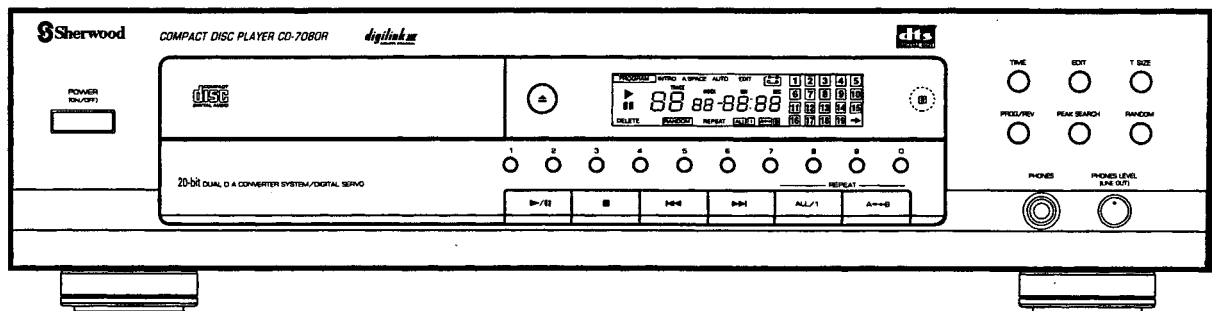


# SERVICE MANUAL

## CD- 980R/C/G COMPACT DISC PLAYER



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# LASER BEAM SAFETY PRECAUTIONS

## CLASS 1 LASER PRODUCT

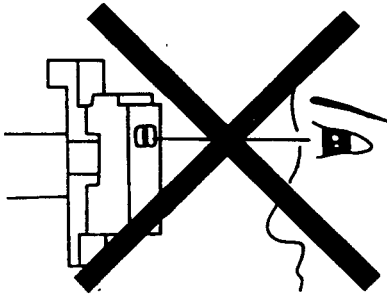
**CLASS 1  
LASER PRODUCT**

### CAUTION

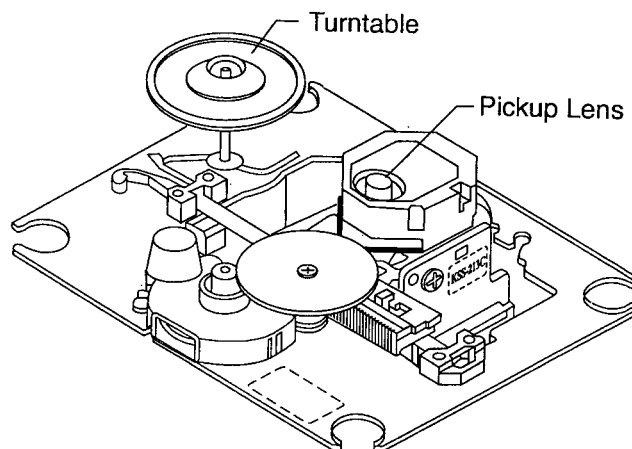
Invisible laser radiation when the unit is open. Do not stare into beam.

CAUTION: USE OF ANY CONTROLS, ADJUSTMENT, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.



This compact disc player uses a pickup that emits a laser beam. The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 1 foot away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.



### CAUTION:

Using controls and adjustment, or doing procedures other than those specified herein, may result in hazardous radiation exposure.

## SAFETY PRECAUTIONS



**CAUTION**

RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attention: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

### WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

### HANDLING LASER PICKUP

The laser diode in the optical system of this player can be damaged by electrostatic discharge from your clothes or your body. Proper electrostatic grounding for service personal is required during servicing.

## BEFORE REPAIRING THE COMPACT DISC PLAYER

### Preparation

- **Human Body Grounding:**  
Many of the components used in this compact disc player, including the laser pickup, are sensitive to electrostatic discharge. Service personal should be grounded with an electrostatic armband (1 Mohm).
- **Caution:**  
Static charge on clothing does not escape through a body grounding wrist band. Be careful not to contact the pickup or electrical components with your clothing.
- **Workbench and Tool Grounding:**  
A properly-grounded electroconductive plate (1 Mohm) or metal sheet should be fitted to the workbench surface. Tools and instruments (such as soldering irons and scopes) should be grounded to prevent AC leakage.



Fig. 1

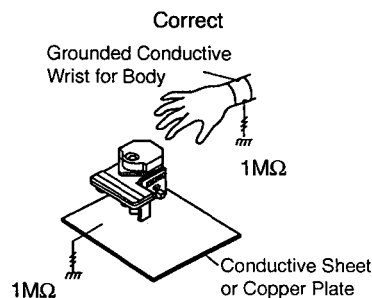


Fig. 2

**Note:** Laser diodes are so susceptible to damage from static electricity that, even if a static discharge does not ruin a diode, it can shorten its life or cause it to work improperly.

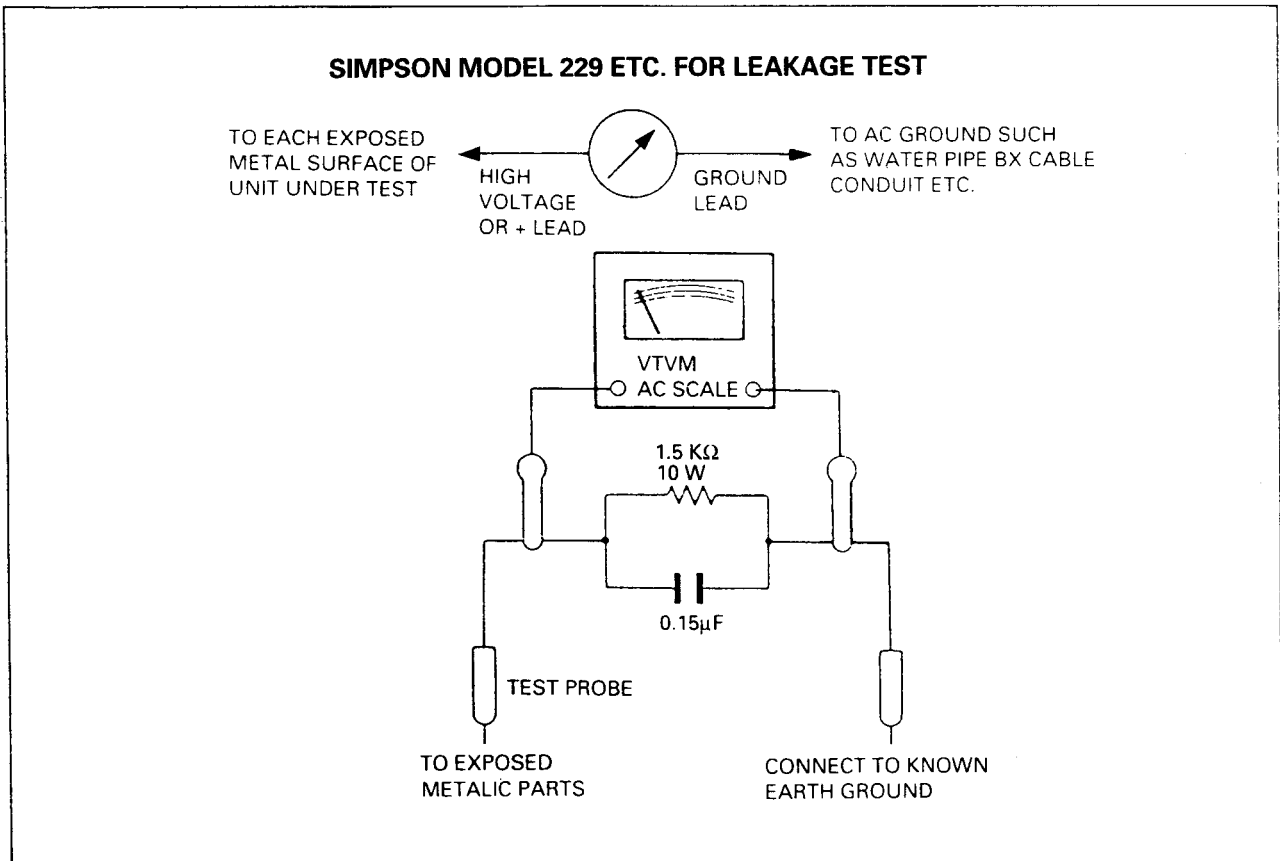
## LEAKAGE TEST

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metallic parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. which were removed for servicing are properly reinstalled.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item no. 21641, RCA model WT540A or use alternate method as follows: plug the power cord directly into a 220-volt AC receptacle (do not use an isolation transformer for this test).

Using two clip leads, connect a 1500 ohm, 10-watt resistor paralleled by a 0.15 $\mu$ F capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (see diagram) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the on and off positions.)

A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.





**PICK-UP**

System object lens type .....	Optical pick-up
Object lens drive system .....	2 Dimensional parallel drive type
Optical source .....	Semiconductor laser
Wave length .....	780 nm
Tracking system .....	3 Beam tracking servo type

**ELECTRICAL**

- Measuring methods in conformity with EIAJ CP-307, CCIR 468-3.
- Reference level : 0dB
- Test disc : SONY CD-3 YEDS-7, TEAC MCD-151A, TEAC MCD-111, TEAC MCD-193, A-BEX TCD-721R, TEAC MCD-131
- Filter : 30 KHz, 18 dB/oct low pass filter

**ENVIRONMENT**

Test specification

Temperature between 59°F (15°F) and 95°F (35°F) and relative humidity between 45% and 75%, with power supply voltage of 10% the normal supply voltage.

Test disc : SONY YEDS-7 or TEAC MCD-151A, TEAC MCD-111, TEAC MCD-193, A-BEX TCD-721R, TEAC MCD-131

**Operation**

Unit must work properly and correctly at the temperature range, from 32°F (0°C) to 113°F (45°C) and the relative humidity from 40% to 80%, and with the supply voltage.

**Storage**

Temperature test : 48 hours each at -40°F (-40°C) and 146°F (65°C).

Humidity test : 40°C, 95% relative humidity.

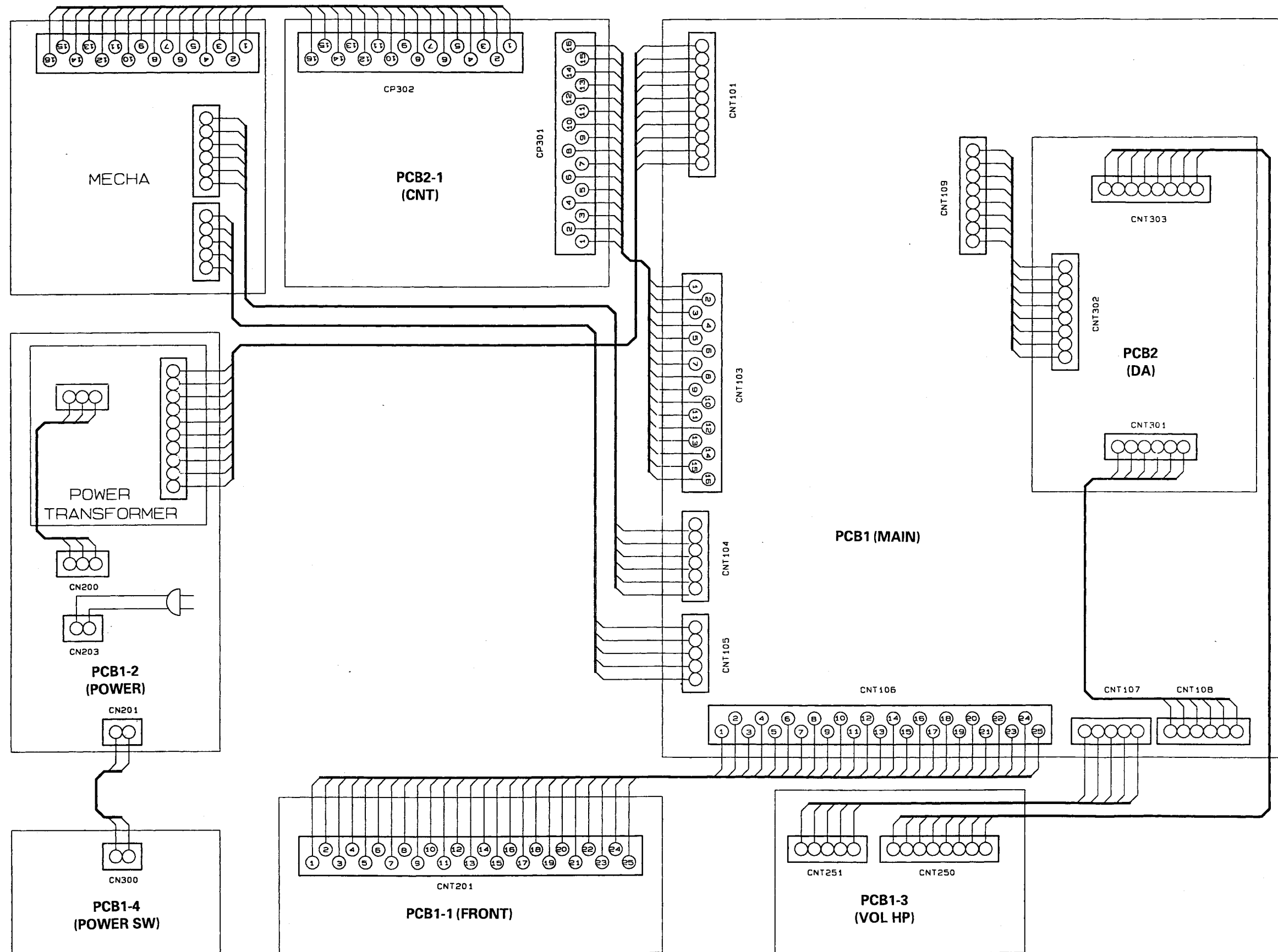
<b>POWER CONSUMPTION .....</b>	<b>13W</b>
<b>DIMENSIONS (W X H X D) .....</b>	<b>440 X 95 X 245 mm</b>
<b>WEIGHT .....</b>	<b>5.5 Kg (12.1 lbs)</b>
<b>POWER SUPPLIES .....</b>	<b>AC 220V, 60Hz, KS</b>
	<b>AC 110/220V, 50/60Hz, PT INDO</b>

Specifications and components subject to change without notice.

Overall performance will be maintained or improved.

