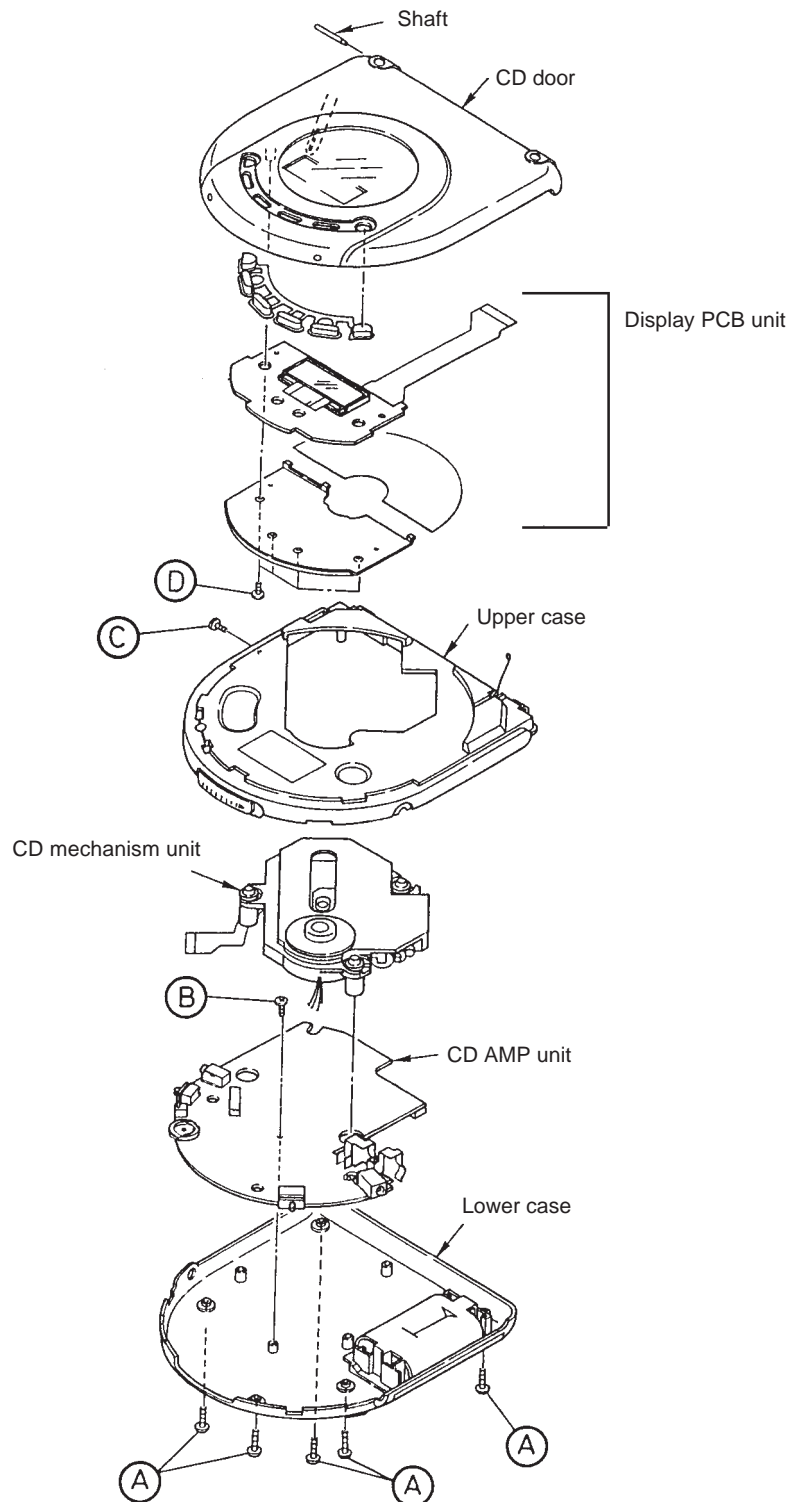
PORTABLE CD PLAYER

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DISASSEMBLY INSTRUCTIONS

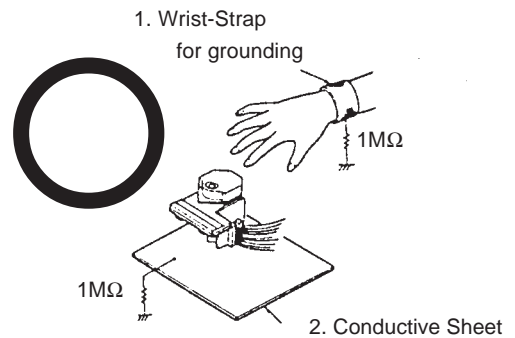
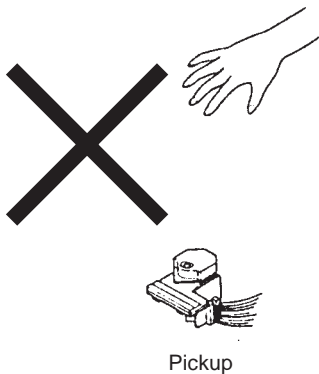
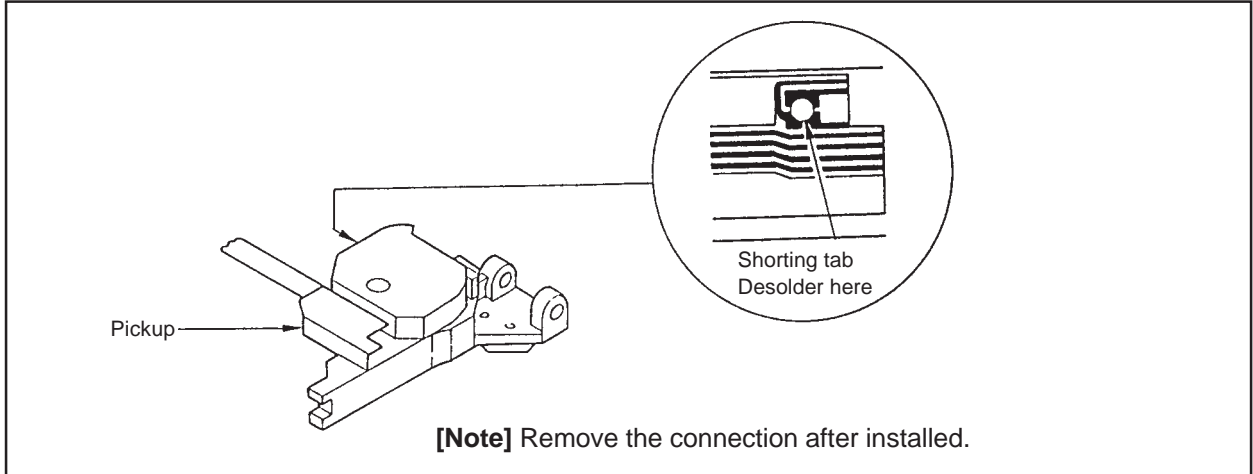
1. Remove five screws (A) holding the case assembly.
2. Remove the CD mechanism unit.
3. Remove screw (B) holding the CD AMP unit.
4. Remove screw (C) and pull out the shaft holding the CD door.
5. Remove four screws (D) holding the display PCB unit.



CD ADJUSTMENT

Precautions

To prevent damage caused by static electricity, the following procedures for grounding is required or repairing the unit.



1. Grounding for the human body

Be sure to put on a wrist-strap for grounding (with impedance lower than $10^6 \Omega$) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.

2. Grounding for the work table

Be sure to lay on the table a conductive sheet (with impedance lower than $10^6 \Omega$) such as a sheet of copper which is grounded.

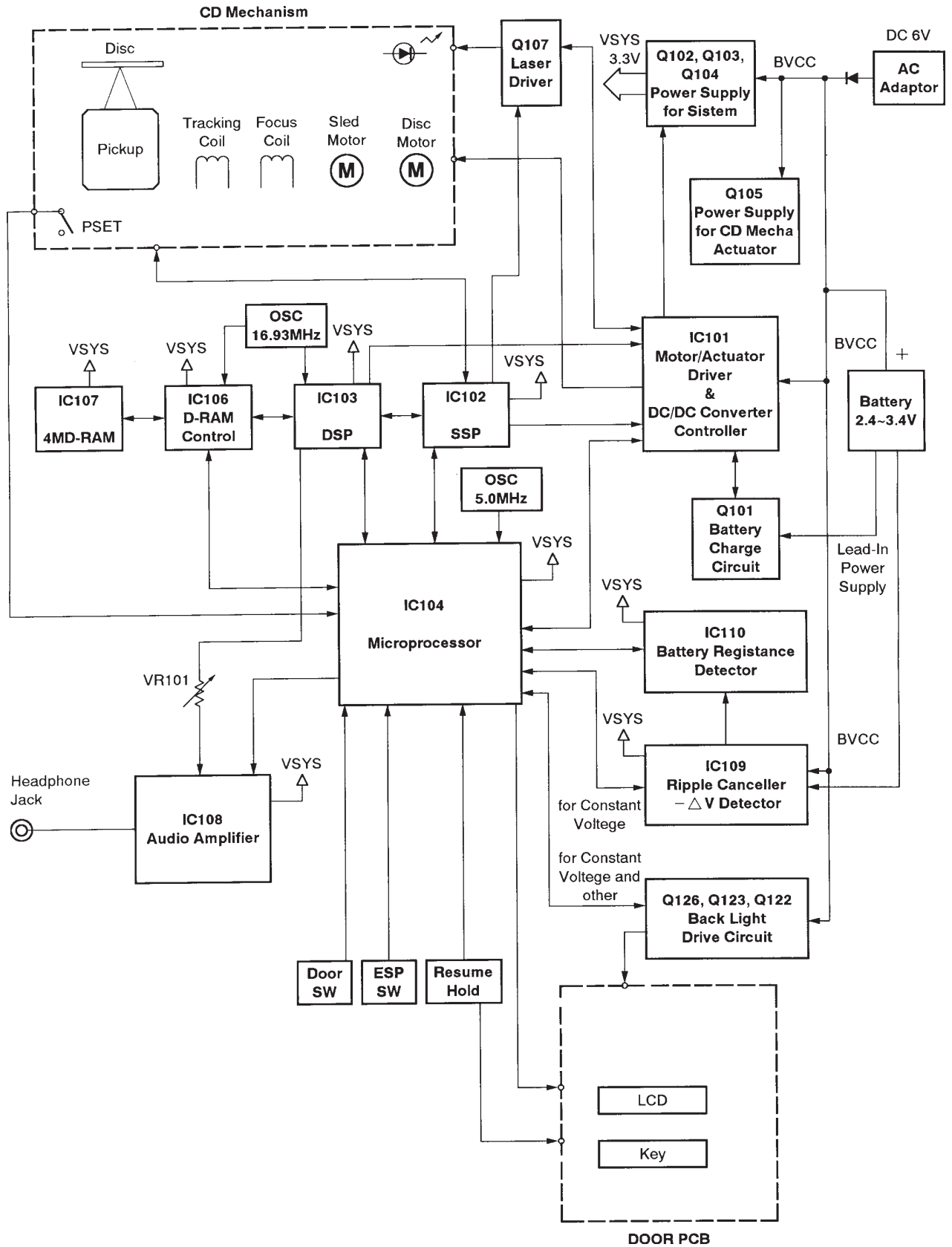
3. As static electricity build-up on clothes is not drained away, be careful not to let your clothes touch the unit.

4. The short-pad on the pick-up PCB of a spare part is short-circuited for protection during shipment. To open the short circuit, remove the soldering quickly with a soldering iron whose insulation resistance is larger than $10M\Omega$ after connection to a suitable APC circuit.

