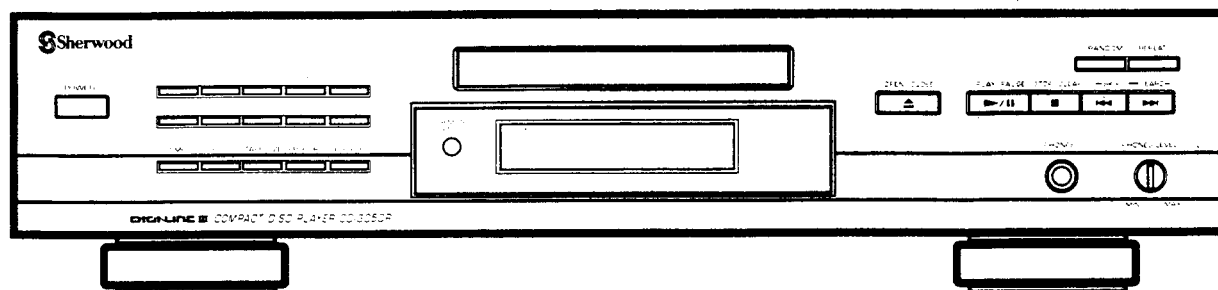


SERVICE MANUAL

CD-3050R COMPACT DISC PLAYER



■ CONTENTS ■

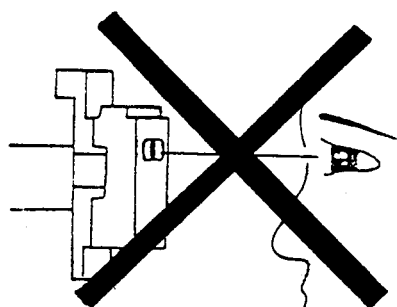
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LASER BEAM SAFETY PRECAUTIONS

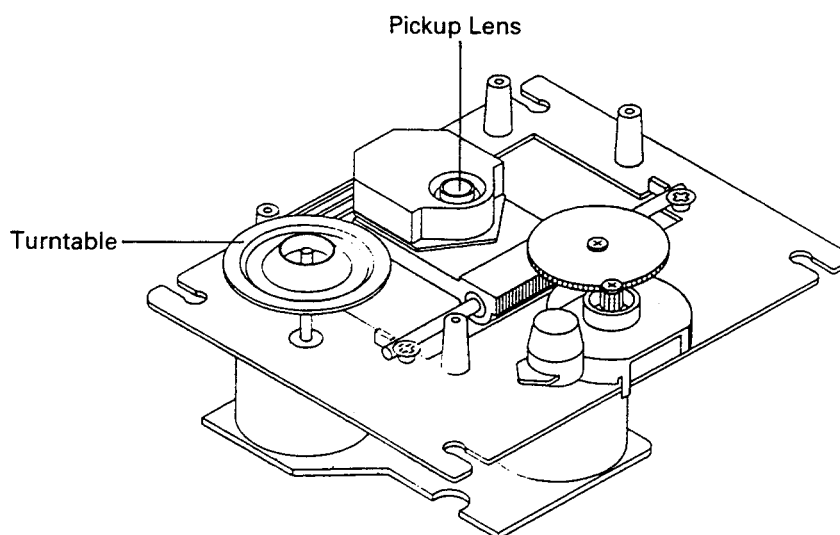
CLASS 1 LASER PRODUCT

DANGER:
INVISIBLE LASER RADIATION.
AVOID DIRECT EXPOSURE TO BEAM.

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.

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.

Incorrect

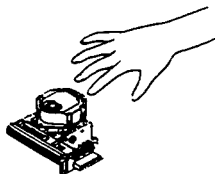


Figure 1

Correct

Grounded Conductive
Wrist for Body

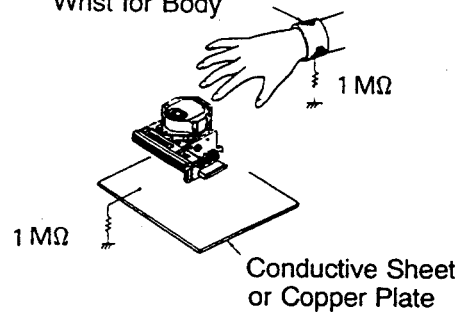


Figure 2

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.

SAFETY PRECAUTIONS

WARNING

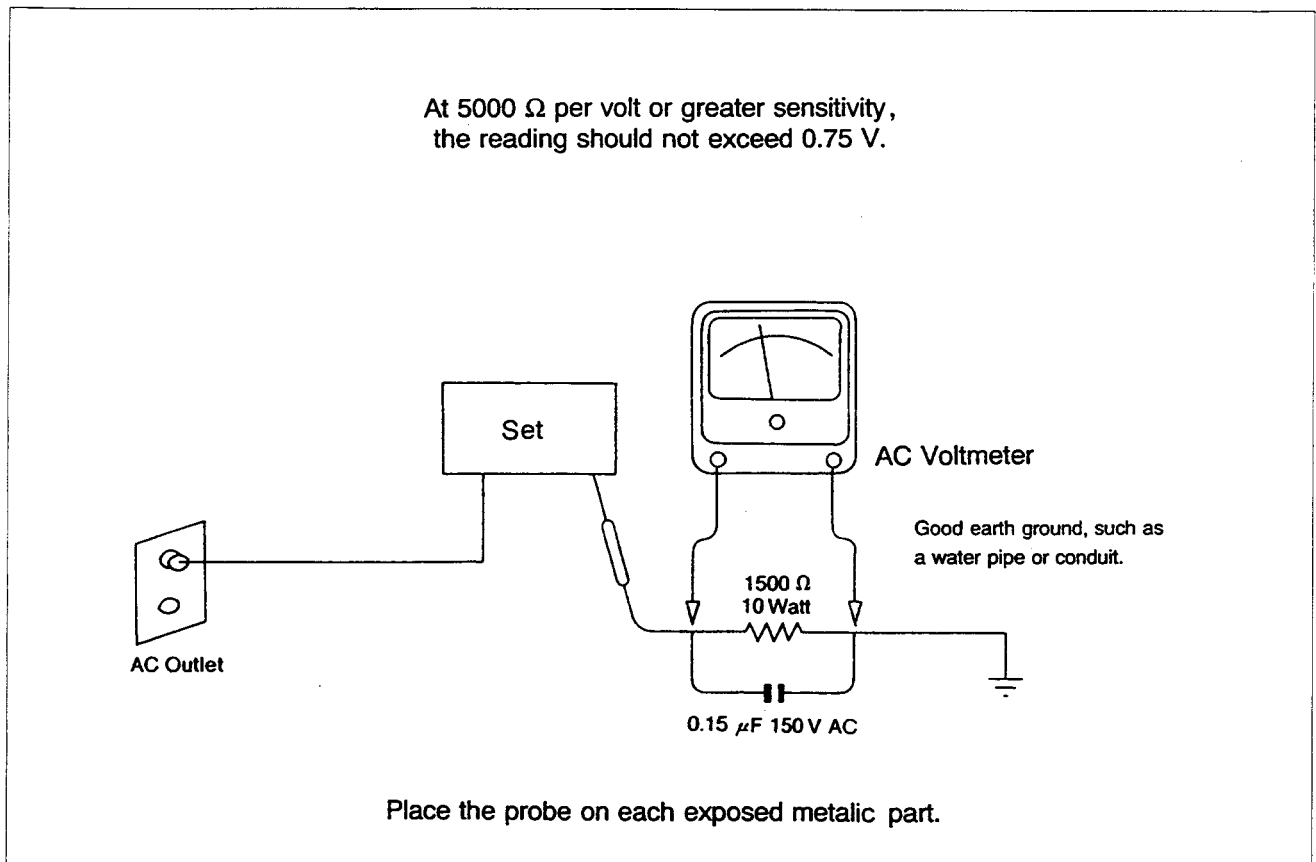
Before servicing this unit, familiarize yourself with the following precautions:

1. Many electrical and mechanical parts in this chassis have special safety characteristics that often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements: electrical components having such features are identified by ⚠ in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

2. Before returning the set to the customer, always do an AC leakage current check on the

exposed metal parts of the cabinet, such as terminals, screw heads, and metal overlays, to be sure the set is safe to operate danger of electrical shock. Plug the AC line cord directly into a 120 V AC outlet (120 V AC version only). (Do not use a line isolation transformer during this check.) Be sure your AC voltmeter has a sensitivity of $5000\ \Omega$ per volt or greater. Then connect a $1500\ \Omega$ 10 watt resistor, paralleled by a $0.15\ \mu\text{F}$ 150 V AC capacitor, between a known good earth ground (such as a water pipe, or conduit) and the exposed metallic is parts, one at a time. Measure the AC voltage across the combination of a $1500\ \Omega$ resistor and a $0.15\ \mu\text{F}$ capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75V RMS. This corresponds to 0.2 mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



SPECIFICATIONS

General

Transmission bit ratio	4.3218 Mbit/Sec
Transmission on clock	16.9344 MHz
Error correction	CIRC C1: Double correction

Pickup

System	Object lens drive type optical pickup
Object lens drive system	2 Dimensional parallel drive type
Optical source	Semiconductor AlGaAs
Wave length	760-800 nm
Tracking system	3 Beam tracking servo type

Others

D/A Converter	1 bit (Bitstream Conversion)
Power supply voltage	See type plate at the rear of the unit.

ELECTRICAL

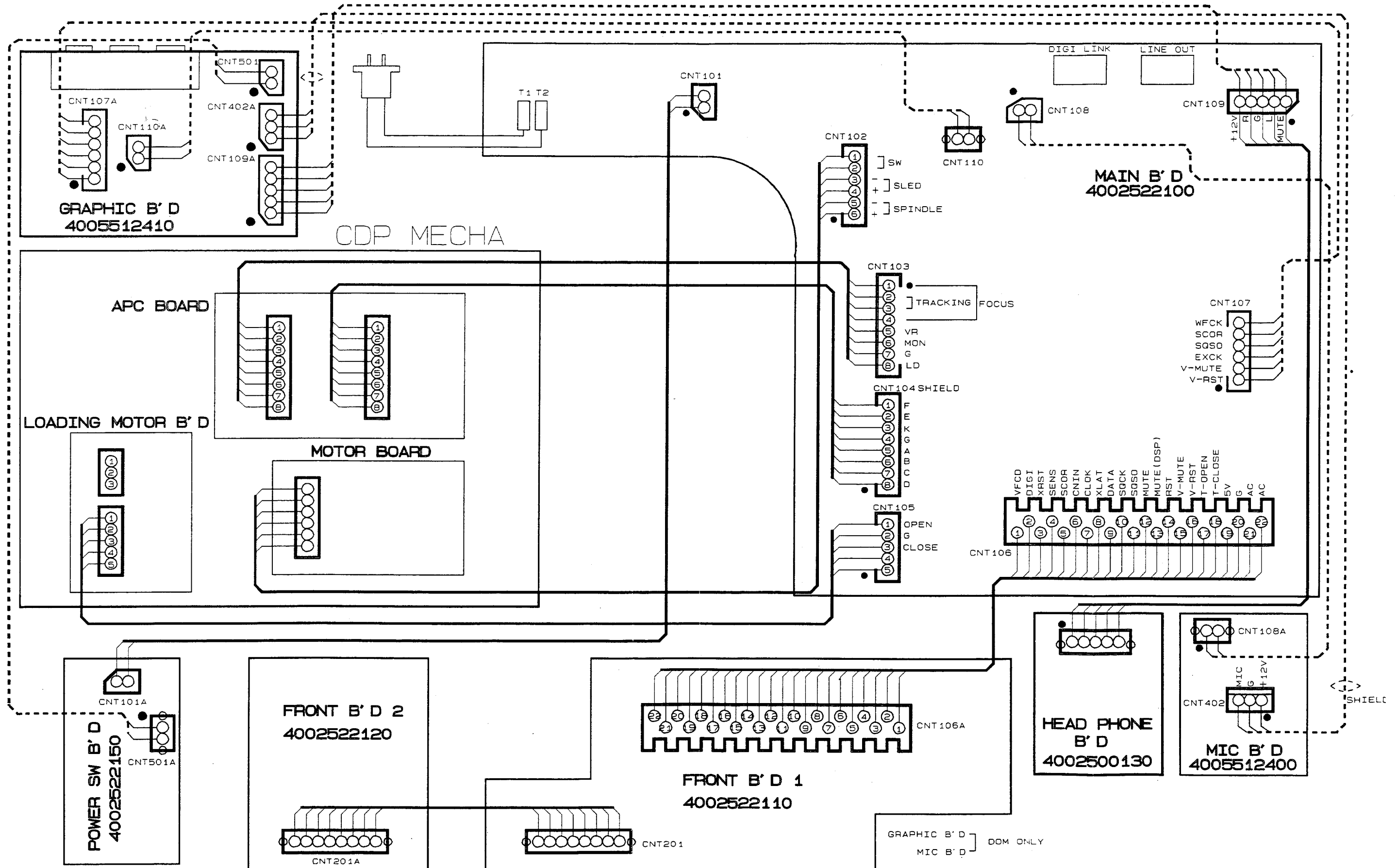
* Preparations

- Measuring methods in conformity with EIAJ CP-307, CCIR 468-3.
- Reference level : 0 dB
- Test disc : Sony CD-3 YEDS-7, Philips 5A
- Filter : 30 kHz, 18 dB/oct low pass filter.

Description		Signal	Disc/Track	Unit	Normal	Limit
Frequency response		20-2000 Hz	2-13	dB	± 0.5	± 1.0
Signal to noise ratio(Weighted A)		1 kHz	23	dB	> 100	> 95
Dynamic range(Weighted A)		1 kHz, -60 dB	20	dB	> 95	> 92
Distortion at 0 dB		100 kHz	4	%	≤ 0.05	≤ 0.07
		1kHz	7	%	≤ 0.05	≤ 0.07
		20 kHz	13	%	≤ 0.05	≤ 0.07
Channal seperation(selective)		1 kHz	30, 34	dB	≥ 90	≥ 88
Channal unbalance		1 kHz	7	dB	± 0.5	± 1
Output voltage/Impedance		1 kHz	7	V/k	1.6 ± 0.2	1.6 ± 0.4
Access time	Track to next track			sec	1	
Disc defects	Black dot		10-15	uM	≤ 800	≤ 800
	Interrupt		3-9	uM	≤ 900	≤ 900
	Fingerprint		17-19	uM	ALL	ALL
Emphasis	-0.37	1 kHz	39	dB	0.37 ± 0.1	± 0.3
	-4.53	5 kHz	40	dB	-4.53 ± 0.2	± 0.5
	-9.04	16 kHz	41	dB	-9.04 ± 0.4	± 1.0