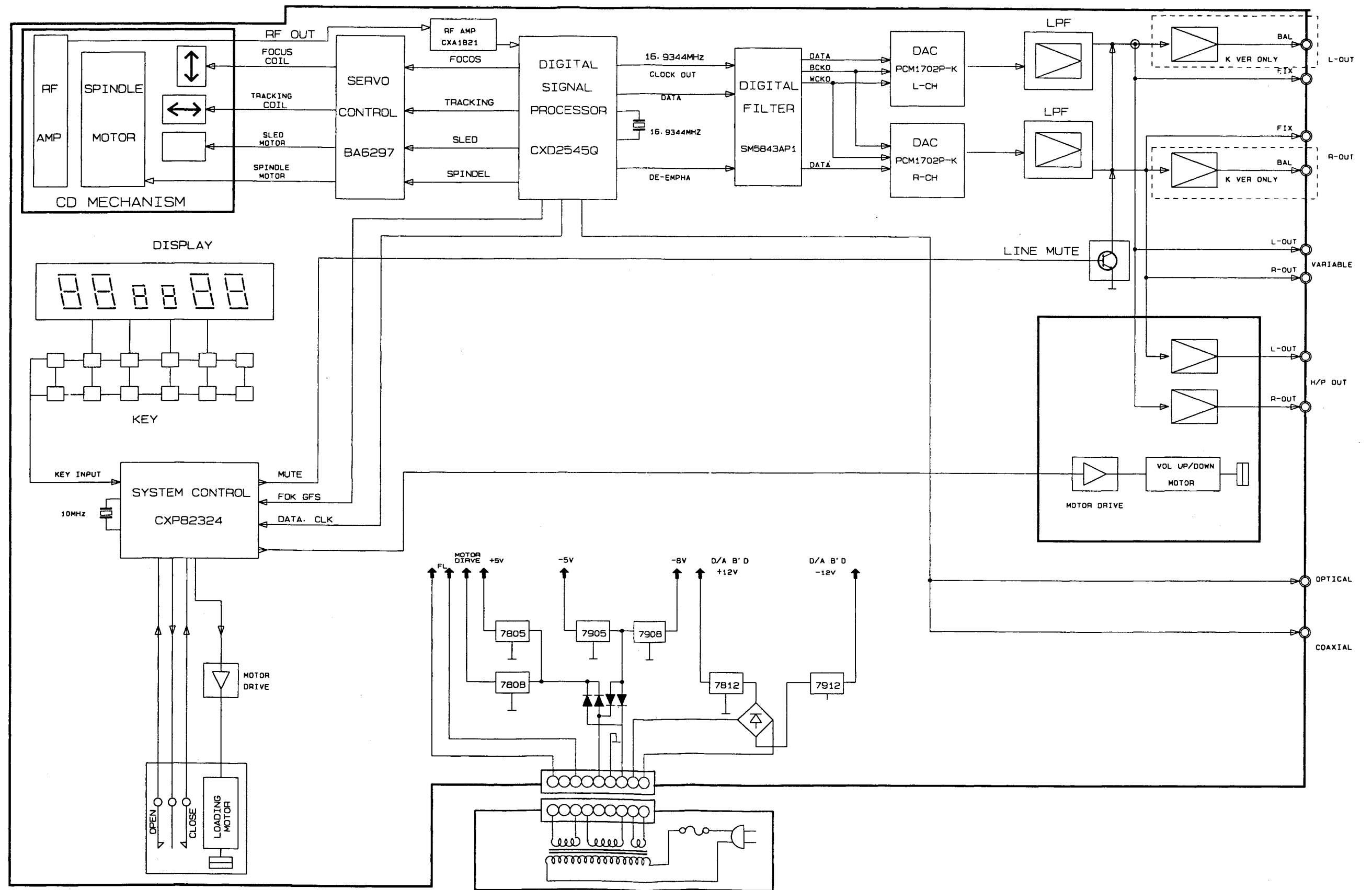
# WIRING DIAGRAM

Model No. : CD-7080R/C/G



# BLOCK DIAGRAM

Model No. : CD-7080R/C/G

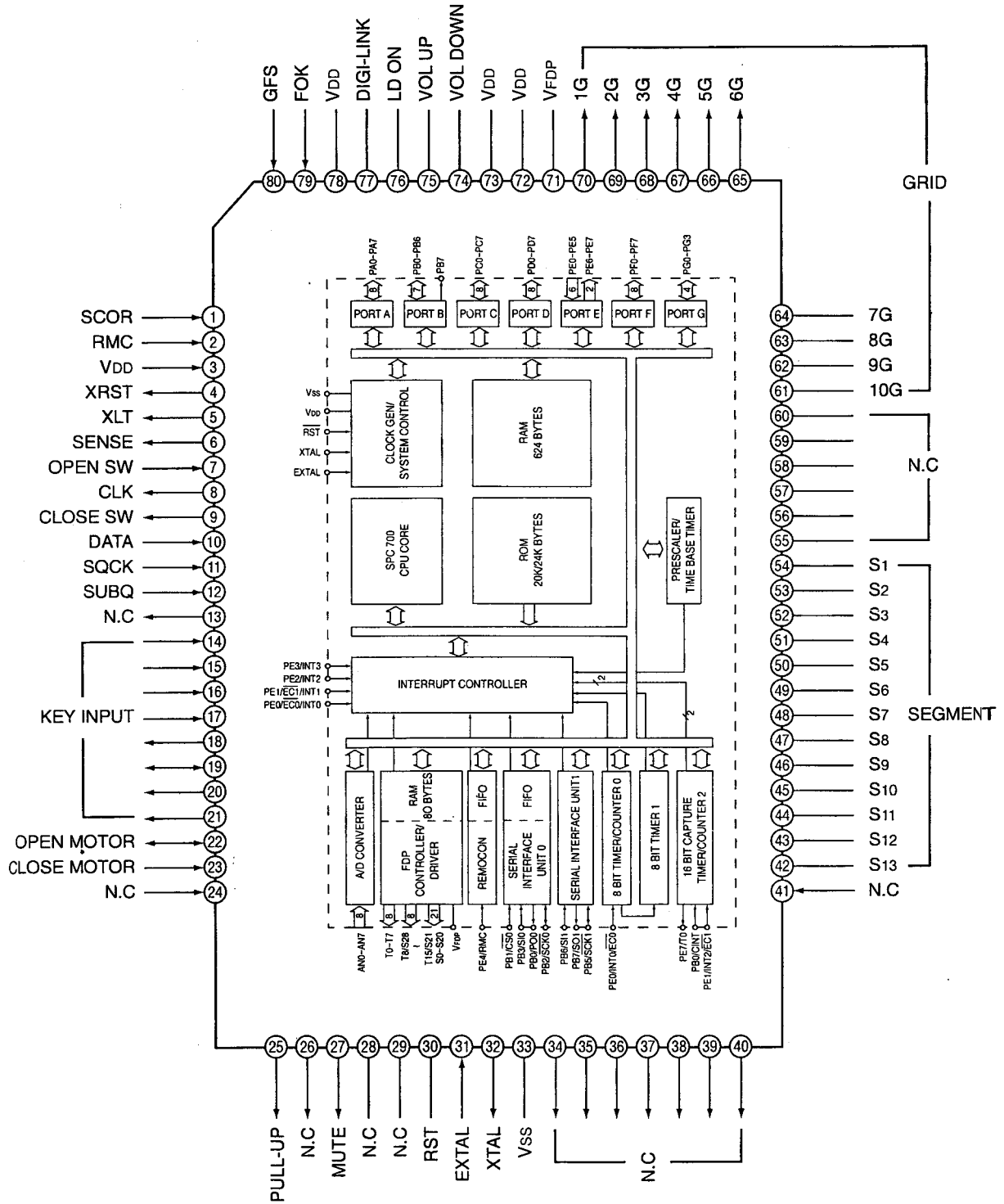




# CIRCUIT DESCRIPTION

## 1. IC201 : CXP82324-396Q(DWP340)

### 1-1. Pin Connection Diagram and Block Diagram

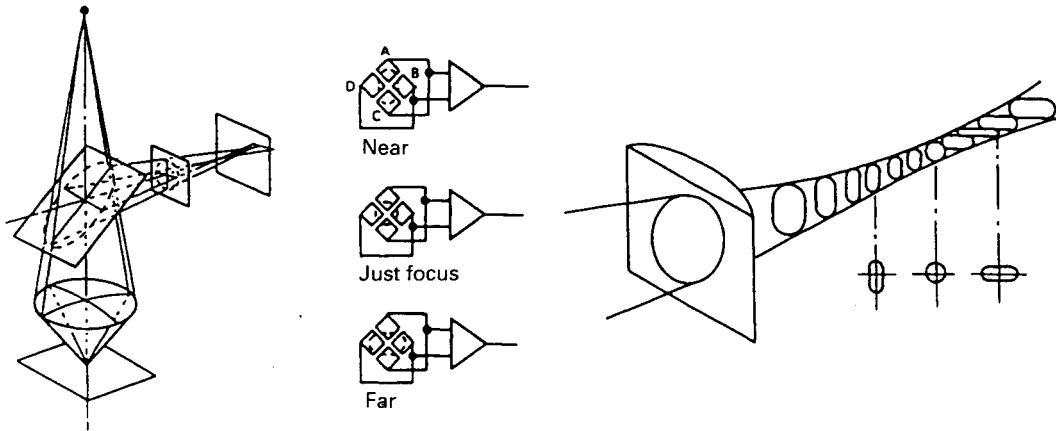


## 1-2. Input and Output Terminal Functions

PIN NO.	SYMBOL	DESCRIPTION
1	SCOR	Subcode-Q readout timing input from CXD2545Q.
2	RMC	Input for remocon data. (At "L", it is active.)
3	VDD	
4	XRST	Output for resetting CXD2545Q.
5	XLT	Serial ratch data output to CXD2545Q.
6	SENSE	Sense signal output to pick-up unit.
7	OPEN SW	Input to detect that tray is open.
8	CLK	serial clock data output for CXD2545Q.
9	CLOSE SW	Input to detect that tray is closed.
10	DATA	Serial data output for CXD2545Q.
11	SQCK	Clock data output for subcode-Q readout to CXD2545Q.
12	SUBQ	Subcode-Q data input from CXD2545Q.
13	NC	Not used.
14-21	KEY INPUT	Data input for key scan.
22	OPEN MOTOR	Output for driving motor to open the tray. (At "H", it is active.)
23	CLOSE MOTOR	Output for driving motor to close the tray. (At "H", it is active.)
24	NC	Not used.
25	PULL-UP	Pull-up for CPU.
26	NC	Not used.
27	MUTE	Output for audio mute. (At "L", it is active.)
28-29	NC	Not used.
30	RST	Input for resetting for CPU (At "L", it is active.)
31	EXTAL	Input of 10.0MHz oscillator crystal.
32	XTAL	Output of 10.0MHz oscillator crystal.
33	VSS	GND.
34-41	NC	Not used.
42-54	SEGMENT	Segment signal output.
55-60	NC	Not used.
61-70	GRID	Grid signal output.
71	VFDP	-30V power supply for FL Display.
72	VDD	+5V power supply for CPU.
73	VDD	+5V power supply for CPU.
74	VOL DOWN	Volume down signal for volume motor.
75	VOL UP	Volume up signal for volume motor.
76	LD ON	LD-ON signal output for pick-up unit.
77	DIGI-LINK	Input for remocon data.
78	VDD	+5V power supply for CPU.
79	FOK	FOK data from CXD2545Q.
80	GFS	GFS signal input from CXD2545Q.

**1-3. Focus error detecting operation**

Fig. 3 shows the reflected laser beam from a disc is polarized 90° with the beam-splitter and sent to the cylindrical lens. The beam passed through this cylindrical lens is then sent to the four division photo diodes and focuses into an image whose shape varies with the distance between the disc and the objective lens. Such change in the beam shape causes the current flowing from the photo diodes to vary.



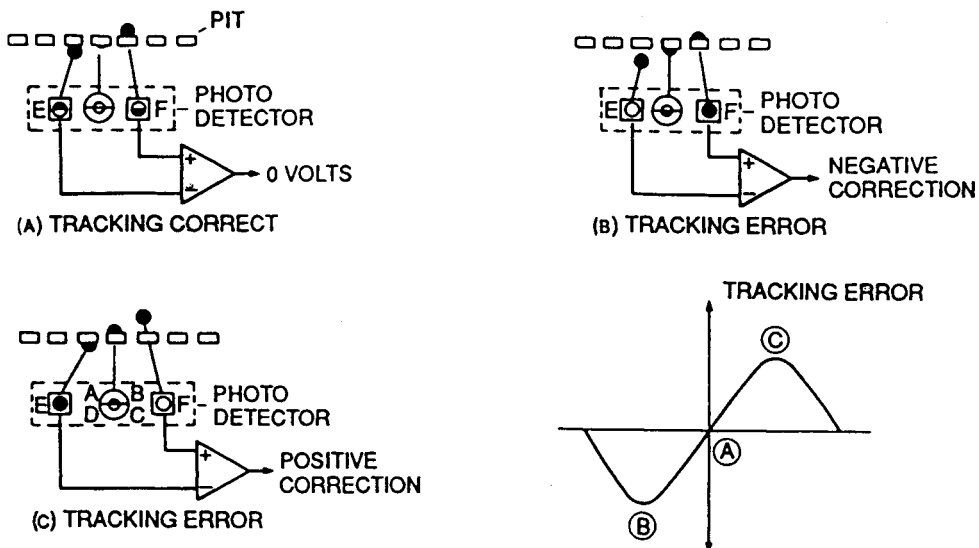
**Fig. 3**

**1-4. Tracking error detection system**

Fig. 4 shows the principle of the tracking error detection system which employs the three beam system.

The laser beam is divided into the main beam and two sub-beams by diffraction grating and they are arranged on one line. The center line connecting these three beams has a slight offset angle against the main beam. The main beam is received by photo diodes A, B, C and D and two sub-beams by E and F respectively.

Fig. 4 - A shows the on-track state. As both auxiliary beams 1 and 2 are slightly on the track in this state, the outputs of photo diodes E and F are equal and the tracking signal is 0(zero). When the track is shifted to the left (Fig. 4 - B), the auxiliary beam 1 is off the pit. This allows more light to be received by the photo diode E, resulting in positive (+) tracking signal output. On the other hand, when the track is shifted to the right (Fig. 4 - C), the amount of light received by the photo diode F increases, resulting in negative (-) tracking signal output. And these extreme signals are detected as tracking error signals.



**Fig. 4**

# PICKUP REPLACEMENT

## Caution:

Laser diodes are extremely susceptible to damage from static electricity. Even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly. When replacing the pickup, take appropriate measures, such as using a conductive mat and a grounded soldering iron, to protect the laser diode from static damage.

1. Remove the CD mechanism assembly by referring to the "EXPLODED VIEW II" on page 24 (See Fig. 5).

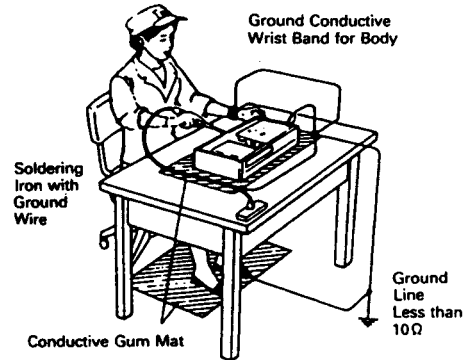


Fig. 5

2. Remove four screws S12 (See Fig. 6).

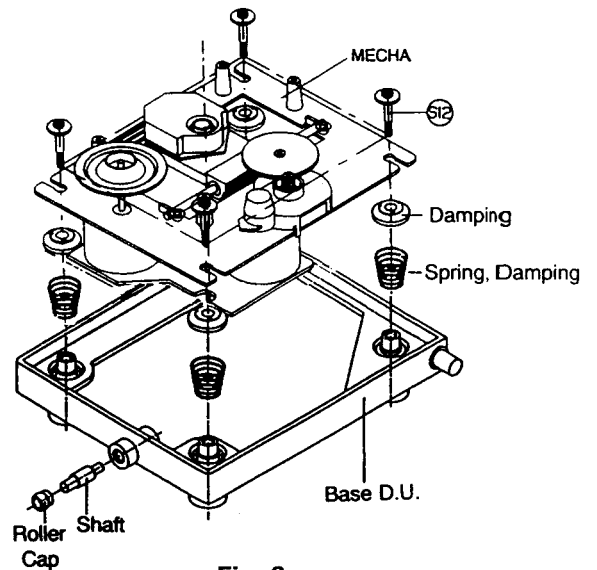


Fig. 6

3. Remove the gear A (See Fig. 7).
4. Pull out the slide shaft.

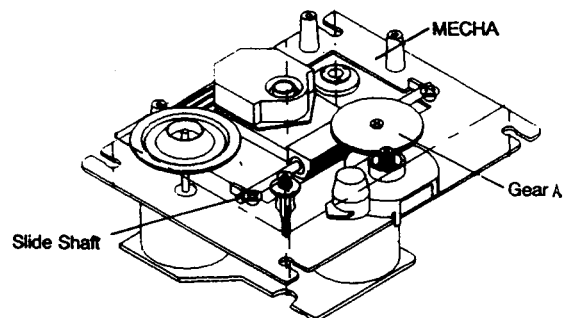


Fig. 7

5. Remove the pickup (See Fig. 8).

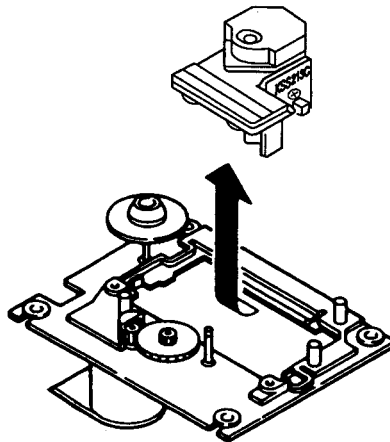


Fig. 8

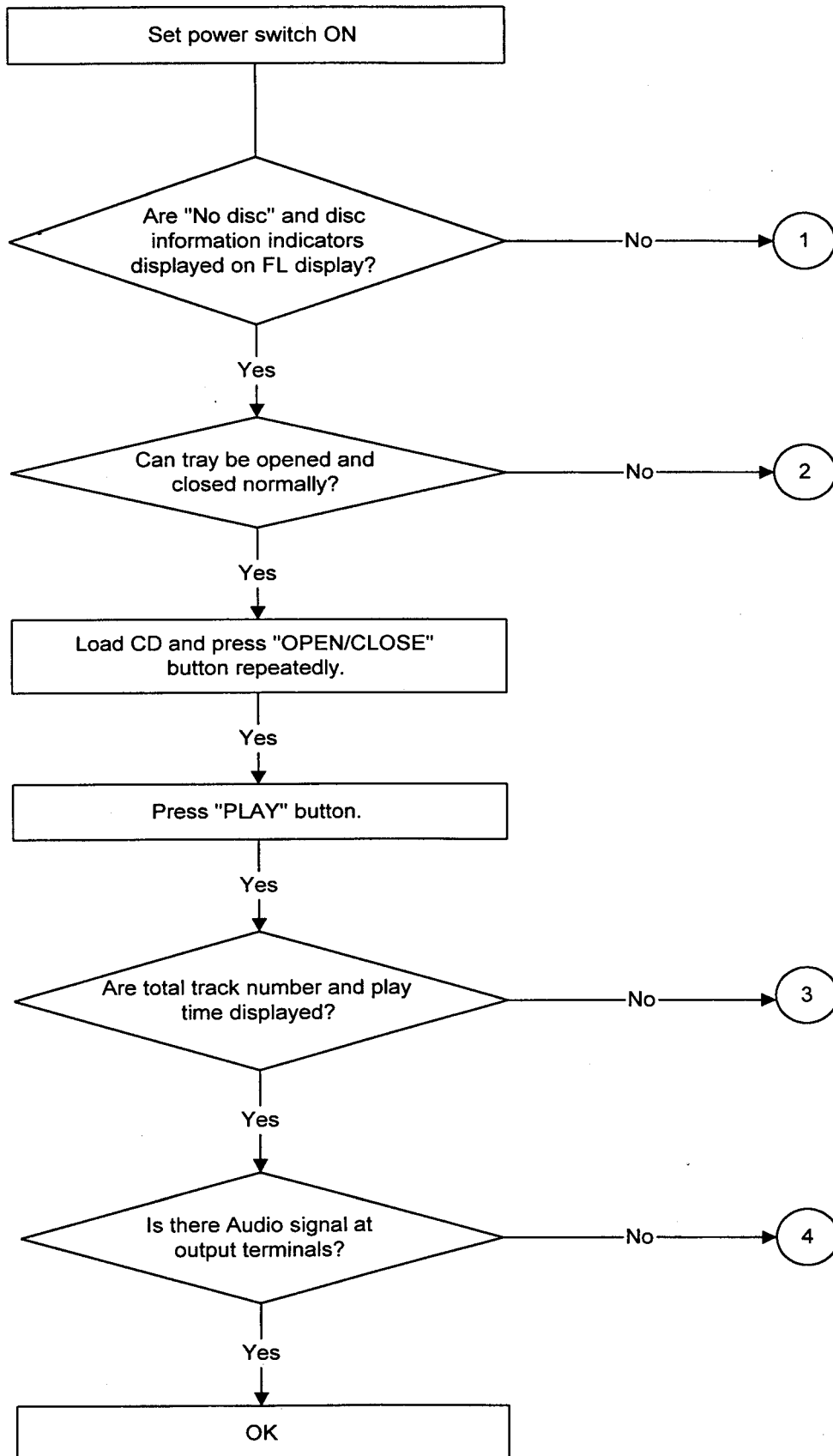
6. Refer to the "EXPLODED VIEW I" of the compact disc mechanism on page 23 for detailed illustrations.