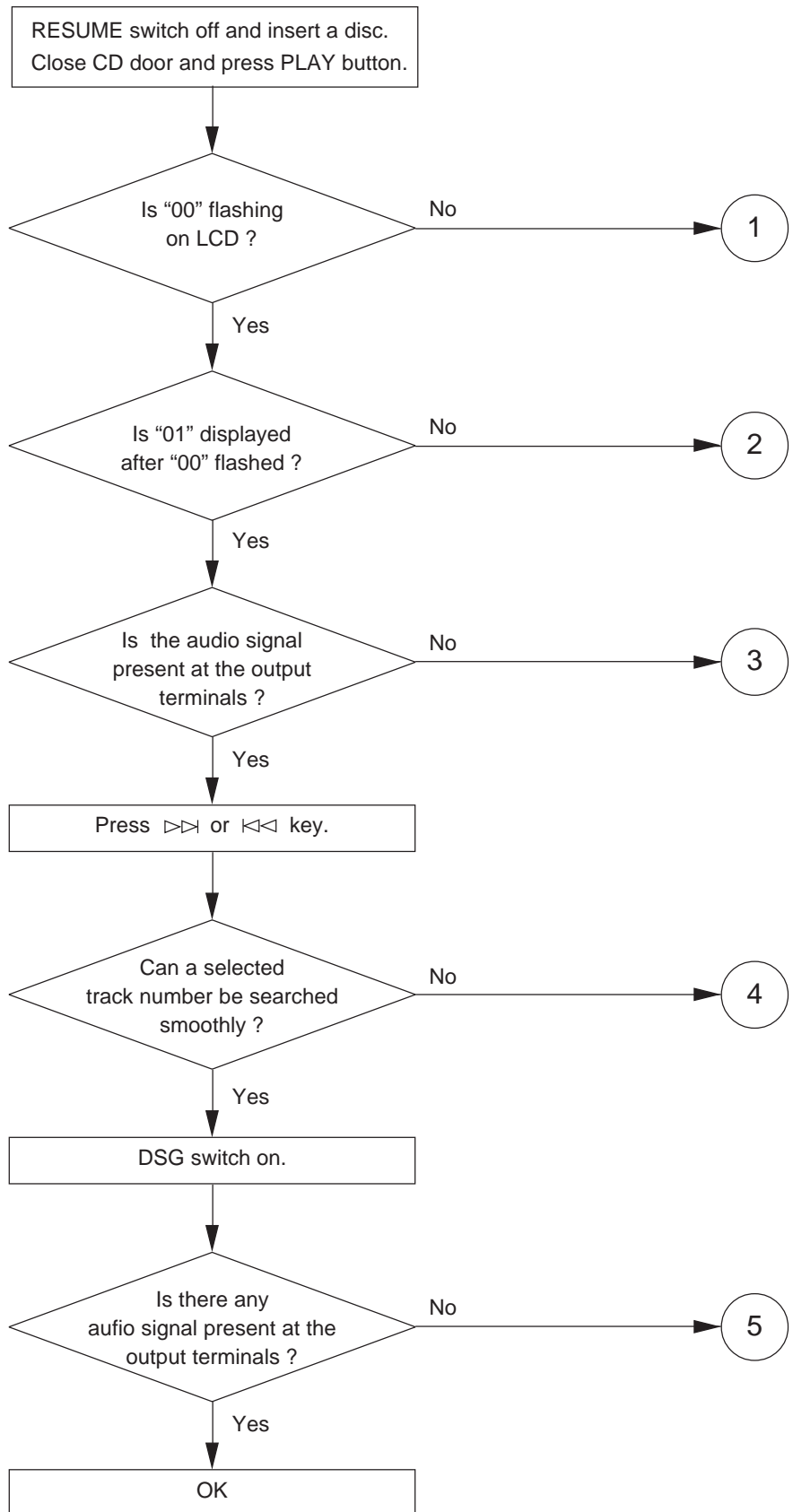
Equipment Required

- Multi Meter
- Oscilloscope
- Compact Disc
- Dummy Load 10 k Ω

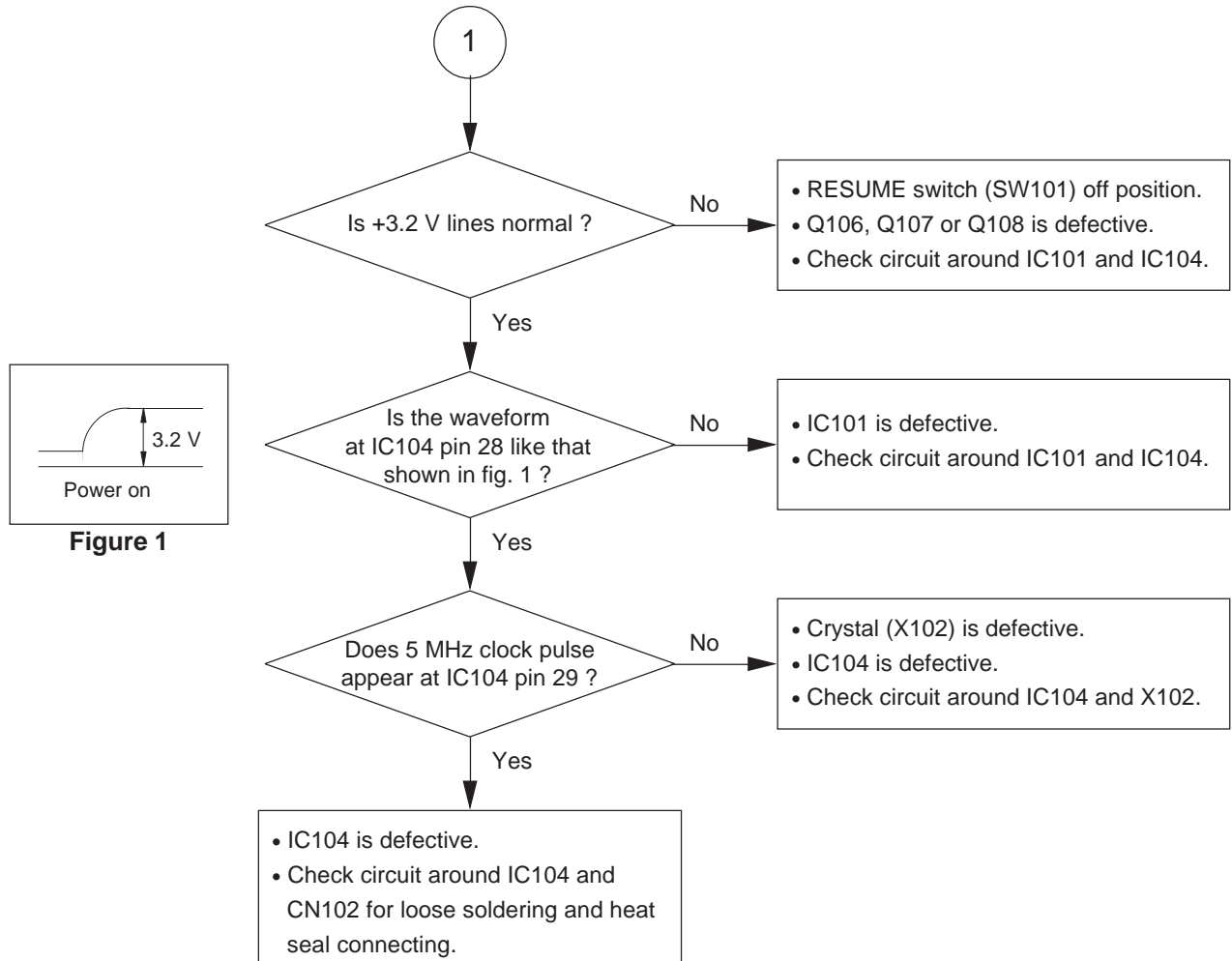
BLOCK DIAGRAM



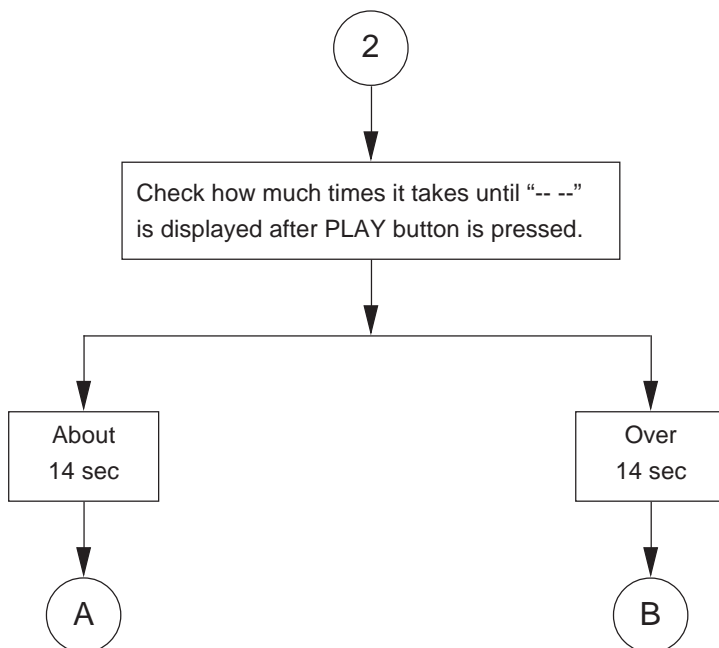
TROUBLESHOOTING



Repair Item 1: At power on, "00" is not displayed.

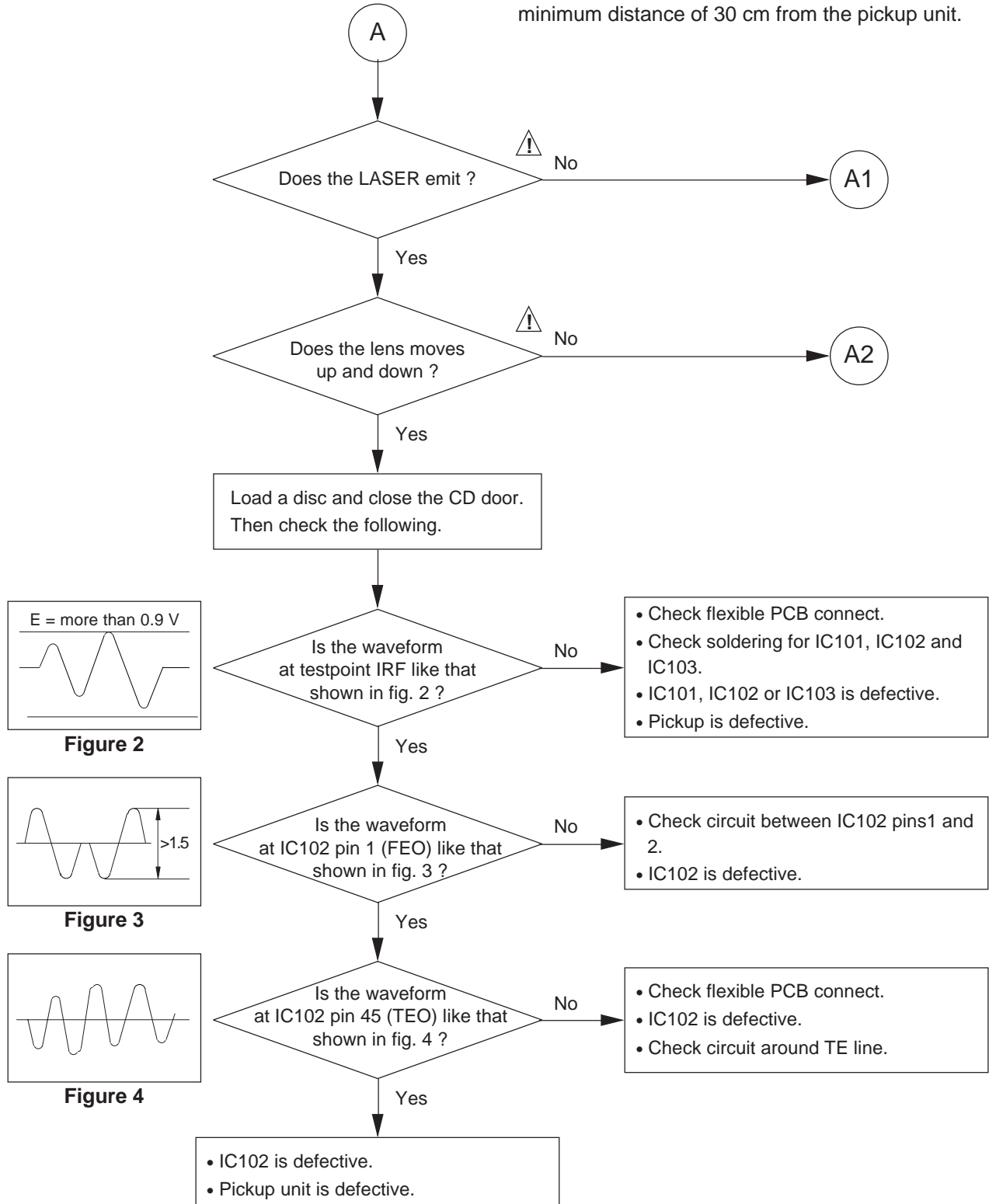


Repair Item 2: "-- --" is displayed instead of playing first song track.

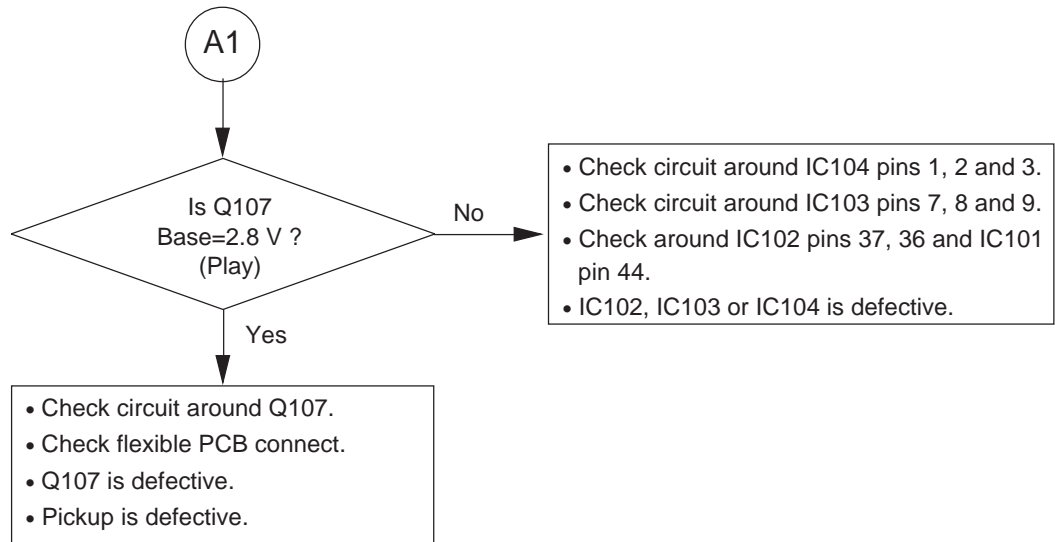


Repair Item 2-A

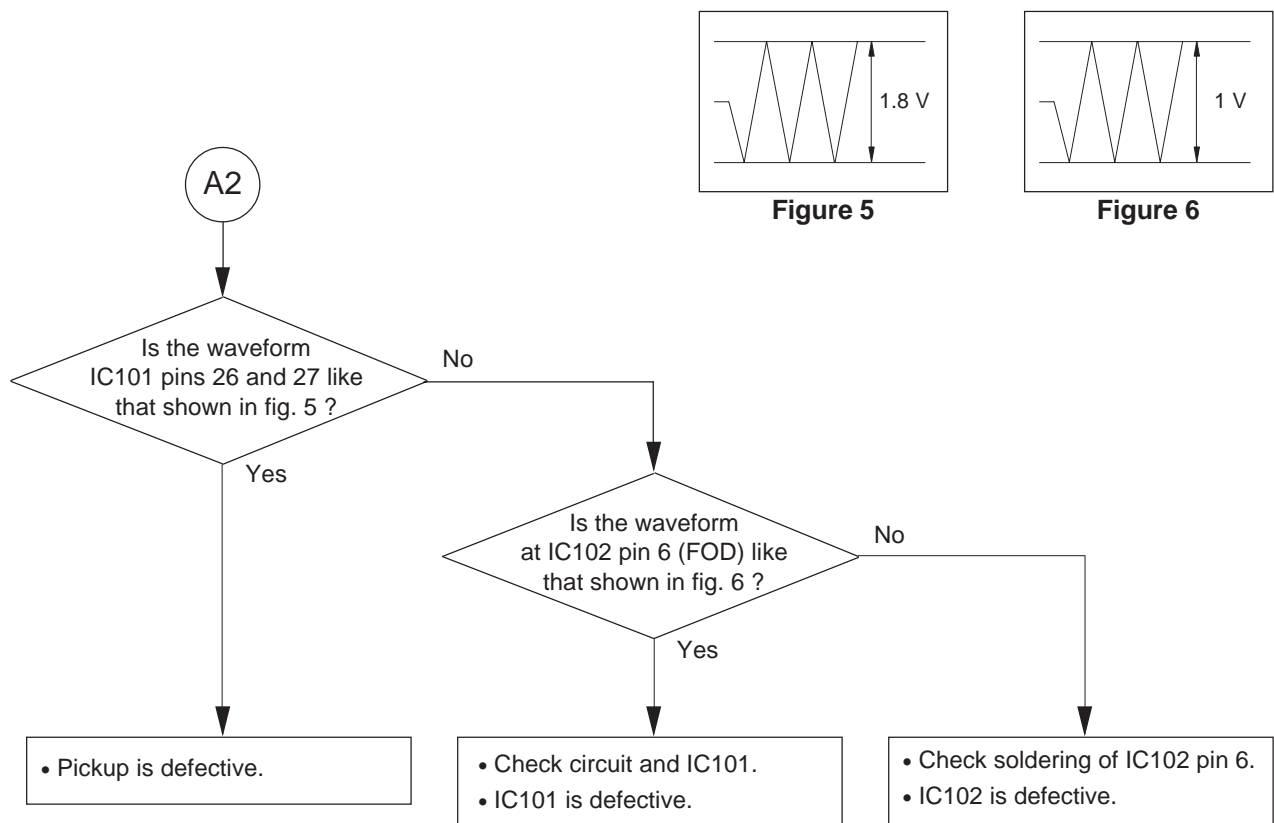
⚠ Note: Connect GND to door switch by removing the top cabinet. Then open the top cover and check the radiation power with an optical power meter. If an optical power meter is not available, watch the radiation through the lens of the pickup unit at a minimum distance of 30 cm from the pickup unit.