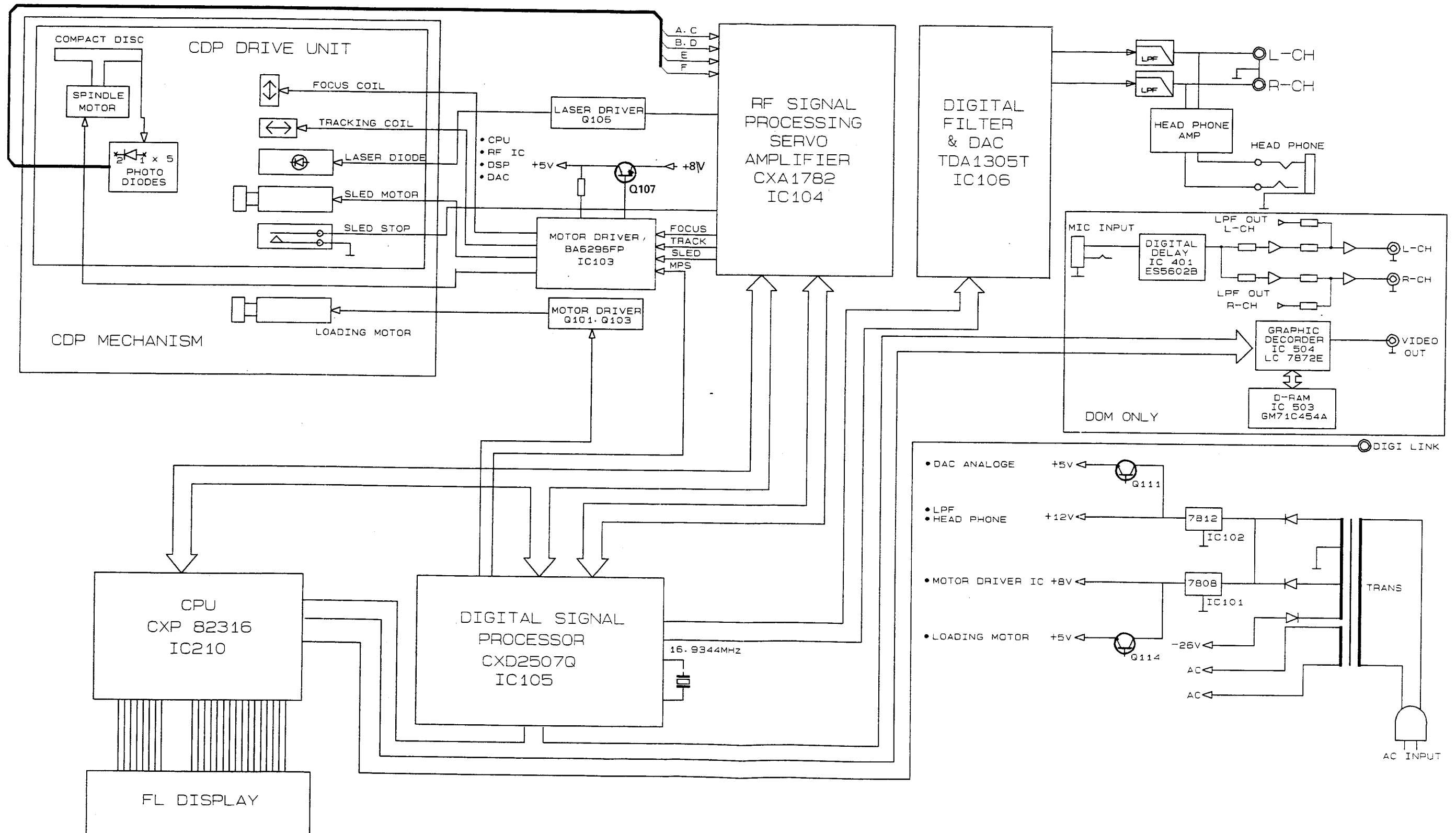
WIRING DIAGRAM

Model No. : CD3050R



BLOCK DIAGRAM

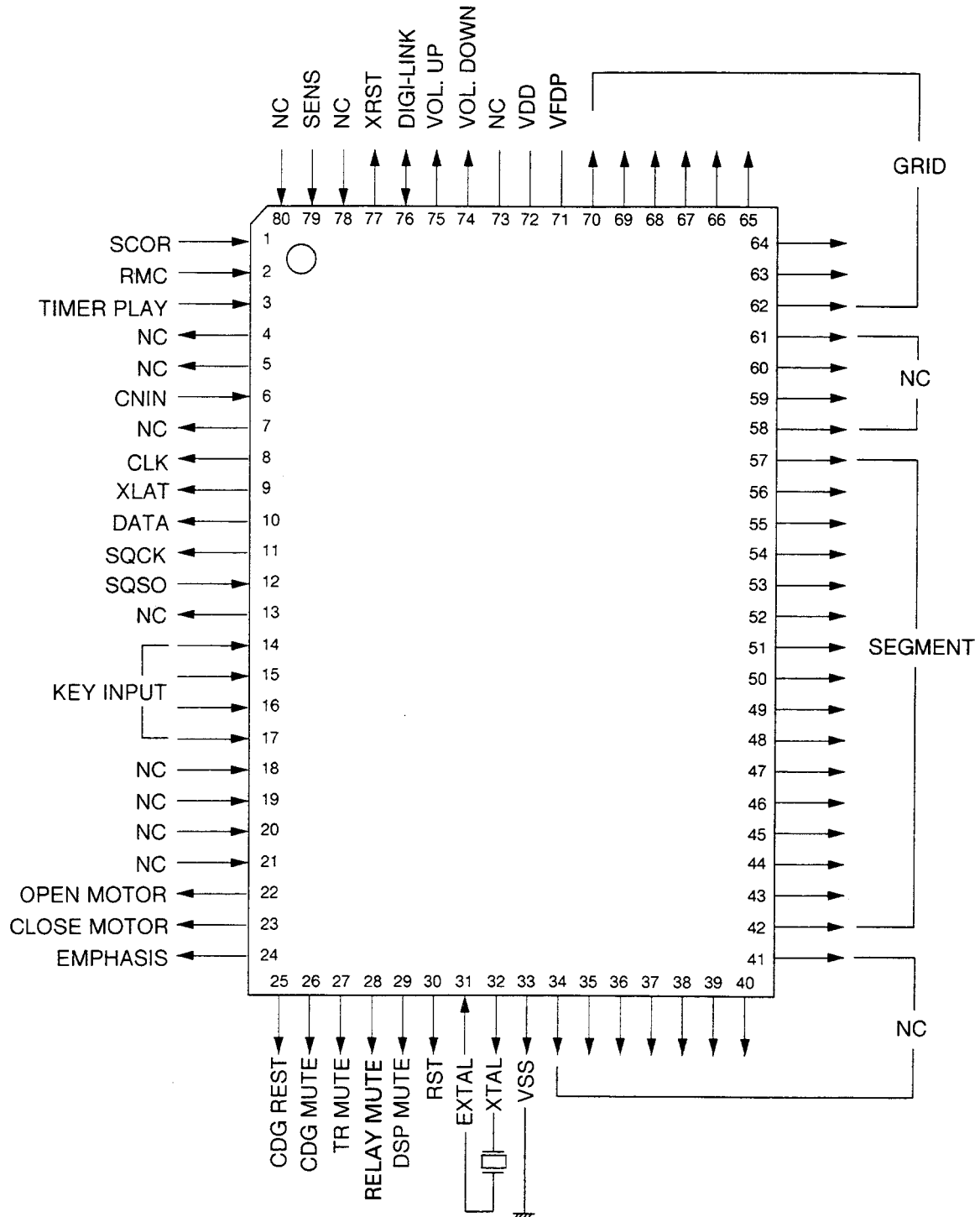
Model No. : CD3050R



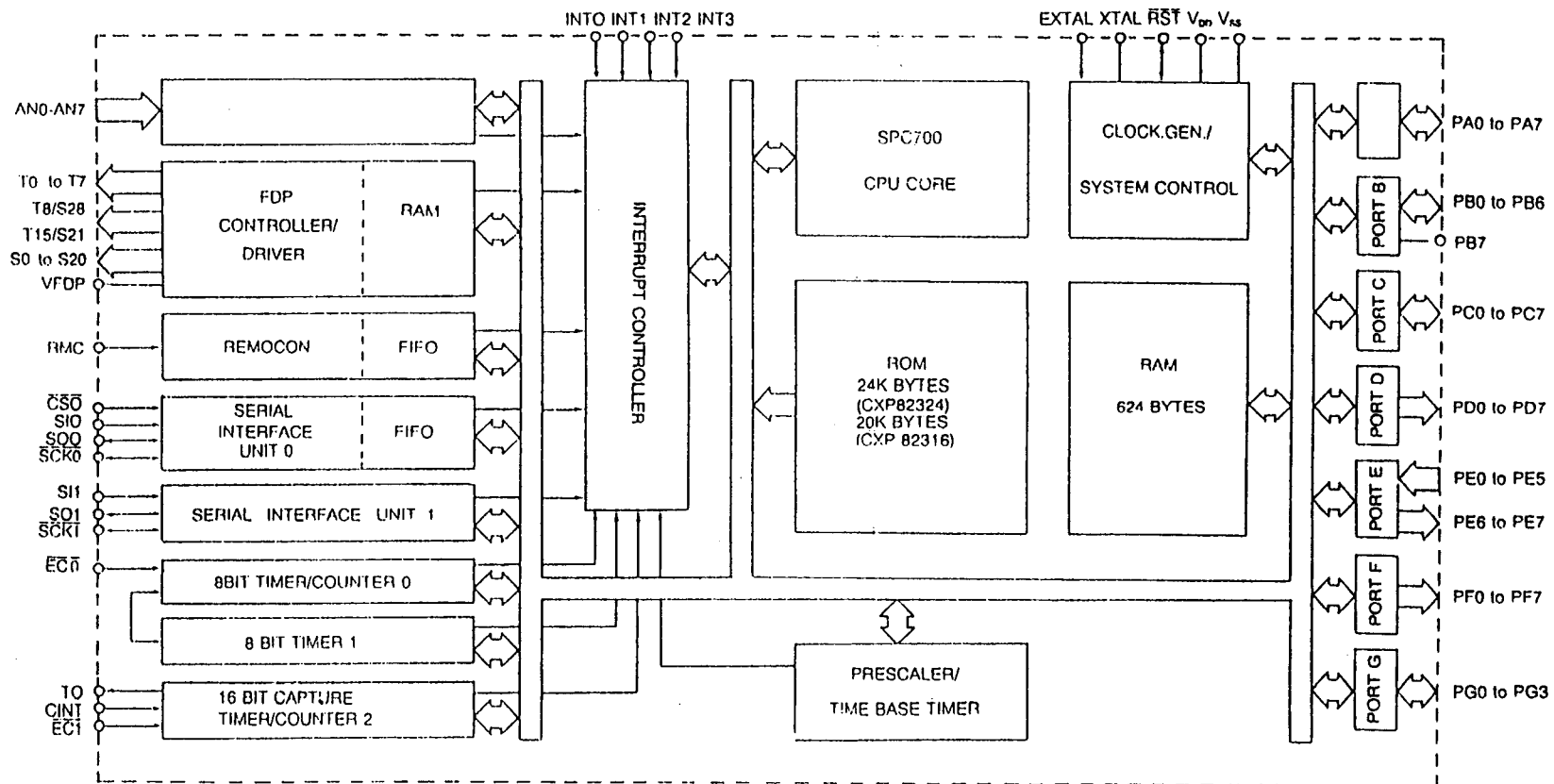
CIRCUIT DESCRIPTION

IC201 : CXP82320-308Q(CMOS 8bit 1-chip Microcomputer)

1. Pin Connection Diagram



2. Block Diagram



3. Pin Function

Pin No.	Symbol	Description
1	SCOR	Subcode-Q readout timing signal input from CXD2507.
2	RMC	Input for remocon data.(At "L", it is active.)
3	TIMER PLAY	Not used! (It should be connected to VDD.)
4/5	NC	Not used! (They should be left open.)
6	CNIN	Signal input for automatic tracking adjustment from CXD2507.
7	NC	Not used! (It should be left open.)
8	CLK	Serial clock data output to CXD2507.
9	XLAT	Serial latch data output to CXD2507.
10	DATA	Serial data output to CXD2507.
11	SQCK	Clock data output for subcode-Q readout to CXD2507.
12	SQSO	subcode-Q data input from CXD2507.
13	NC	Not used! (It should be left open.)
14-17	KEY INPUT	Data input for key scan.
18-21	NC	Not used! (It should be connected to VDD.)
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	EMPHASIS	Not used! (It should be left open.)
25	CDG RESET	Output for CD-Graphic reset.(At "L", it is active.)
26	CDG MUTE	Output for CD-Graphic mute.(At "H", it is active.)
27	TR.MUTE	Output for audio mute.(At "H", it is active.)
28	RELAY MUTE	Not used! (It should be left open.)
29	DSP MUTE	Output for muting CXD2507.(At "H", it is active.)
30	RST	Input for resetting CPU.(At "L", it is active.)
31	EXTAL	Input of 10 MHz oscillator crystal.
32	XTAL	Output of 10 MHz oscillator crystal.
33	VSS	Ground.
34-41	NC	Not used! (It should be left open.)
42-47	SEGMENT	Segment signal output of S1-S6 and data output for key scan.
48-57	SEGMENT	Segment signal output of S7-S16.
58-62	NC	Not used! (It should be left open.)
63-70	GRID	Grid signal output of 8G-1G.
71	VFDP	-30 V power supply for FL controller.
72	VDP	+5 V power supply for CPU.
73	NC	Not used! (It should be connected to VDD.)
74	VOL.DOWN	Not used! (It should be left open.)
75	VOL.UP	Not used! (It should be left open.)
76	DIGI LINK	Input/Output for controlling DIGI LINK.
77	XRST	Output for resetting CXD2507.(At "L", it is active.)
78	NC	Not used! (It should be connected to VDD.)
79	SENS	Sens signal input from CXD2507.
80	NC	Not used! (It should be connected to VDD.)

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 "Disassembly Instructions" (See Figure 3).

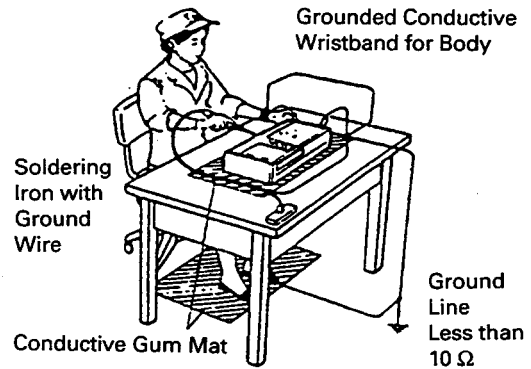


Figure 3

2. Remove 3 screws (See Figure 4).

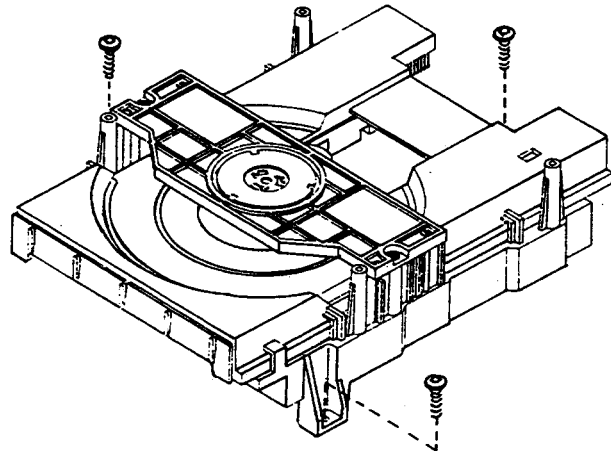


Figure 4

3. Remove 1 screws (See Figure 5).

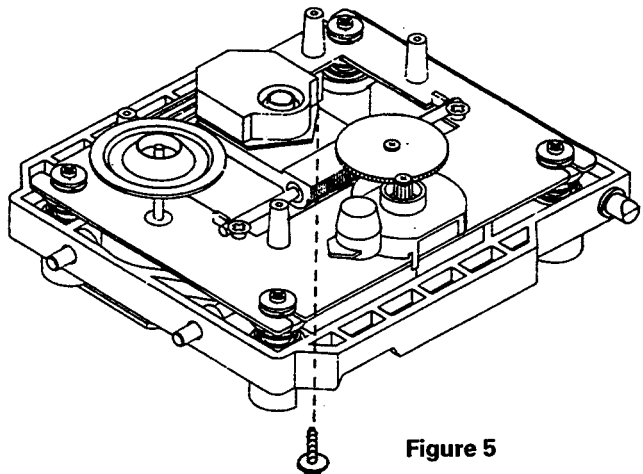


Figure 5

4. Remove 4 screws (See Figure 6).

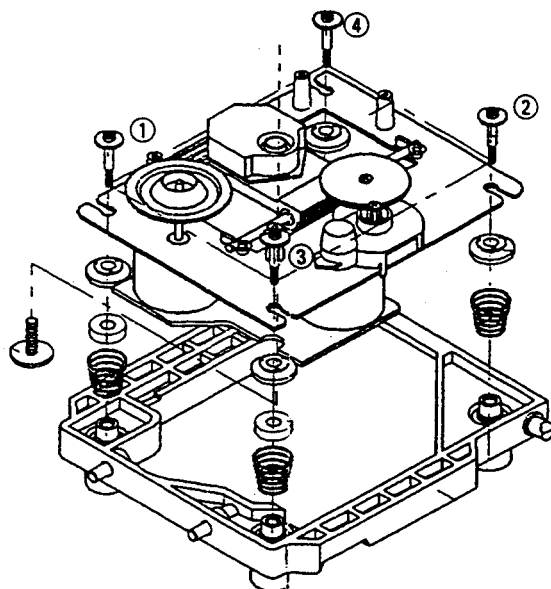


Figure 6

- 5. Remove the Gear A (See Figure 7).
- 6. Pull out the slide Shaft.

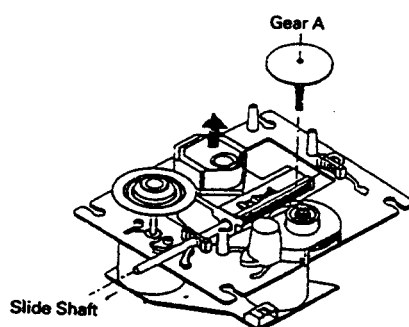


Figure 7

5. Remove the pickup (See Figure 8).

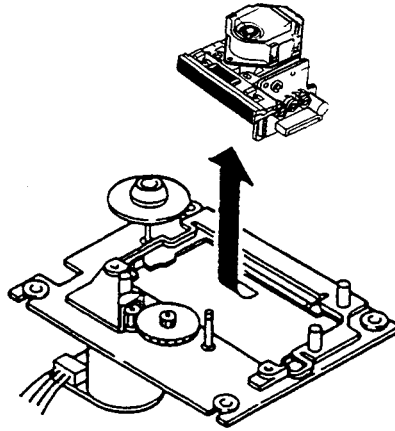


Figure 8

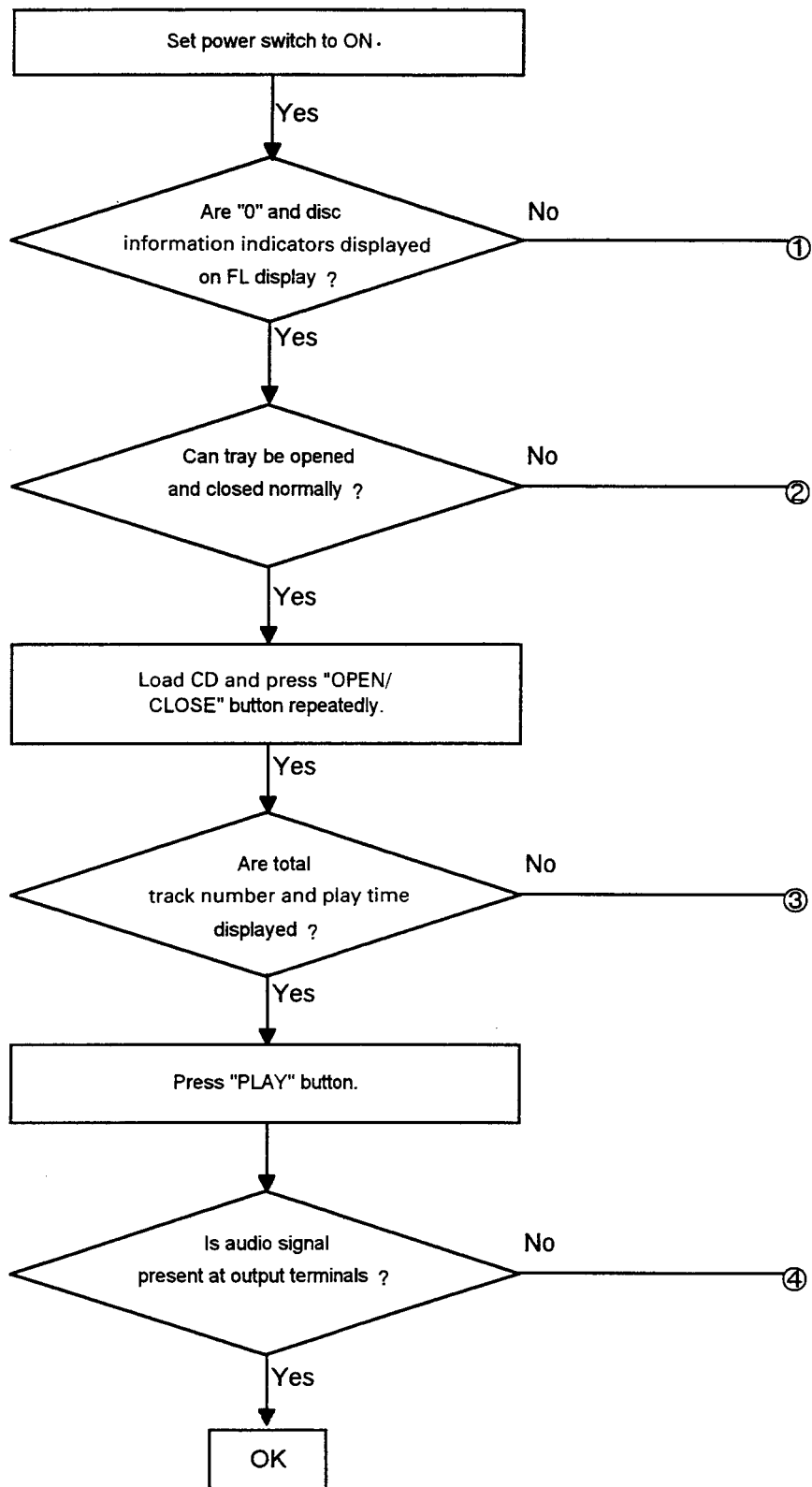
6. Refer to the exploded view of the compact disc mechanism on page 29 for detailed illustrations.