### OPERATION CHECK

When the power switch is turned on after the chucking arm is removed, observe the objective lens and check the following. (The optical system block should be at the lead-in position when it is checked.)

1. The disc table should be at the innermost position after the chucking arm is removed.
2. The diffused light of the laser beam can be seen when the power switch is turned on.
3. Vertical (up and down) movement of the objective lens take place (2 or 3 times).

# TROUBLESHOOTING



[Repair item 1] At power on, "0" and some parts are not displayed.

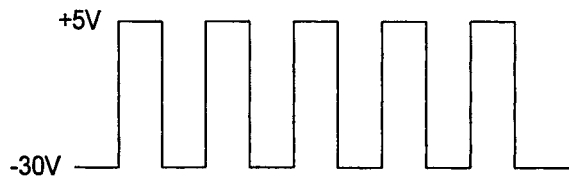
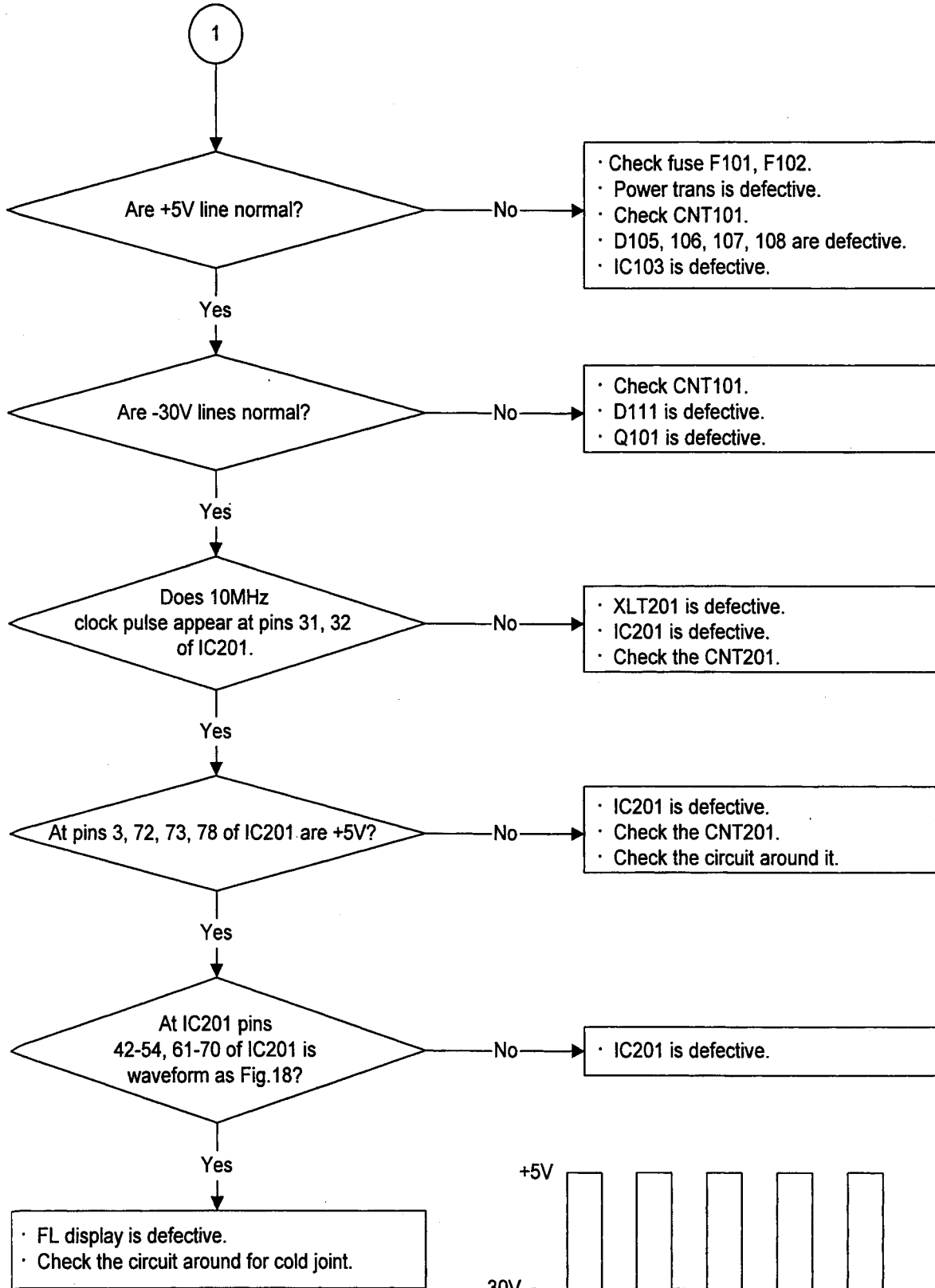
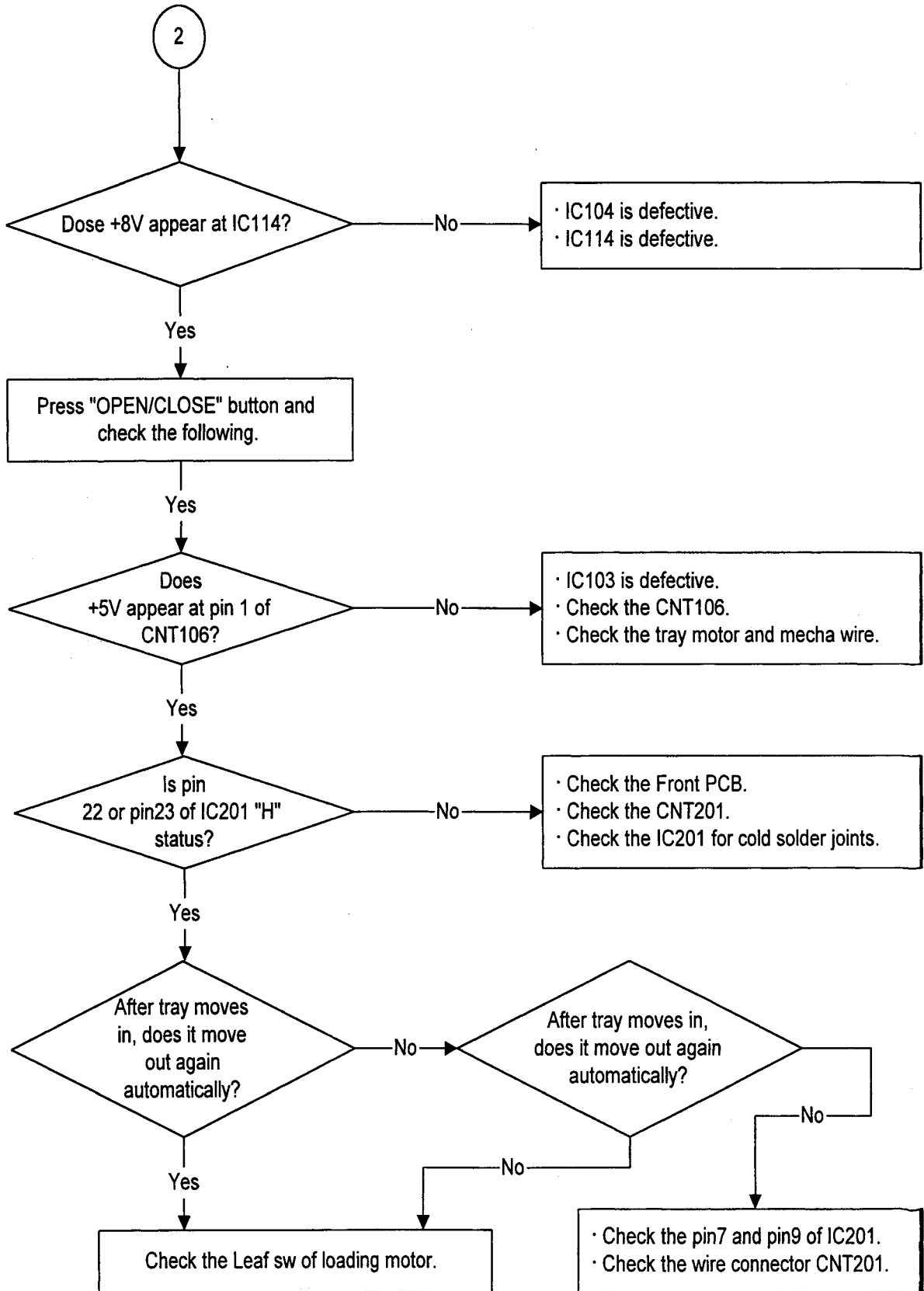


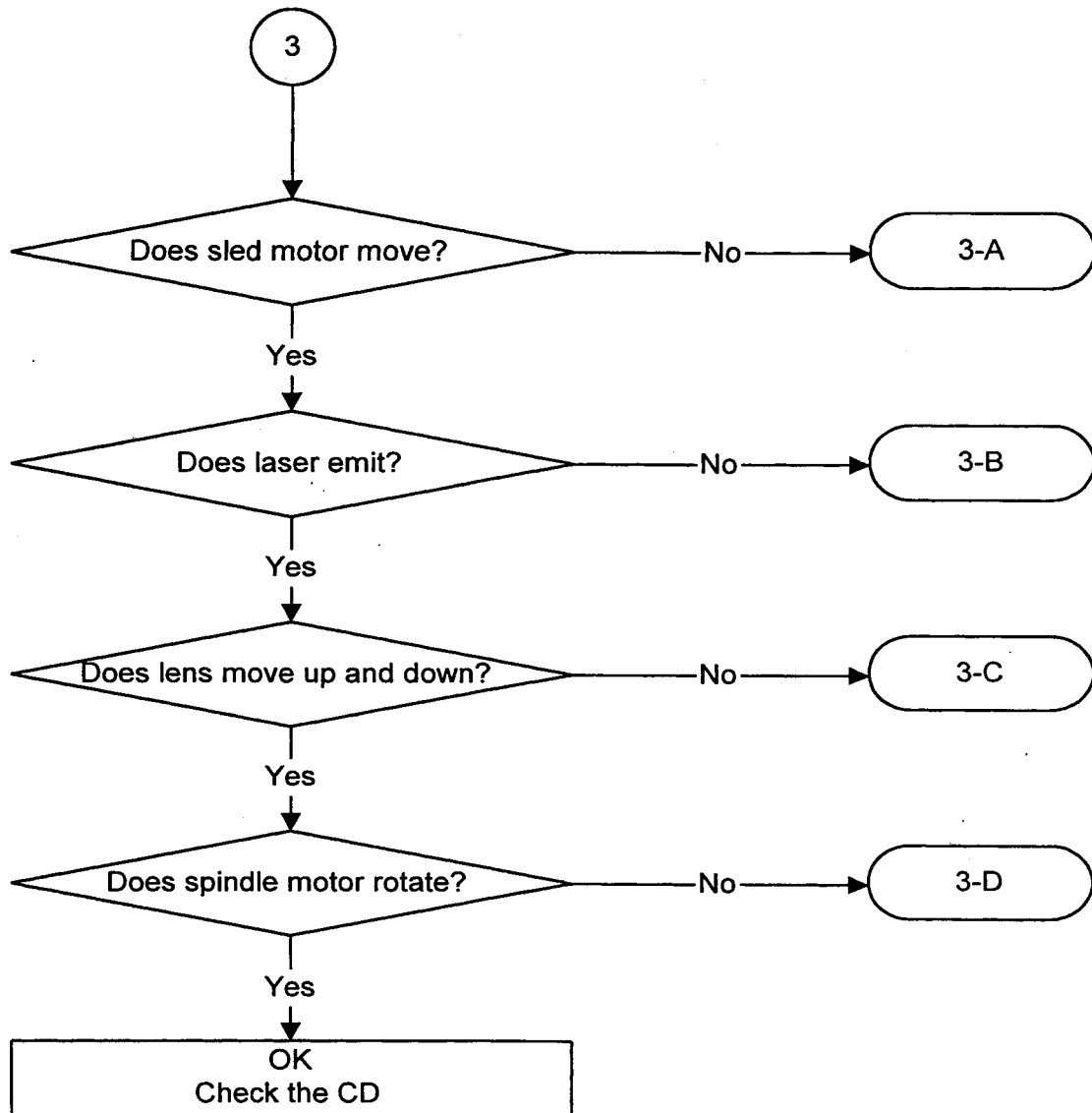
Fig. 18

[Repair item 2] Tray cannot be opened and closed by pressing "OPEN/CLOSE" button.