Repair Item 2-A1: Laser does not emit.



Repair Item 2-A2: Object lens of pickup unit does not move up and down.



Repair Item 2-B

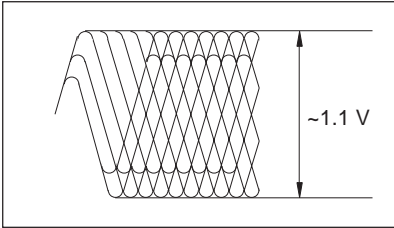
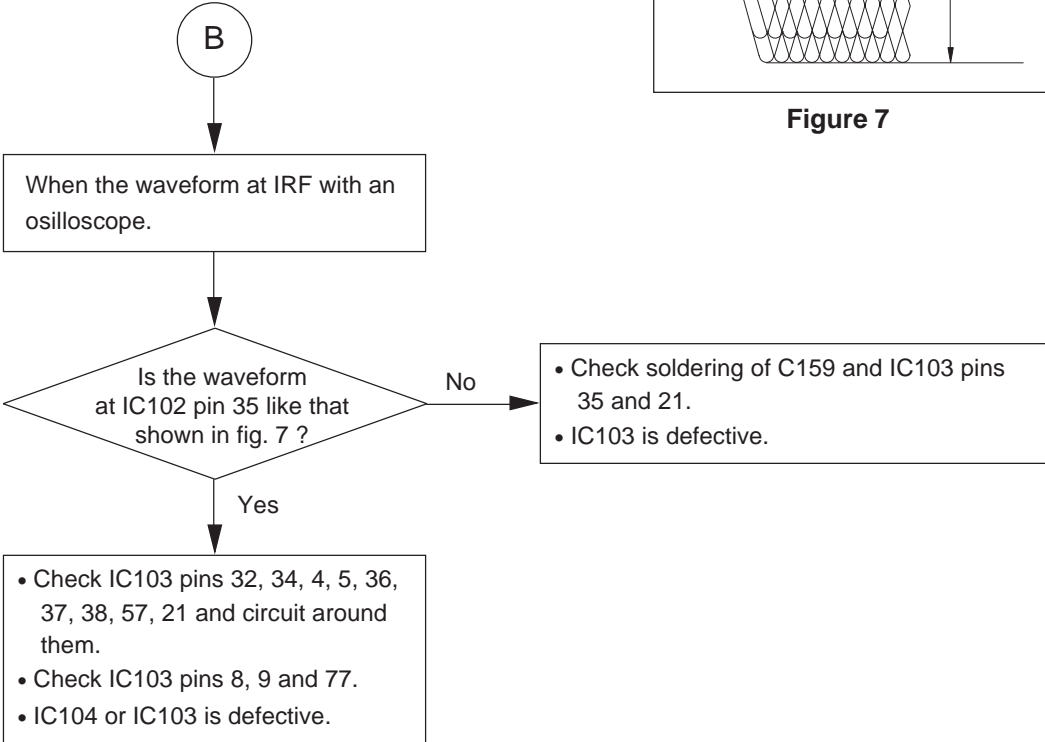
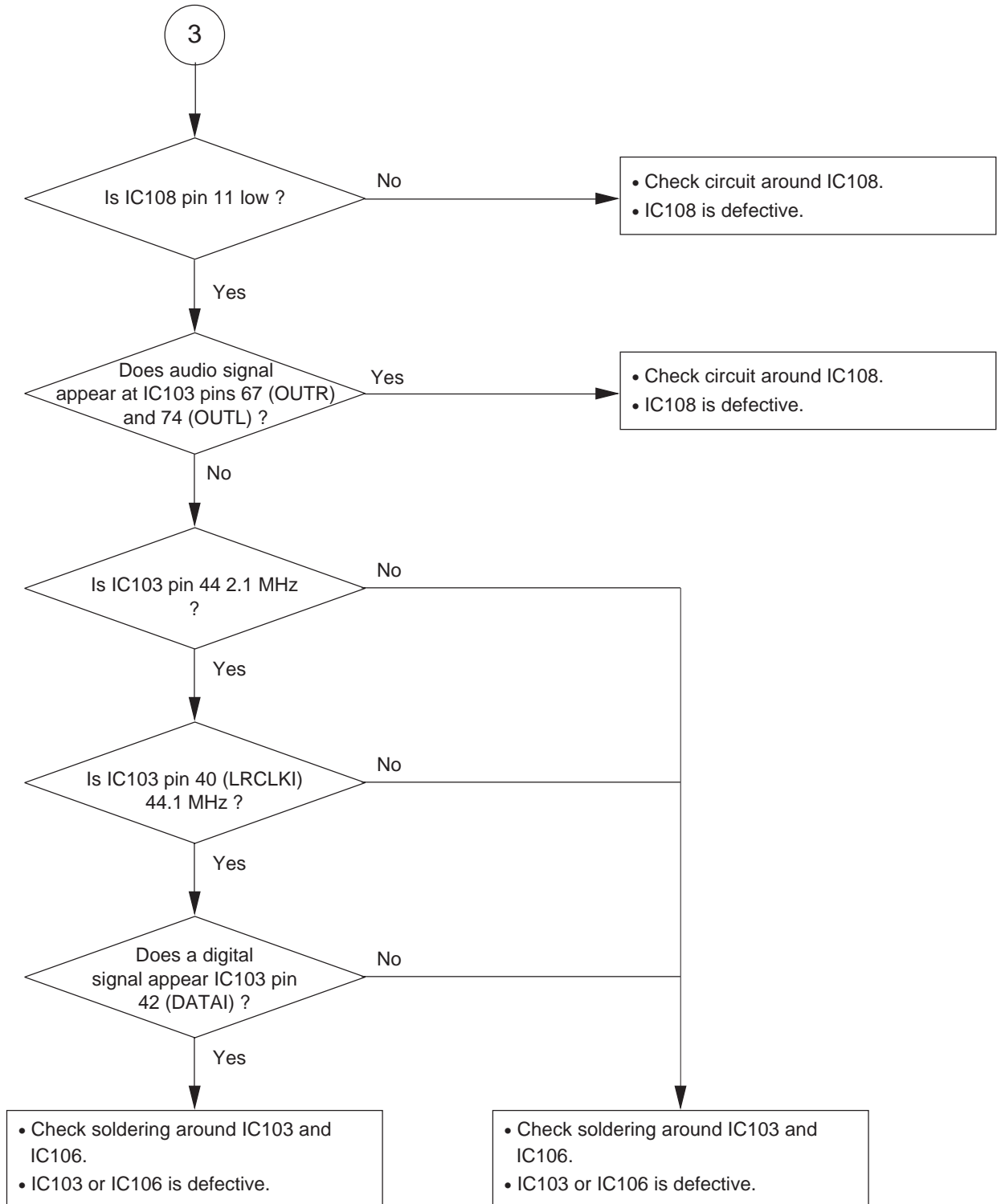


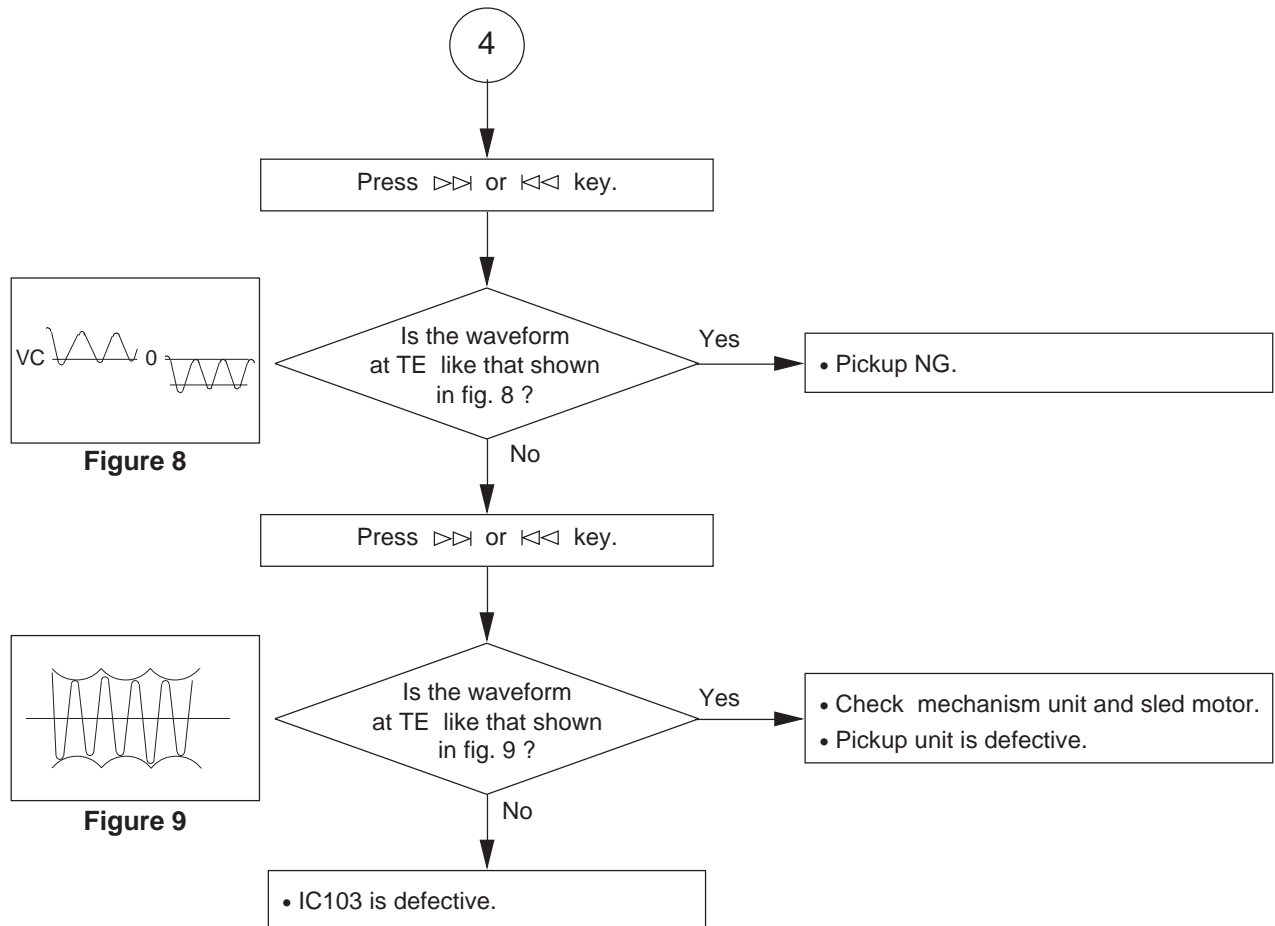
Figure 7



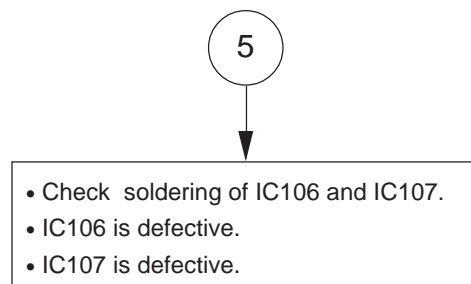
Repair Item 3: No audio signal.



Repair Item 4: Selected track number cannot be searched.

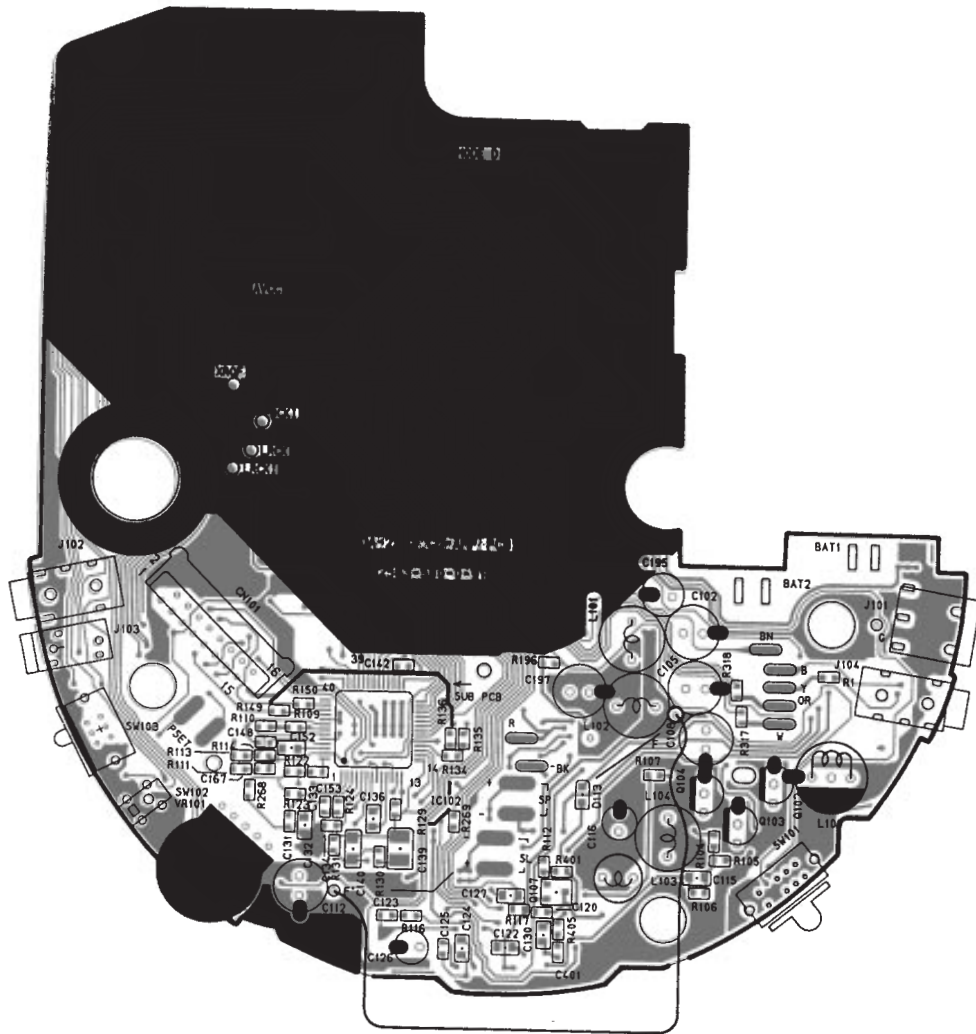


Repair Item 5: No audio signal output.