OPERATION CHECK

When the power switch is turned on after the chucking arm is removed, observe the objective lens and chuck 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 takes place 2 or 3 times.

TROUBLESHOOTING



[Repair item1] At power on, " 8 " and some parts are not displayed.

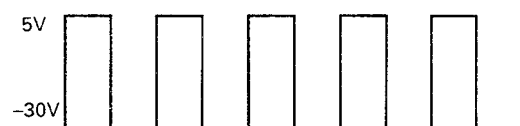
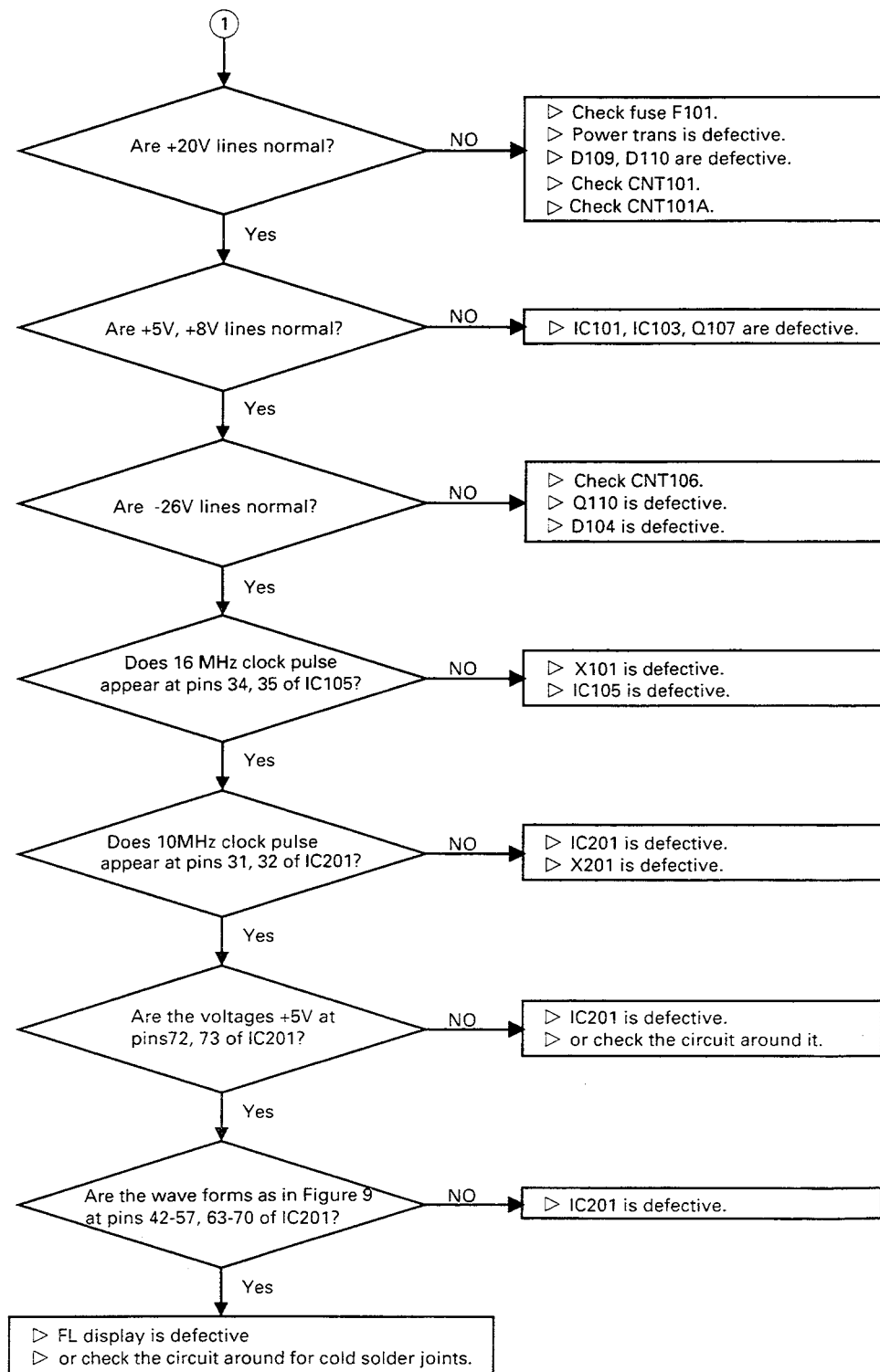
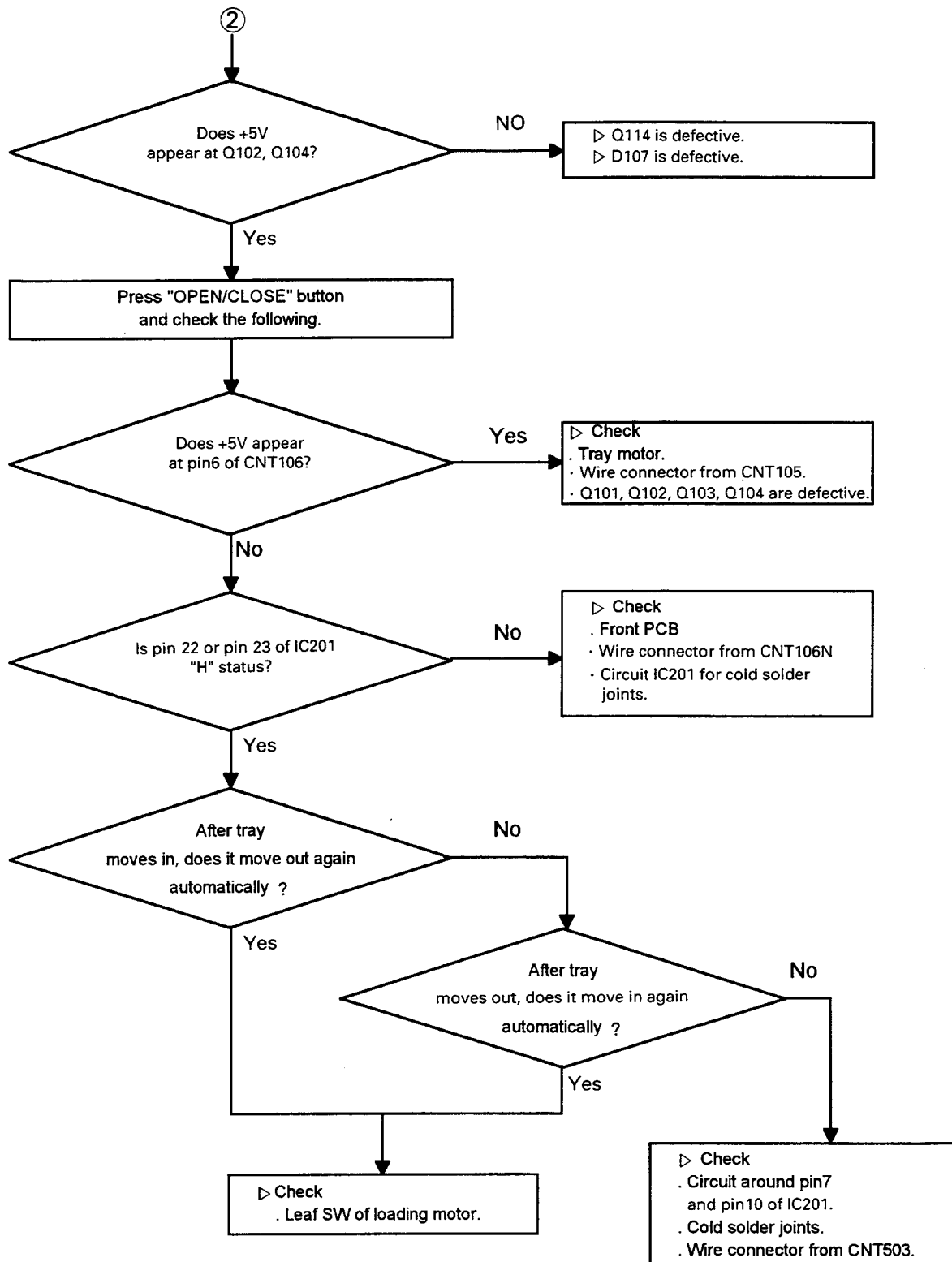
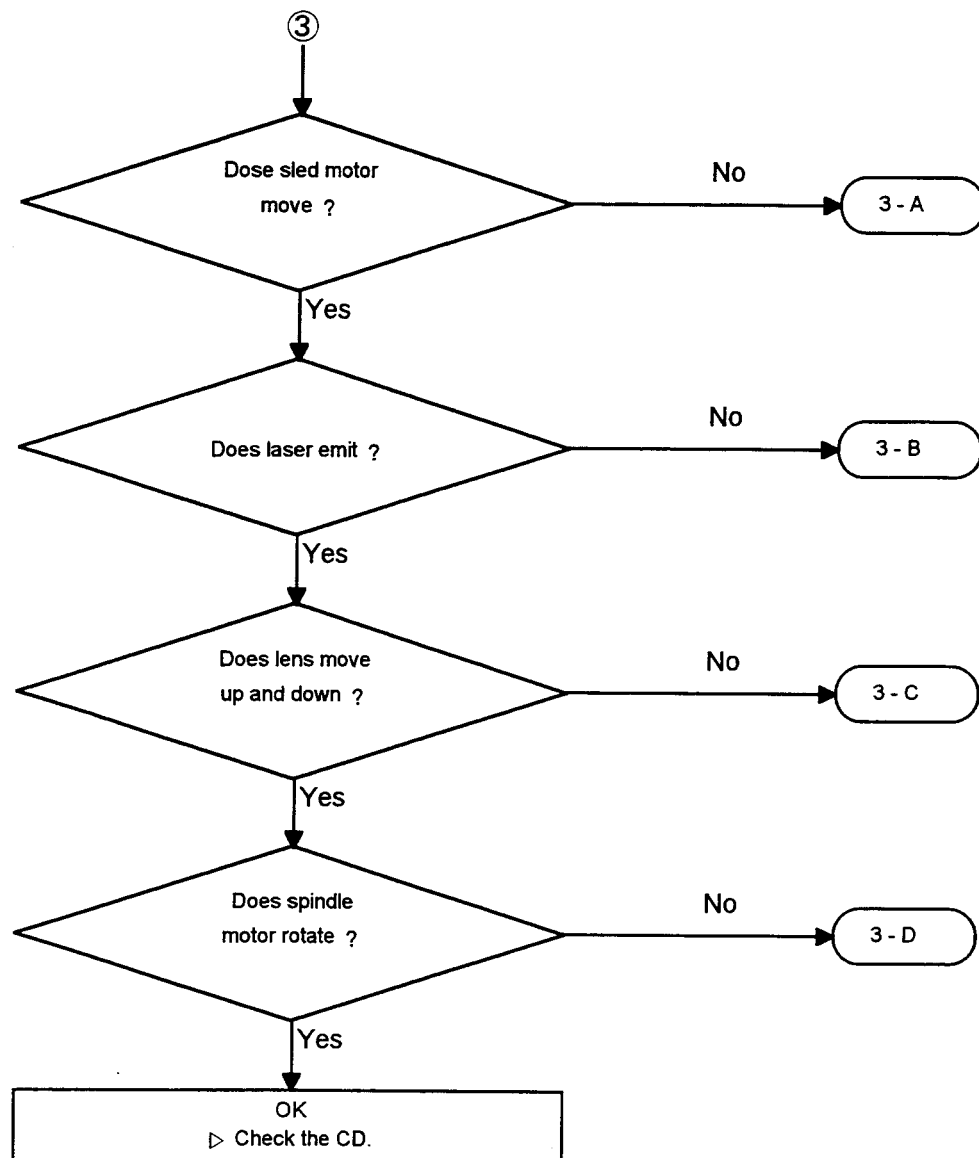


Figure 9

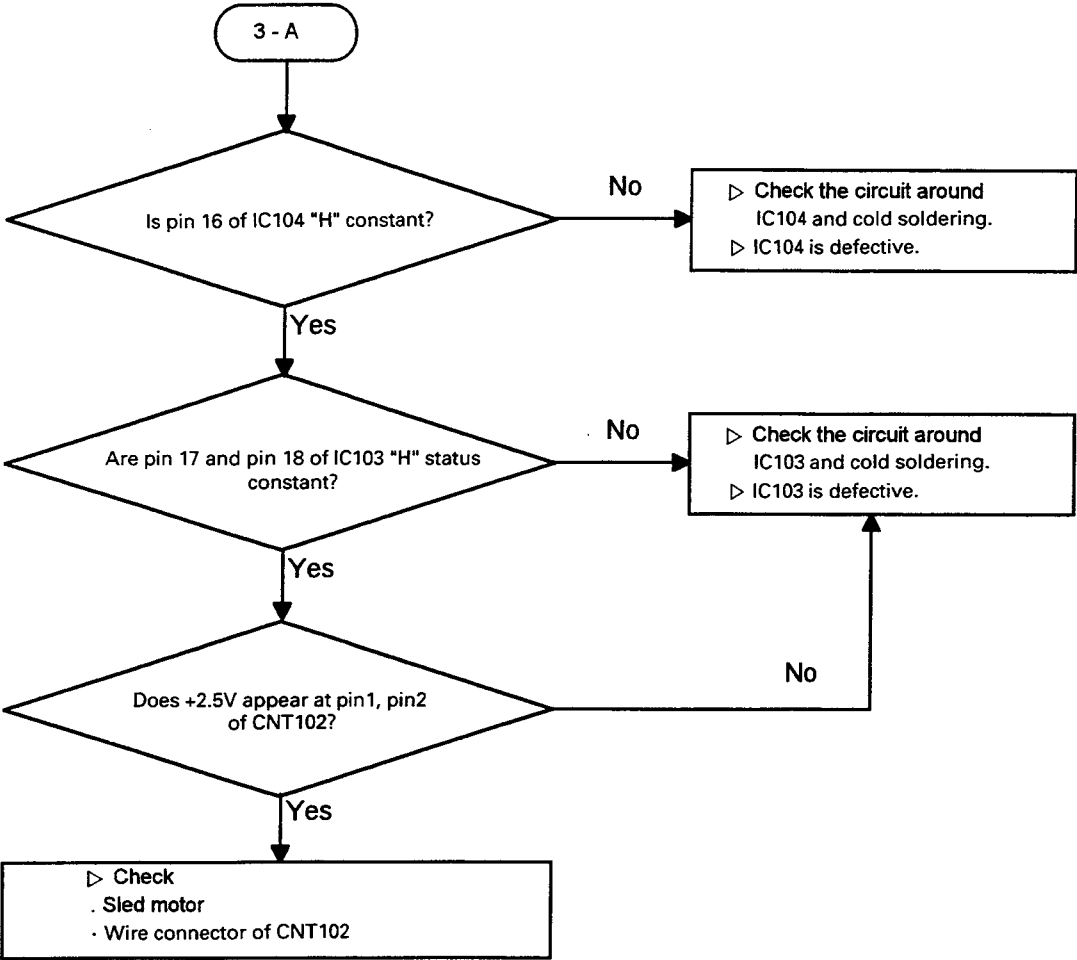
[Repair item 2] Tray cannot opened and closed by pressing "OPEN/CLOSE" button.



[Repair item 3] "8" is displayed instead of total playing time and track number.