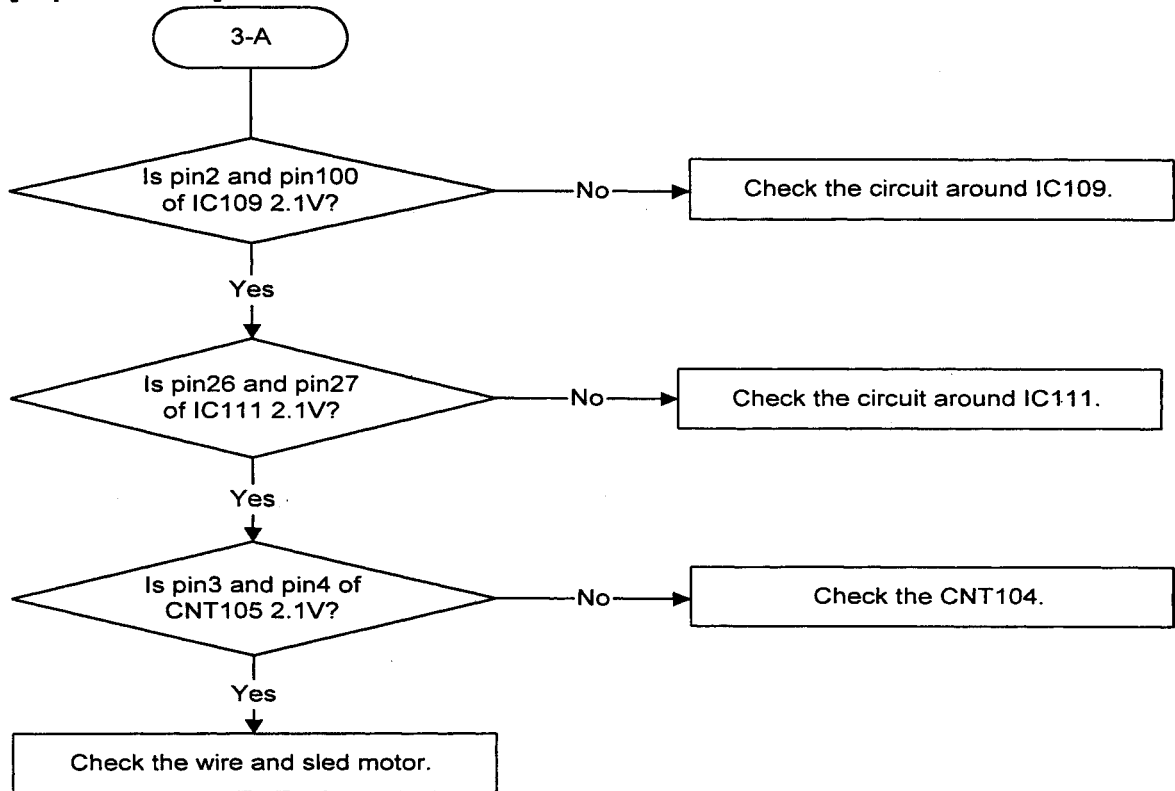




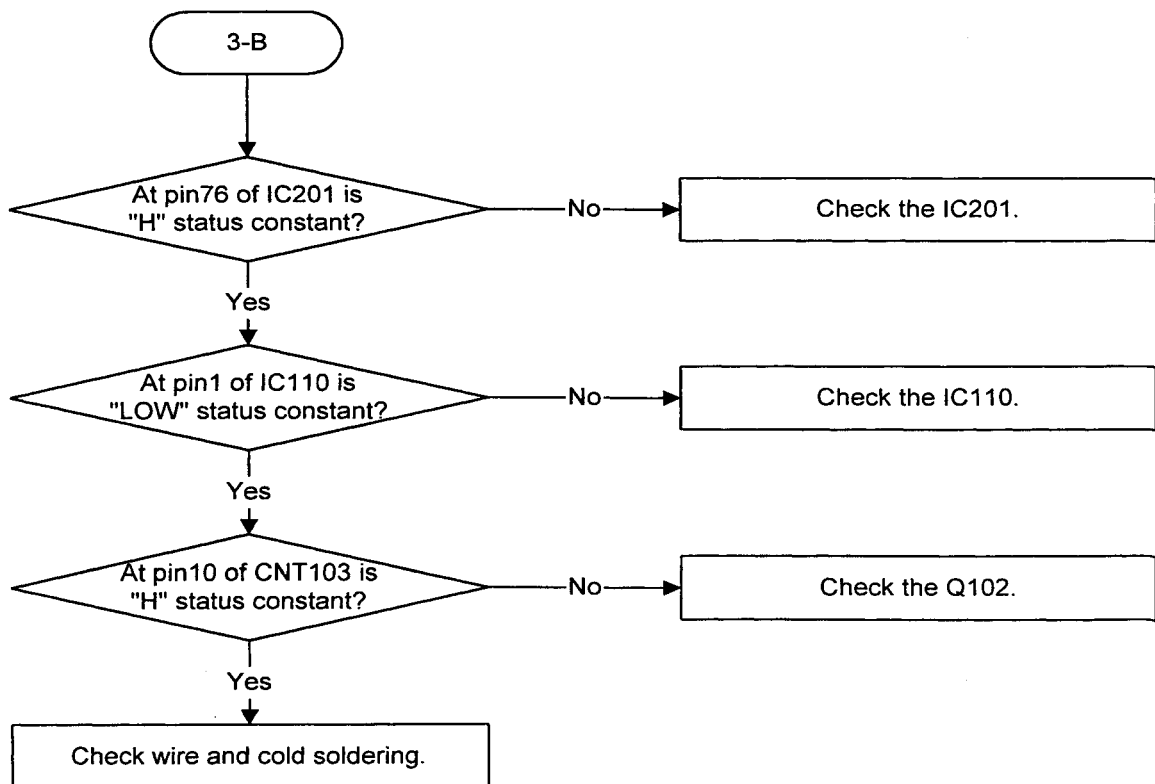
[Repair item 3] "0" is displayed of total playing time and track number.



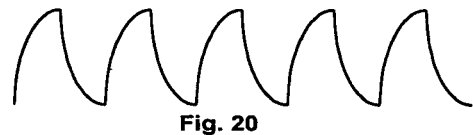
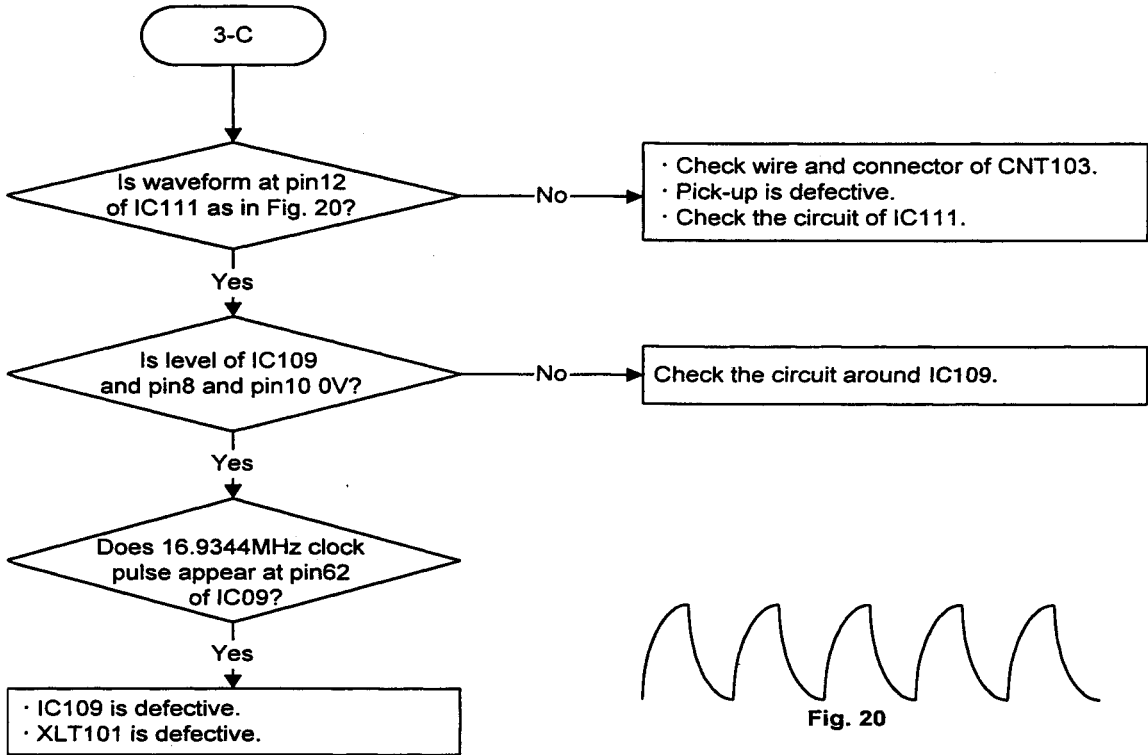
**[Repair item 3-A] Sled motor does not move.**



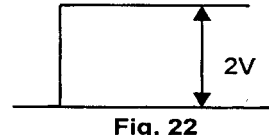
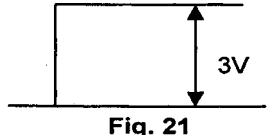
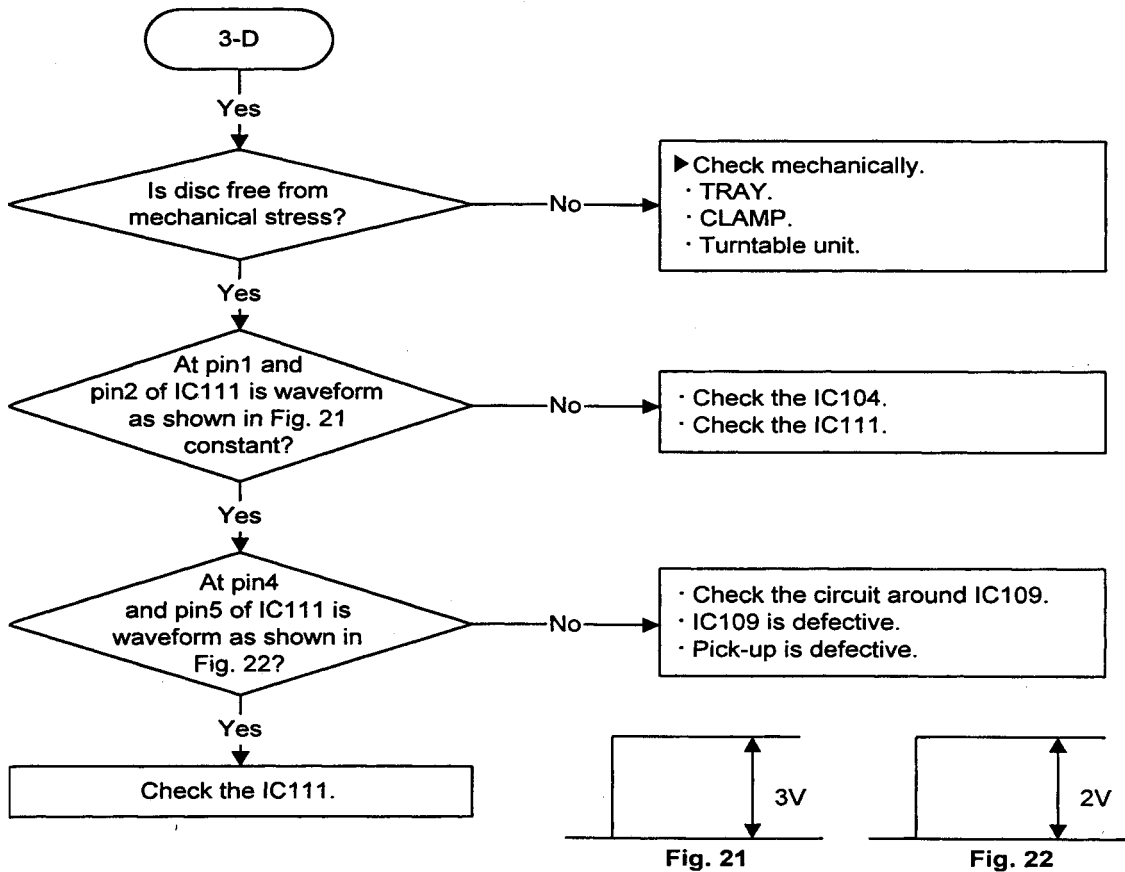
**[Repair item 3-B] Laser does not emit.**



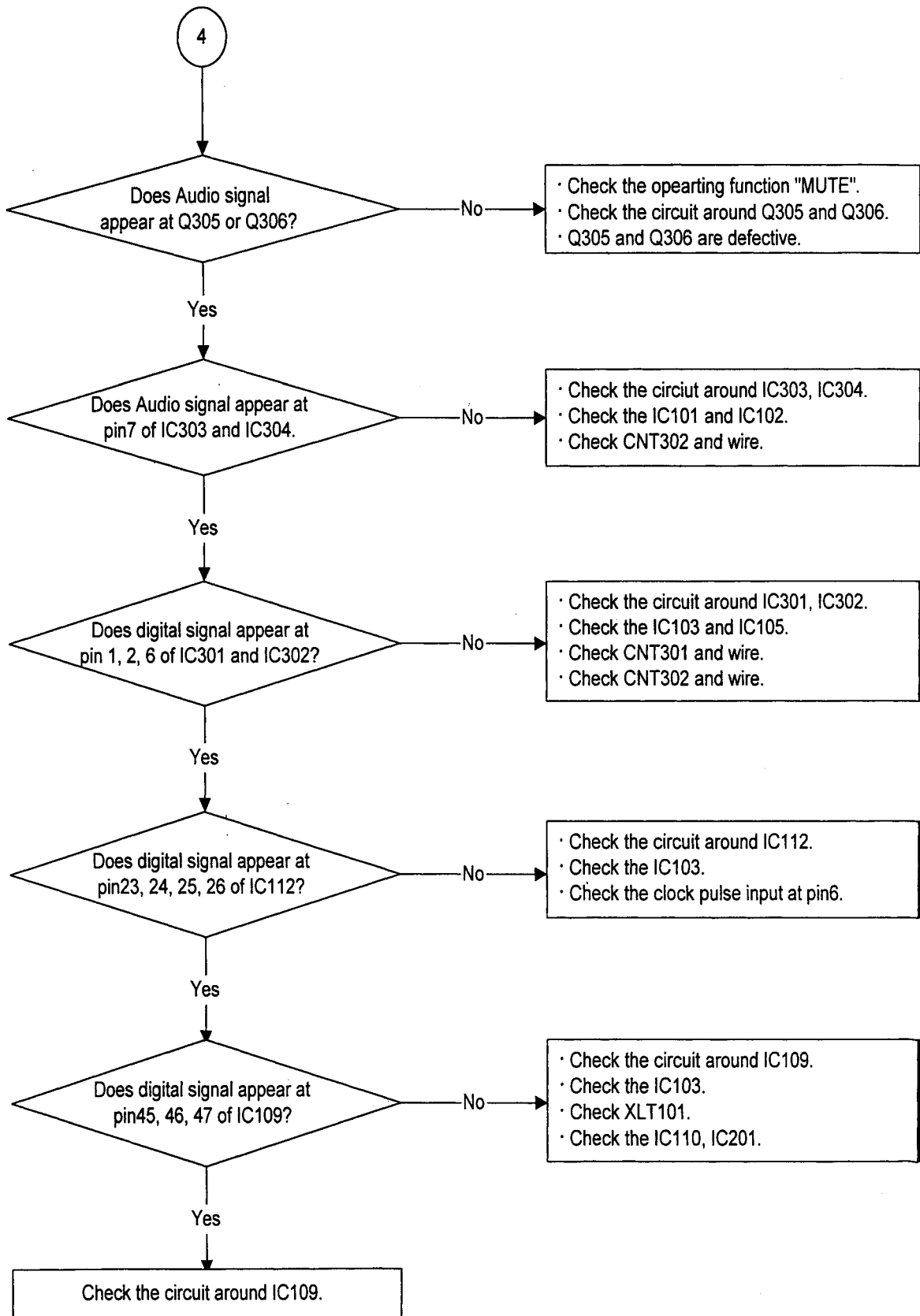
**[Repair item 3-C] Object lens of pickup unit does not move up and down.**



**[Repair item 3-D] Spindle motor does not rotate.**



**[Repair item 4] No sound signal.**



# MECHANICAL PARTS LIST

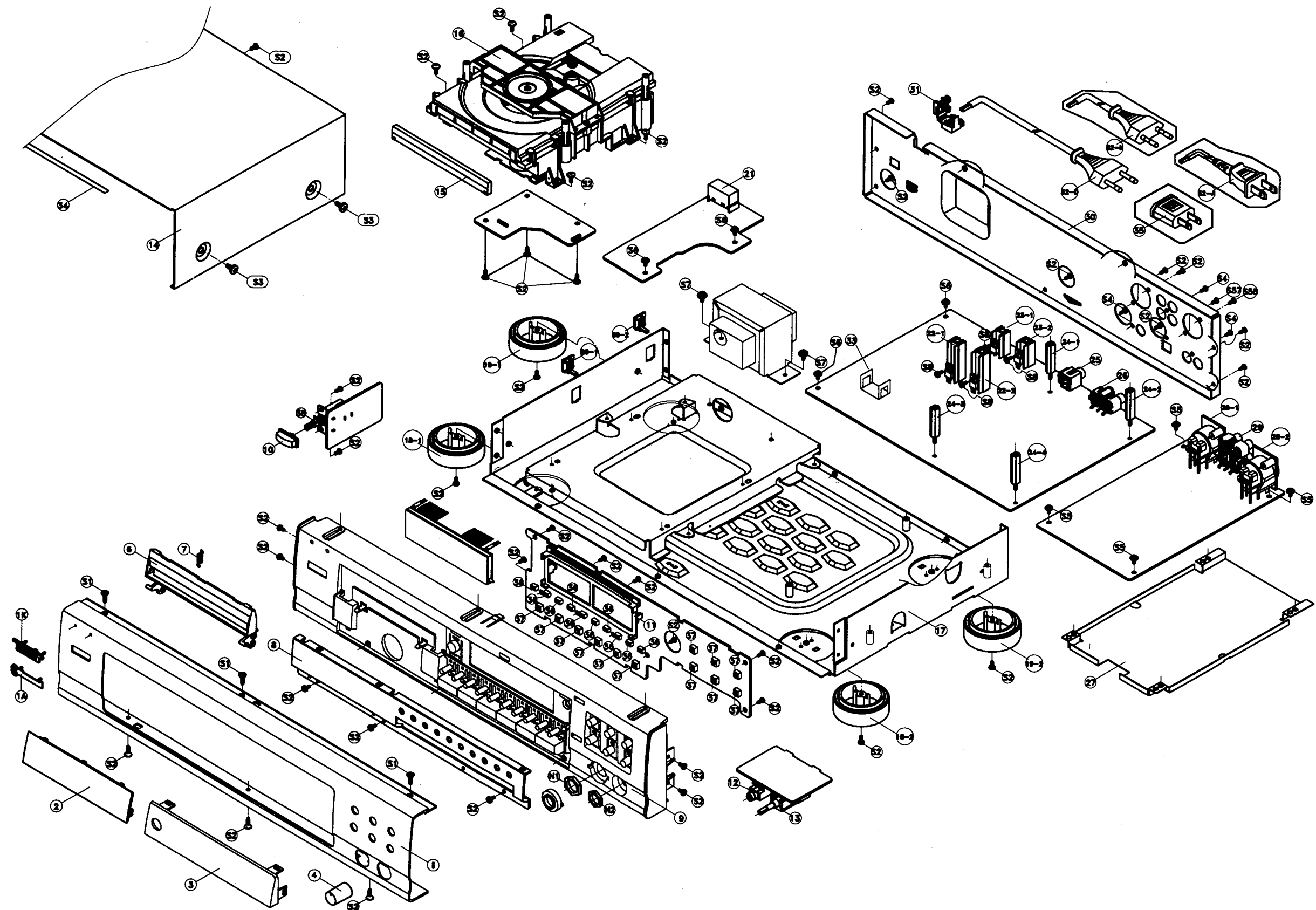
# NOTES

\* Parts without Parts No are not supplied.  
 \* Parts without version mentioned are common ones.