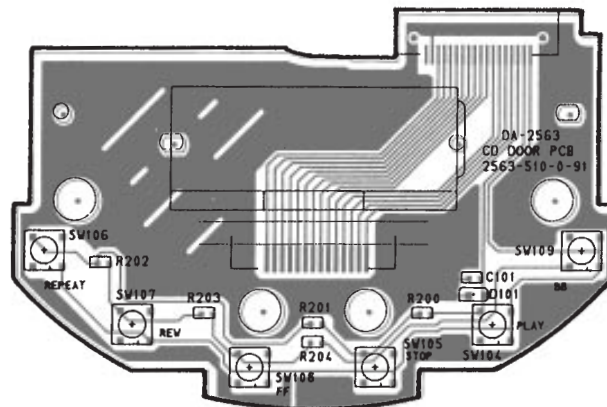


PCB VIEWS

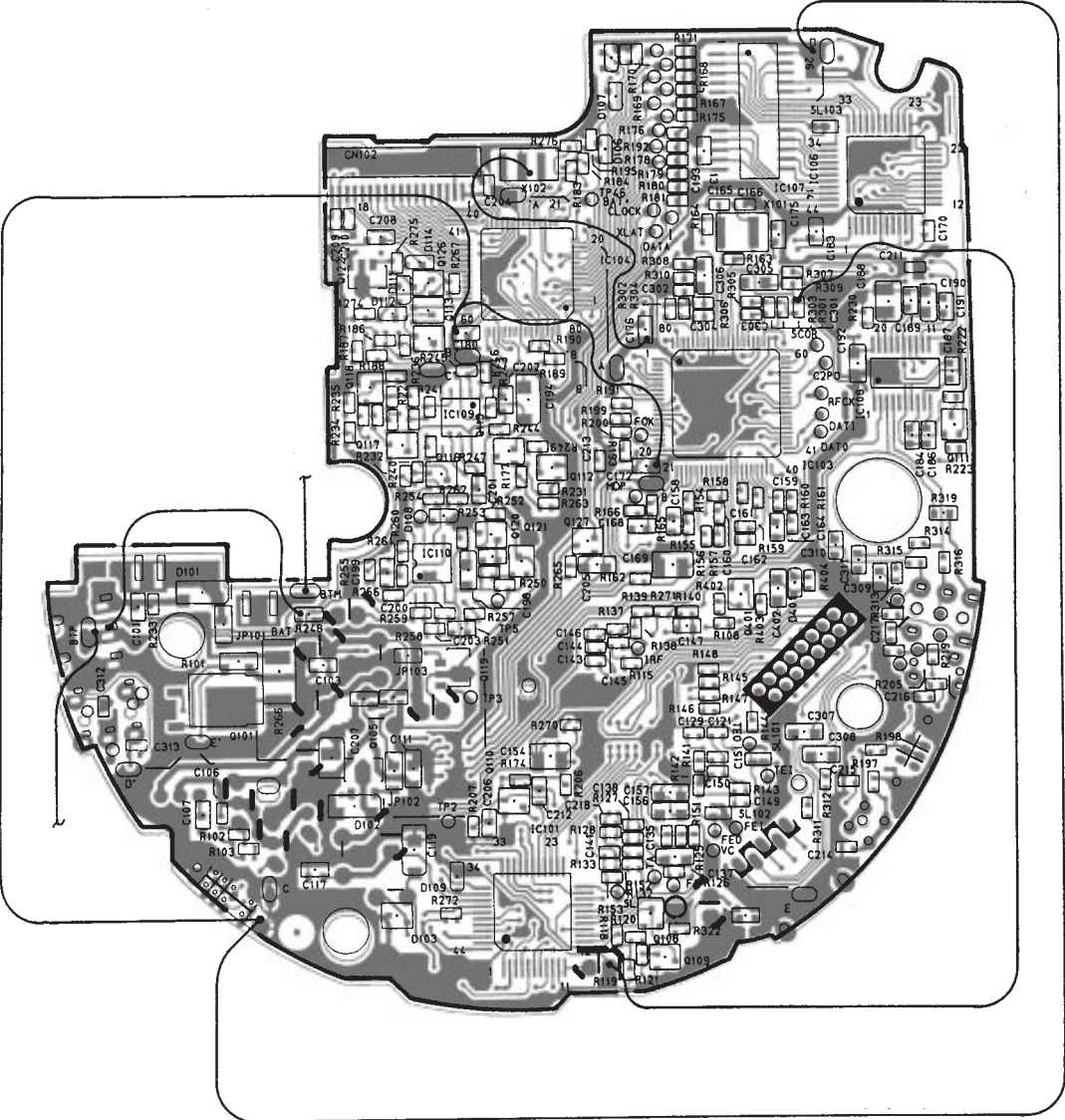
CD AMP PCB Top View



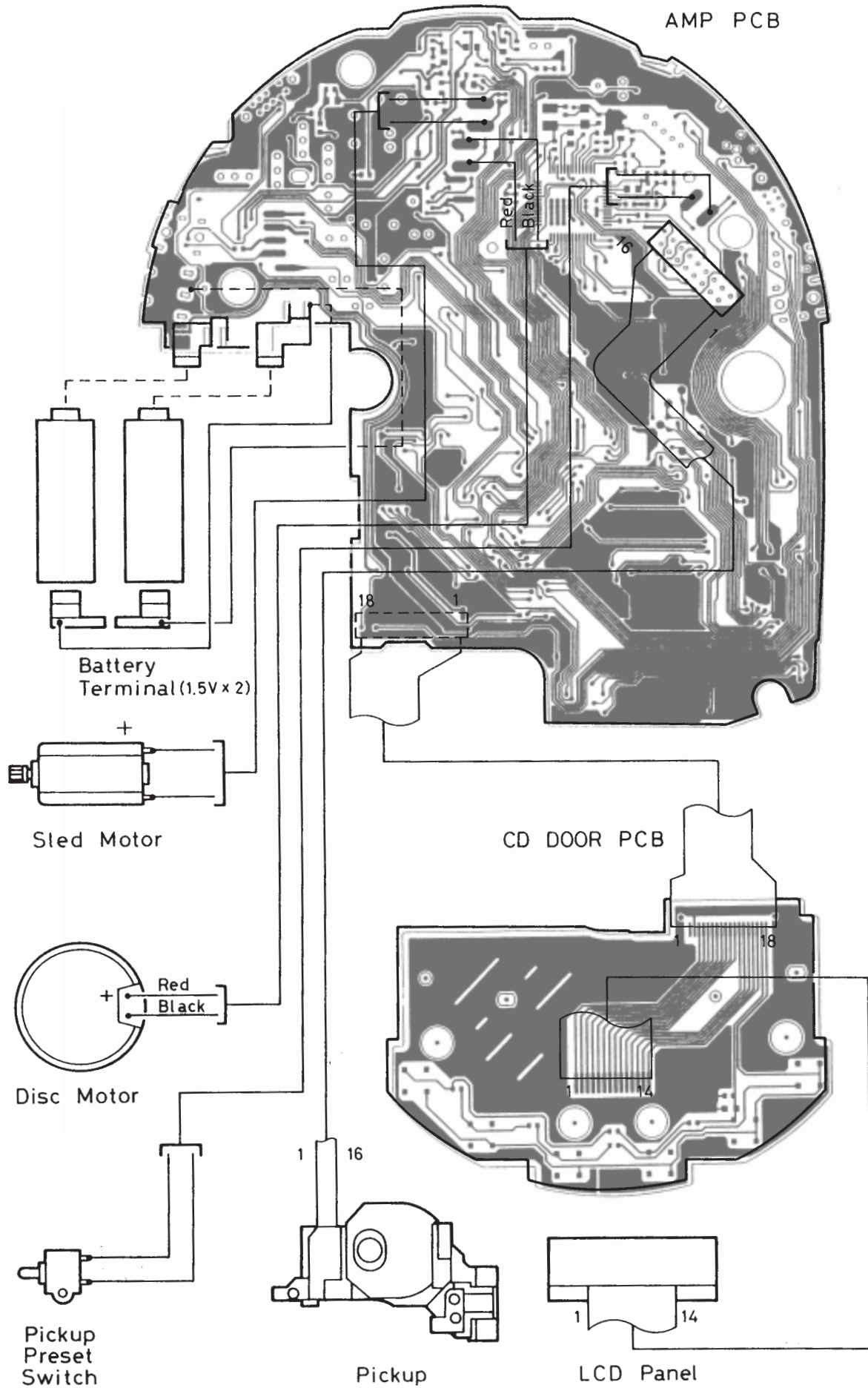
CD Door PCB Top View



CD AMP PCB Bottom View

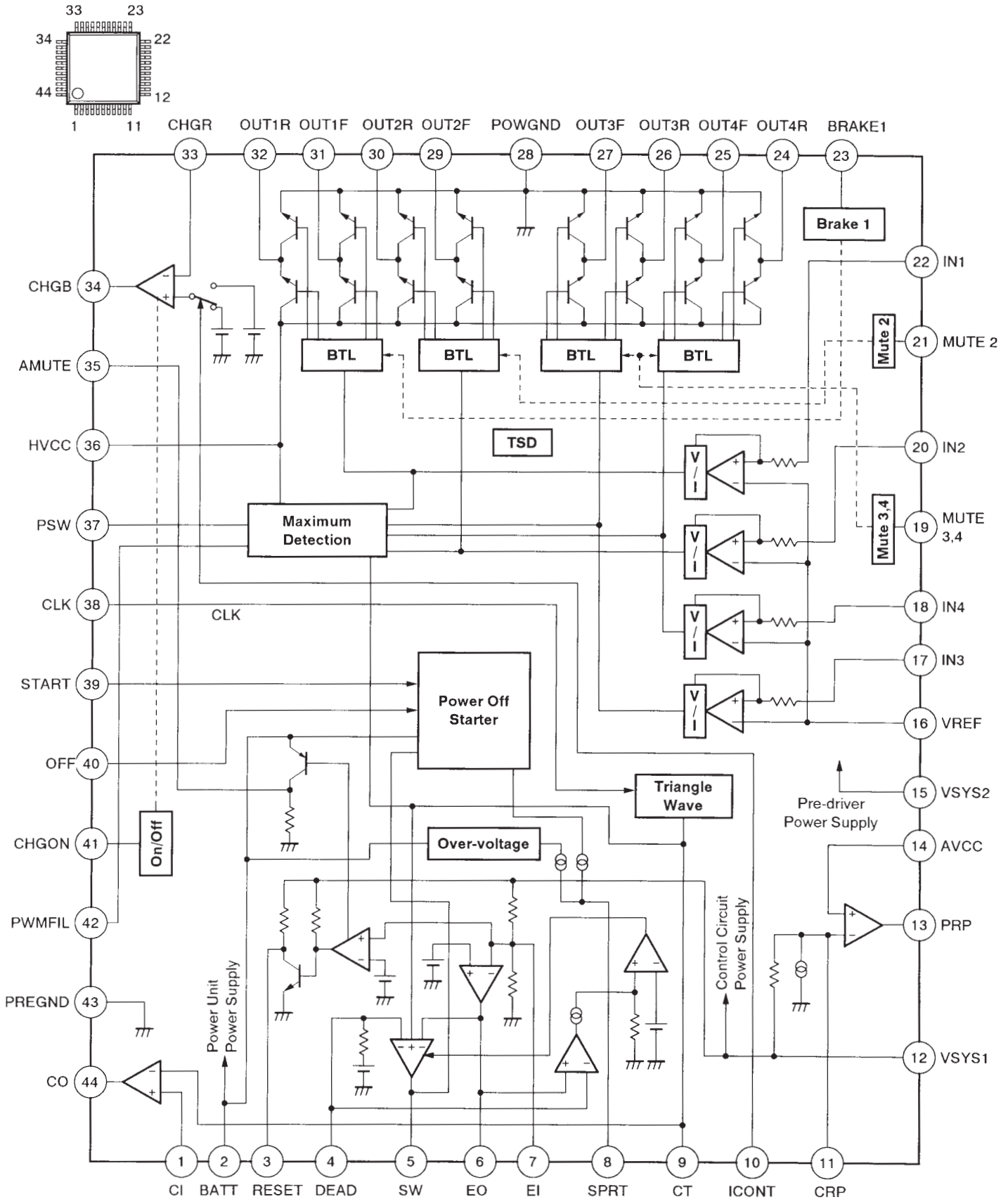


WIRING DIAGRAM

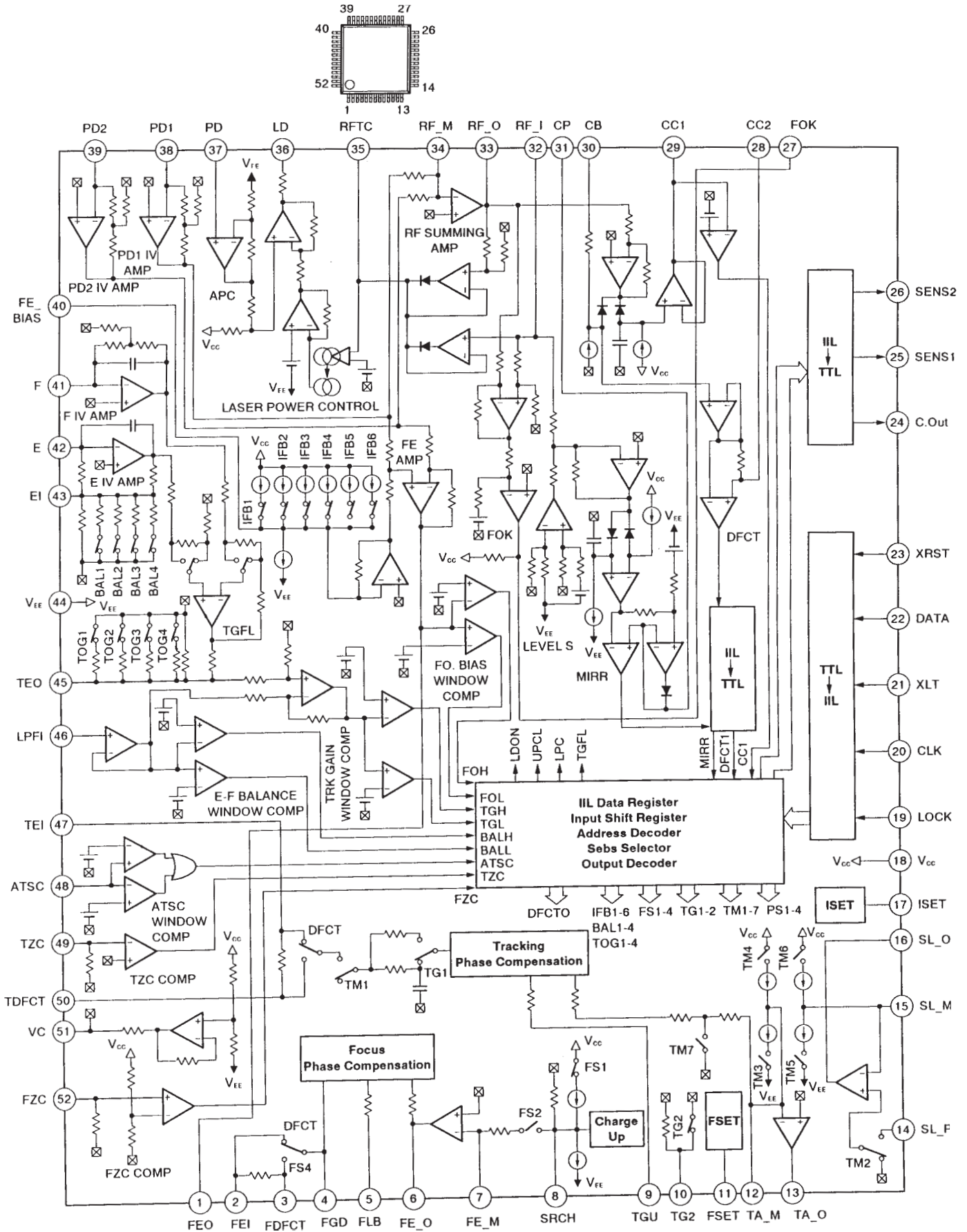