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



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

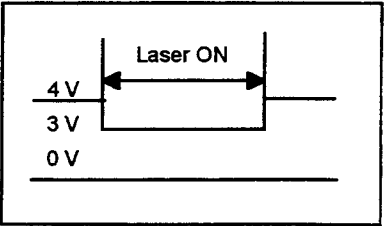
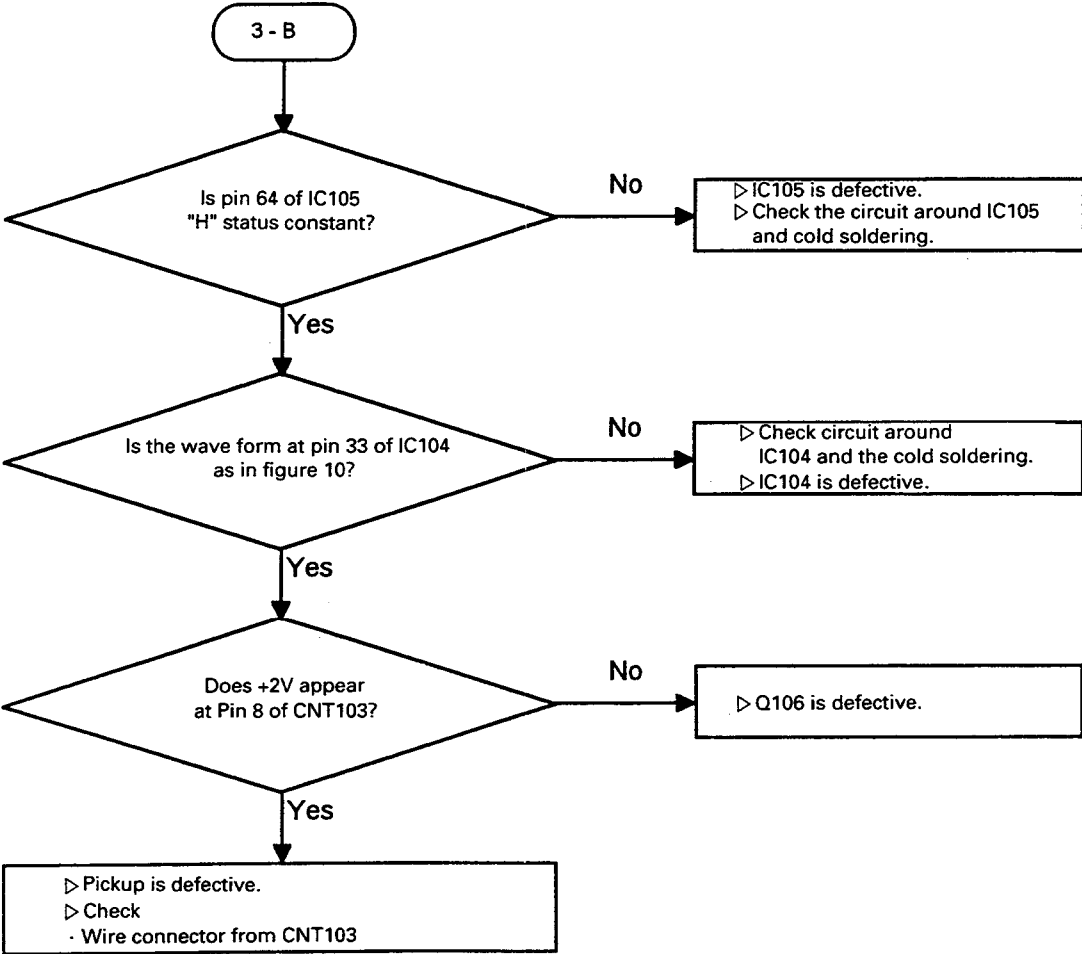


Figure 10

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

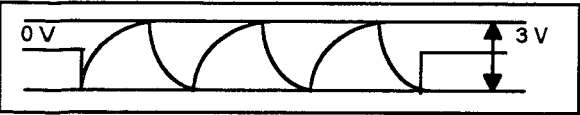
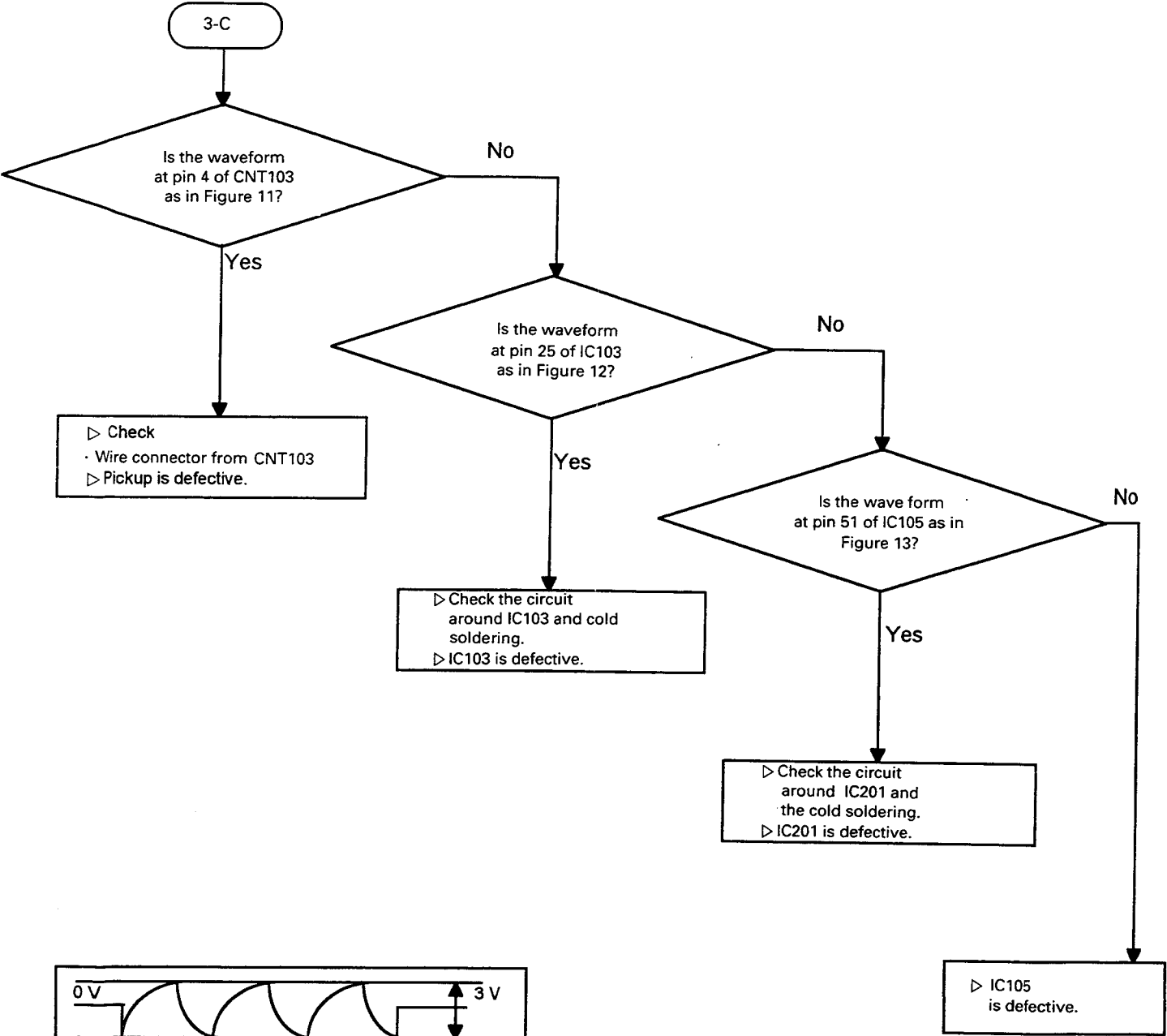


Figure 11

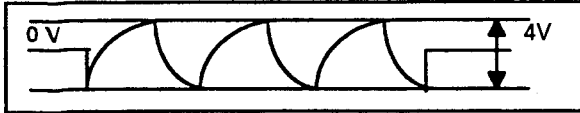


Figure 12

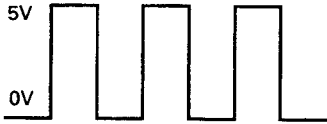


Figure 13

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

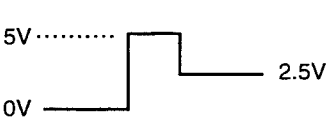
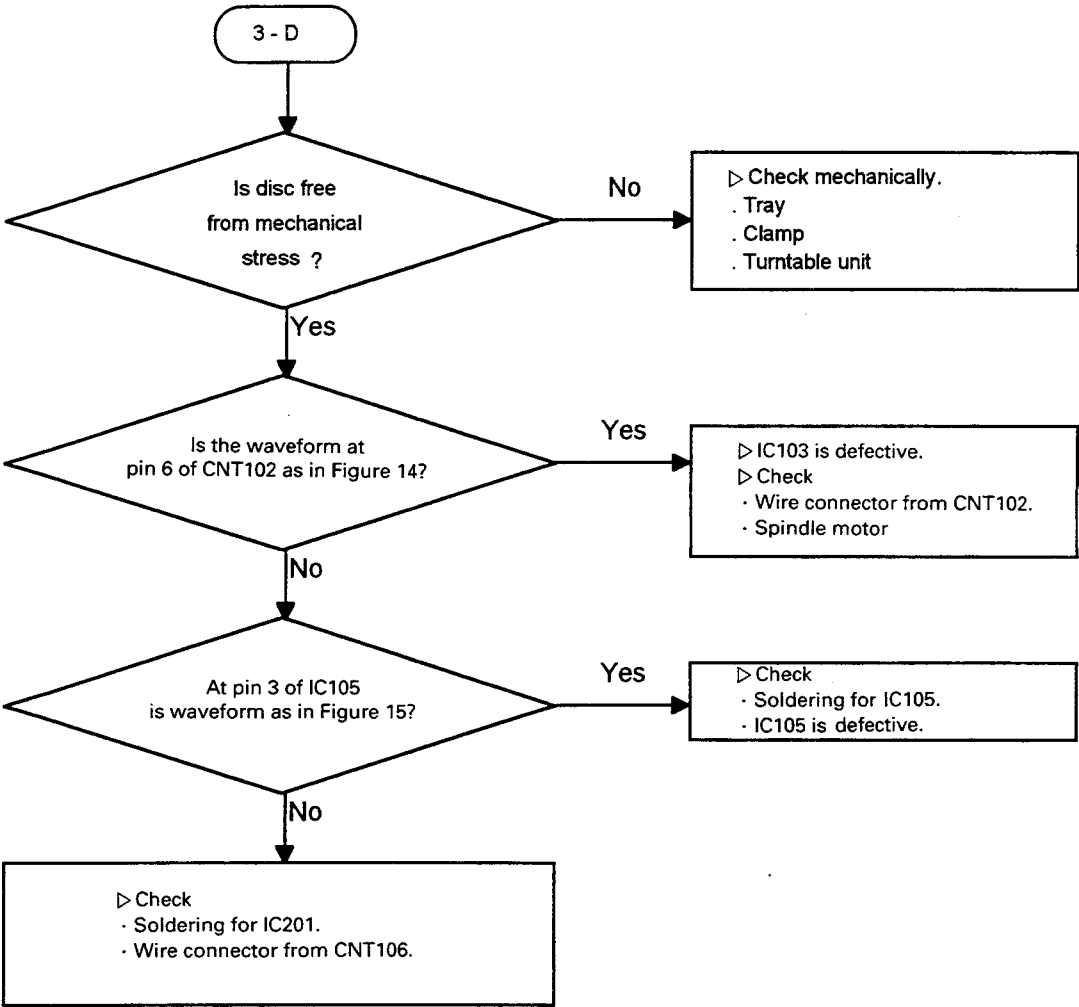


Figure 14

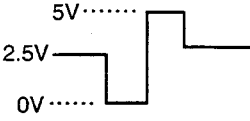
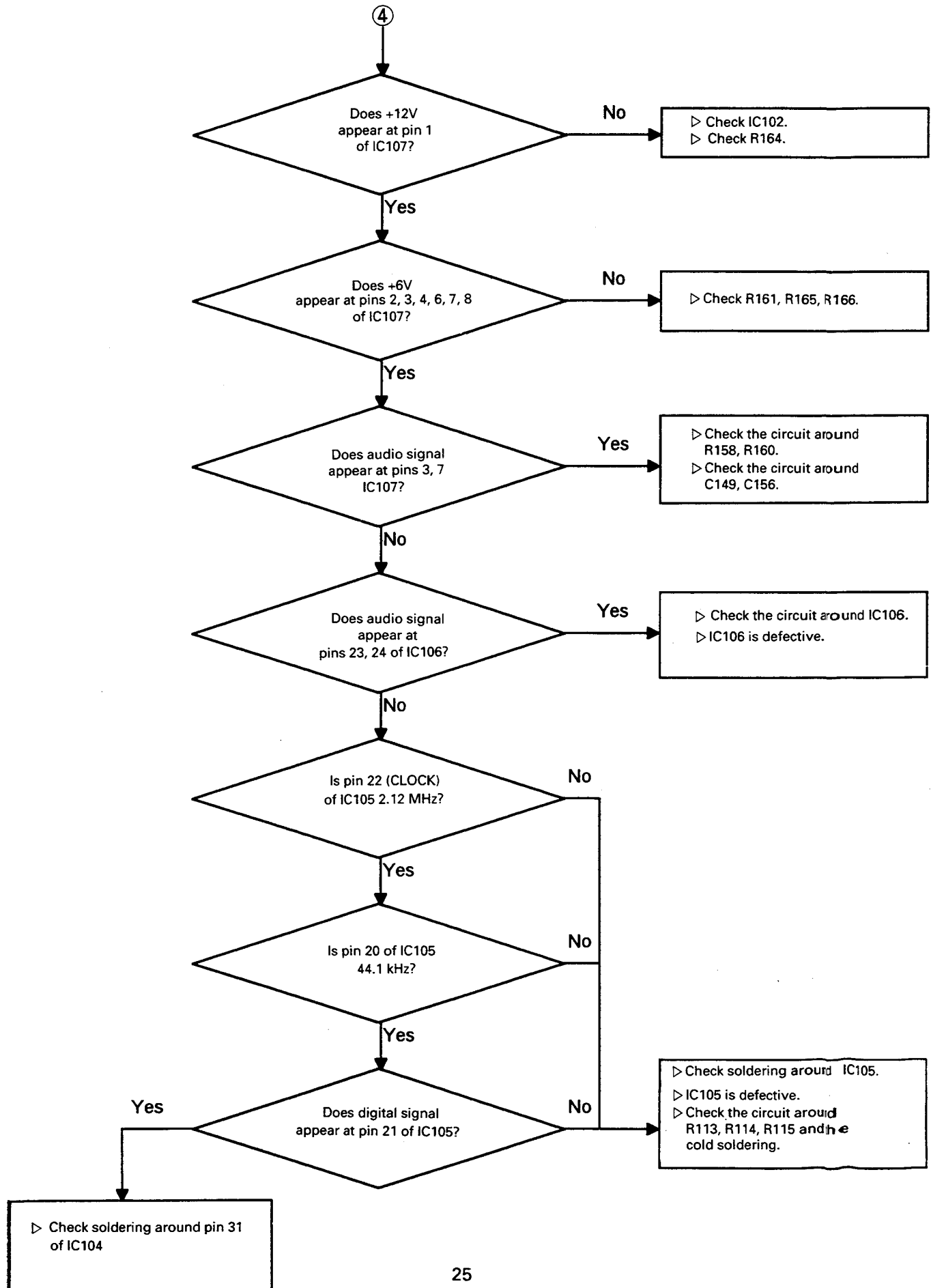


Figure 15

[Repair item 4] No sound signal.



MECHANICAL PARTS LIST

Ref.No.	Description	Part No.	Qty	Version	Ref.No.	Description	Part No.	Qty	Version
Packaging Materials					Hardware Kit				
	Box Carton	049605172122	1	KS	S1-S42	Screw, BTC 3X8B	8109230083	42	
	Box Carton	049605172121	1	A, D, PT INDO.	S43-S44	Screw Ground	8155000710	2	
	Cushion Poly	9722027310	1		S45-S50	Screw, BTC 3X8B	8109230083	6	
	Film Soft	9715000120	1		S51	Screw #2PTC 4 x 6Y	8119240061	1	
	Poly Bag	9705001550	1		S52-S57	Screw WSAM 4 x 8B			
Accessories					Miscellaneous				
	Cord RCA, 2P	4328200510	1		P1	PCB Main	4002522100	1	
	Cord RCA, 1P	4328201910	1	KS(Only)	P2	PCB Power S/W	4002522150	1	
	Ass'y Commander	5408000612	1	KS	P3	PCB Voltage Select	4002522140	1	
	Ass'y Commander	5408000611	1	A, D, PT INDO.	P4	PCB Front 1	4002522110	1	
	Manual Instructions	9007018142	1	KS	P5	PCB Front 2	4002522120	1	
	Manual Instructions	9007018140	1	A	P6	PCB Headphone	4002522130	1	A, D, PT INDO.
	Manual Instructions	9007018143	1	D	P7	PCB Mic	4005512400	1	KS
	Manual Instructions	9007018141	1	PT INDO.	P8	PCB Graphic	4005512410	1	KS
						Cable FPC, 22P, 220 mm	4118622159	1	
						Lead Ass'y, 2P, 600mm, CNT101 To CNT101	436102603031	1	
						Cable FPC, 22P, CNT106 To CNT106A	4426001022	1	
						Lead Ass'y, 6P, 600 mm, CNT107 To CNT107	436206603032	1	KS
						Lead Ass'y, 5P, 400 mm, CNT109 To CNT109	436105403031	1	
1	Panel Front,ABS,Black	048501034911	1	KS					
	Panel Front,ABS,Black	048501034912	1						
2	Door CD,ABS,Black	048562005712	1						
3	Window FL,Acryl,Wine	048552004711	1	KS					
	Window FL,Acryl,Wine	048552004712	1						
4	Knob,Balance,ABS,Black	048545118011	1						
5	Badge,INKEL	048535038511	1	KS					
	Badge,Sherwood	048535042011	1						
6	Button,Power	8545126010	1						
7	Button Tact,10key,ABS,Black	8543064810	1						
8	Button Tact, 5key,ABS,Black	8543064610	1						
9	Button Tact, 7key,ABS,Black	048543064711	1	KS					
	Button Tact, 7key,ABS,Black	048543064712	1						
10	Bracket,Phone,SECC,1t	6505139510	1						
11	Jack Phone,Gold	4438005610	1						
12	Chassis Main,SECC,0.8t	6121609420	1						
13	Foot,Gold	046033102621	2	KS					
	Foot,Hot-stamp	046033102531	2						
14	Foot,Black	6033102510	2						
15	Foot,Gold	046033102621	2	KS					
	Foot,Hot-stamp	046033102531	2						
16	Foot,Black	6033102510	2						
17	Fastener	6028301710	1						
18	Heat Sink REG. TR.	7505206220	1						
19	Jack,RCA,DIGI-LINK	4438105020	1						
20	Jack,RCA,2P	4438111310	1	A,D,PT INDO.					
21	Jack,RCA,3P	4438110710	1	KS(Only)					
22	Heat Sink REG. TR.	7505202410	1	KS(Only)					
23	Selector,Vortage	4618006610	1	PT INDO.(Only)					
24	Chassis Back,SECC,0.8t	046102042911	1	KS					
	Chassis Back,SECC,0.8t	046102042921	1	A					
	Chassis Back,SECC,0.8t	046102042951	1	D					
	Chassis Back,SECC,0.8t	046102042991	1	PT INDO					
25	Cord,AC Power	4308007310	1	KS					
	Cord,AC Power	4308001410	1	A					
	Cord,AC Power	4308000430	1	D,PT INDO					
26	Holder, AC Cord	6518002310	1	KS,D,PT INDO					
	Holder, AC Cord	6518002320	1	A					
27	Adaptor, AC	4428300410	1	PT INDO.					
28	Terminal, Ground	4408104910	1	KS(Only)					
29	Cover Insulation, PVC,0.5t	4835023410	1	UK(Only)					
30	Mecha CDP, ILU04A	5728000450	1						
31	Cover Top, SECC,0.8t	046122021011	1						
VR1	Volume Mic	3228018010	1	KS					
VR1	Volume Mic	3208069210	1						
SW1	Switch,Push	4628055810	1						
SW2-SW2	Switch Tact	4658003710	22						