NO.	DESCRIPTION	PART NO.	QTY	VER.	NO.	DESCRIPTION	PART NO.	QTY	VER.
<b>PACKAGE</b>					36	SW, TACT	G180040560010	10	
	BOX CARTON	6017040830060	1	K	37	SW, TACT	G180000270010	13	
	BOX CARTON	6017040830080	1	A/D/PT	38	SW, PUSH	G000041590000	1	
	CUSHION POLY	6230042384010	1		<b>HARDWARE KIT</b>				
	FILM SOFT	6320040022011	1		S1	SCREW,+#2FTC 3X8B	B010530083F10	3	
	POLY BAG, 330*240*0.05	6330040062010	1		S2	SCREW, +2S 3*8B-TYPE BK/BH	B020030083B10	46	
<b>ACCESSORIES</b>					S3	SCREW, +3S 4*8 BK/BH	B020940081B10	4	
	INSTRUCTION MANUAL	5707046940010	1	K	S4	SCREW, +G.N.D	1507040996010	3	
	INSTRUCTION MANUAL	5707046940020	1	A	S5	SCREW, +M3*6ZNY/BH	B000030061B10	4	
	INSTRUCTION MANUAL	5707046940030	1	D	S6	SCREW, #B WPTT3X6Y	B020030061W10	4	
	INSTRUCTION MANUAL	5707046940040	1	PT	S7	SCREW, +3S 4*8 C-TYPE ZNY/BH	B020940081B10	2	
	WARRANTY CARD	5727040060010	1	A/PT	S8	SCREW, +2BTC3X8B	B010530083B10	4	
	WARRANTY CARD, NORSAT	5727041040020	1	A	<b>MISCELLANEOUS</b>				
	WARRANTY CARD	5727041570011	1	K	LOCKING TIE (WPM 13248)	4330040533010	1	A/D	
	WARRANTY CARD	5727041620020	1	D					
	COMPACT DISC DEMON	6510040030010	1	K					
	REMOCON	8300040660010	1	K					
	REMOCON	8300040660020	1	A/D/PT					
	BATTERY, 1.5V	G670011R50000	1	A/K					
	CORD RCA 2P	L063040400000	1	A/D/PT					
	CORD RCA 1P(W:800)	L063040780000	1	A/D/PT					
	CORD DIGI-LINK GOLD	L063040790000	1	K					
	CORD RCA	L063041240000	1	K					
<b>CABINET &amp; CHASSIS</b>									
1	BADGE, SHERWOOD	5637040371010	1	A/D/PT					
	BADGE, INKEL	5637040501010	1	K					
2	WINDOW DOOR	5077045202010	1						
3	WINDOW FL	5077045192010	1						
4	KNOB PHONE	5097049851010	1						
5	FRONT PANEL	3067046408020	1						
6	DOOR IN	5047042731010	1						
7	SPRING LID TRAY	3720040686010	1						
8	DECORATION PANEL	5127041088010	1						
9	FRONT BODY	3417041311010	1						
10	BUTTON POWER	509005399101A	1						
11	BUTTON HOLDER FL	5090058942R00	1						
12	JACK D6.5	G402040182330	1						
13	VR ROTARY MOTOR 16MM	C495121300100	1						
14	COVER TOP	3007041256010	1						
15	BASE DOOR	3400040511010	1						
16	MECHA ASSY, KSM213CCM	8038040000230	1						
17	MAIN CHASSIS	3208043696020	1						
18	FOOT PL (H.S)	4007040201010	2	A/D/PT					
	FOOT AL (GOLD)	4007041021010	2	K					
19	FOOT PL	4000040201010	2						
20	HOLDER PCB	4320044271010	2	ALL					
21	SELECTOR VOLTAGE	G060040870010	1						
22	HEATSINK REG TR	2120044358010	2	ALL					
23	HEATSINK REG TR	2120044338010	2	ALL					
24	CUSHION SUPPORTER(B)	4050047656010	4	ALL					
25	TER, RCA 1PIN	G600101270010	1	K					
		G600101260010	1	A/D/PT					
26	TER, RCA 2PIN	G601200500030	1	K					
		G601020050300	1	A/D/PT					
27	SHIELD COVER	3070041406010	1						
28	JACK DIN	G403000040010	2						
29	TER, RCA 4PIN	G60240045003A	1	K					
		G602040045000	1	A/D/PT					
30	BACK CHASSIS	3207056476010	1	K					
	BACK CHASSIS	3207056476020	1	A					
	BACK CHASSIS	3207056476030	1	PT					
	BACK CHASSIS	3207056476040	1	D					
31	STOPPER CORD	4380040162010	1						
32	CORD AC, 7A/125V	L061040361030	1	A					
	CORD AC, 3A/250V	L061040381030	1	K					
	CORD AC, 2.5A/250V	L061040411030	1	D/PT					
33	SHIELD HEATSINK IC	3070046266010	1						
34	SPONGE TAPE	4050043525010	1						
35	ADAPTER AC PLUG	L109283004100	1						

# EXPLODED VIEW

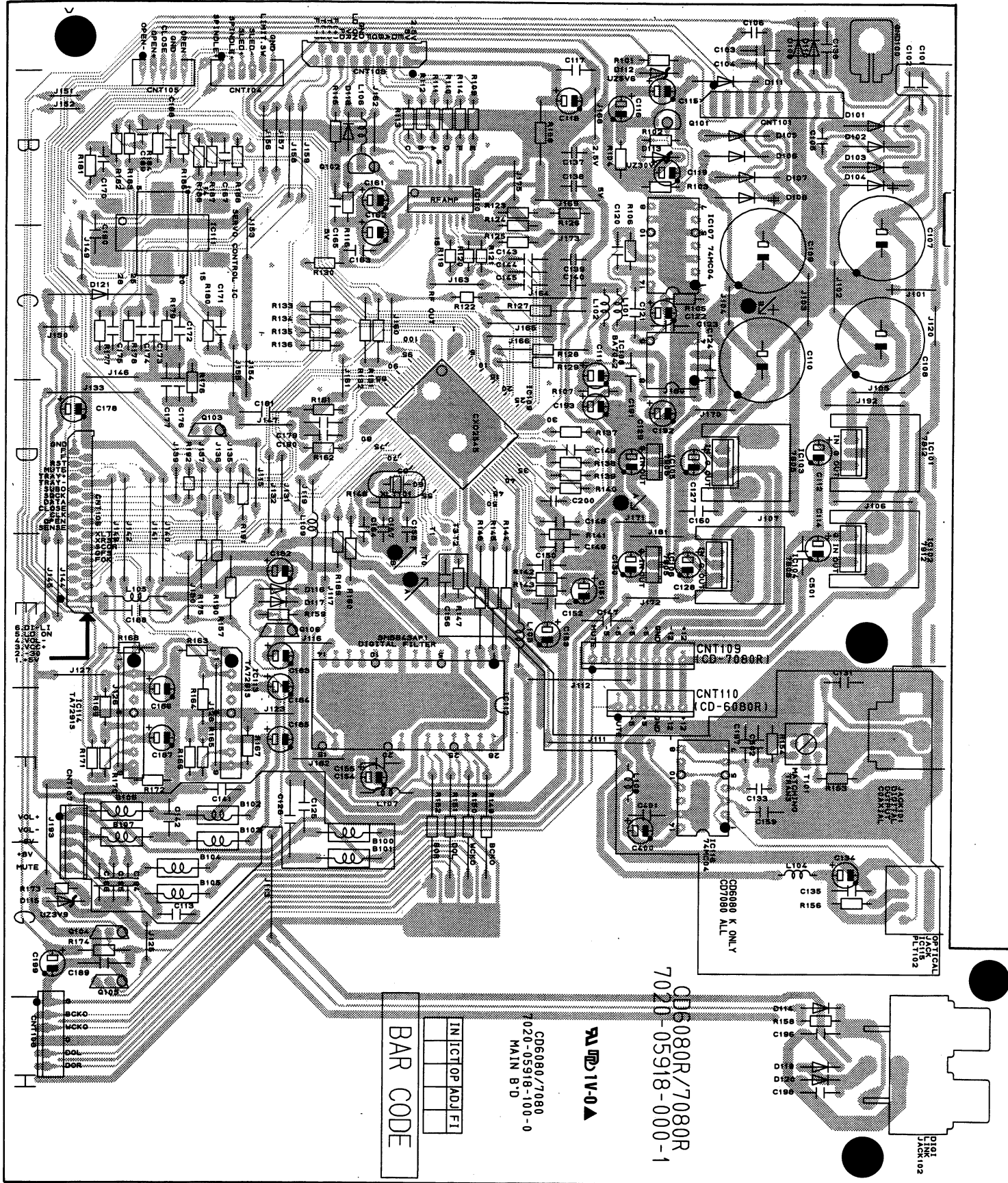
Model No. : CD-7080R/C/G



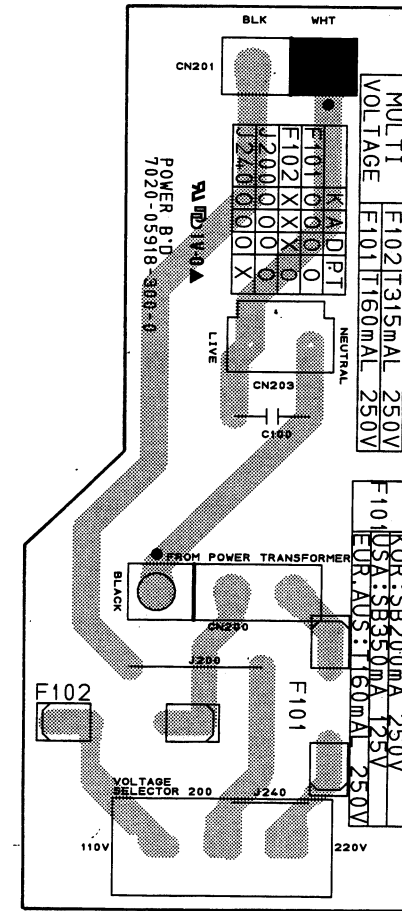
PRINTED CIRCUIT BOARDS

Model No. : CD-7080R/C/G

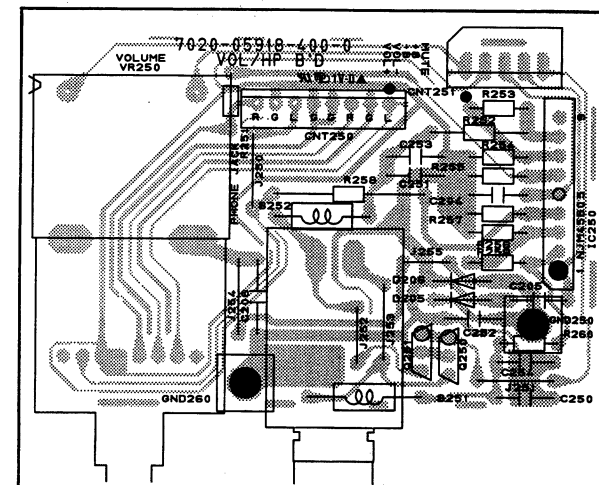
PCB1 (MAIN)



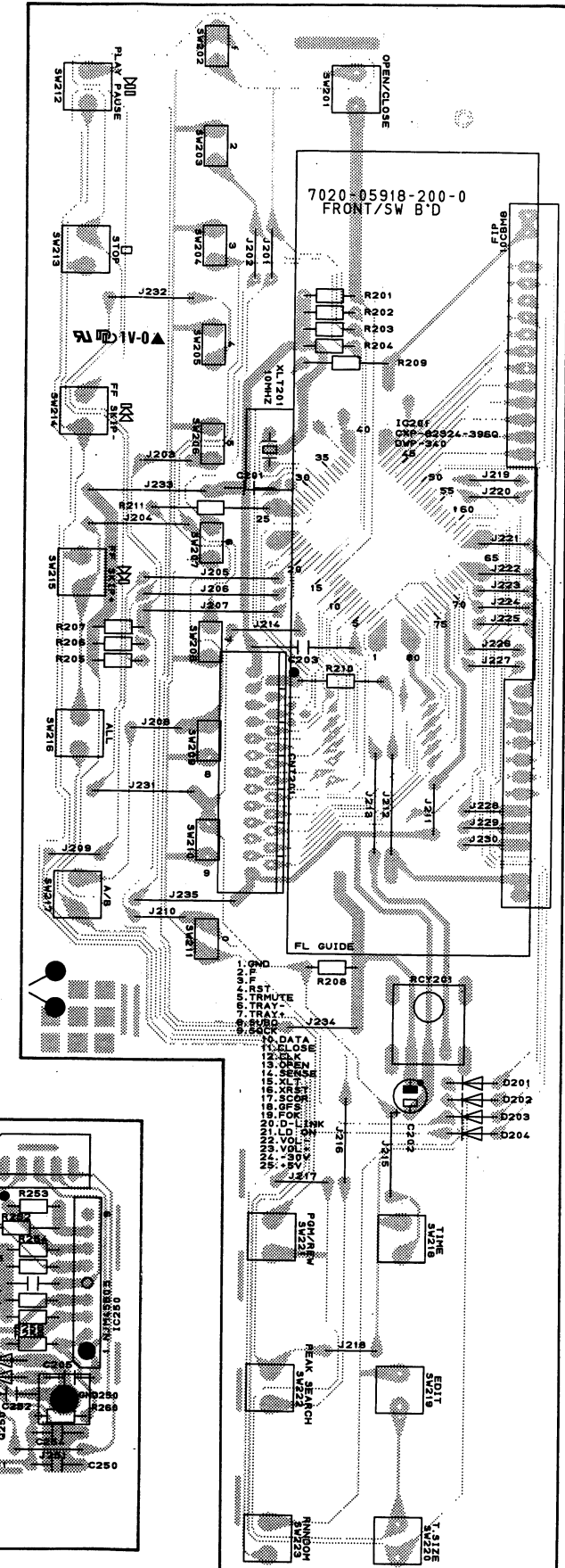
PCB1-2 (POWER)



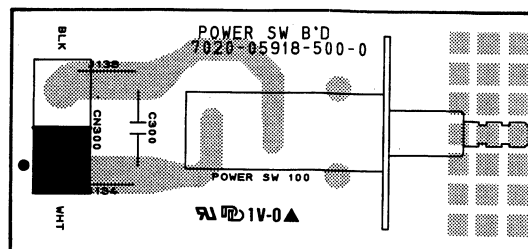
PCB1-3 (VOL HP)



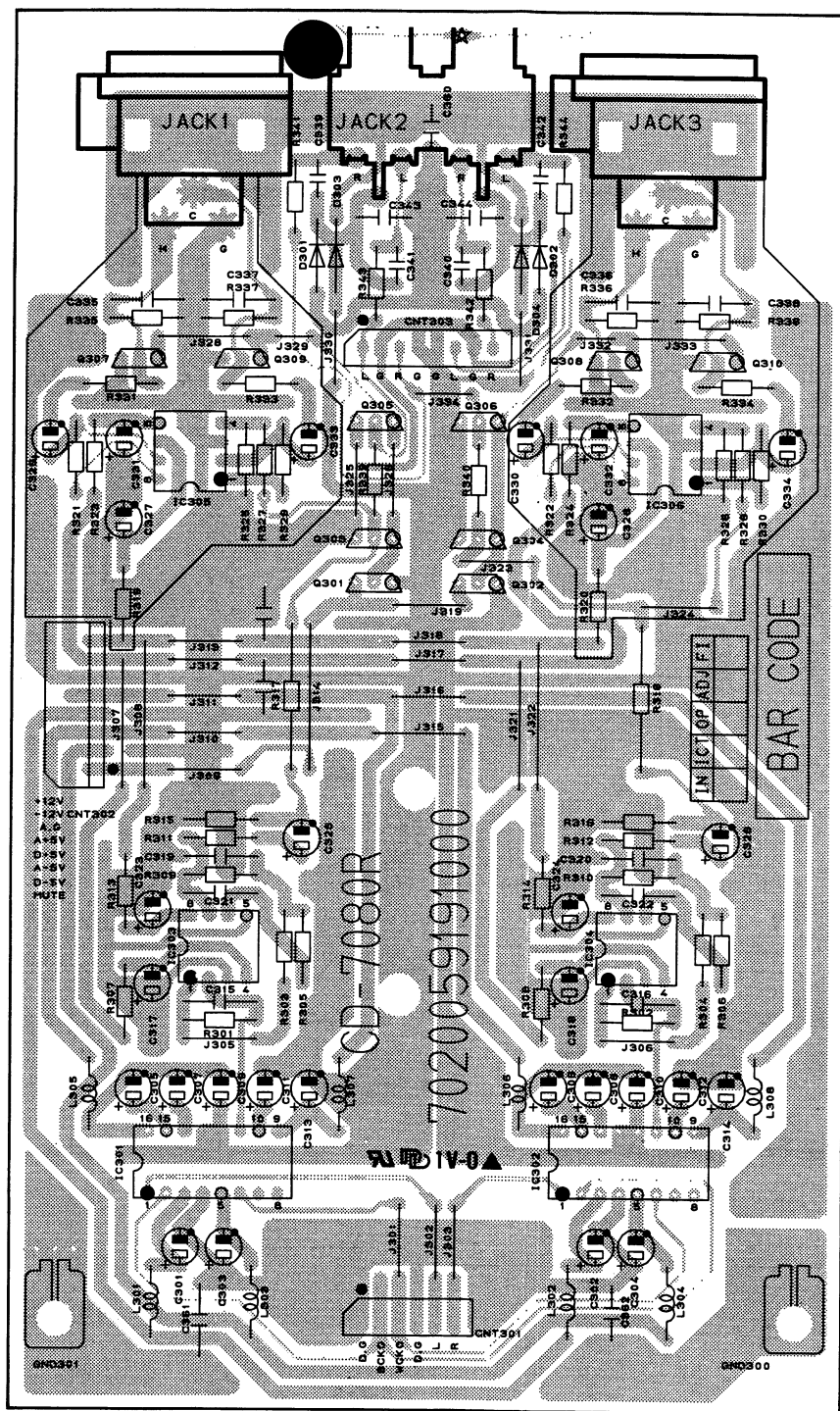
PCB1-1 (FRONT)



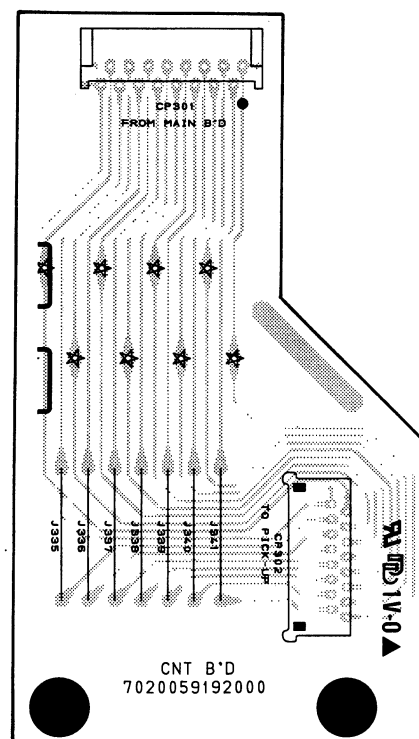
PCB1-4 (POWER SW)



PCB2 (DA)



PCB2-1 (CNT)



# ELECTRICAL PARTS LIST

\* Parts without Parts No are not supplied.