IC LEAD IDENTIFICATION AND INTERNAL DIAGRAMS

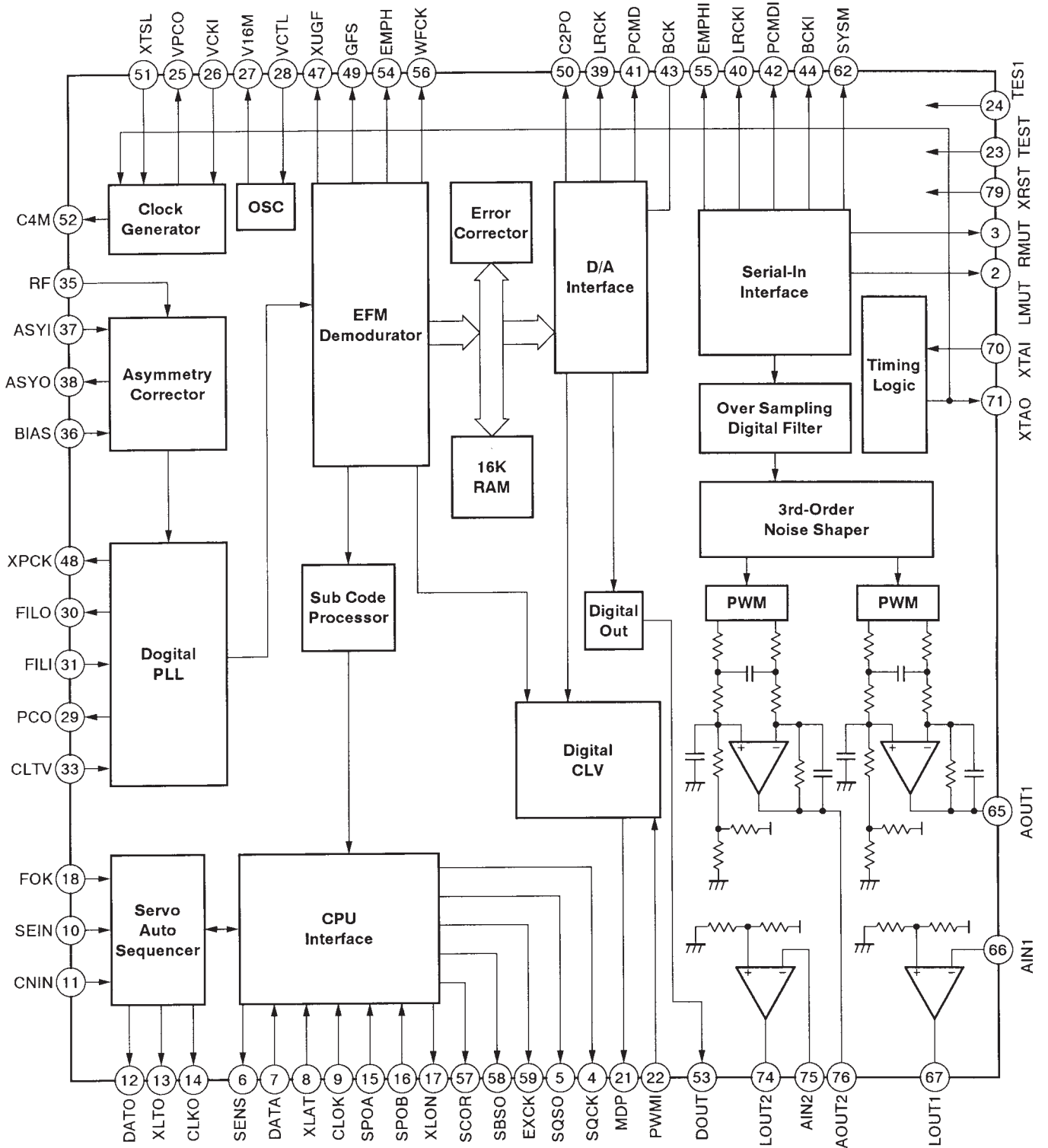
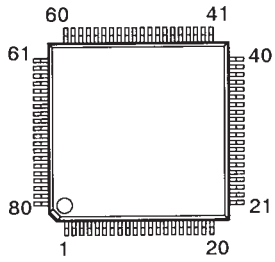
IC101: BA6894K



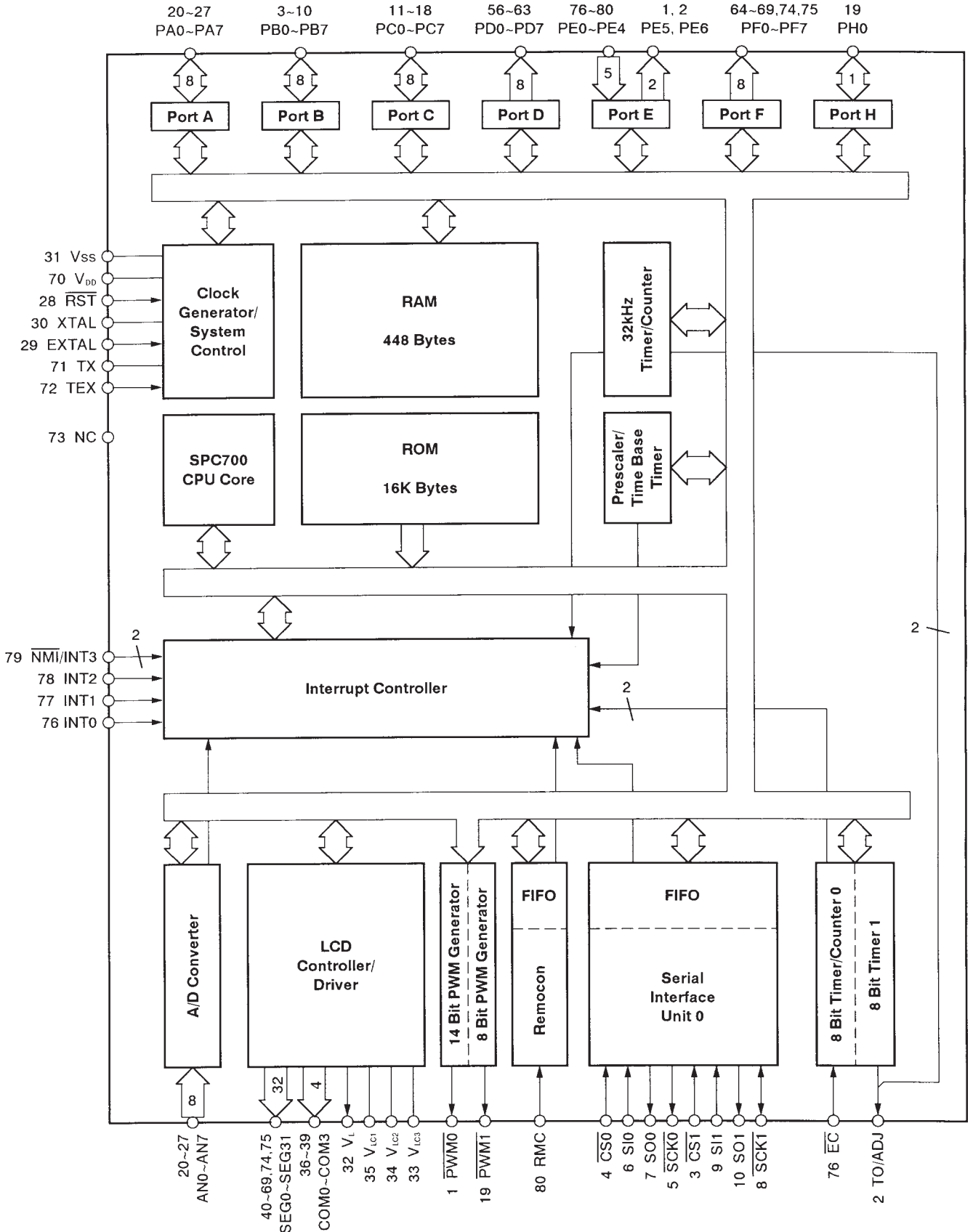
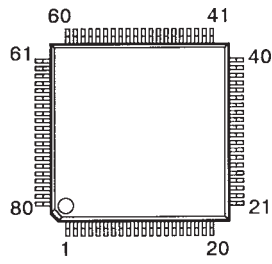
IC102: CXA1992AR



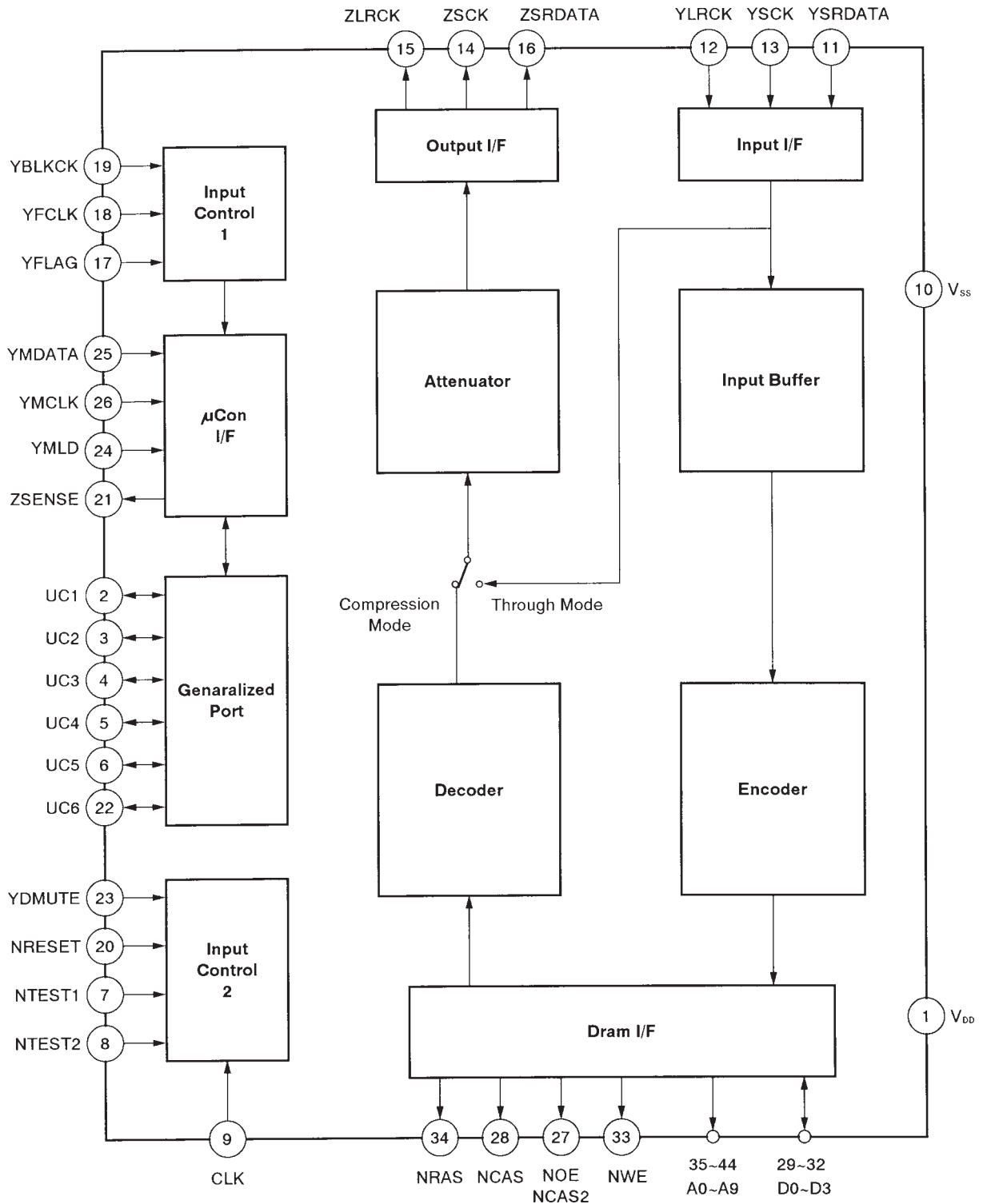
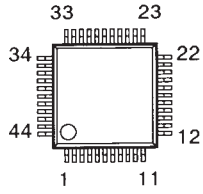
IC103: CXD2589Q