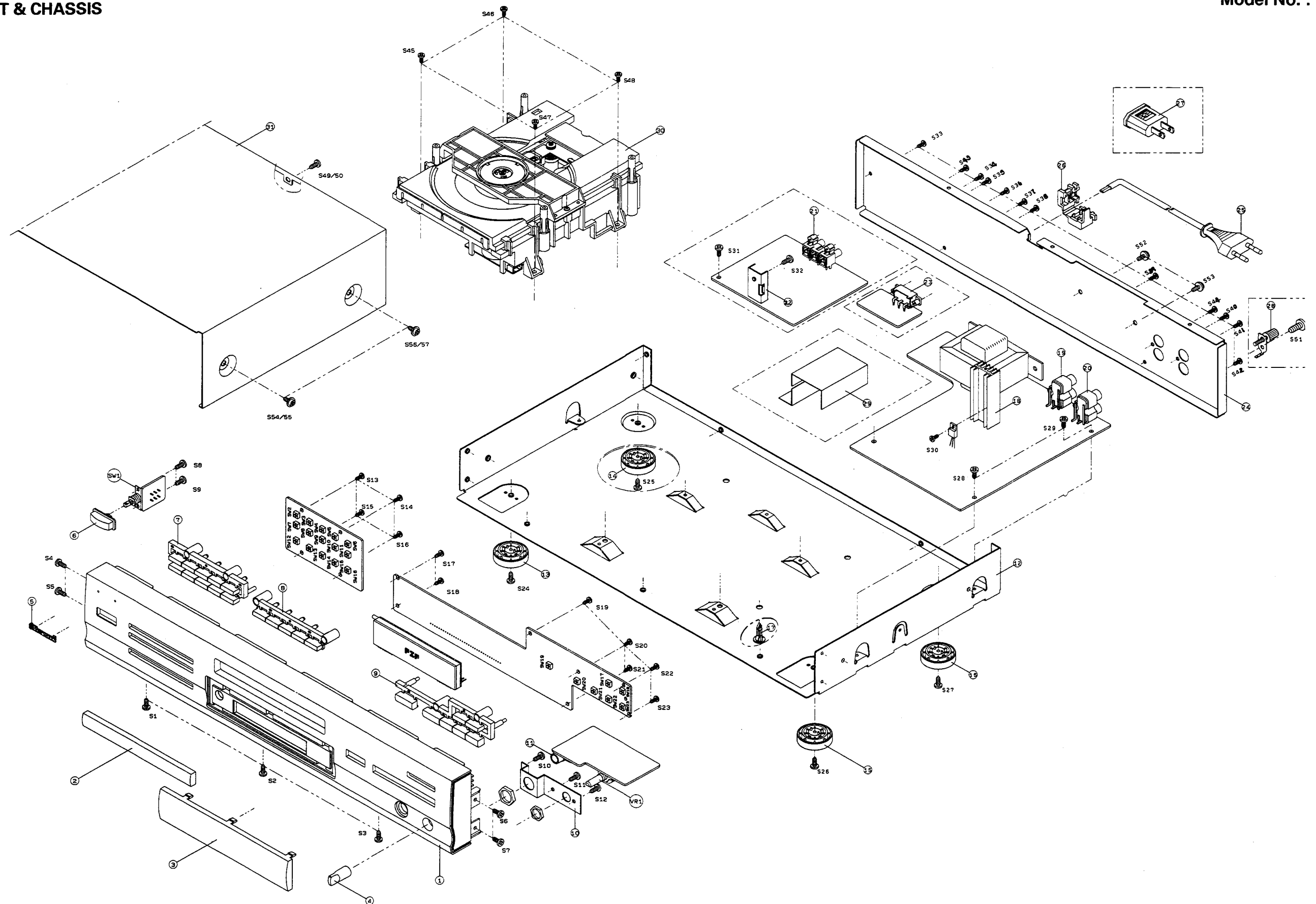
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the safety can be of special significance. When replacing a component identified with Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CABINET & CHASSIS

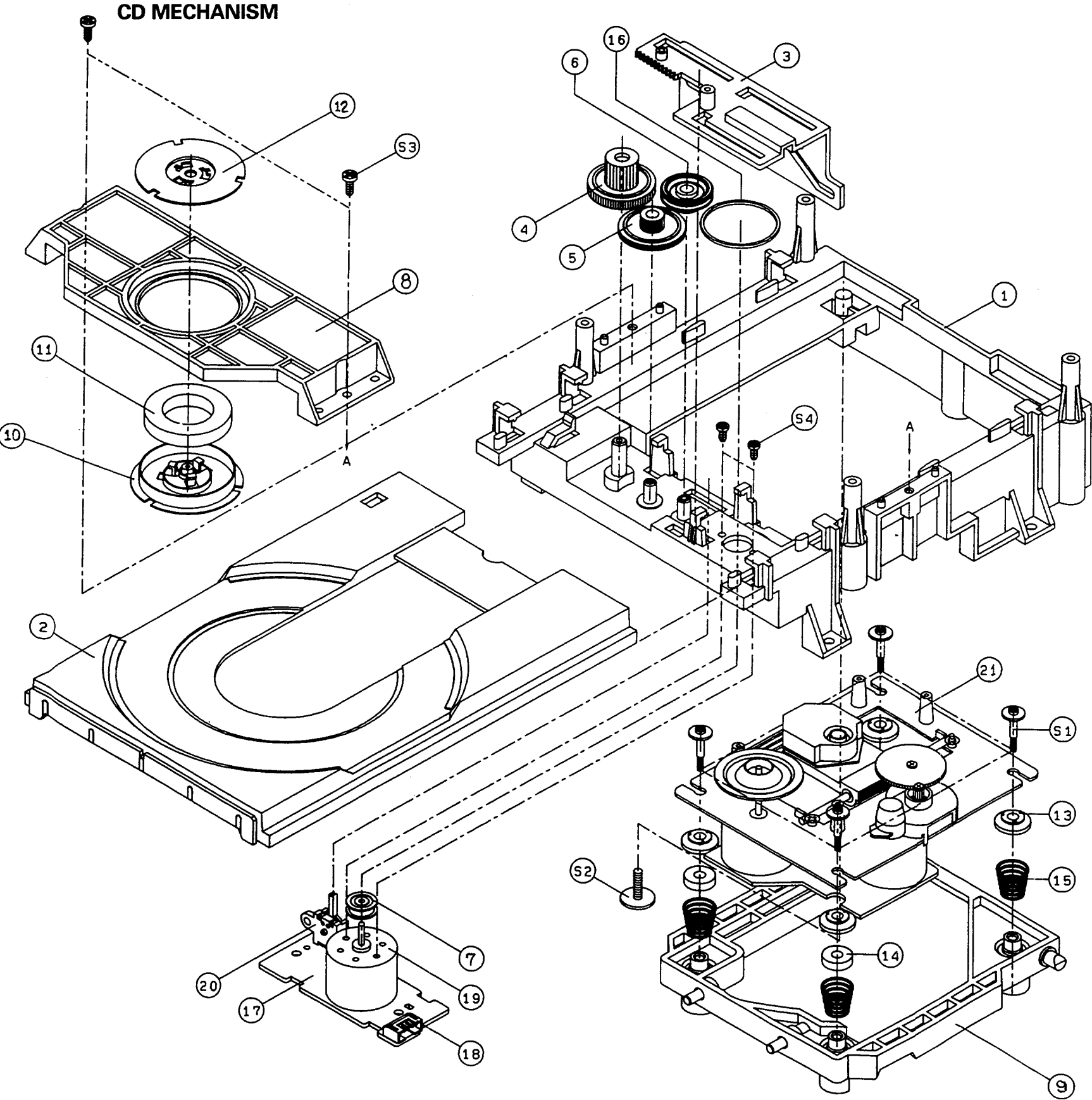
EXPLODED VIEW (I)

Model No. : CD3050R



EXPLODED VIEW (II)

Model No. : CD3050R



PARTS LIST					
NO.	PART No.	Rev.	DESCRIPTION	Q'ty	REMARK
1	6021601210		BODY MECHA	1	
2	6021800310		TRAY DISC	1	COLOR:BLACK
3	7142000410		CAM SLIDE	1	
4	7103001610		GEAR LOADING	1	
5	7103001710		GEAR CENTER	1	
6	7103001810		GEAR PULLEY	1	
7	7113001310		PULLEY MOTOR	1	
8	6023601210		CHUCK FRAME	1	
9	6062000320		BASE DRIVE UNIT	1	A'ssy SHAFT
10	6063103010		BASE MAGNET	1	
11	5125000910		MAGNET	1	
12	6023408610		COVER MAGNET	1	
13	6715018420		RUBBER DAMPING	4	
14	6705021910		SPONGE DAMPING	2	FRONT ONLY(2EA)
15	6555009220		SPRING DAMPING	4	
16	7165002610		BELT (φ 24×1×1)	1	
17			PCB MOTOR	1	
18	4428525550		CNT GIL-05P-S2L2-EF	1	
19	5558200210		MOTOR RF310T-11400	1	
20	4638003210		SWITCH LEVER (SSCF-21)	1	
21	5728001010		CD DRIVE UNIT	1	KSM-2101-ABM
SCREWS					
S1	8155001120		SCREW DAMPING	4	
S2	8155001210		SCREW MECHA	1	
S3	8009120051		SCREW BM 2×5Y	2	
S4	8159626081		SCREW #2WPT 2.6×8Y	2	

Model No. : CD3050R

VOLTAGE
SELECT B'D
4002522140B

CP103A

PT T160mA/250V

110V

220V

F501

F502

SW501

PT T315mA/250V

4002522150B
POWER SW B'D

SW4D1 ★ J1 J1 179X ▲

★ CNT7501A

★ CNT7501A

★ CNT7501A

ELECTRICAL PARTS LIST

Ref.No.	Description	Part No.	Q'ty	Version	Ref.No.	Description	Part No.	Q'ty	Version	
PRODUCT SAFETY NOTICE : Products marked with ⚠ have special characteristics important to safety. If you replace these components, read carefully the product safety notice in the manual. Resistor/Capacitor Tolerance, D : (±0.5%), J : (±5%), K : (±10%), M : (±20%), Z : (+80, -20%).										
Ass'y P.C.Board Main					Connectors					
054041010057										
Capacitors					Diodes					
C101/C102	Electrolytic SG	100	uF	10 V M	3479310121	2	CNT101	Wafer, 2P	4428508210	2
C103	Ceramic Disc, CH	33	pF	50 V Z	3528330210	1	CNT102	Wafer, 6P	4428516510	1
C104	Electrolytic SG	4.7	uF	50 V M	3479347971	1	CNT103	Wafer, 8P	4428516710	2
C105	Ceramic Disc, CH	33	pF	50 V Z	3528330210	1	CNT104	Wafer, 8P	4428516710	1
C106	Not used !						CNT105	Wafer, 5P	4428516410	1
C107	Mylar	0.01	uF	100 V J	3679103120	1	CNT106	Wafer FPC, 22P	4426001022	2
C108	Mylar	0.033	uF	100 V J	3679333120	1	CNT107	Wafer, 6P	4428516510	2 KS
C109	Mylar	0.01	uF	100 V J	3679103120	1	CNT108	Wafer, 2P	4428508210	1 KS
C110	Electrolytic SG	33	uF	16 V M	3479333031	1	CNT109	Wafer, 5P	4428506910	2
C111	Mylar	0.033	uF	100 V J	3679333120	1	CNT110	Lead Ass'y, 2P, 450 mm	436102453331	1 KS
C112	Electrolytic SG	22	uF	25 V M	3479322041	1				
C113	Ceramic Tubular	220	pF	50 V J	3519221935	1				
C114-C117	Mylar	0.01	uF	100 V J	3679103120	4				
C118	Mylar	0.022	uF	100 V J	3679223120	1				
C119	Mylar	0.1	uF	100 V J	3679104120	1				
C120	Mylar	0.033	uF	100 V J	3679333120	1				
C121	Mylar	0.047	uF	100 V J	3679473120	1				
C122	Not used !									
C123	Electrolytic SG	100	uF	10 V M	3479310121	1				
C124	Not used !									
C125	Electrolytic SG	4.7	uF	50 V M	3479347971	1				
C126	Electrolytic SG	22	uF	25 V M	3479322041	1				
C127	Ceramic Disc	1000	pF	50 V Z	3519102935	1				
C128	Mylar	0.047	uF	100 V J	3679473120	1				
C129	Not used !									
C130	Electrolytic SG	3.3	uF	50 V M	3479333971	1				
C131	Not used !									
C132	Electrolytic SG	4.7	uF	50 V M	3479347971	1				
C133	Ceramic Tubular	2200	pF	10 V J	3519222915	1				
C134	Not used !									
C135	Not used !									
C136	Electrolytic SG	100	uF	10 V M	3479310121	1				
C137	Not used !									
C138-C141	Mylar	0.1	uF	100 V J	3679104120	4				
C142/C143	Ceramic Tubular	470	pF	50 V J	3519471935	2				
C144	Ceramic Disc	1000	pF	50 V Z	3519102935	1				
C145	Electrolytic SG	0.47	uF	50 V M	3479347871	1				
C146	Ceramic Disc	1000	pF	50 V Z	3519102935	1				
C147	Electrolytic SG	22	uF	50 V M	3479322071	1				
C148	Not used !									
C149	Electrolytic SG	100	uF	10 V M	3479310121	1				
C150	Electrolytic SG	1	uF	50 V M	3479310971	1				
C151	Not used !									
C152	Electrolytic SG	10	uF	50 V M	3479310071	1				
C153	Electrolytic SG	22	uF	25 V M	3479322041	1				
C154-C156	Electrolytic SG	100	uF	10 V M	3479310121	3				
C157	Electrolytic SG	2200	uF	25 V M	3409322249	1				
C158	Not used !									
C159	Electrolytic SG	100	uF	10 V M	3479310121	1				
C160/C161	Mylar	0.002	uF	100 V J	3679222120	2				
C162/C163	Electrolytic SG	47	uF	10 V M	3479347021	2				
C164/C165	Ceramic Tubular	220	pF	50 V J	3519221935	2				
C166	Electrolytic SG	10	uF	50 V M	3479310071	1				
C167	Electrolytic SG	22	uF	50 V M	3479322071	1				
C168/C169	Electrolytic SG	10	uF	50 V M	3479310071	2				
C170/C171	Mylar	0.002	uF	100 V J	3679222120	2				
C172/C173	Ceramic Disc	0.1	uF	50 V Z	3579104530	2				
C174/C175	Mylar	0.047	uF	100 V J	3679473120	1				
C176	Not used !									
C178	Mylar	0.047	uF	100 V J	3679473120	1				