\* Parts without version mentioned are common ones.

REF NO.	DESCRIPTION	PART NO.	QTY	VER.
PCB1	ASSEMBLY P.C.BOARD MAIN	7028059180010		A
PCB1	ASSEMBLY P.C.BOARD MAIN	7028059180020		D
PCB1	ASSEMBLY P.C.BOARD MAIN	7028059180000		K
PCB1	ASSEMBLY P.C.BOARD MAIN	7028059180030		PT
<b>CAPACITORS</b>				
C101-C104	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	4
C105	FILM POLYESTER	0.1 uF	63V K D020104078060	1
C106	FILM POLYESTER	0.1 uF	63V K D020104078060	1
C107/C108	ELECT GE 85C	6800 uF	25V M D040682084100	2
C109/C110	ELECT GE 85C	4700 uF	25V M D0404720842100	2
C111	ELECT GE 85C	3.3 uF	50V M D0403R3087100	1
C112	ELECT GE 85C	1 uF	50V M D040010087100	1
C113	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C114	ELECT GE 85C	1 uF	50V M D040010087100	1
C115	ELECT GE 85C	22 uF	50V M D040220087100	1
C116	ELECT GE 85C	10 uF	50V M D040100087100	1
C117	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C118	ELECT GE 85C	220 uF	10V M D040221082050	1
C119	ELECT GE 85C	10 uF	50V M D040100087100	1
C120	CERAMIC T.C AXIAL	10 pF	50V J D001100067520	1
C121	CERAMIC HIK AXIAL	1000 pF	50V B D005102177530	1
C122	ELECT GE 85C	100 uF	10V M D040101082100	1
C123	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C124	CERAMIC T.C AXIAL	15 pF	50V J D001150067530	1
C125	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C126	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C127-C130	ELECT GE 85C	1 uF	50V M D040010087100	4
C131	CERAMIC T.C AXIAL	33 pF	50V J D001330067530	1
C133	FILM POLYESTER	0.47 uF	63V K D02047078060	1
C134	ELECT GE 85C	100 uF	10V M D040101082100	1
C135/C136	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	2
C137-C140	FILM POLYESTER	0.68 uF	63V K D020684078060	4
C141	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C142	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C143	CERAMIC HIK AXIAL	470 pF	50V K D005471277520	1
C144	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C145	CERAMIC HIK AXIAL	470 pF	50V K D005471277520	1
C146	CERAMIC HIK AXIAL	0.047 uF	50V Z D005473597520	1
C147	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C148	CERAMIC HIK AXIAL	3300 pF	16V X D00533277530	1
C149	CERAMIC T.C AXIAL	100 pF	50V J D001101077530	1
C150	CERAMIC HIK AXIAL	10000 pF	16V Y D00510377530	1
C151	ELECT GE 85C	0.1 uF	50V M D040R10087070	1
C152	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C153	ELECT GE 85C	220 uF	10V M D040221082050	1
C154	ELECT GE 85C	100 uF	10V M D040101082100	1
C155	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C156	CERAMIC HIK AXIAL	22 pF	50V J D005220067530	1
C157/C158	CERAMIC T.C DISC	27 pF	50V J D000270167070	2
C159	CERAMIC HIK AXIAL	470 pF	50V K D005471277520	1
C160	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C161	ELECT GE 85C	47 uF	16V M D040470083100	1
C162	ELECT GE 85C	220 uF	10V M D040221082050	1
C163	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C164	CERAMIC T.C DISC	56 pF	50V J D044560067060	1
C165/C166	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	2
C167/C168	CERAMIC HIK AXIAL	680 pF	50V Z D005681177520	2
C169	FILM POLYESTER	0.002 uF	100V J D02015206C060	1
C170	FILM POLYESTER	0.007 uF	100V J D02068206C060	1
C171/C172	CERAMIC HIK AXIAL	680 pF	50V Z D005681177520	2
C173	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C174	CERAMIC HIK AXIAL	0.022 uF	25V Z D005223594520	1
C175	CERAMIC HIK AXIAL	0.022 uF	25V Z D005223594520	1
C176	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C177	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C178	ELECT GE 85C	470 uF	10V E D040471082100	1
C179-C181	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	5
C182	ELECT GE 85C	3.3 uF	50V M D0403R3087100	1
C183	ELECT GE 85C	1 uF	50V M D040010087080	1
C184	ELECT GE 85C	100 uF	10V M D040101082100	1
C185	ELECT GE 85C	100 uF	10V M D040101082100	1
C186	ELECT GE 85C	100 uF	10V M D040101082100	1
C187	ELECT GE 85C	100 uF	10V M D040101082100	1
C188-C191	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	4
C192	ELECT GE 85C	100 uF	10V M D040101082100	1
C193	ELECT GE 85C	10 uF	50V M D040100087100	1
C194/C195	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	2
C196	CERAMIC T.C AXIAL	33 pF	50V J D001330067530	1
C197	CERAMIC HIK AXIAL	0.001 uF	50V K D005102077530	1
C198	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C198	ELECT GE 85C	100 uF	10V M D040101082070	1
C199	ELECT GE 85C	0.1 uF	25V M D040101084100	1
C199	ELECT GE 85C	100 uF	25V M D040101084060	1
C200	FILM POLYESTER	0.002 uF	100V J D02015206C060	1
C201	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C203-C205	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	3
C206	CERAMIC HIK AXIAL	22 pF	50V J D005220067530	1
C250-C254	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	5
C400	ELECT GE 85C	100 uF	10V M D040101082100	1
C401	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C501	CERAMIC HIK AXIAL	0.1 uF	50V Z D005104597530	1
C502	CERAMIC T.C AXIAL	47 pF	50V J D001470067530	1

REF NO.	DESCRIPTION	PART NO.	QTY	VER.
B100-B107	COILS			
B251/B252	BEAD, COIL 3580	7610010030000	8	
	BEAD, COIL 3580	7610010030000	2	
<b>CONNECTORS</b>				
CNT101	CN, WAFER 2.5MM (10P)	L102526701000	1	
CNT103	CN, FPC 1.25MM (16P)	L131837001600	1	
CNT104	CN, WAFER 2.0MM (6P)	L101220060000	1	
CNT105	CN, WAFER 2.0MM (5P)	L101220050000	1	
CNT106	CN, FPC 1.25MM (25P)	L131621602500	1	
CNT107	CN, WIRE 5P	L000101050020	1	
CNT107	CN, WIRE 5P	L000231052610	1	D
CNT108	CN, WIRE FLAT(2651)	L352106083100	1	
CNT108	CN, WIRE 6P	L000181062610	1	D
CNT109	CN, WIRE FLAT(2651)	L352108103100	1	
CNT109	CN, WIRE 8P	L000171082610	1	D
<b>DIODES</b>				
D101-D108	1N4003, RECTIFIER	K040400300520	8	
D109/D110	1N4148, SWITCHING	K000414801520	2	
D111	1N4003, RECTIFIER	K040400300520	1	
D112	ZENER, 5.6V	K06005R614520	1	
D113	ZENER, 30V	K060300034520	1	
D114	1N4148, SWITCHING	K000414801520	1	
D115	ZENER, 3.9V	K06003R904520	1	
D116-D120	1N4148, SWITCHING	K000414801520	5	
D121	1N4003, RECTIFIER	K040400300520	1	
<b>INTEGRATED CIRCUITS</b>				
IC101	KIA78012AP (KIA7812P)	J126780120000	1	
IC102	KA7912	J126791200050	1	
IC103	KA7805	J126780500270	1	
IC104	KA7808	J126780800060	1	
IC105	KA7908	J126790800000	1	
IC106	KIA7905PI	J126790500070	1	
IC107	MC74HCU04	J040740400170	1	
IC108	BA7042	J120704200010	1	
IC109	CXD2545Q, DSP	J031254500010	1	
IC110	CXA1821, RF AMP	J030182100010	1	
IC111	BA6297AFP	J127629700000	1	
IC112	SM5843AP1, DIGITAL FILTER	J047584310010	1	
IC113	TA7291S	J127729100000	1	
IC114	TA7291S	J127729100000	1	
IC115	PLT102, PHOTO SENSOR	K61102000000	1	
IC116	MC74HCU04	J040740400170	1	
<b>COILS</b>				
L101-L105	COIL, FILTER-INDUCTOR 100uH	D330101001020	5	
L106	COIL, FILTER-INDUCTOR 10uH	D330100001020	1	
L107-L109	COIL, FILTER-INDUCTOR 100uH	D330101001020	3	
<b>TRANSISTORS</b>				
Q101	MPSA56, PNP	J5005600Y0050	1	
Q102	KTA1266Y, PNP	J5001266Y0050	1	
Q103	DTC323TS, NPN	J602323TS0050	1	
Q104	DTC114YS, NPN	J6020114Y0050	1	
Q105	DTA114YS, PNP	J6000114Y0010	1	
Q106	DTC114YS, NPN	J6020114Y0050	1	
<b>RESISTORS</b>				
R101	CARBON FILM	12 kohm 1/5W J C00001236P520	1	
R102	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R103	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R104	CARBON FILM	6.8 kohm 1/5W J C00006826P520	1	
R105	CARBON FILM	22 kohm 1/5W J C00002236P520	1	
R106	CARBON FILM	100 kohm 1/5W J C00001046P520	1	
R107	METAL FILM	680 ohm 1/5W J C06006816P520	1	
R108	METAL FILM	10 ohm 1/5W J C06001006P520	1	
R109	CARBON FILM	150 kohm 1/5W J C00001546P520	1	
R110-R113	METAL FILM	3.3 kohm 1/5W J C06003326P520	4	
R114	CARBON FILM	150 kohm 1/5W J C00001546P520	1	
R115	METAL FILM	100 ohm 1/5W J C06001016P520	1	
R116	METAL FILM	22 ohm 1/5W J C06002206P520	1	
R119	CARBON FILM	15 kohm 1/5W J C00001536P520	1	
R120	CARBON FILM	100 kohm 1/5W J C00001046P520	1	
R121	CARBON FILM	15 kohm 1/5W J C00001536P520	1	
R122	CARBON FILM	100 kohm 1/5W J C00001046P520	1	
R123	CARBON FILM	15 kohm 1/5W J C00001536P520	1	
R124	CARBON FILM	12 kohm 1/5W J C00001236P520	1	
R125	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R126	CARBON FILM	15 kohm 1/5W J C00001536P520	1	
R127	CARBON FILM	33 kohm 1/5W J C00003336P520	1	
R128	METAL FILM	330 ohm 1/5W J C06003316P520	1	
R129	METAL FILM	4.7 kohm 1/5W J C06004726P520	1	
R130	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R131	CARBON FILM	33 kohm 1/5W J C00003336P520	1	
R132	CARBON FILM	12 kohm 1/5W J C00001236P520	1	
R133-R136	CARBON FILM	15 kohm 1/5W J C00001536P520	4	
R137	METAL FILM	100 ohm 1/5W J C06001016P520	1	
R138	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R139/R140	METAL FILM	3.3 kohm 1/5W J C06003326P520	2	



REF NO.	DESCRIPTION	PART NO.	Q'TY	VER.
R147	METAL FILM	180 ohm 1/5W J C06001816P520	1	
R148	CARBON FILM	1 kohm 1/5W J C00001056P520	1	
R149-R152	METAL FILM	330 ohm 1/5W J C06003316P520	4	
R153	METAL FILM	75 ohm 1/5W J C06007506P520	1	
R154	METAL FILM	15 ohm 1/5W J C06001506P520	1	
R156	CARBON FILM	8.2 kohm 1/5W J C00008226P520	1	
R157	CARBON FILM	220 kohm 1/5W J C00002248P520	1	
R158	CARBON FILM	22 kohm 1/5W J C00002236P520	1	
R159	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R160	METAL FILM	680 ohm 1/5W J C06006816P520	1	
R161	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R162	METAL FILM	1 kohm 1/5W J C06001026P520	1	
R163	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R164	METAL FILM	1 ohm 1/5W J C06000106P520	1	
R165	METAL FILM	2.7 kohm 1/5W J C06002726P520	1	
R166	CARBON FILM	6.8 kohm 1/5W J C00006826P520	1	
R167	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R168	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R169	METAL FILM	1 ohm 1/5W J C06000106P520	1	
R170	METAL FILM	2.7 kohm 1/5W J C06002726P520	1	
R171	CARBON FILM	6.8 kohm 1/5W J C00006826P520	1	
R172/R173	CARBON FILM	47 kohm 1/5W J C00004736P520	2	
R174	CARBON FILM	5.6 kohm 1/5W J C00005626P520	1	
R175	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R176	METAL FILM	4.7 ohm 1/5W J C06004706P520	1	
R177-R180	CARBON FILM	7.5 kohm 1/5W J C00007526P520	4	
R181	CARBON FILM	68 kohm 1/5W J C00006836P520	1	
R182	CARBON FILM	22 kohm 1/5W J C00002236P520	1	
R183/R184	CARBON FILM	68 kohm 1/5W J C00006836P520	2	
R185	CARBON FILM	7.5 kohm 1/5W J C00007526P520	1	
R186	CARBON FILM	15 kohm 1/5W J C00001536P520	1	
R187	CARBON FILM	8.2 kohm 1/5W J C00008226P520	1	
R188	CARBON FILM	15 kohm 1/5W J C00001536P520	1	
R189	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R190	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R191	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R192	CARBON FILM	10 kohm 1/5W J C00001036P520	1	
R201	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R202	CARBON FILM	47 kohm 1/5W J C00004736P520	1	
R252	METAL FILM	22 ohm 1/5W J C06002206P520	1	
R253	METAL FILM	2.7 kohm 1/5W J C06002726P520	1	
R254	METAL FILM	2.7 kohm 1/5W J C06002726P520	1	
R256	METAL FILM	2.7 kohm 1/5W J C06002726P520	1	
R259	METAL FILM	2.7 kohm 1/5W J C06002726P520	1	
R260	METAL FILM	22 ohm 1/5W J C06002206P520	1	
GND100	MISCELLANEOUS			
T101	GND PLATE	3790040876010	1	
WIRE A<->A	COIL, TRANS MATCHING	D300010250000	1	
WIRE B<->B	WIRE 1P	L046241008440	1	
XL101	WIRE 1P	L046241012440	1	
XL101	CRYSTAL, 16.9344MHZ	E800169344460	1	
<b>1-1 ASSEMBLY P.C.BOARD FRONT</b>				
<b>CAPACITORS</b>				
C201	CERAMIC HIK AXIAL	0.1 uF 50V Z D005104597530	1	
C202	ELECT GE 85C	100 uF 10V M D040101082070	1	
C203	CERAMIC HIK AXIAL	0.1 uF 50V Z D005104597530	1	
<b>CONNECTOR</b>				
CNT201	CN.FPC 1.25MM (25P)	L131525752500	1	
<b>DIODES</b>				
D201-D204	1N4148, SWITCHING	K000414801520	4	
<b>INTEGRATED CIRCUIT</b>				
IC201	CXP82324-396Q, CPU(DWP340)	J020823243960	1	
<b>RESISTORS</b>				
R201-R208	CARBON FILM	47 Kohm 1/5W J C00004736P520	8	
R209/R210	METAL FILM	1 ohm 1/5W J C06000106P520	2	
R211	CARBON FILM	47 Kohm 1/5W J C00004736P520	1	
<b>SWITCHES</b>				
SW201	TACT SW,SKHV10920A	G180000270010	1	
SW202-SW211	TACT SW, EVQ-PJJ-05T	G180040560010	10	
SW212-SW223	TACT SW,SKHV10920A	G180000270010	12	
<b>MISCELLANEOUS</b>				
XL101	RESONATOR, CST110.0MTW	E830100000050	1	
FIP	DISPLAY, FIP 10CBM8	K530001180010	1	
RCY201	PHOTO SENSOR, CRV1G352-00B	K611135200010	1	
<b>1-2 ASSEMBLY P.C.BOARD POWER</b>				
<b>CONNECTOR</b>				
CN200	CN.WAFER, 3P	L103030000000	1	
CN201	CN.WAFER, 2P	L103020000000	1	
CN203	CN.WIRE 3.96MM	L104020040000	1	
<b>FUSES</b>				
F101	FUSE, SB 350MA/125V	G650351121150	1	A
F101	FUSE, SB 200MA/250V	G650201251150	1	DOM
F101	FUSE, T160MA/250V	G650161251160	1	D/PT
F102	FUSE, T315MA/250V	G650311251160	1	PT