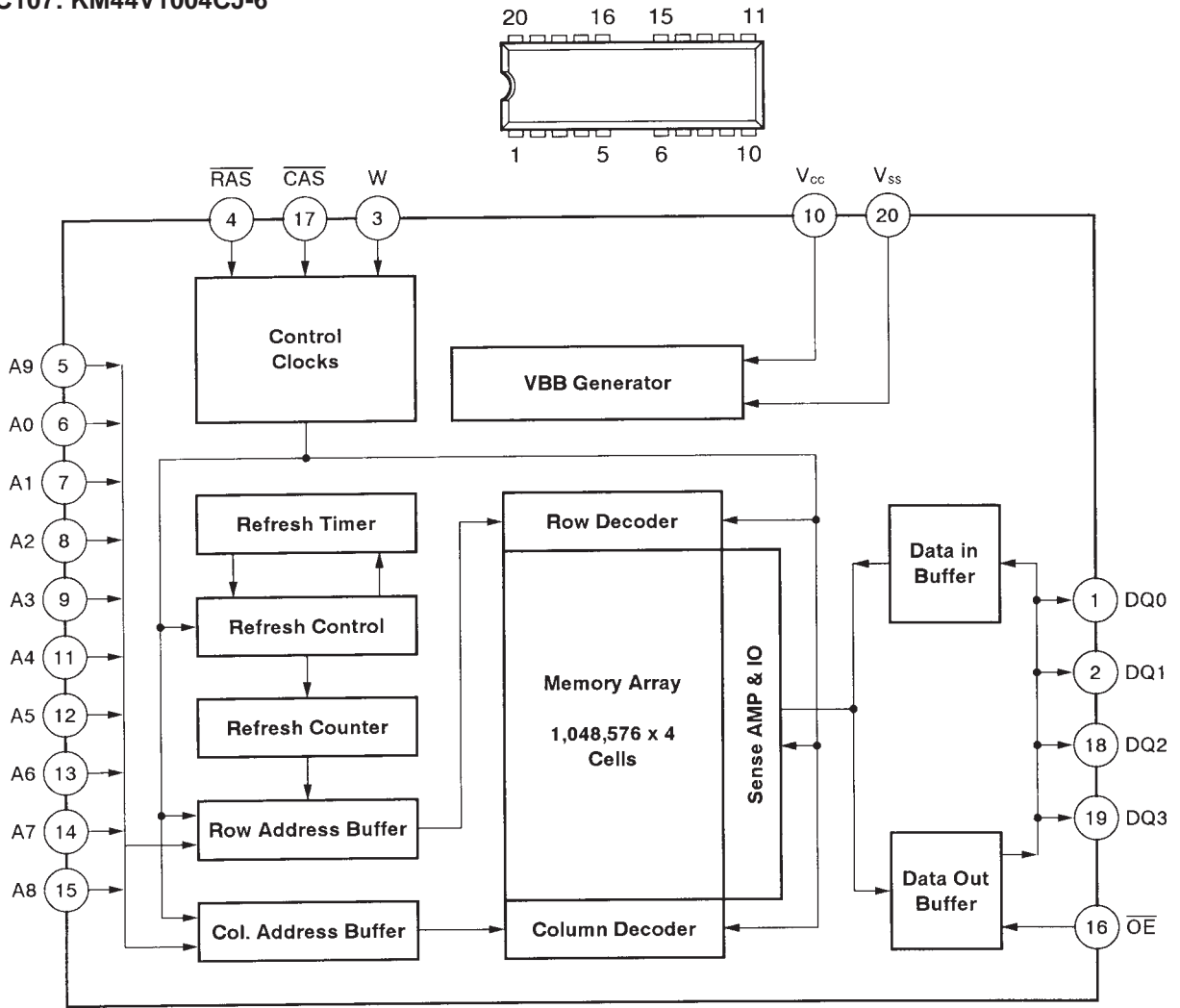
IC104: CXP83416-127R



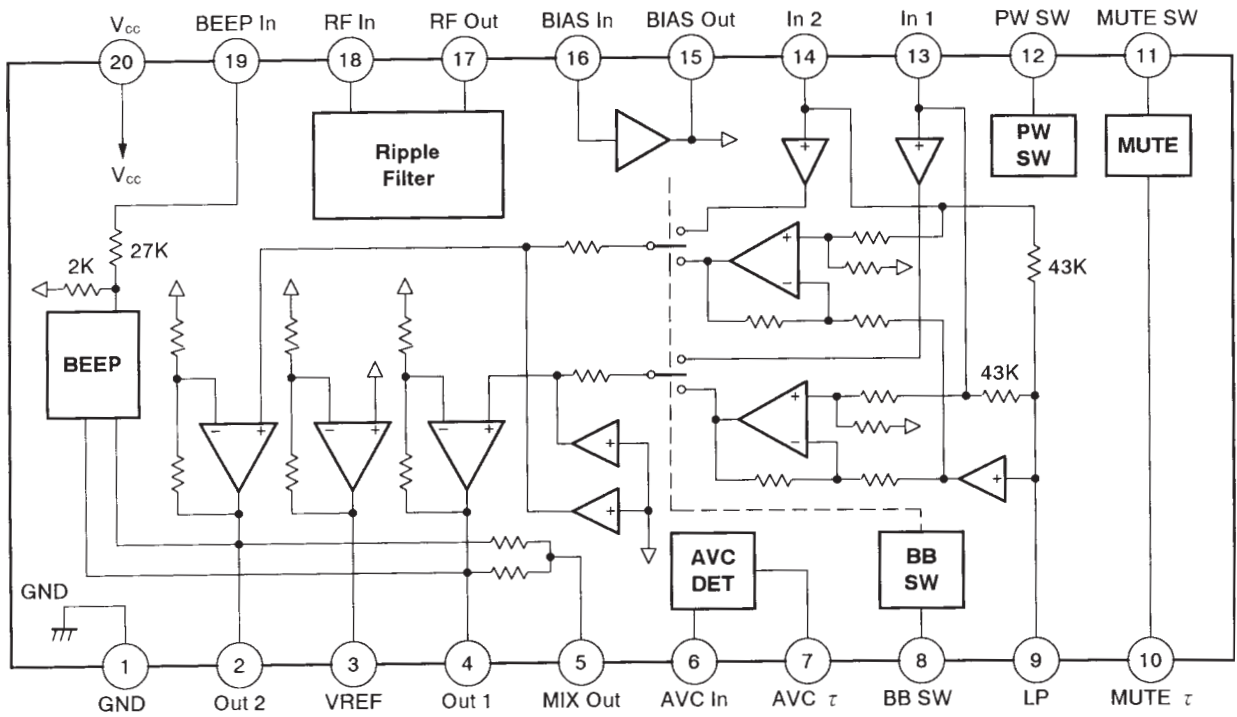
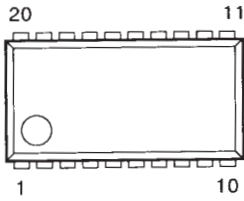
IC106: SM5859AF-TF



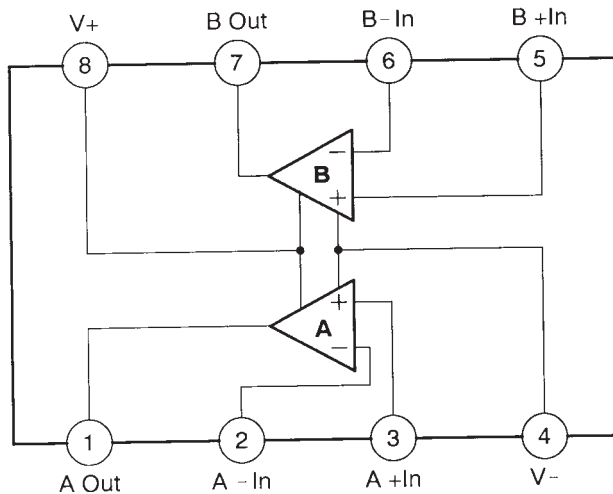
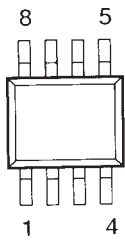
IC107: KM44V1004CJ-6