Ref.No.	Description	Part No.	Q'ty	Version	Ref.No.	Description	Part No.	Q'ty	Version
Resistors					R184	Not used !			
R101/R102	Carbon Film	1 kohm 1/5 W J	3069102970	2	R185	Carbon Film	22 kohm 1/5 W J	3069223970	1
R103	Not used !				R186	Carbon Film	220 kohm 1/5 W J	3069224970	1
R104/R105	Carbon Film	1 kohm 1/5 W J	3069102970	2	Miscellaneous				
R106	Not used !				X101	Crystal,16.9344MHz		3938101500	1
R107/R108	Carbon Film	1 kohm 1/5 W J	3069102970	2	18	Heat Sink REG. TR.		7505206220	1
R109/R110	Carbon Film	47 kohm 1/5 W J	3069473970	2	19	Jack RCA, DIGI-LINK		4438105020	1
R111	Carbon Film	330 ohm 1/5 W J	3069331970	1	20	Jack RCA, 2P		4438111310	1
R112	Carbon Film	39 kohm 1/5 W J	3069393970	1		Clip Fuse			2
R113-R115	Carbon Film	680 ohm 1/5 W J	3069681970	3	⚠	Power Transformer, 220 V, 60 Hz		2828100451	1 KS
R116	Carbon Film	1 kohm 1/5 W J	3069102970	1	⚠	Power Transformer, 120 V, 60 Hz		2828100321	1 A
R117	Carbon Film	22 ohm 1/5 W J	3069220970	1	⚠	Power Transformer, 230 V, 50 Hz		2828100331	1 D
R118	Carbon Film	1 mohm 1/5 W J	3069105970	1	⚠	Power Transformer, 230 V, 50/60 Hz		2828100371	1 PT INDO.
R119/R120	Carbon Film	24 kohm 1/5 W J	3069243970	1					
R121	Carbon Film	120 kohm 1/5 W J	3069124970	1					
R122	Carbon Film	100 ohm 1/5 W J	3069101970	1		Ass'y P.C.Board Power S/W		054041010058	
R123	Carbon Film	3.3 kohm 1/5 W J	3069332970	1	CNT101A	Wafer, 2P		4428508210	1
R124/R125	Carbon Film	100 kohm 1/5 W J	3069104970	2	CNT501A	Lead Ass'y, 2P, 300 mm		436102303331	1
R126	Carbon Film	47 kohm 1/5 W J	3069473970	1	SW1	Switch Push		4628055810	1
R127	Carbon Film	100 kohm 1/5 W J	3069104970	1					
R128	Carbon Film	3.3 kohm 1/5 W J	3069332970	1		Ass'y P.C.Board Voltage Select		054040210059	PT INDO.(Only)
R129	Carbon Film	10 kohm 1/5 W J	3069103970	1	CP101	Lead Ass'y, LV, 3P, 180 mm		4358850318	1
R130	Carbon Film	82 kohm 1/5 W J	3069823970	1	⚠ F501	T, 160 mA, 250 V		5508301035	1
R131	Carbon Film	8.2 kohm 1/5 W J	3069822970	1	⚠ F502	T, 315 mA, 250 V		5508301434	1
R132	Carbon Film	10 kohm 1/5 W J	3069103970	1		Clip Fuse			4
R133	Carbon Film	68 kohm 1/5 W J	3069683970	1					
R134	Carbon Film	75 kohm 1/5 W J	3069753970	1		Ass'y P.C.Board Front 1		054041010060	
R135	Not used !				Capacitors				
R136	Carbon Film	15 kohm 1/5 W J	3069153970	1	C201	Electrolytic SG	33 uF 16 V M	3479333031	1
R137	Carbon Film	470 kohm 1/5 W J	3069474970	1	C202	Electrolytic SG	3.3 uF 50 V M	3479333971	1
R138	Carbon Film	10 kohm 1/5 W J	3069103970	1	C203	Electrolytic SG	100 uF 10 V M	3479310121	1
R139/R140	Carbon Film	4.7 ohm 1/5 W J	3069472970	2	C204	Electrolytic SG	2.2 uF 50 V M	3479322971	1
R141	Not used !				Diodes				
R142	Carbon Film	100 ohm 1/5 W J	3069101970	1					
R143	Not used !				D201	1N4148, Switching		2058322101	1
R144	Carbon Film	10 kohm 1/5 W J	3069103970	1	D202	1N4148, Switching		2058322101	1
R145	Not used !				D203	1N4148, Switching		2058322101	1
R146	Carbon Film	10 kohm 1/5 W J	3069103970	1	D204	1N4148, Switching		2058322101	1
R147	Carbon Film	680 kohm 1/5 W J	3069684970	1	D205	1N4148, Switching		2058322101	1
R148-R153	Carbon Film	10 kohm 1/5 W J	3069103970	6	D206	1N4148, Switching		2058322101	1
R154	Carbon Film	47 kohm 1/5 W J	3069473970	1	Integrated Circuit				
R155	Carbon Film	1 kohm 1/5 W J	3069102970	1	IC201	CXP82320-308Q, CPU		2138322187	1
R156	Carbon Film	47 kohm 1/5 W J	3069473970	1					
R157	Carbon Film	1 kohm 1/5 W J	3069102970	1	Transistors				
R158	Carbon Film	6.8 kohm 1/5 W J	3069682970	1					
R159	Carbon Film	1 kohm 1/5 W J	3069102970	1	Q201	DTA114YS/KRA107M, PNP		2238006103	1
R160	Carbon Film	6.8 kohm 1/5 W J	3069682970	1	Q202	DTC114YS		2208622106	1
R161/R162	Carbon Film	22 kohm 1/5 W J	3069223970	2	Resistors				
R163	Carbon Film	4.7 kohm 1/5 W J	3069472970	1					
R164	Carbon Film	100 ohm 1/5 W J	3069101970	1	R201	Carbon Film	100 ohm 1/5 W J	3069101970	1
R165/R166	Carbon Film	47 kohm 1/5 W J	3069473970	2	R202-R206	Carbon Film	3.3 kohm 1/5 W J	3069332970	5
R167-R170	Carbon Film	7.5 kohm 1/5 W J	3069752970	4	R207	Carbon Film	3 kohm 1/5 W J	3069302970	1
R171	Carbon Film	100 ohm 1/5 W J	3069101970	1	R208	Carbon Film	47 kohm 1/5 W J	3069473970	1
R172	Carbon Film	1 kohm 1/5 W J	3069102970	1	Miscellaneous				
R173	Carbon Film	5.1 kohm 1/5W J	3069512970	1					
R174	Carbon Film	390 ohm 1/5 W J	3069391970	1	CNT106A	Wafer, FPC, 22P		4426001022	1
R175	Carbon Film	10 kohm 1/5 W J	3069103970	1	CNT201	Lead Ass'y, 8P, 160 mm, To CNT201A		436408163232	1
R176	Carbon Film	470 ohm 1/5 W J	3069471970	1	FL201	FIP, 8BDM6		2328130319	1
R177/R178	Carbon Film	100 kohm 1/5 W J	3069104970	2	RCV201	SENSOR, RPM-638CBR-L		2408004005	1
R179	Carbon Film	1 kohm 1/5 W J	3069102970	1	X201	10 MHz		3938124010	1
R180/R181	Carbon Film	1 kohm 1/5 W J	3069102970	2	SW17-SW23	Switch Tact		4658003710	15
R182/R183	Carbon Film	470 ohm 1/5 W J	3069471970	2					

Ref.No.	Description	Part No.	Q'ty	Version	Ref.No.	Description	Part No.	Q'ty	Version
Ass'y P.C.Board Headphone					Connectors				
		054040210062		A, D, PT INDO					
Capacitors					CNT402	Lead Ass'y, 3P, 600 mm	436103607131	1	
C301	Ceramic Disc	0.1 uF 50 V Z	3579104530	1	CNT402A	Wafer, 3P	4428505710	1	
C302	Ceramic Tubular	1500 pF 10 V J	3519152915	1					
C303	Ceramic Tubular	1500 pF 10 V J	3519152915	1	Diode				
C304-C307	Electrolytic SG	10 uF 50 V M	3479310071	4	D401	Zener, UZ 5.6BSB	2258599104	1	
C308	Electrolytic SG	100 uF 10 V M	3479310121	1					
Integrated Circuit					Integrated Circuits				
IC301	KIA4559S/KIA75559S, OP Amp	2168206103	1		IC401	ES56028	2138633001	1	
					IC402	KIA4559S/KIA75559S, OP AMP	2168206103	1	
Transistors					Resistors				
Q301	DTA114YS/KRA107M, PNP	2238006103	1		R401-R404	Carbon Film	22 ohm 1/5 W J	3069220970	4
Q302	KTD1302, NPN	2208606112	1		R405	Carbon Film	27 kohm 1/5 W J	3069273970	1
Q303	KTD1302, NPN	2208606112	1		R406	Carbon Film	15 kohm 1/5 W J	3069153970	1
Resistors					R407	Carbon Film	3.3 kohm 1/5 W J	3069332970	1
R301	Carbon Film	56 ohm 1/5 W J	3069560970	1	R408	Carbon Film	7.5 kohm 1/5 W J	3069752970	1
R302/R303	Carbon Film	22 ohm 1/5 W J	3069220970	2	R409	Carbon Film	75 kohm 1/5 W J	3069753970	1
R304	Carbon Film	56 ohm 1/5 W J	3069560970	1	R410	Carbon Film	7.5 kohm 1/5 W J	3069752970	1
R305	Carbon Film	470 ohm 1/5 W J	3069471970	1	R411	Carbon Film	75 kohm 1/5 W J	3069753970	1
R306	Carbon Film	1.8 kohm 1/5 W J	3069182970	1	R412/R413	Carbon Film	10 kohm 1/5 W J	3069103970	2
R307	Carbon Film	47 kohm 1/5 W J	3069473970	1	R414	Carbon Film	15 kohm 1/5 W J	3069153970	1
R308	Carbon Film	22 kohm 1/5 W J	3069223970	1	R415	Carbon Film	10 kohm 1/5 W J	3069103970	1
R309/R310	Carbon Film	1 kohm 1/5 W J	3069102970	2	R416/R417	Carbon Film	15 kohm 1/5 W J	3069153970	2
R311	Carbon Film	47 kohm 1/5 W J	3069473970	1	R418	Carbon Film	8.2 kohm 1/5 W J	3069822970	1
R312	Carbon Film	1.8 kohm 1/5 W J	3069182970	1	R419	Carbon Film	15 kohm 1/5 W J	3069153970	1
R313	Carbon Film	470 ohm 1/5 W J	3069471970	1	R420	Carbon Film	10 kohm 1/5 W J	3069103970	1
R314	Carbon Film	22 kohm 1/5 W J	3069223970	1	R421	Carbon Film	18 kohm 1/5 W J	3069183970	1
R315	Carbon Film	3 kohm 1/5 W J	3069302970	1	R422	Carbon Film	4.7 kohm 1/5 W J	3069472970	1
R361	Carbon Film	3 kohm 1/5 W J	3069302970	1	R423	Carbon Film	47 kohm 1/5 W J	3069473970	1
Miscellaneous					R424	Carbon Film	3.3 kohm 1/5 W J	3069332970	1
CNT109A	Lead Ass'y, 5P, 220 mm	436105223331	1		R425	Carbon Film	560 ohm 1/5 W J	3069561970	1
VR1	Volume Mic	3208069210	1		R426	Carbon Film	3.3 kohm 1/5 W J	3069332970	1
11	Jack Phone, Gold	4438005610			R427	Carbon Film	47 kohm 1/5 W J	3069473970	1
Ass'y P.C.Board Mic					R428	Carbon Film	22 ohm 1/5 W J	3069221970	1
		054040810063		KS(Only)	R429	Carbon Film	4.7 kohm 1/5 W J	3069472970	1
Capacitors					R430	Carbon Film	910 kohm 1/5 W J	3069911970	1
C401	Electrolytic SG	100 uF 10 V M	3479310121	1	R431	Carbon Film	100 kohm 1/5W J	3069104970	1
C402	Electrolytic SG	47 uF 10 V M	3479347021	1	Miscellaneous				
C403	Ceramic Disc	0.01 uF 50 V Z	3579103530	1	VR1	Volume Mic	3228018010	1	
C404	Electrolytic SG	0.47 uF 50 V M	3479347871	1	Ass'y P.C.Board Graphic				
C405/C406	Ceramic Tubular	560 pF 50 V J	3519561935	2			054040810064		KS(Only)
C407/C408	Ceramic Disc	0.047 uF 50 V Z	3579473530	2	Capacitors				
C409/C410	Ceramic Disc	0.01 uF 50 V Z	3579103530	2	C501	Mylar	0.002 uF 100V	3679222120	1
C411	Mylar	0.006 uF 100 V J	3679562120	1	C502	Mylar	0.002 uF 100V	3679222120	1
C412	Mylar	0.033 uF 100 V J	3679333120	1	C503	Ceramic Disc	0.1 uF 50 V Z	3579104530	1
C413	Electrolytic SG	0.33 uF 50 V M	3479333871	1	C504	Electrolytic SG	470 uF 6.3 V M	3479347111	1
C414	Mylar	0.006 uF 100 V J	3679562120	1	C505/R506	Electrolytic SG	10 uF 50 V M	3479310071	2
C415	Electrolytic SG	0.33 uF 50 V M	3479333871	1	C507/C508	Electrolytic SG	47 uF 25 V M	3479347041	2
C416/C417	Electrolytic SG	4.7 uF 50 V M	3479347971	2	C509	Not used !			
C418	Electrolytic SG	0.47 uF 50 V M	3479347871	1	C510	Electrolytic SG	33 uF 16 V M	3479333031	1
C419	Electrolytic SG	0.1 uF 50 V M	3479310871	1	C511	Not used !			
C420	Electrolytic SG	0.47 uF 50 V M	3479347871	1	C512/C513	Ceramic Tubular	33 pF 50 V J	3519330930	2
C421	Ceramic Tubular	220 pF 50 V J	3519221935	1	C514	Electrolytic SG	47 uF 25 V M	3479347041	1
C422	Electrolytic SG	10 uF 25 V M	3479310041	1	C515/C516	Electrolytic SG	1 uF 50 V M	3479310971	2
C423	Electrolytic SG	10 uF 35 V M	3479310061	1	C517	Electrolytic SG	100 uF 10 V M	3479310121	1
C424	Ceramic Tubular	470 pF 50 V J	3519471935	1	C518	Electrolytic SG	47 uF 25V	3479347041	1
C425	Electrolytic SG	10 uF 35 V M	3479310061	1	C519	Electrolytic SG	100 uF 16 V M	3409310131	1
C426	Electrolytic SG	0.47 uF 50V	3479347871	1	C526	Ceramic Disc	0.1 uF 50 V Z	3579104530	1
					Connectors				

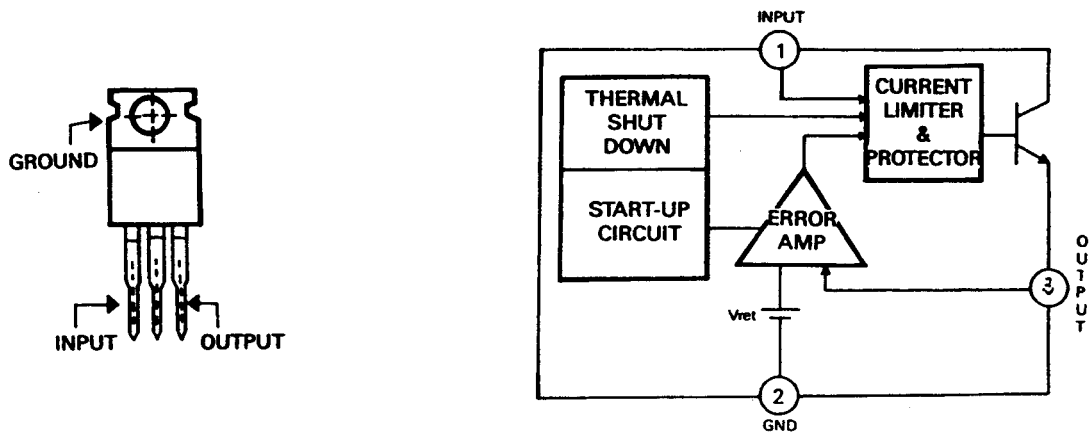
Ref.No.	Description	Part No.	Q'ty	Version
CNT501	Wafer, 2P	4428508210	1	
CNT501A	Lead Ass'y, 2P, 300 mm	436102303331	1	
Diodes				
D501	Zener, UZ, 5.1 BSB	2258599103	1	
D502	Zener, UZ 9.1BSC	2258599107	1	
Integrated Circuits				
IC501	KIA4559D	2168206104	1	
IC502	KIA4559D	2168206104	1	
IC503	DRAM, UD61466-10	2138031001	1	
IC504	LC7872E	2138017139	1	
△ IC505	KA7805, Regulator	2168602105	1	
Transistors				
Q501	KTA114Y(KRA107M)	2238006103	1	
Q502	KTC1815Y/KTC3198, NPN	2208606104	1	
Q503	KTD1302, NPN	2208606112	1	
Q504	DTA114YS/KRA107M, PNP	2238006103	1	
Q505	KTD1302, NPN	2208606112	1	
Q506	KTA1015Y/BKTA1266, PNP	2208206105	1	
Q507	KTC1815Y/KTC3198, NPN	2208606104	1	
Resistors				
R501/R502	Carbon Film	1 kohm 1/5 W J	3069102970	2
R503	Carbon Film	75 ohm 1/5 W J	3069750970	1
R504	Carbon Film	220 ohm 1/5 W J	3069221970	1
R505	Carbon Film	1 kohm 1/5 W J	3069102970	1
R506/R507	Carbon Film	3 kohm 1/5 W J	3069302970	2
R508	Carbon Film	470 ohm 1/5 W J	3069471970	1
R509/R510	Carbon Film	4.7 kohm 1/5 W J	3069472970	2
R511	Carbon Film	75 ohm 1/5 W J	3069750970	1
R512/R513	Carbon Film	100 kohm 1/5 W J	3069104970	2
R514	Carbon Film	470 ohm 1/5 W J	3069471970	1
R515	Carbon Film	100 ohm 1/5 W J	3069101970	1
R516-R518	Carbon Film	3.3 kohm 1/5 W J	3069332970	3
R519/R520	Carbon Film	2.7 kohm 1/5 W J	3069272970	2
R521	Not used !			
R522	Carbon Film	100 ohm 1/5 W J	3069101970	1
R523	Carbon Film	1 kohm 1/5 W J	3069102970	1
R524/R525	Carbon Film	10 kohm 1/5 W J	3069103970	2
R526	Carbon Film	680 ohm 1/5 W J	3069681970	1
R527	Carbon Film	10 kohm 1/5 W J	3069103970	1
R528	Carbon Film	1 kohm 1/5 W J	3069102970	1
R529	Carbon Film	3 kohm 1/5 W J	3069302970	1
R530	Carbon Film	51 kohm 1/5 W J	3069513970	1
R531	Carbon Film	3.3 kohm 1/5 W J	3938201950	1
Miscellaneous				
X501	Not used !			
X502	Resonator, 14.3198 MHz	3938201950	1	
21	Jack RCA, 3P	4438110710	1	
22	Heat Sink REG.TR	7505202410	1	

PRODUCT SAFETY NOTICE

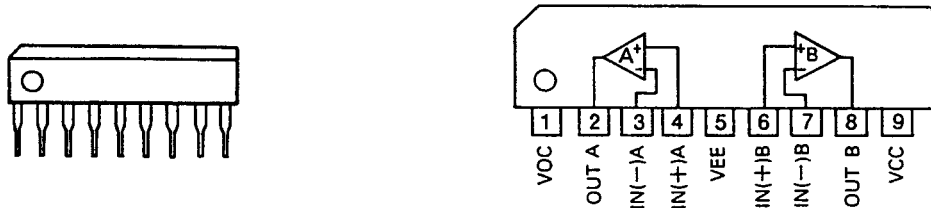
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the safety can be of special significance. When replacing a component identified with Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