REF NO.	DESCRIPTION	PART NO.	Q'TY	VER.
<b>FUSE CLIPS</b>				
FC101A	FUSE CLIP	G645000040010	1	
FC102A	FUSE CLIP	G645000040010	1	
<b>POWER TRANSISTORS</b>				
TRANS	POWER TRANS	8200281017770	1	A
TRANS	POWER TRANS	8200281017970	1	D
TRANS	POWER TRANS	8200281017870	1	DOM
TRANS	POWER TRANS	8200281018070	1	PT
<b>1-3 ASSEMBLY P.C.BOARD VOL HP</b>				
<b>CAPACITORS</b>				
C204/C205	CERAMIC HIK AXIAL	0.1 uF 50V Z D005104597530	2	
C206	CERAMIC T.C AXIAL	22 pF 50V J D001220067520	1	
C250-C254	CERAMIC HIK AXIAL	0.1 uF 50V Z D005104597530	4	
<b>COILS</b>				
B251/B252	BEAD, COIL	7610010030000	2	
<b>CONNECTORS</b>				
CNT250	CN.WIRE 0822 #26 2.5	L033599710160	1	
CNT250	CN.WIRE 8P	L000221082610	1	D
CNT251	CN.WAFER 2.5MM (5P)	L102526805010	1	
<b>DIODES</b>				
D205/D206	1N4148, SWITCHING	K000414801520	2	
<b>INTEGRATED CIRCUIT</b>				
IC250	NJM4560S, OP	J121456000000	1	
<b>TRANSISTORS</b>				
Q250/Q251	DTC323TS, NPN	J602323TS0050	2	
<b>RESISTORS</b>				
R251	CARBON FILM	18 Kohm 1/5W J C00001836P520	1	
R252	METAL FILM	22 ohm 1/5W J C06002206P520	1	
R253/R254	METAL FILM	2.7 Kohm 1/5W J C06002726P520	2	
R255	CARBON FILM	18 Kohm 1/5W J C00001836P520	1	
R256	METAL FILM	2.7 Kohm 1/5W J C06002726P520	1	
R257/R258	CARBON FILM	18 Kohm 1/5W J C00001836P520	2	
R259	METAL FILM	2.7 Kohm 1/5W J C06002726P520	1	
R260	METAL FILM	22 ohm 1/5W J C06002206P520	1	
<b>MISCELLANEOUS</b>				
GND250	WIRE, 16BK1007#18	L033599710160	1	
GND260	WIRE, 16BK1007#18	L033599710160	1	
PHONE JACK	JACK,D6.5	G402040182330	1	
VR250	MOTOR VR (10KB)	C495121300100	1	
<b>1-4 ASSEMBLY P.C.BOARD POWER SW</b>				
C100	CERAMIC AC(SAFETY), DE7150-487F	D00847208K03	1	
C300	CERAMIC AC(SAFETY), DE7150-487F	D00847208K03	1	
CN300	CN.WIRE 120MM (2P)	L001121022200	1	
SW101.	PUSH SW, ESB-8236V	G000041590000	1	
<b>PCB2 ASSEMBLY P.C.BOARD DA 7028059200010 AD</b>				
<b>PCB2 ASSEMBLY P.C.BOARD DA 7028059200000 K</b>				
<b>PCB2 ASSEMBLY P.C.BOARD DA 7028059200010 FT INDO</b>				
<b>CAPACITORS</b>				
C301-C314	ELECT GE 85C	100 uF 10V M D040101082100	14	
C315/C316	CERAMIC HIK AXIAL	220 pF 50V K D005221277520	2	
C317/C318	ELECT GE 85C	100 uF 16V M D040101083100	2	
C319/C320	CERAMIC HIK AXIAL	4700 pF 16V X D005472773530	2	
C321/C322	CERAMIC T.C AXIAL	100 pF 50V J D001101077530	2	
C323/C324	ELECT GE 85C	100 uF 16V M D040101083100	2	
C325/C326	ELECT GE 85C	22 uF 16V M D040220083100	2	
C327/C328	ELECT GE 85C	100 uF 16V M D040101083100	2	K
C329/C330	ELECT GE 85C	47 uF 16V M D04070083100	2	K
C331/C332	ELECT GE 85C	100 uF 16V M D040101083100	2	K
C333/C334	ELECT GE 85C	47 uF 16V M D040470083100	2	K
C335-C338	CERAMIC HIK AXIAL	1000 pF 50V K D005102177530	4	K
C339-C342	FILM POLYESTER	0.04 uF 100V J D02039206C060	4	
C343/C344	CERAMIC HIK AXIAL	0.1 uF 50V Z D005104597530	2	
C360	CERAMIC HIK AXIAL	0.047 uF 50V Z D005473597520	1	
C361/C362	CERAMIC HIK AXIAL	22 pF 50V C D005220067530	2	
<b>CONNECTORS</b>				
CNT301	CN.WAFER 2.5MM (6P)	L102526700600	1	
CNT302	CN.WAFER 2.5MM (8P)	L102526808010	1	
CNT303	CN.WAFER 2.5MM (8P)	L102526700800	1	
<b>DIODES</b>				
D301-D304	1SS133T, SWITCHING	K000013300520	4	
<b>INTEGRATED CIRCUITS</b>				
IC301/IC302	PCM1702, D/A CONVER	J042170200010	2	
IC303/IC304	LM833, OP	J121083300010	2	
IC305/IC306	SSM2142P, BALANCED LINE DRIVE	J081214200000	2	K
<b>COILS</b>				
L301-L308	COIL, INDUCTOR 100UH	D330101001020	8	
<b>TRANSISTORS</b>				
Q301/Q302	DTA114YS, PNP	J6000114Y0010	2	

REF NO.	DESCRIPTION	PART NO.	Q'TY	VER.
Q303-Q306	DTC323TS, NPN	J602323TS0050	4	
Q307-Q310	DTC323TS, NPN	J602323TS0050	4	K
<b>RESISTORS</b>				
R301-R304	CARBON FILM	2.7 Kohm 1/4W J C000027263520	4	
R305/R306	CARBON FILM	1.5 Kohm 1/4W J C000015263520	2	
R307/R308	CARBON FILM	22 ohm 1/4W J C000022063520	2	
R309/R310	CARBON FILM	2.7 Kohm 1/4W J C000027263520	2	
R311/R312	CARBON FILM	100 ohm 1/4W J C000010163520	2	
R313/R314	CARBON FILM	22 ohm 1/4W J C000022063520	2	
R315/R316	CARBON FILM	10 Kohm 1/4W J C000010363520	2	
R317/R318	CARBON FILM	100 ohm 1/4W J C000010163520	2	
R319/R320	CARBON FILM	4.7 ohm 1/4W J C0004R7063520	2	K
R321/R322	CARBON FILM	560 ohm 1/4W J C000056163520	2	K
R323/R324	CARBON FILM	4.7 ohm 1/4W J C0004R7063520	2	K
R325/R326	CARBON FILM	10 Kohm 1/4W J C000010363520	2	K
R327/R328	CARBON FILM	220 ohm 1/4W J C000022163520	2	K
R329/R330	CARBON FILM	560 ohm 1/4W J C000056163520	2	K
R331-R334	CARBON FILM	220 ohm 1/4W J C000022163520	4	K
R335-R338	CARBON FILM	10 Kohm 1/4W J C000010363520	1	K
R339-R344	CARBON FILM	100 ohm 1/4W J C000010163520	6	
<b>MISCELLANEOUS</b>				
GND300	GND PLATE	3790040876010	2	
GND301	GND PLATE	3790040876010	2	
<b>PCB2-1 ASSEMBLY P.C. BOARD CNT.</b>				
CP301	CN.FPC 1.0MM	L130620001600	1	
CP302	CN.FPC 1.25MM	L131621601610	1	

\* MAIN PCB ASS'Y (PCB1) INCLUDES THE FOLLOWING BOARDS.

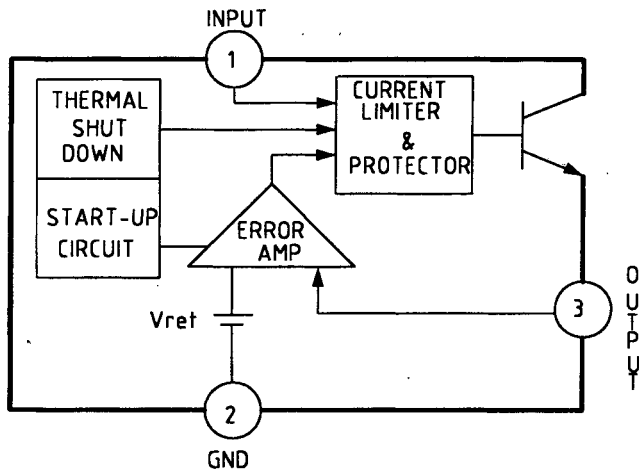
- ① THE ASS'Y PCB FRONT (PCB1-1).
- ② THE ASS'Y PCB POWER (PCB1-2).
- ③ THE ASS'Y PCB VOL HP (PCB1-3).
- ④ THE ASS'Y PCB POWER SW (PCB1-4).

\* DA PCB ASS'Y (PCB2) INCLUDES THE FOLLOWING BOARD.

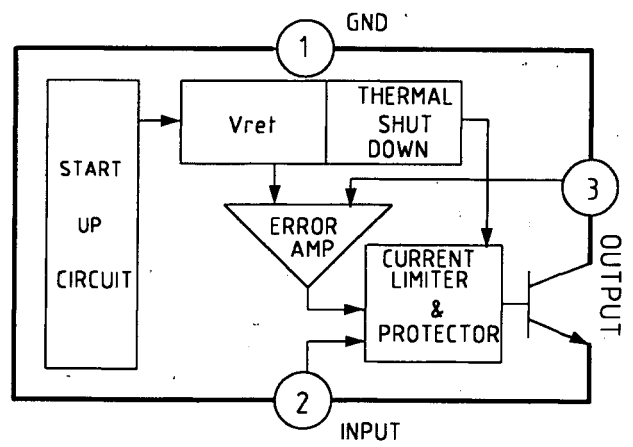
- ① THE ASS'Y CNT (PCB2-1).

## IC'S FUNCTIONAL BLOCK DIAGRAM

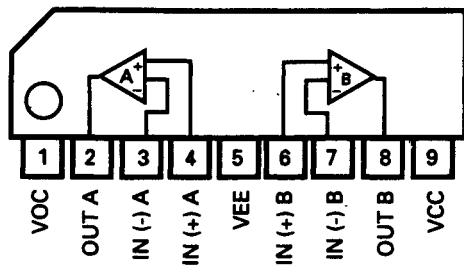
**KIA78012/KA7805/KA7808 :**  
**IC101, IC103, IC104**



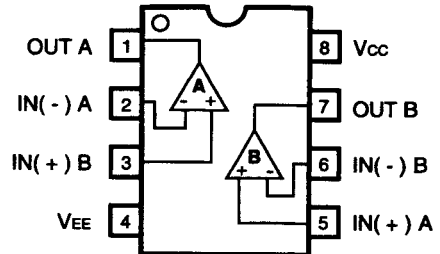
**KA7912/KA7908/KIA7905 :**  
**IC102, IC105, IC106**