IC108: BA3574BFS

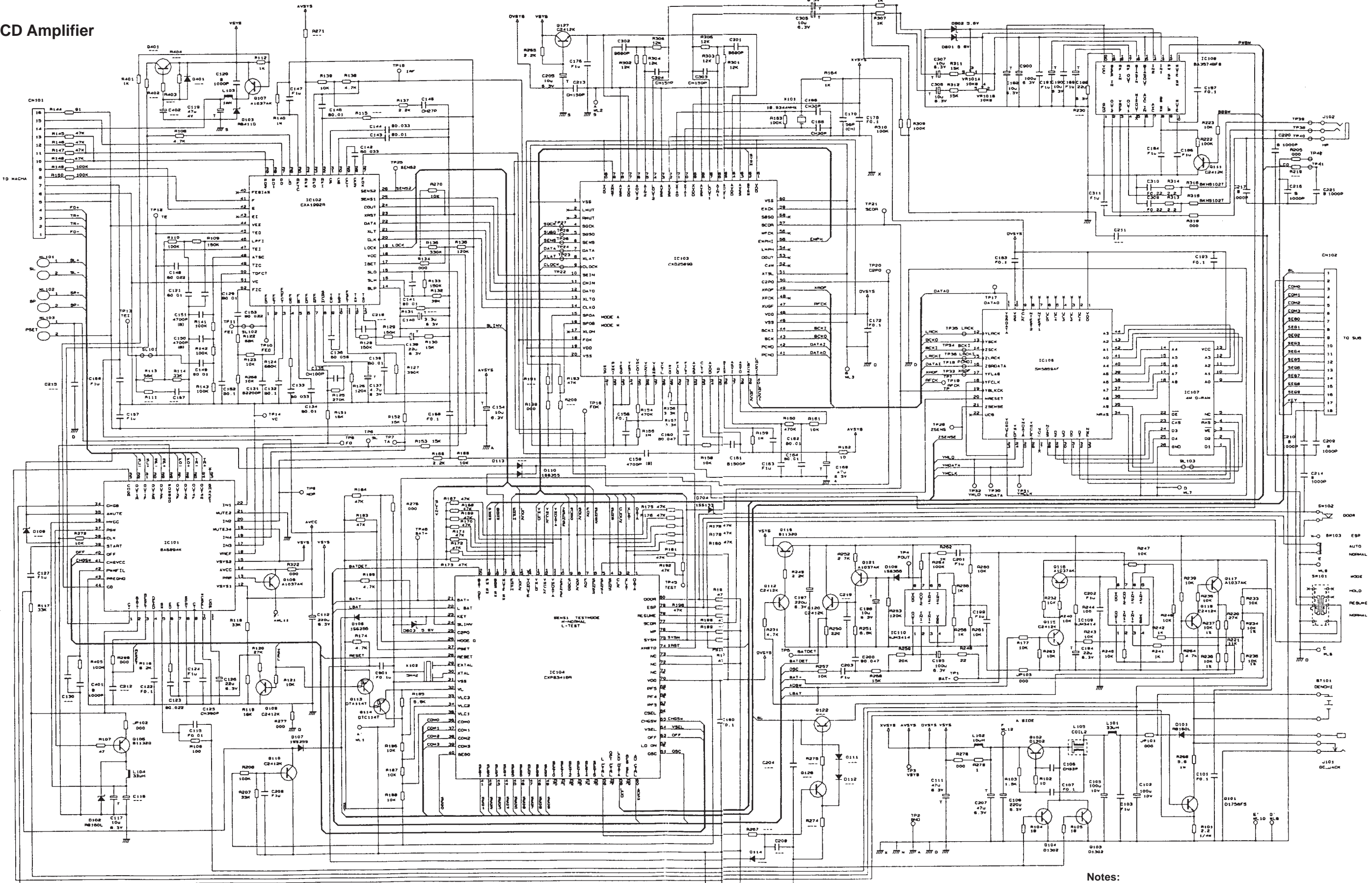


IC109, IC110: NJM3414AM-TE2



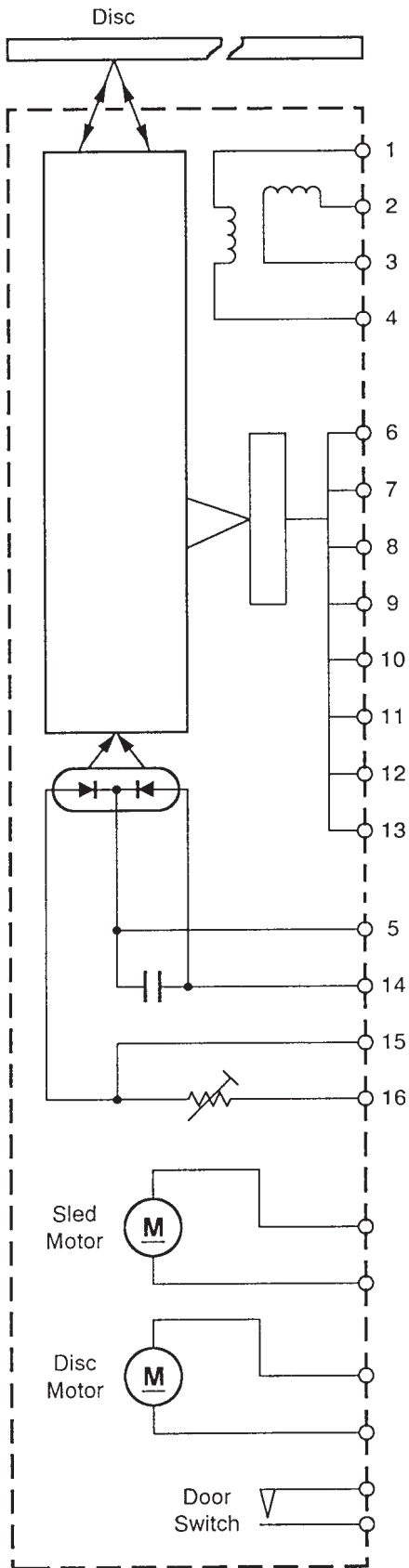
SCHEMATIC DIAGRAMS

CD Amplifier

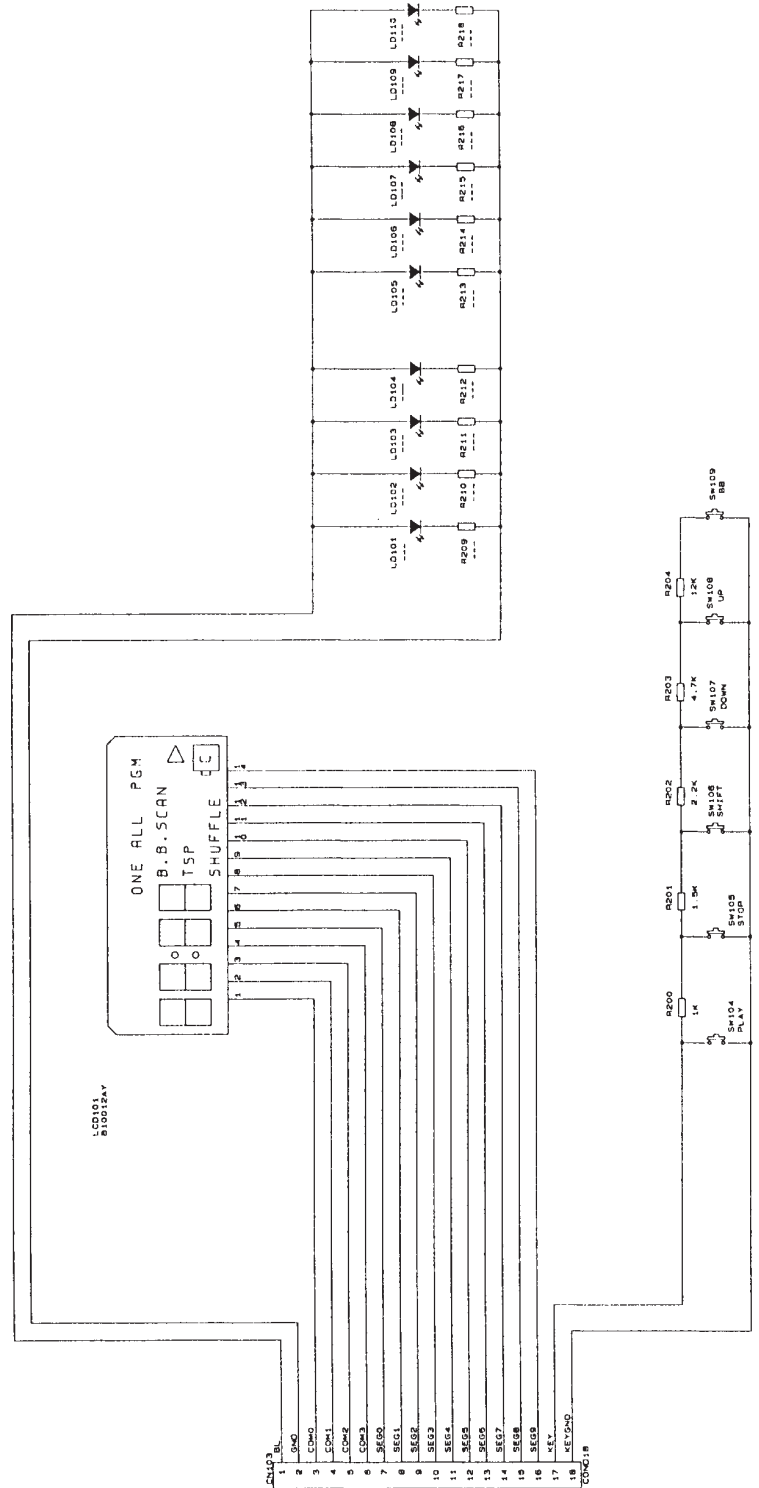


- Notes:**
1. All resistance values are in ohms (k=1000 ohms, M=1000 kohms).
 2. All capacitance values are in IF (P=10⁻⁶ μF).
 3. All resistors are 1/16 watt, unless otherwise specified.

Pick-up



CD Door



PARTS LIST

PZ-7

- Notes:
1. Prices and specifications are subject to change without pointer notice.
 2. As for spare parts order and supply, refer to the “GUIDEBOOK for Spare parts Supply”, published separately.
 3. The numbers in item column correspond to the same numbers in drawing.

N	Item	Code No.	Parts Name	Specification	Q'ty	R	Remark
ELECTRICAL PARTS							
DIODES							
	D101/102	2390 1883	Diode	RB160L-40TE25	2	C	PZ-7 Common
	D103	2390 1729	Diode	RB411DT146	1	C	PZ-7 Common
	D106/107/108/110	7101 1194	Diode	MA111-TX	4	C	PZ-7 Common
	D801/802/803	2310 8399	Diode	RD5.6ESB2	3	C	PZ-7 Common
IC's							
N	IC101	1915 0140	IC / BA6894K	0911-204-0-00	1	A	PZ-7 Common
N	IC102	1915 0141	IC / CXA1992AR	0911-203-9-00	1	A	PZ-7 Common
N	IC103	1915 0142	IC / CXD2589Q	0911-203-8-00	1	A	PZ-7 Common
N	IC104	1915 0143	IC / CXP83416-127R	0037-405-0-00	1	A	PZ-7 Common
N	IC106	1915 0144	IC / SM5859AF-TF	0911-842-3-00	1	A	PZ-7 Common
N	IC107	1915 0145	IC / KM44V1004CJ-6	0911-839-4-00	1	A	PZ-7 Common
N	IC108	1915 0146	IC / BA3574BFS	0911-204-1-00	1	A	PZ-7 Common
N	IC109/110	1915 0147	IC / NJM3414AM-TE2	0911-842-2-00	1	A	PZ-7 Common
JACK							
	J101	3502 0003	Jack / power	MOJ-D201LK	1	B	PZ-7 Common
	J102	1909 5601	Jack	HSJ171501110	1	B	PZ-7 Common
COIL							
	L101/104	3841 1568	Coil	RCR-875D-330LM	2	C	PZ-7 Common
	L102	3013 1197	Coil	RCH-875-100M	1	C	PZ-7 Common
N	L103	1915 0148	Coil / RCR-664D-102K	0990-561-0-25	1	C	PZ-7 Common
	L105	3841 1869	Coil	0990-869-5-05	1	C	PZ-7 Common
LCD PANEL							
N	LC101	1915 0149	LCD	0040-420-0-0013	1	C	PZ-7 Common
TRANSISTORS							
	Q101	2253 0709	Transistor	2SD1758TLQ	1	B	PZ-7 Common
	Q102/103/104	1909 9831	Transistor	2SD1302-T	3	B	PZ-7 Common
	Q105/119	1909 6532	Transistor	2SB1132Q	2	B	PZ-7 Common
	Q107/108/116/117 Q121	2250 1288	Transistor	2SA1037K-S	5	B	PZ-7 Common
	Q109/110/111/112 Q115/118/120/127	2252 1211	Transistor	2SC2412K-BR	8	B	PZ-7 Common
	Q113	1909 5851	Transistor	DTA114TKA	1	B	PZ-7 Common
	Q114	1909 5850	Transistor	DTC114TKA	1	B	PZ-7 Common
SWITCHES							
N	SW101	1915 0150	Switch / slide	0028-434-0-0013	1	C	PZ-7 Common
	SW102	3412 1484	Switch / push	ESE11S	1	C	PZ-7 Common
	SW103	3412 1498	Switch / slide	SS347B22H4.4K	1	C	PZ-7 Common
N	SW104~109	1915 0151	Switch / TP-tach	0028-667-0-0001	6	C	PZ-7 Common
VARIABLE RESISTORS							
	VR101	2765 1764	Potentiometer	0031-639-1-03	1	C	PZ-7 Common
OSCILLATOR							
N	X101	1915 0152	Resonator / ceramic	0038-999-0-00	1	C	PZ-7 Common
N	X102	1915 0153	Resonator / ceramic	0038-800-0-00	1	C	PZ-7 Common

Note : N - New parts
M - Minimum order/supply quantity
R - Rank

N	Item	Code No.	Parts Name	Specification	Q'ty	R	Remark
MECHANICAL PARTS							
N	1	1915 7002	Case / upper	2563-808-0-01	1	X	PZ-7 Common
	2	6924 3190	Label / FCC caution	0074-235-0-00	1	X	for USA
	2	6923 6070	Label / caution	0074-227-0-00	1	X	for EU
N	3	1915 0162	Knob / open	2563-861-0-01	1	X	PZ-7 Common
N	4	1915 0156	Lever / lock	2563-270-0-00	1	X	PZ-7 Common
N	5	1915 0110	Mechanical unit / CD	2597-050-0-00	1	C	PZ-7 Common
N	6	1915 0165	Amp PCB unit / CD	2563-002-0-00	1	C	PZ-7 Common
N	7	1915 0166	Spring A1 / battery	2569-184-1-00	1	X	PZ-7 Common
N	8	1915 0167	Spring A2 / battery	2569-185-1-00	1	X	PZ-7 Common
N	9	1915 0158	Case / lower	2563-810-0-01	1	X	PZ-7 Common
N	10	1915 0160	Cover / battery	2563-806-0-01	1	X	PZ-7 Common
N	11	1915 0155	Label / rear	2511-850-0-83	1	X	PZ-7 Common
N	12	1915 0164	Label / Identification	2540-850-0-02	1	X	PZ-7 Common
N	13	1915 0163	Foot	2563-885-0-00	2	X	PZ-7 Common
N	14	1915 0168	Display PCB unit	2563-005-0-00	1	X	PZ-7 Common
N	14-1	1915 0174	Heat seal	2569-560-0-00	1	X	PZ-7 Common
N	14-2	1915 0175	FPC	2563-550-0-91	1	X	PZ-7 Common
N	15	1915 7003	Door unit / CD	2563-804-0-05	1	X	for USA
N	15	1915 7004	Door unit / CD	2563-804-0-04	1	X	for EU
N	16	1915 0161	Button / operation	2563-860-0-01	1	X	PZ-7 Common
CD MECHANISM							
N	5	1915 0110	Mechanical unit / CD	2597-050-0-00	1	C	PZ-7 Common
N	5-1	1915 0171	Laser pick up	0020-015-0-0001	1	C	PZ-7 Common
N	5-2	1915 0172	Motor / slide	0022-107-0-0013	1	X	PZ-7 Common
N	5-3	1915 0173	Motor / CD drive	0022-093-0-00	1	X	PZ-7 Common
	5-4	3412 1505	Switch / micro	0036-819-0-00	1	X	PZ-7 Common
	5-5	6923 5210	Gear / motor	1497-255-1-00	1	X	PZ-7 Common
N	5-6	1915 0174	Gear A	2597-256-0-00	1	X	PZ-7 Common
N	5-7	1915 0175	Gear B	2597-257-0-00	1	X	PZ-7 Common
ACCESSORY							
N	Z009	1915 0176	Headphone	0025-072-0-0321	1	X	for USA
N	Z009	1915 0177	Innerphone	0025-537-0-0113	1	X	for EU
	Z010	1014 9060	Adaptor / AC-DC(120/6V)	0027-194-0-0113	1	X	for USA
	Z010	19100178	Adaptor / AC-DC(230/6V)	0027-195-0-0113	1	X	for EU

Note : N - New parts
M - Minimum order/supply quantity
R - Rank

Capacitors and resistors can not be supplied, because they will be available in your country.

CAPACITOR

Item	Specification	Q'ty
	C: Chip type	
C101	Ceramic, C 25V 0.1 μF +80/-20%	1
C102	Electrolytic 10V 100 μF ±20%	1
C103	Ceramic, C 16V 1 μF +80/-20%	1
C105	Electrolytic 10V 100 μF ±20%	1
C106	Ceramic, C 50V 33 PF ±5%	1
C107	Ceramic, C 25V 0.1 μF +80/-20%	1
C108	Electrolytic 6.3V 220 μF ±20%	1
C111	Ceramic, C 6.3V 47 μF ±20%	1
C112	Electrolytic 6.3V 220 μF ±20%	1
C115	Ceramic, C 50V 0.01 μF +80/-20%	1
C117	Ceramic, C 6.3V 10 μF ±20%	1
C119	Ceramic, C 4V 47 μF ±20%	1
C120	Ceramic, C 50V 1000 PF ±10%	1
C121	Ceramic, C 50V 0.01 μF ±10%	1
C122	Ceramic, C 25V 0.1 μF +80/-20%	1
C123	Ceramic, C 25V 0.022 μF ±10%	1
C124	Ceramic, C 16V 1 μF +80/-20%	1
C125	Ceramic, C 50V 390 PF ±5%	1
C126	Electrolytic 6.3V 22 μF ±20%	1
C127	Ceramic, C 16V 1 μF +80/-20%	1
C129	Ceramic, C 50V 0.01 μF ±10%	1
C131	Ceramic, C 50V 2200 PF ±10%	1
C132	Ceramic, C 25V 0.1 μF ±10%	1
C133	Ceramic, C 16V 0.033 μF ±10%	1
C134	Ceramic, C 50V 0.01 μF ±10%	1
C135	Ceramic, C 50V 100 PF ±5%	1
C136	Ceramic, C 25V 0.056 μF ±10%	1
C137	Ceramic, C 6.3V 4.7 μF ±20%	1
C138	Ceramic, C 50V 0.01 μF ±10%	1
C139	Ceramic, C 6.3V 22 μF ±20%	1
C140	Ceramic, C 6.3V 3.3 μF ±20%	1
C141	Ceramic, C 50V 0.01 μF ±10%	1
C142	Ceramic, C 16V 0.033 μF ±10%	1
C143	Ceramic, C 50V 0.01 μF ±10%	1
C144	Ceramic, C 16V 0.033 μF ±10%	1
C145	Ceramic, C 50V 0.01 μF ±10%	1
C146	Ceramic, C 50V 27 PF ±5%	1
C147	Ceramic, C 16V 1 μF +80/-20%	1
C148	Ceramic, C 25V 0.022 μF ±10%	1
C149	Ceramic, C 50V 0.01 μF ±10%	1
C150	Ceramic, C 50V 4700 PF ±10%	1
C151	Ceramic, C 50V 4700 PF ±10%	1
C152	Ceramic, C 25V 0.1 μF ±10%	1
C153	Ceramic, C 25V 0.022 μF ±10%	1
C154	Ceramic, C 6.3V 10 μF ±20%	1
C156	Ceramic, C 16V 1 μF +80/-20%	1
C157	Ceramic, C 16V 1 μF +80/-20%	1
C158	Ceramic, C 25V 0.1 μF +80/-20%	1
C159	Ceramic, C 50V 4700 μF ±10%	1
C160	Ceramic, C 16V 0.047 μF ±10%	1
C161	Ceramic, C 50V 1500 PF ±10%	1
C162	Ceramic, C 50V 0.01 μF ±10%	1
C163	Ceramic, C 16V 1 μF +80/-20%	1
C164	Ceramic, C 50V 0.01 μF ±10%	1
C165	Ceramic, C 50V 30 PF ±5%	1