IC'S LEAD IDENTIFICATION & INTERNAL DIAGRAMS

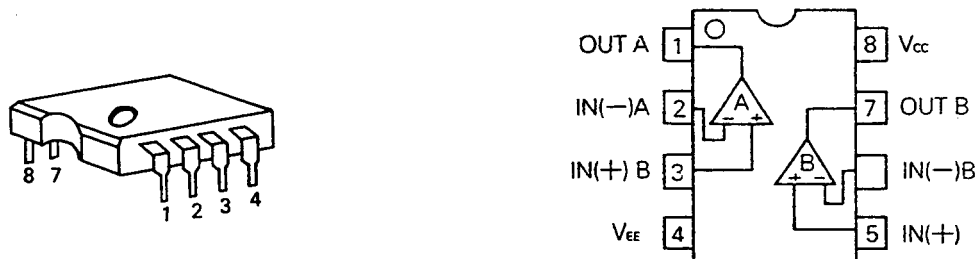
XA 78XX : IC101, IC102, IC505



KIA 4559S/KIA 75559S : IC107, IC301, IC402

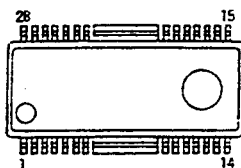


KIA 4559P : IC501, IC502

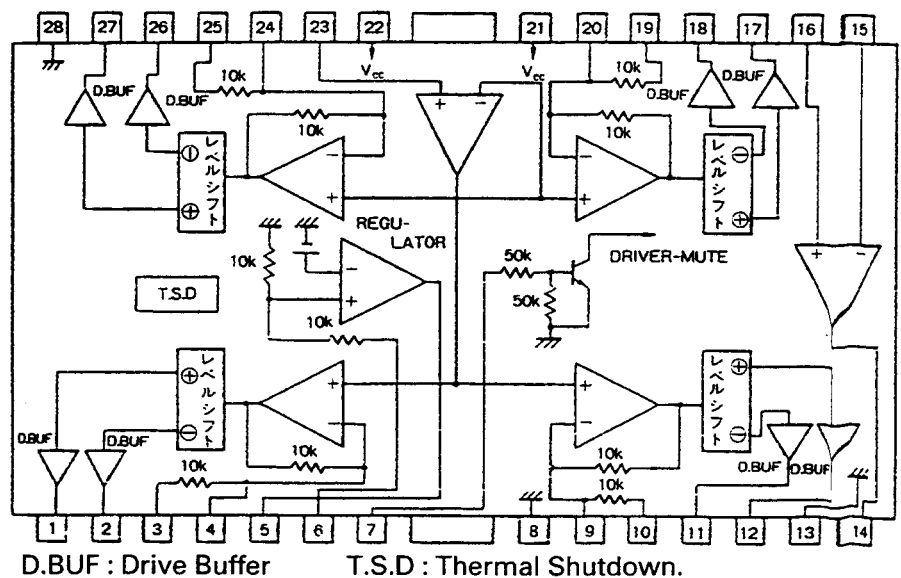


KA 9258D : IC103

Pin Diagram

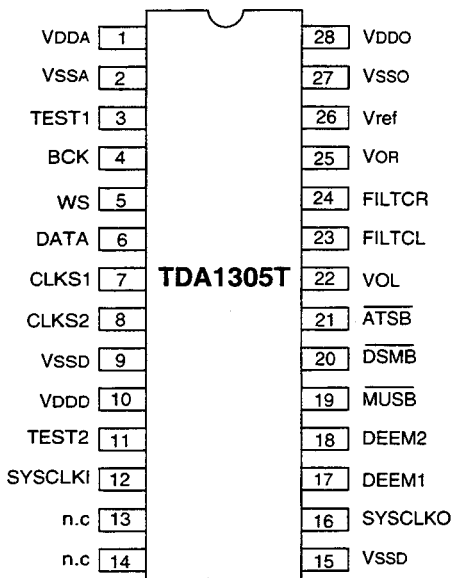


Block Diagram

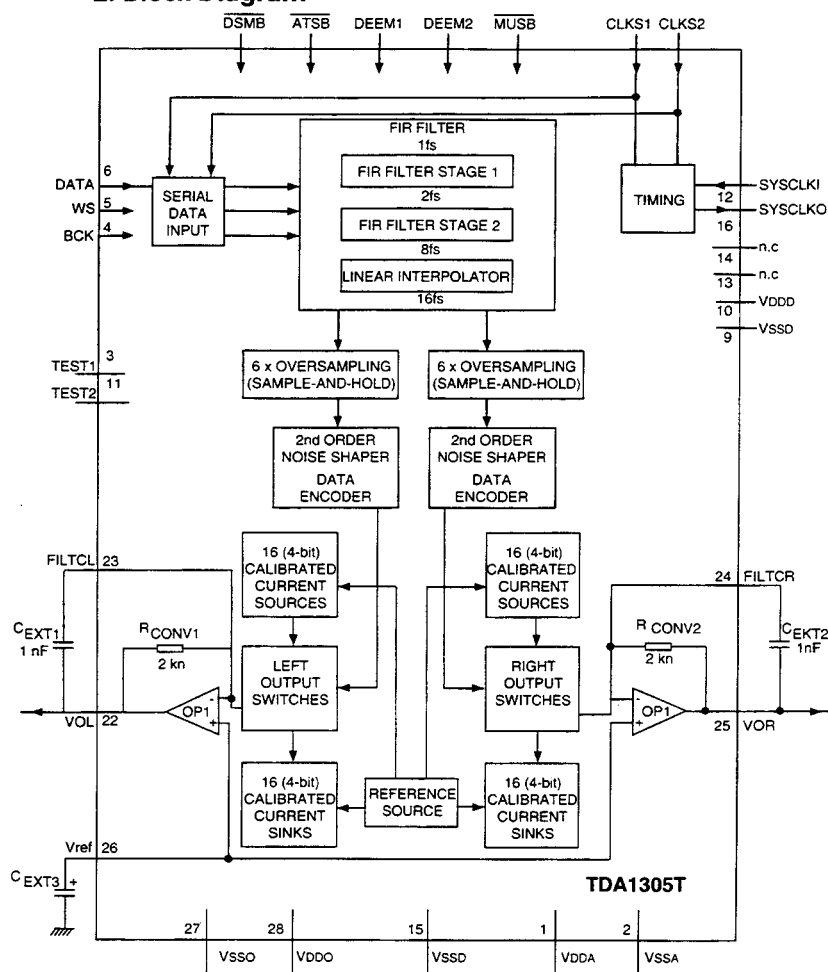


TDA 1305T : IC106

1. Pin Diagram



2. Block Diagram

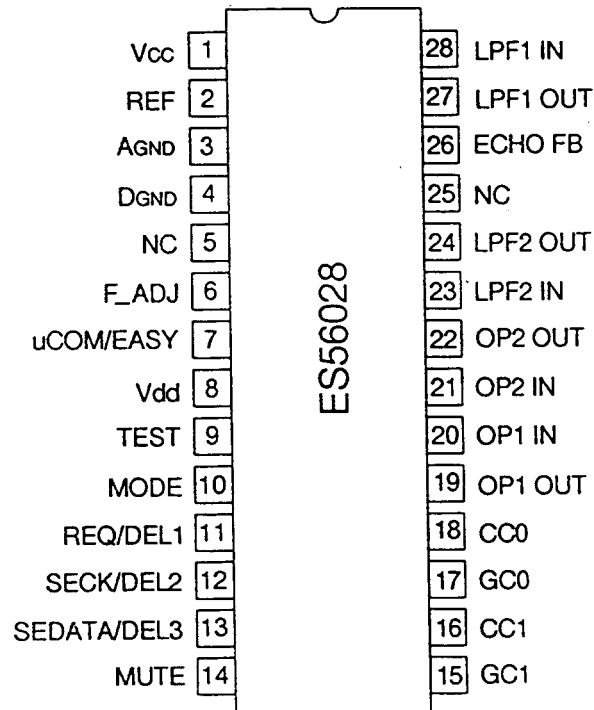


3. Pin Description

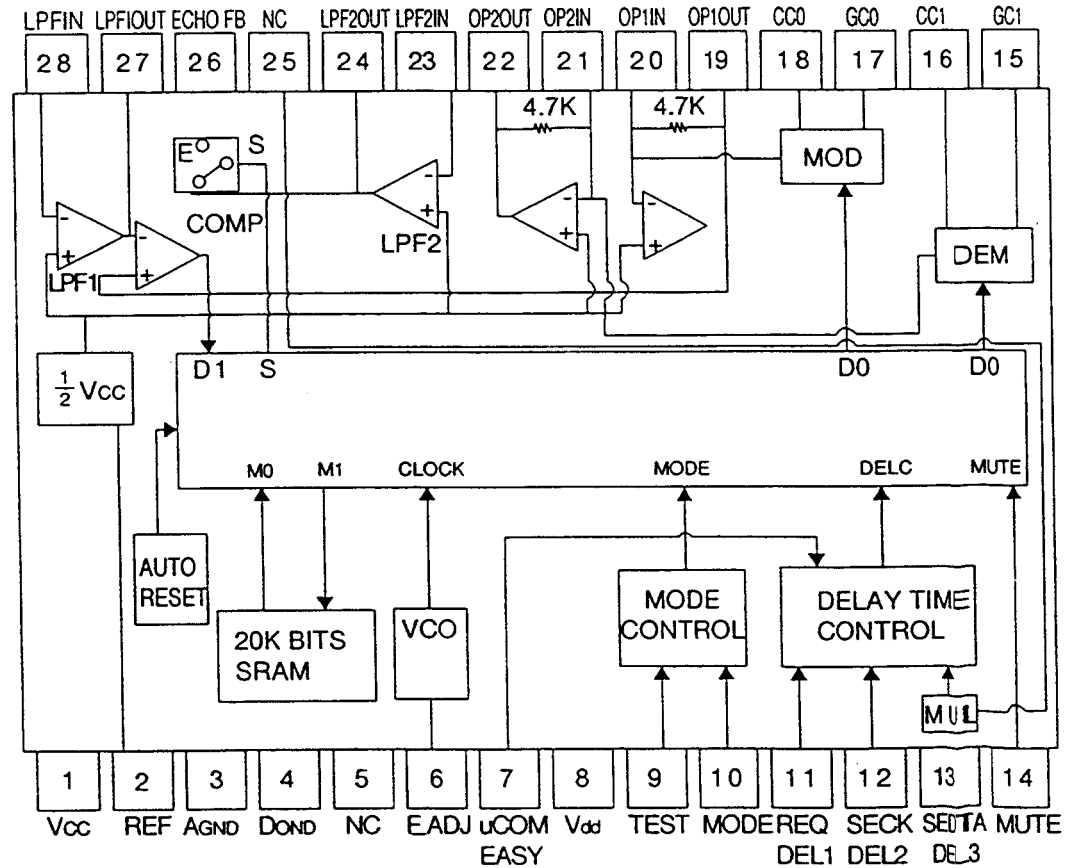
SYMBOL	PIN	DESCRIPTION	SYMBOL	PIN	DESCRIPTION
VDDA	1	analog supply voltage.	SYSCLKO	16	system clock output
VSSA	2	analog ground	DEEM1	17	de-emphasis on/off ; fDEEM 32 kHz, 44 kHz and 48 kHz
TEST1	3	test input; pin should be connected to ground (internal pull-down resistor)	DEEM2	18	de-emphasis on/off ; fDEEM 32 kHz, 44 kHz and 48 kHz
BCK	4	bit clock input	MUSB	19	mute input (active LOW)
WS	5	word select input	DSMB	20	double-speed mode input (active LOW)
DATA	6	data input	ATSB	21	12 dB attenuation input (active LOW)
CLKS1	7	clock selection 1 input	VOL	22	left channel output
CLKS2	8	clock selection 2 input	FILTCL	23	capacitor for left channel 1st order filter function should be connected between pins 22 and 23
VSSD	9	digital ground	FILTCL	24	capacitor for right channel 1st order filter function should be connected between pins 25 and 24
VDDD	10	digital supply voltage	VOR	25	right channel output
TEST2	11	test input; pin should be connected to ground (internal pull-down resistor)	Vref	26	internal reference voltage for output channel (0.5VDD)
SYSCLK1	12	system clock input	VSSO	27	operational amplifier ground
n.c.	13	not connected (this pin should be left open-circuit)	VDDO	28	operational amplifier supply voltage
n.c.	14	not connected (this pin should be left open-circuit)			
VSSD	15	digital ground			

ES56028 : IC702 (Echo Sound Processor)

1. Pin Diagram



2. Block Diagram

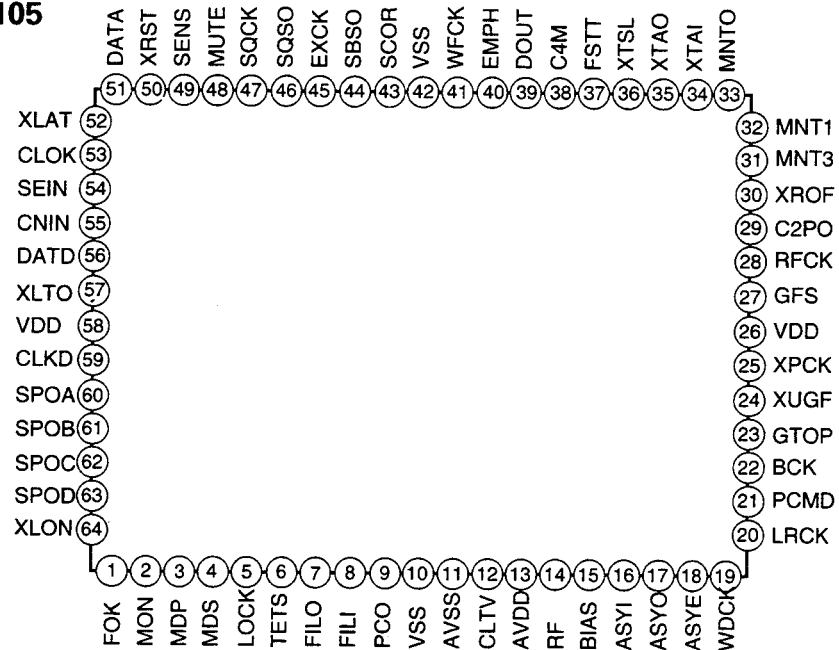


3. Pin Description

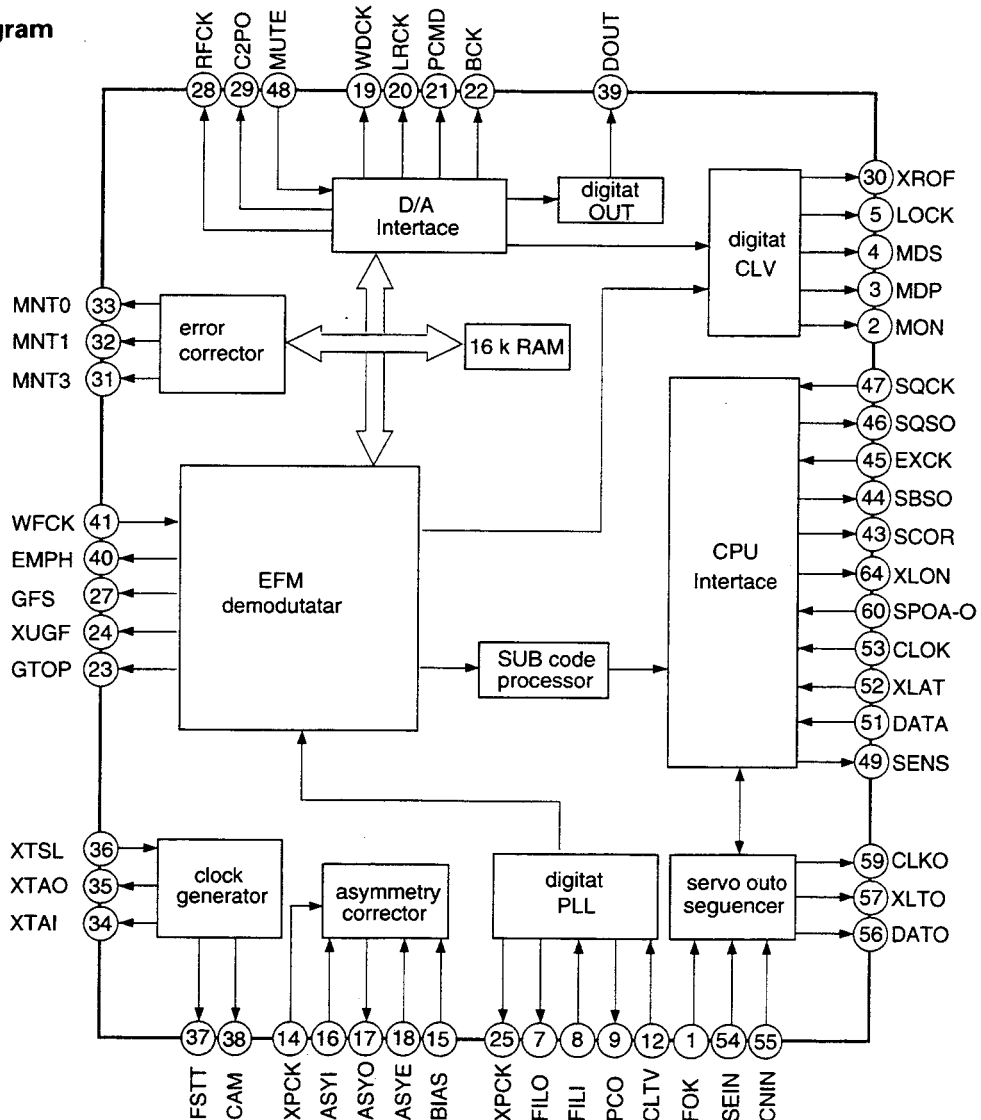
Pin	Name	I/O	Function
1	V _{cc}		Analog supply voltage input.
2	Ref		Analog reference voltage(=1/2 V _{cc})
3	A _{GND}		Analog ground.
4	D _{GND}		Digital ground.
5	NC		No connect.
6	F_adj	I	Frequency adjust
7	uCOM/EASY	I	A "high" on this input indicates uCOM mode--serial data control; a "low" on this input indicates EASY mode-- parallel data control.
8	V _{dd}		Digital supply voltage input.
9	Test	I	A "high" on this input indicates test mode; a "low" on this input indicates surround mode.
10	Mode	I	A "high" on this input indicates echo mode; a "low" on this input indicates surround mode.
11	Req/Del1	I	In uCOM mode, this input indicates data request signal; in easy mode, this input indicates delay time 1 setting.
12	Seck/Del2	I	In uCOM mode, this input indicates serial clock input; in easy mode, this input indicates delay time 3 setting.
13	Sedata/Del3	I	In uCOM mode, this input indicates serial data input; in easy mode, this input indicates delay time 3 setting.
14	Mute	I	A "high" on this input indicates mute control.
15	GC1		Gain control 1.
16	CC1		Current control 1.
17	GC0		Gain control 0.
18	CC0		Current control 0.
19	OP1 OUT	O	It can be used as modulated integrator by connecting capacitor.
20	OP1 IN	I	It can be used as modulated integrator by connecting capacitor.
21	OP2 IN	I	It can be used as demodulated integrator by connecting capacitor.
22	OP2 OUT	O	It can be used as demodulated integrator by connecting capacitor.
23	LPF2 IN	I	Low pass filter 2 input.
24	LPF2 OUT	O	Low pass filter 2 output.
25	NC		No connect.
26	Echo FB	O	Echo feedback pin. In echo mode, it can be adjusted the needed echo feedback.
27	LPF1 OUT	O	Low pass filter 1 output.
28	LPF1 IN	I	Low pass filter 1 input.