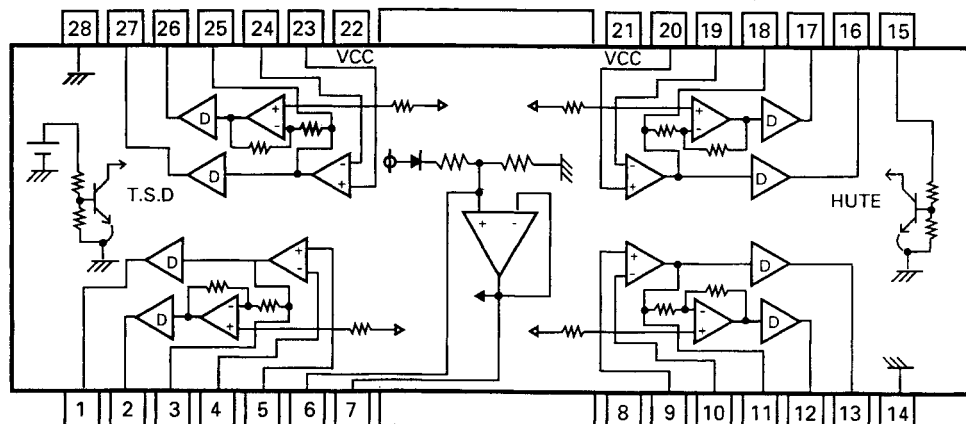
**NJM4560S : IC250**



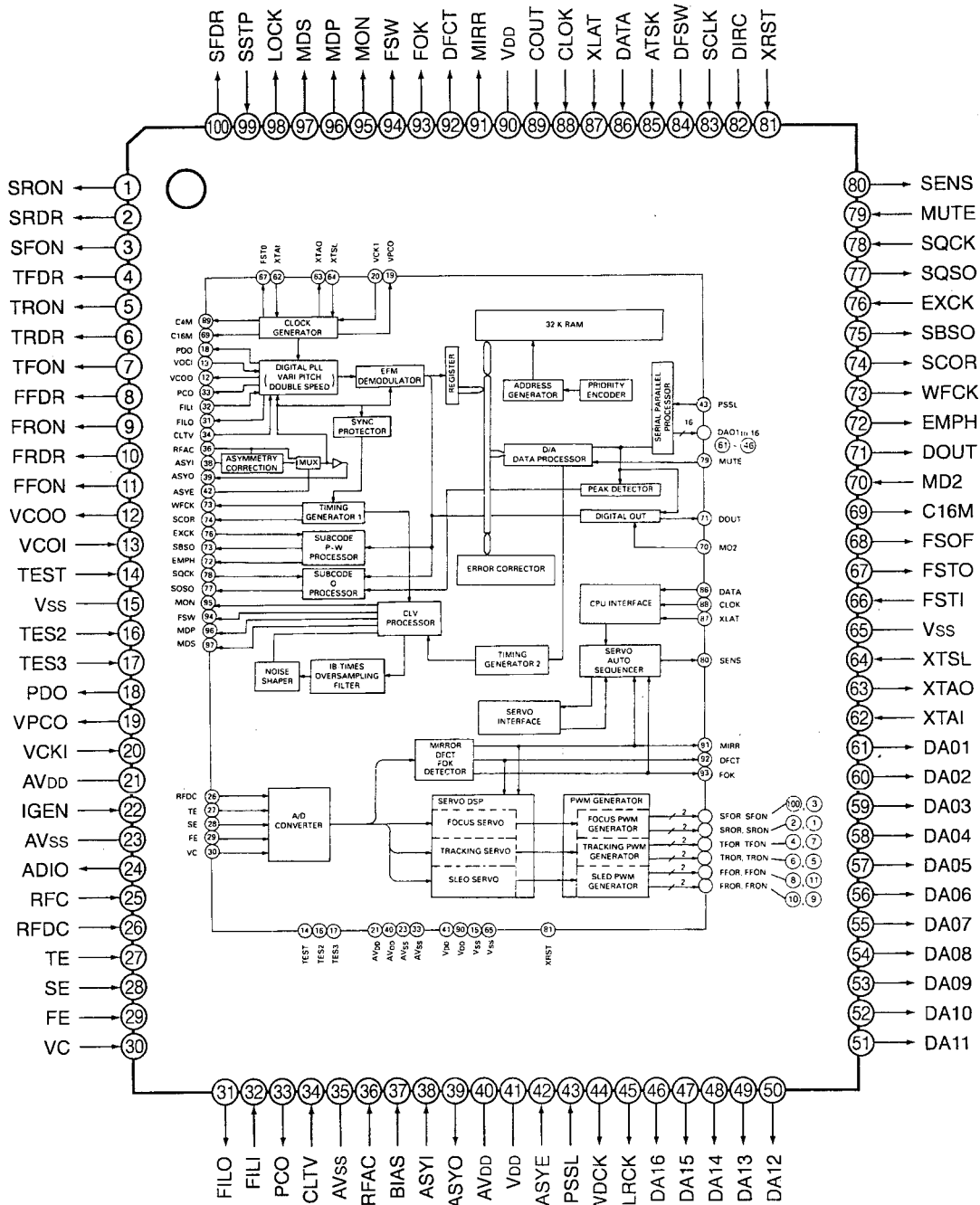
**LM833 : IC303, IC304**



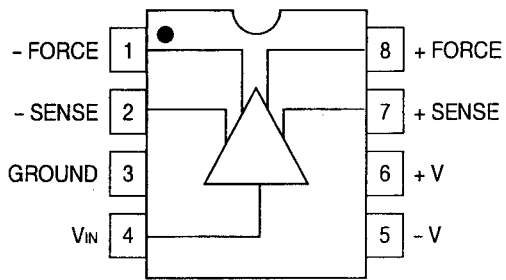
**BA6297 : IC111**



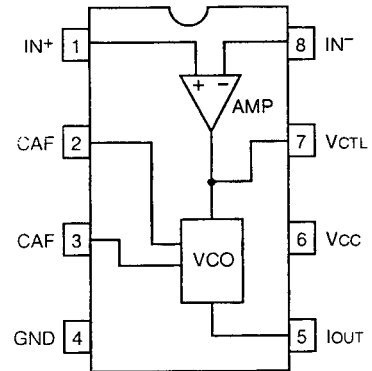
# CXD2545Q : IC109



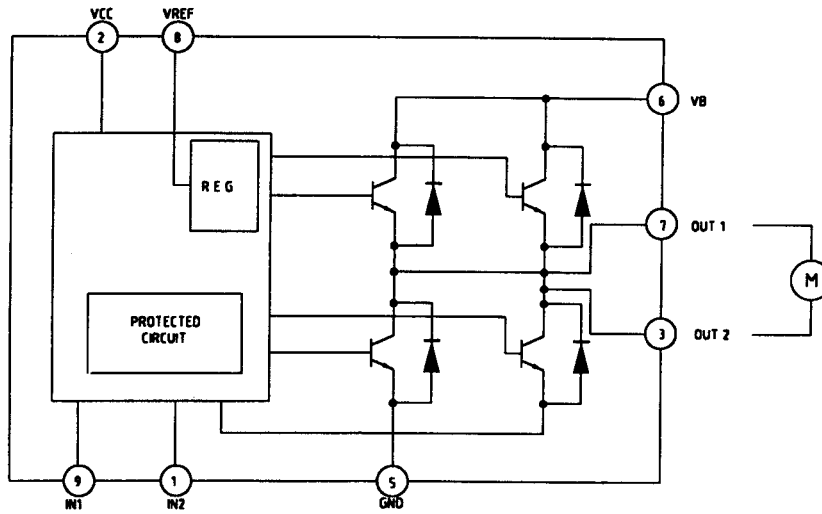
**SSM2142P : IC305, IC306**



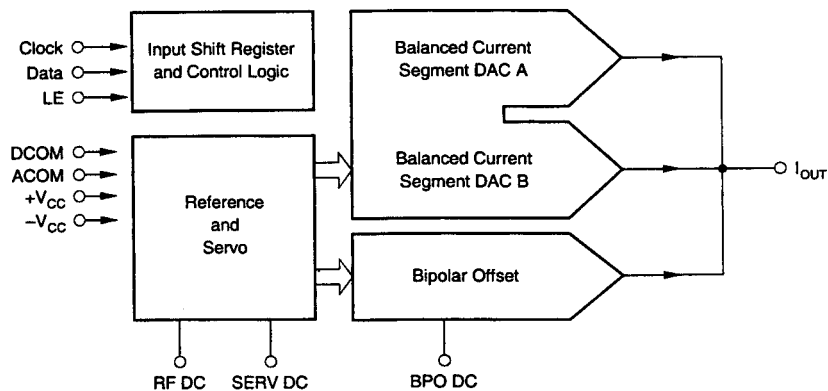
**BA7042 : IC108**



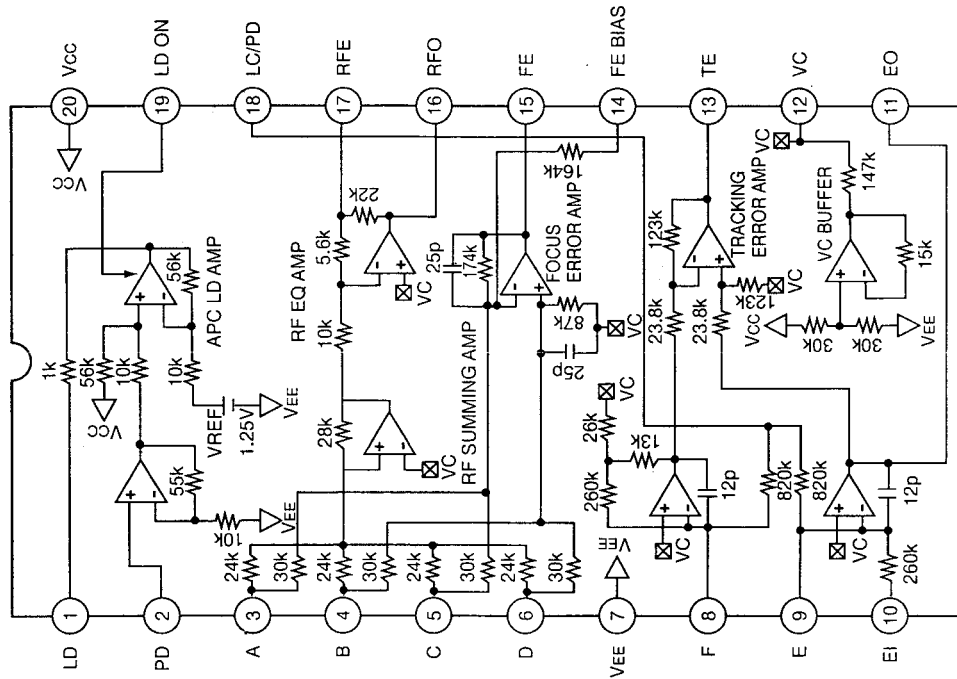
**TA7291S : IC113, IC114**



**PCM1702 : IC301, IC302**

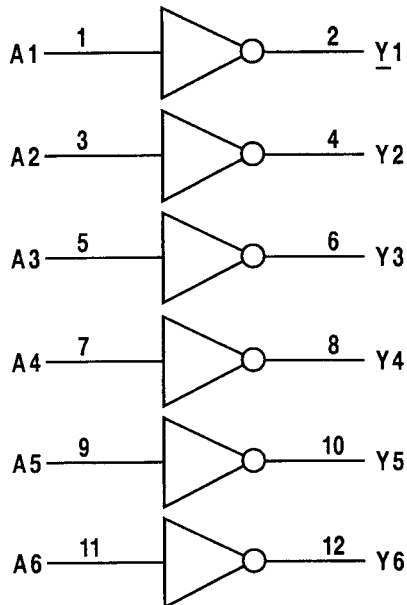


**CXA1821M : IC110**

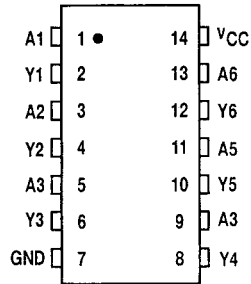


**MC74HCU04 : IC107, IC116**

**LOGIC DIAGRAM**



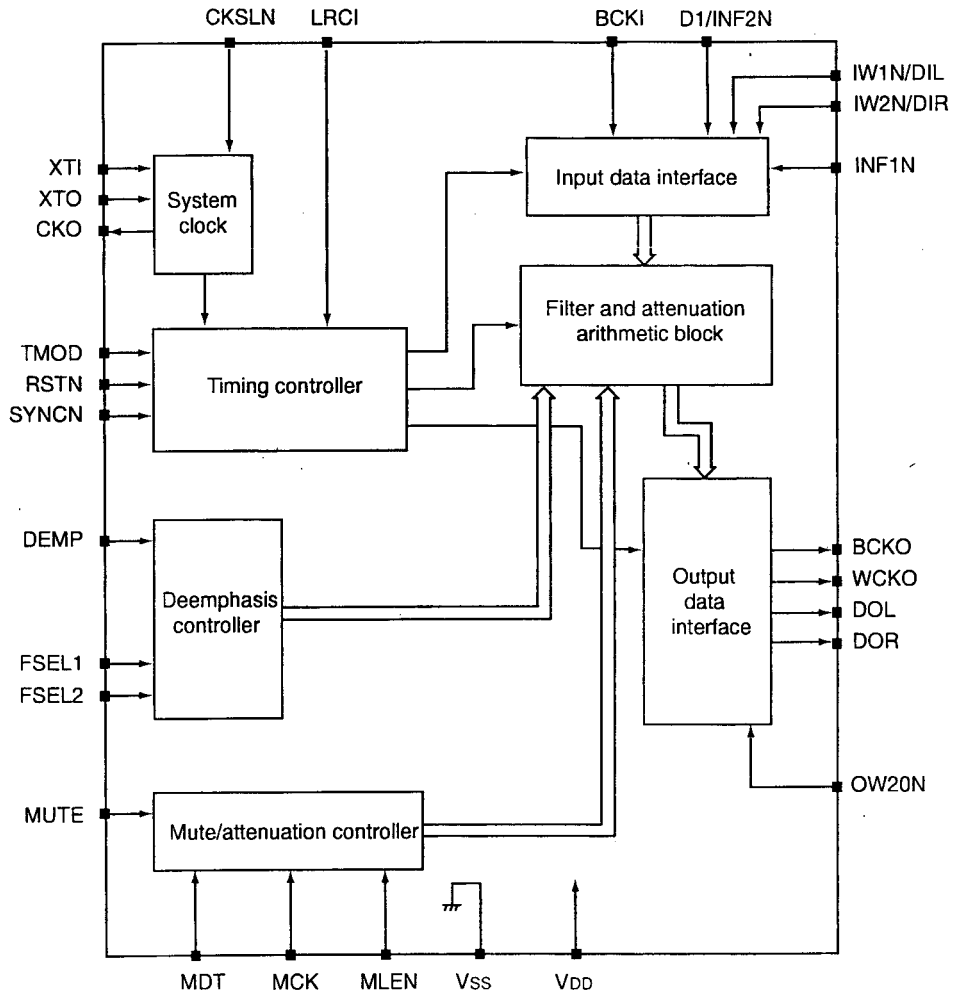
**PIN ASSIGNMENT**



**FUNCTION TABLE**

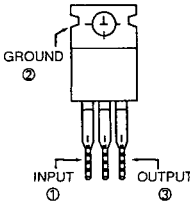
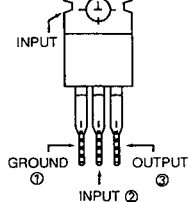
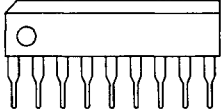
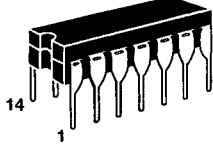
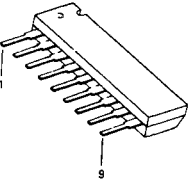
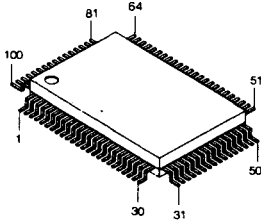
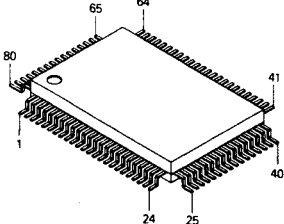
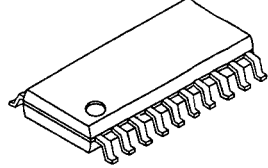
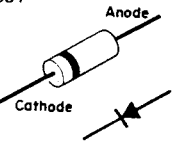
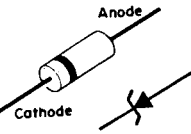
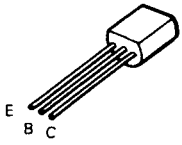
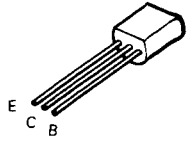
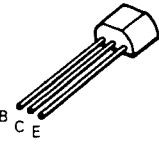
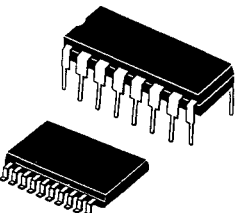
Inputs A	Outputs Y
L	H
H	L

# SM5843AP1 : IC112



D1/INF2N	1	28	LRC1
BCKI	2	27	TMCD
CKSLN	3	26	BCKO
INF1N	4	25	WCKO
IW1N/DIL	5	24	DOL
XTI	6	23	DOR
XTO	7	22	VDD
VSS	8	21	NC
CKO	9	20	SYNCN
IW2N/DIR	10	19	CW20N
MDT	11	18	FSEL2
MCK	12	17	FSEL1
MLEN	13	16	DEMP
RSTN	14	15	MUTE

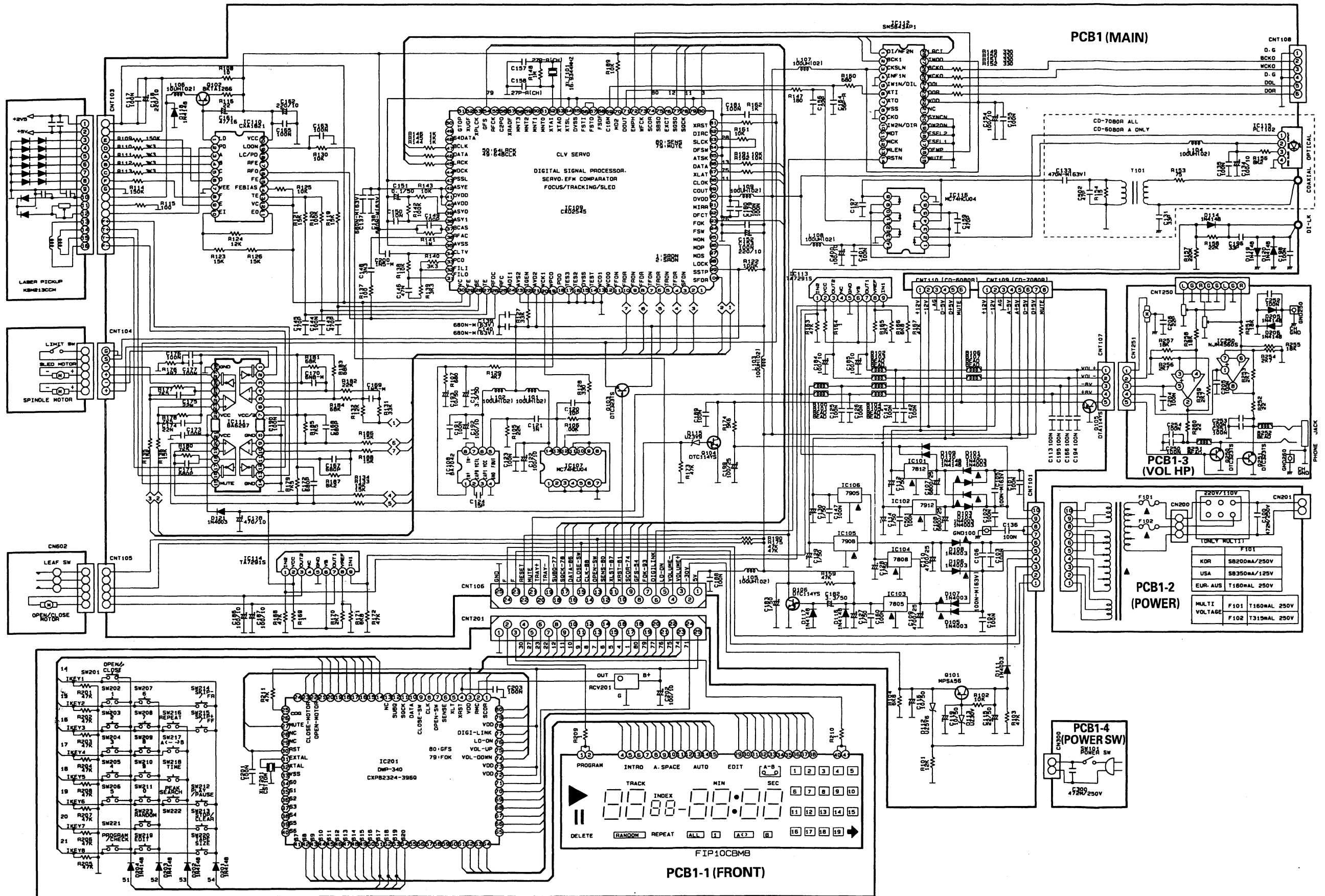
# PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES & IC'S

<p>KA78XX KIA78XXX</p> 	<p>KA79XX KIA79XX</p> 	<p>NJM4560S</p> 	<p>MC74HCU04</p> 
<p>TA7291S</p> 	<p>CXD2545Q</p> 	<p>CXP82324</p> 	<p>CXA1821M</p> 
<p>IN4003 IN4148 ISS133T</p> 	<p>ZENER</p> 	<p>MPSA56</p> 	<p>KTA1266</p> 
<p>DTC323TS DTC114YS DTA114YS</p> 	<p>PCM1702</p> 		



SCHEMATIC DIAGRAM (I)

Model No. : CD-7080R/C/G



# SCHEMATIC DIAGRAM (II)

Model No. : CD-7080R/C/G