Item	Specification	Q'ty
C166	Ceramic, C 50V 30 PF ±5%	1
C168	Ceramic, C 25V 0.1 μF +80/-20%	1
C169	Ceramic, C 6.3V 47 μF ±20%	1
C170	Ceramic, C 50V 56 PF ±5%	1
C172	Ceramic, C 25V 0.1 μF +80/-20%	1
C175	Ceramic, C 25V 0.1 μF +80/-20%	1
C176	Ceramic, C 16V 1 μF +80/-20%	1
C180	Ceramic, C 25V 0.1 μF +80/-20%	1
C183	Ceramic, C 25V 0.1 μF +80/-20%	1
C184	Ceramic, C 16V 1 μF +80/-20%	1
C186	Ceramic, C 16V 1 μF +80/-20%	1
C187	Ceramic, C 25V 0.1 μF +80/-20%	1
C188	Ceramic, C 6.3V 4.7 μF ±20%	1
C189	Ceramic, C 16V 1 μF +80/-20%	1
C190	Ceramic, C 6.3V 10 μF ±20%	1
C191	Ceramic, C 16V 1 μF +80/-20%	1
C192	Ceramic, C 6.3V 10 μF ±20%	1
C193	Ceramic, C 25V 22 μF +80/-20%	1
C194	Ceramic, C 6.3V 22 μF ±20%	1
C195	Electrolytic 6.3V 100 μF ±20%	1
C197	Electrolytic 6.3V 220 μF ±20%	1
C198	Ceramic, C 6.3V 10 μF ±20%	1
C199	Ceramic, C 16V 1 μF +80/-20%	1
C200	Ceramic, C 16V 0.047 μF ±10%	1
C201	Ceramic, C 16V 1 μF +80/-20%	1
C202	Ceramic, C 16V 1 μF +80/-20%	1
C203	Ceramic, C 16V 1 μF +80/-20%	1
C205	Ceramic, C 6.3V 10 μF ±20%	1
C206	Ceramic, C 16V 1 μF +80/-20%	1
C207	Ceramic, C 6.3V 47 μF ±20%	1
C209	Ceramic, C 50V 1000 PF ±10%	1
C210	Ceramic, C 50V 1000 PF ±10%	1
C212	Ceramic, C 16V 1 μF +80/-20%	1
C213	Ceramic, C 50V 150 PF ±5%	1
C214	Ceramic, C 50V 1000 PF ±10%	1
C216	Ceramic, C 50V 1000 PF ±10%	1
C217	Ceramic, C 50V 1000 PF ±10%	1
C220	Ceramic, C 50V 1000 PF ±10%	1
C221	Ceramic, C 50V 1000 PF ±10%	1
C301	Ceramic, C 50V 680 PF ±10%	1
C302	Ceramic, C 50V 680 PF ±10%	1
C303	Ceramic, C 50V 150 PF ±5%	1
C304	Ceramic, C 50V 150 PF ±5%	1
C305	Ceramic, C 6.3V 10 μF ±20%	1
C306	Ceramic, C 6.3V 10 μF ±20%	1
C307	Ceramic, C 6.3V 10 μF ±20%	1
C308	Ceramic, C 6.3V 10 μF ±20%	1
C309	Ceramic, C 25V 0.22 μF +80/-20%	1
C310	Ceramic, C 25V 0.22 μF +80/-20%	1
C311	Ceramic, C 16V 1 μF +80/-20%	1
C401	Ceramic, C 50V 1000 PF ±10%	1

RESISTOR

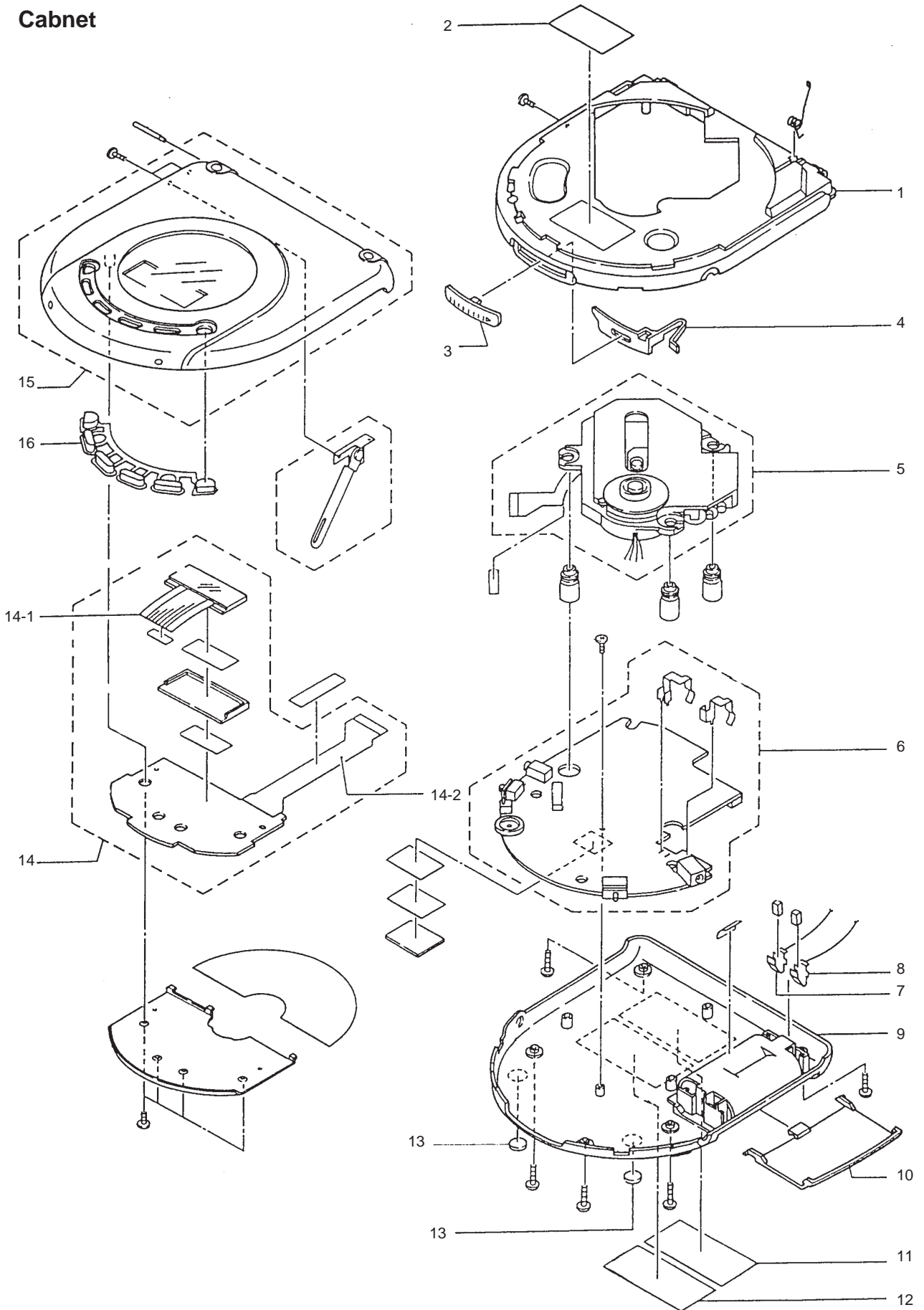
All resistors are chip type, 1/16watts, $\pm 5\%$ unless otherwise specified.

Item	Specification	Q'ty	Item	Specification	Q'ty
R101	2.2 Ω 1/8W	1	R160	470K Ω	1
R102	10 Ω	1	R161	10K Ω	1
R103	1.5K Ω	1	R162	10 Ω	1
R104	18 Ω	1	R163	100K Ω	1
R105	18 Ω	1	R164	1K Ω	1
R106	100 Ω	1	R165	10K Ω	1
R107	47 Ω	1	R166	2.2K Ω	1
R108	4.7K Ω	1	R167		
R109	150K Ω	1	~	47K Ω	7
R110	100K Ω	1	R173		
R112	1K Ω	1	R174	4.7K Ω	1
R113	56K Ω	1	R175	47K Ω	1
R114	33K Ω	1	R176	47K Ω	1
R116	8.2K Ω	1	R177	10K Ω	1
R117	33K Ω	1	R178		
R118	33K Ω	1	~	47K Ω	6
R119	18K Ω	1	R184		
R120	27K Ω	1	R185	5.6K Ω	1
R121	10K Ω	1	R186	10K Ω	1
R122	68K Ω	1	R187	10K Ω	1
R123	10K Ω	1	R188	10K Ω	1
R124	680K Ω	1	R189		
R125	270K Ω	1	~	47K Ω	5
R126	120K Ω	1	R193		
R127	390K Ω	1	R195	4.7K Ω	1
R128	150K Ω	1	R196	47K Ω	1
R129	150K Ω	1	R197	47K Ω	1
R130	15K Ω	1	R198	47K Ω	1
R132	39K Ω	1	R200	1K Ω	1
R133	150K Ω	1	R201	1.5K Ω	1
R134	0 Ω	1	R202	2.2K Ω	1
R135	120K Ω	1	R203	4.7K Ω	1
R136	330K Ω	1	R204	12K Ω	1
R137	2.2K Ω	1	R206	100K Ω	1
R138	4.7K Ω	1	R207	33K Ω	1
R139	10K Ω	1	R220	27K Ω	1
R140	1M Ω	1	R221	11K Ω	1
R141	100K Ω	1	R222	100K Ω	1
R142	100K Ω	1	R223	10K Ω	1
R143	100K Ω	1	R231	4.7K Ω	1
R144	91 Ω	1	R232		
R145			~	10K Ω	10
~	47K Ω	4	R240		
R148			R241	1K Ω	1
R149	100K Ω	1	R242	1K Ω	1
R150	100K Ω	1	R243	10K Ω	1
R151	15K Ω	1	R244	100 Ω	1
R152	15K Ω	1	R245	10K Ω	1
R153	15K Ω	1	R246	10K Ω	1
R154	470K Ω	1	R247	10K Ω	1
R155	1M Ω	1	R248	22 Ω 1/10W	1
R156	3.3K Ω	1	R249	2.2K Ω	1
R157	3.3K Ω	1	R250	220 Ω	1
R158	10K Ω	1	R251	6.8K Ω	1
R159	1M Ω	1	R252	2.7K Ω	1

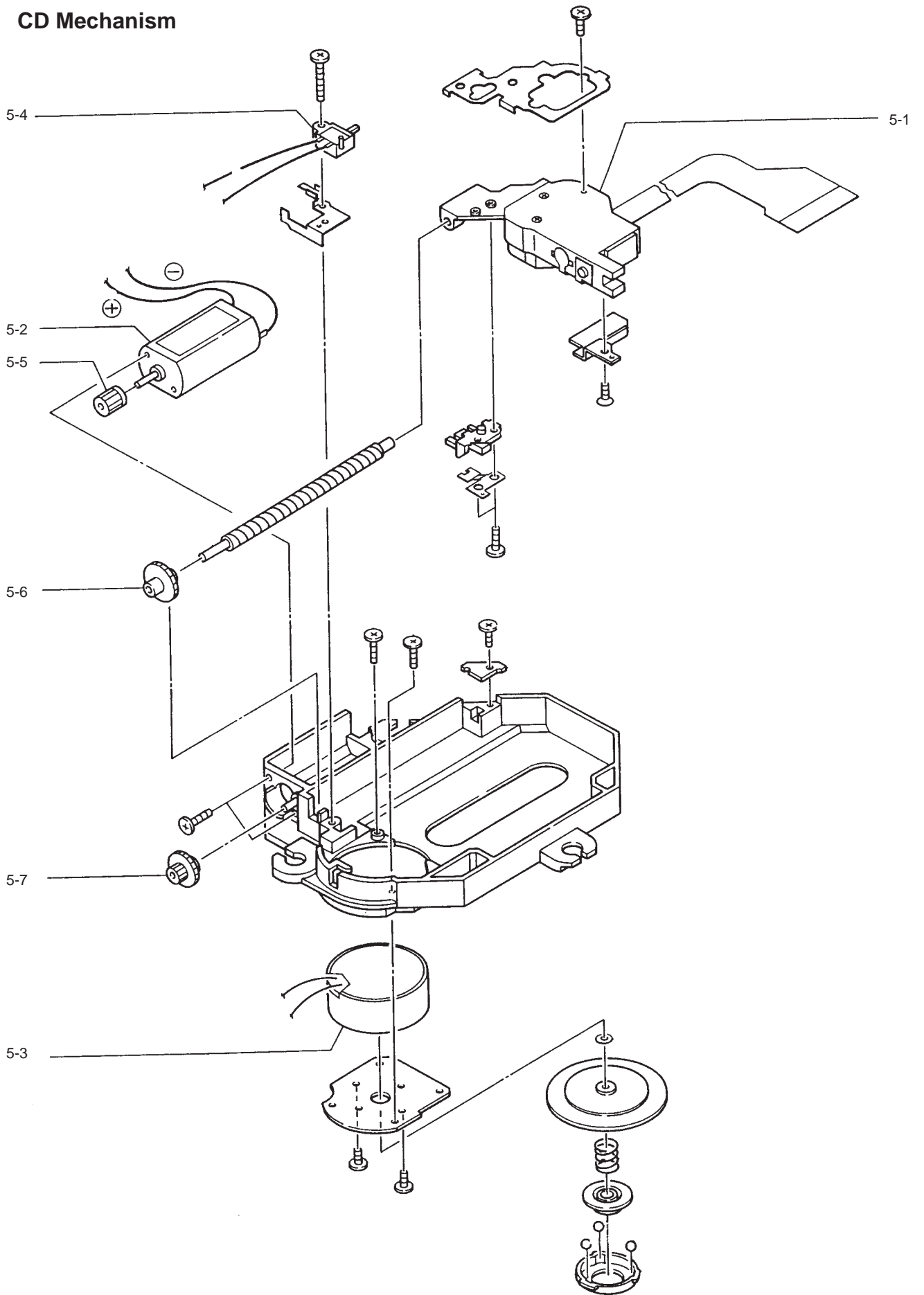
Item	Specification	Q'ty
R253	120KΩ	1
R254	100KΩ	1
R255	1KΩ	1
R256	1KΩ	1
R157	10KΩ	1
R258	15KΩ	1
R259	20KΩ	1
R260	10KΩ	1
R261	10KΩ	1
R262	1KΩ	1
R263	10KΩ	1
R264	4.7KΩ	1
R265	2.2KΩ	1
R266	5.6Ω 1W Metal Type	1
R268	10KΩ	1
R269	0Ω	1
R270	10KΩ	1
R272	10KΩ	1
R276	0Ω	1
R301		
~	12KΩ	6
R306		
R307	1KΩ	1
R308	1KΩ	1
R309	100KΩ	1
R310	100KΩ	1
R311	15KΩ	1
R312	15KΩ	1
R313	2.2KΩ	1
R314	2.2KΩ	1
R315	1KΩ EMI BEAD	1
R316	1KΩ EMI BEAD	1
R322	0Ω	1
R401	1KΩ	1
R405	100KΩ	1
JP101	0Ω 1/8W	1
JP102	0Ω 1/8W	1
JP103	0Ω 1/10W	1
JP277	0Ω 1/10W	1
JP278	0Ω 1/10W	1
JP319	0Ω 1/10W	1

EXPLODED VIEWS

Cabinet



CD Mechanism



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