CXD 2507Q : IC105

1. Pin Diagram



2. Block Diagram



3. Pin Description

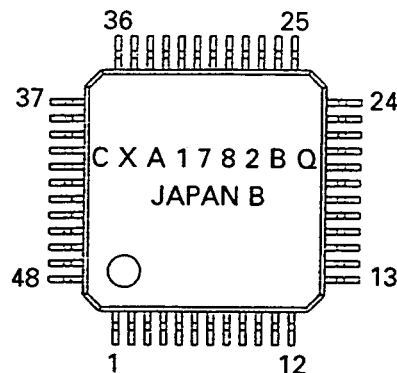
Pin No.	Symbol	I/O		Description
1	FOK	I		Focus OK input. Used for SENS output and the servo auto sequencer.
2	MON	O	1, 0	Spindle motor on/off control output.
3	MDP	O	1, Z, 0	Spindle motor servo control.
4	MDS	O	1, Z, 0	Spindle motor servo control.
5	LOCK	O	1, 0	GFS is sampled at 460 Hz; when GFS is high, this pin outputs a high signal. If GFS is low eight consecutive samples, this pin outputs low.
6	TEST	I		TEST pin. Normally GND.
7	FILO	O	Analog	Master PLL (slave=digital PLL) filter output.
8	FILI	I		Master PLL filter input.
9	PCO	O	1, Z, 0	Master PLL charge pump output.
10	V _{SS}	—	—	GND.
11	AV _{SS}	—	—	Analog GND.
12	CLTV	I		Master VCO control voltage input.
13	AV _{DD}	—	—	Analog power supply (+5 V)
14	RF	I		EFM signal input.
15	BIAS	I		Constant current input of asymmetry circuit.
16	ASYI	I		Asymmetry comparator voltage input.
17	ASYO	O	1, 0	EFM full-swing output (low=V _{SS} , high=V _{DD}).
18	ASYE	I		Low: asymmetry circuit off; high: asymmetry circuit on.
19	WDCK	O	1, 0	D/A interface. Word clock $f=2F_s$.
20	LRCK	O	1, 0	D/A interface. LR clock $f=F_s$.
21	PCMD	O	1, 0	D/A interface. Serial data (two's complement, MSB first).
22	BCK	O	1, 0	D/A interface. Bit clock.
23	GTOP	O	1, 0	GTOP output.
24	XUGF	O	1, 0	XUGF output.
25	XPCK	O	1, 0	XPLCK output.
26	V _{DD}	—	—	Power supply (+5 V).
27	GFS	O	1, 0	GFS output.
28	RFCK	O	1, 0	RFCK output.
29	C2PO	O	1, 0	C2PO output.
30	XROF	O	1, 0	XRAOF output.
31	MNT3	O	1, 0	MNT 3 output.
32	MNT1	O	1, 0	MNT 1 output.
33	MNT0	O	1, 0	MNT 0 output.
34	XTAI	I		16.9344 MHz crystal oscillation circuit input, or 33.8688 MHz input.
35	XTAO	O	1, 0	16.9344 MHz crystal oscillation circuit output.
36	XTSL	I		Crystal selection input. Set low when the crystal is 16.9344 MHz, high when 33.8688 MHz.
37	FSTT	O	1, 0	2/3 frequency divider output for Pins 34 and 35.
38	C4M	O	1, 0	4.2336 MHz output.

Pin No.	Symbol	I/O		Description
39	DOUT	O	1, 0	Digital_Out output.
40	EMPH	O	1, 0	Outputs high signal when the playback disc has emphasis, low signal when no emphasis.
41	WFCK	O	1, 0	WFCK output.
42	V _{SS}	—	—	GND.
43	SCOR	O	1, 0	Outputs high signal when either subcode sync S0 or S1 is detected.
44	SBSO	O	1, 0	Sub P to W serial output.
45	EXCK	I		SBSO readout clock input.
46	SQSO	O	1, 0	SubQ 80-bit serial output.
47	SQCK	I		SQSO readout clock input.
48	MUTE	I		High: mute; low: release
49	SENS	O	1, 0	SENS output to CPU.
50	XRST	I		System reset. Reset when low.
51	DATA	I		Serial data input from CPU.
52	XLAT	I		Latch input from CPU. Serial data is latched at the falling edge.
53	CLOK	I		Serial data transfer clock input from CPU.
54	SEIN	I		Sense input from SSP.
55	CNIN	I		Track jump count signal input.
56	DATO	O	1, 0	Serial data output to SSP.
57	XLTO	O	1, 0	Serial data latch output to SSP. Latched at the falling edge.
58	V _{DD}	—	—	Power supply (+5 V).
59	CLKO	O	1, 0	Serial data transfer clock output to SSP.
60	SPOA	I		Microcomputer extended interface (input A).
61	SPOB	I		Microcomputer extended interface (input B).
62	SPOC	I		Microcomputer extended interface (input C).
63	SPOD	I		Microcomputer extended interface (input D).
64	XLON	O	1, 0	Microcomputer extended interface (output).

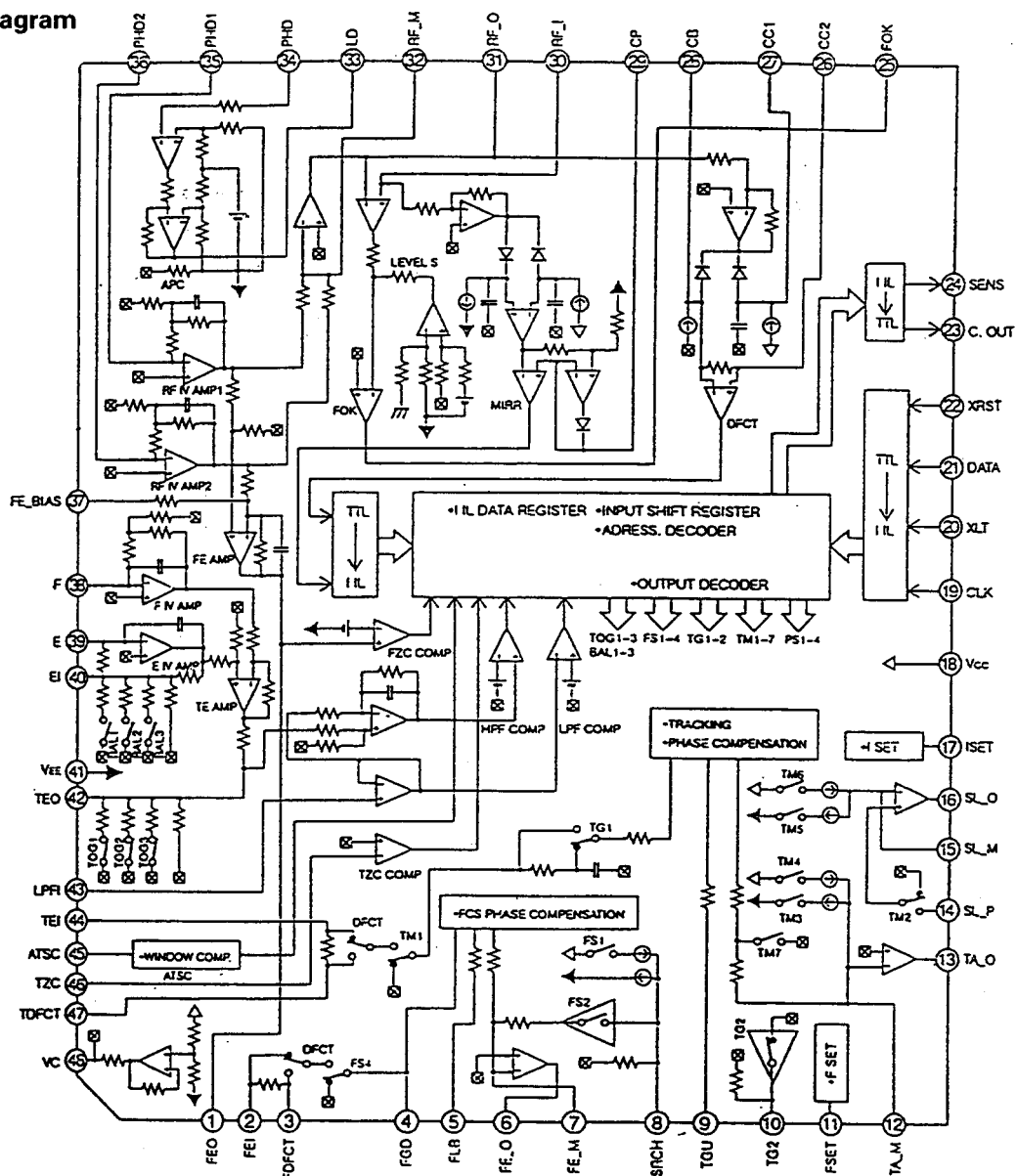
- Notes:
- PCMD is two's complement output of MSB first.
 - GTOP is used to monitor the frame sync protection status.
 - XUGF is the negative pulse for the frame sync derived from the EFM signal. It is the signal before sync protection.
 - XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
 - GFS goes high when the frame sync and the insertion protection timing match.
 - RFCK is derived from the crystal accuracy. This signal has a cycle of 136 μ .
 - C2PO represents the data error status.
 - XRAOF is generated when the 16K RAM exceeds the $\pm 4\text{f}$ jitter margin.

CXA 1782BQ : IC104

1. Pin Diagram



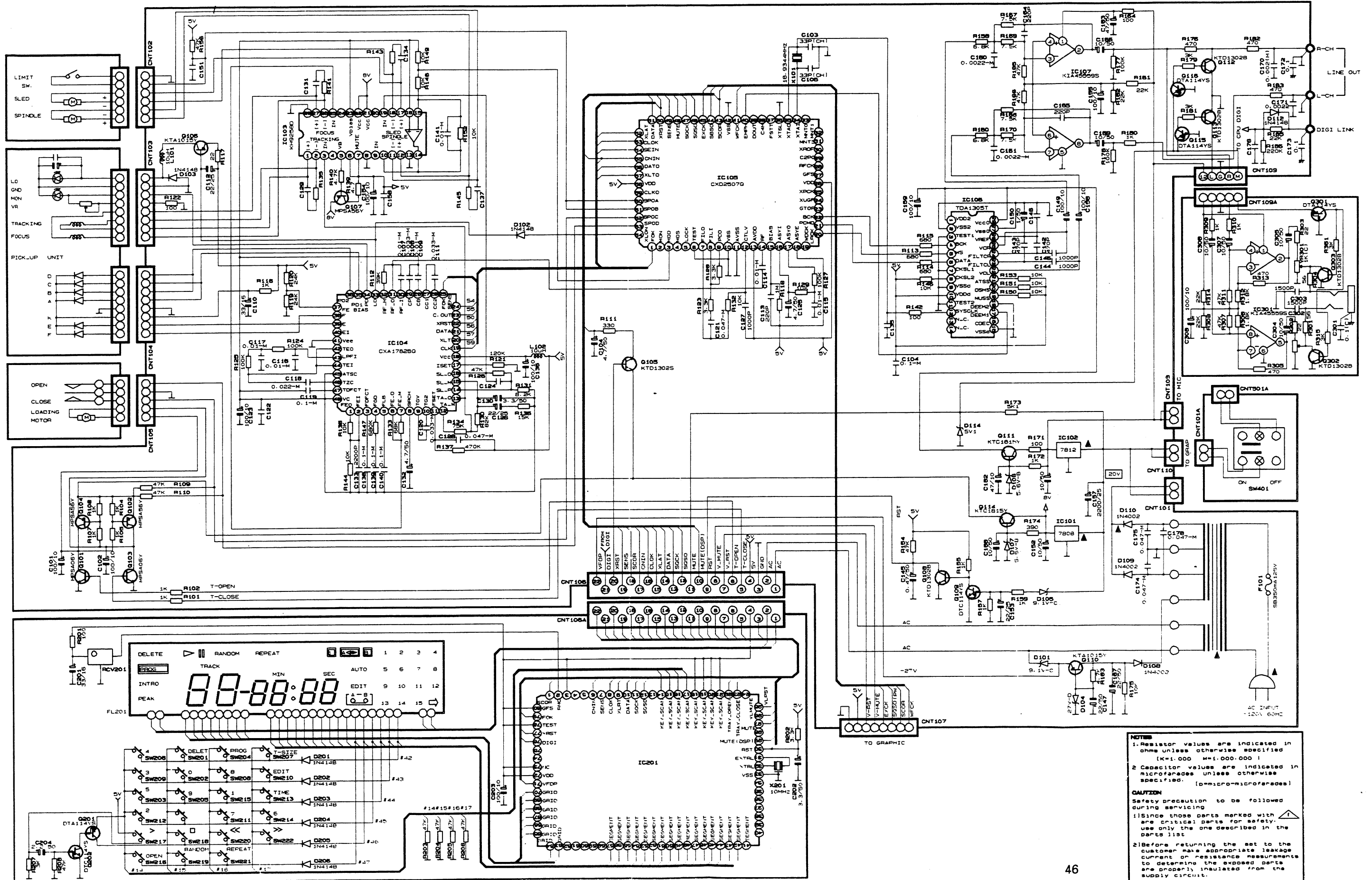
2. Block Diagram



- * The switch state in Block Diagram is for initial resetting.
- * Switch turns to ○ side for 1 and to ● side for 0 in Serial Data Truth Table on pages 30 and 31.
- * DFCT switch turns to ○ side when defect signal generates for DEFECT=E in Serial Data Truth Table.
- * TG1 switch turns to ○ side and TG2 switch is left open when TG1 and TG2 (address 1 : D3) is 1.

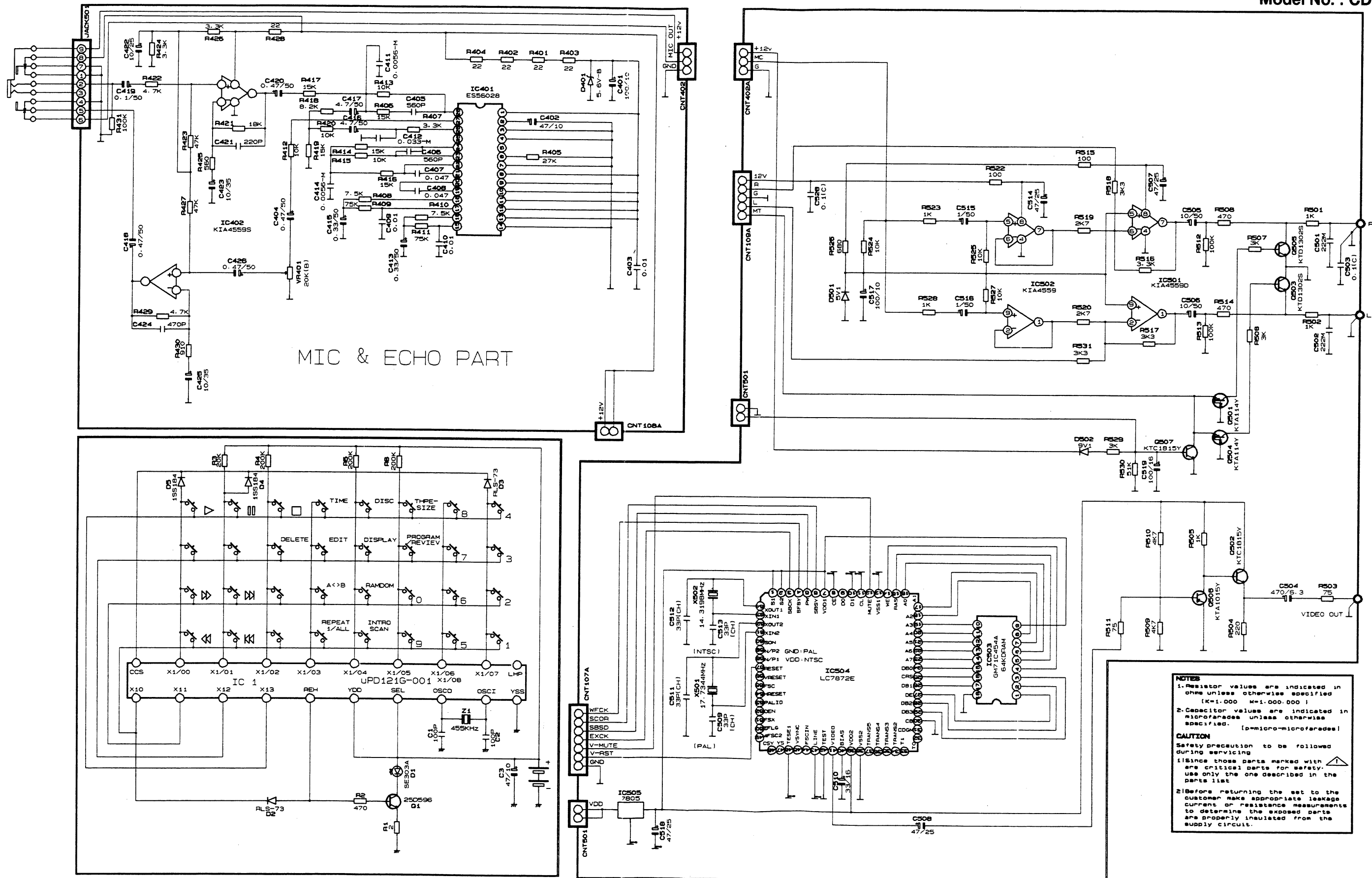
SCHEMATIC DIAGRAM I.

Model No. : CD3050R



SCHEMATIC DIAGRAM II

Model No. : CD3050R



NOTES

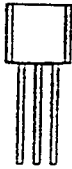
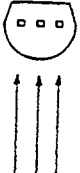
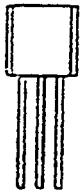
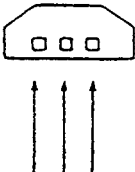
1. Resistor values are indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitor values are indicated in microfarads unless otherwise specified. (p=micro-microfarads)

CAUTION

Safety precaution to be followed during servicing:

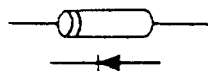
1. Since those parts marked with a triangle are critical parts for safety, use only the one described in the parts list.
2. Before returning the set to the customer, make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

TRANSISTORS LEAD IDENTIFICATION

DESCRIPTION	FRONT VIEW	BOTTOM VIEW
KTC 1815Y/KTC3198 KTA 1015Y/KTA1266 KTD 1302 KTA965Y/KTC1023	 E C B	 E C B
MPSA06 MPSA56	 E B C	 E B C
DTA114YS/KRA107M DTC114YS KTA114Y (KRA107M)	 E C B	 B C E

DIODES

1N 4002



Zener Diode

