

SERVICE MANUAL

MODEL	JP	E3	E2	EK	E2A	E1C	E1K	EUT
DCD-510AE			✓					

CD PLAYER

• For purposes of improvement, specifications and design are subject to change without notice.

• Please use this service manual with referring to the operating instructions without fail.

• Some illustrations using in this service manual are slightly different from the actual set.

DENON

Denon Brand Company, D&M Holdings Inc.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

LASER RADIATION

Do not stare into beam or view directly with optical instruments, class 3A laser product.

CAUTION Please heed the points listed below during servicing and inspection.

◎ Heed the cautions!

Spots requiring particular attention when servicing, such as the cabinet, parts, chassis, etc., have cautions indicated on labels or seals. Be sure to heed these cautions and the cautions indicated in the handling instructions.

◎ Caution concerning electric shock!

- (1) An AC voltage is impressed on this set, so touching internal metal parts when the set is energized could cause electric shock. Take care to avoid electric shock, by for example using an isolating transformer and gloves when servicing while the set is energized, unplugging the power cord when replacing parts, etc.
- (2) There are high voltage parts inside. Handle with extra care when the set is energized.

◎ Caution concerning disassembly and assembly!

Though great care is taken when manufacturing parts from sheet metal, there may in some rare cases be burrs on the edges of parts which could cause injury if fingers are moved across them. Use gloves to protect your hands.

◎ Only use designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). For replacement parts, be sure to use parts which have the same properties. In particular, for the important safety parts that are marked \triangle on wiring diagrams and parts lists, be sure to use the designated parts.

◎ Be sure to mount parts and arrange the wires as they were originally!

For safety reasons, some parts use tape, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires inside and clamps are used to keep wires away from heating and high voltage parts, so be sure to set everything back as it was originally.

◎ Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and turn the power switch on. Using a 500V insulation resistance tester, check that the insulation resistance between the terminals of the power plug and the externally exposed metal parts (antenna terminal, headphones terminal, microphone terminal, input terminal, etc.) is $1M\Omega$ or greater. If it is less, the set must be inspected and repaired.

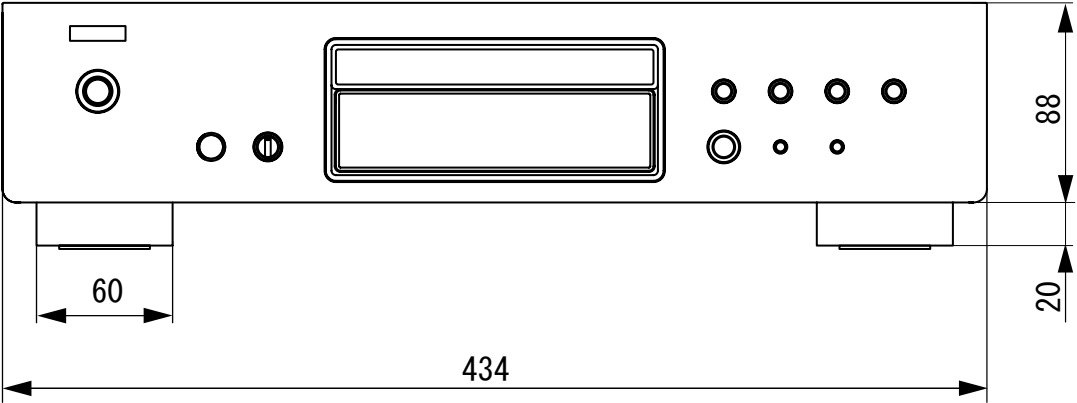
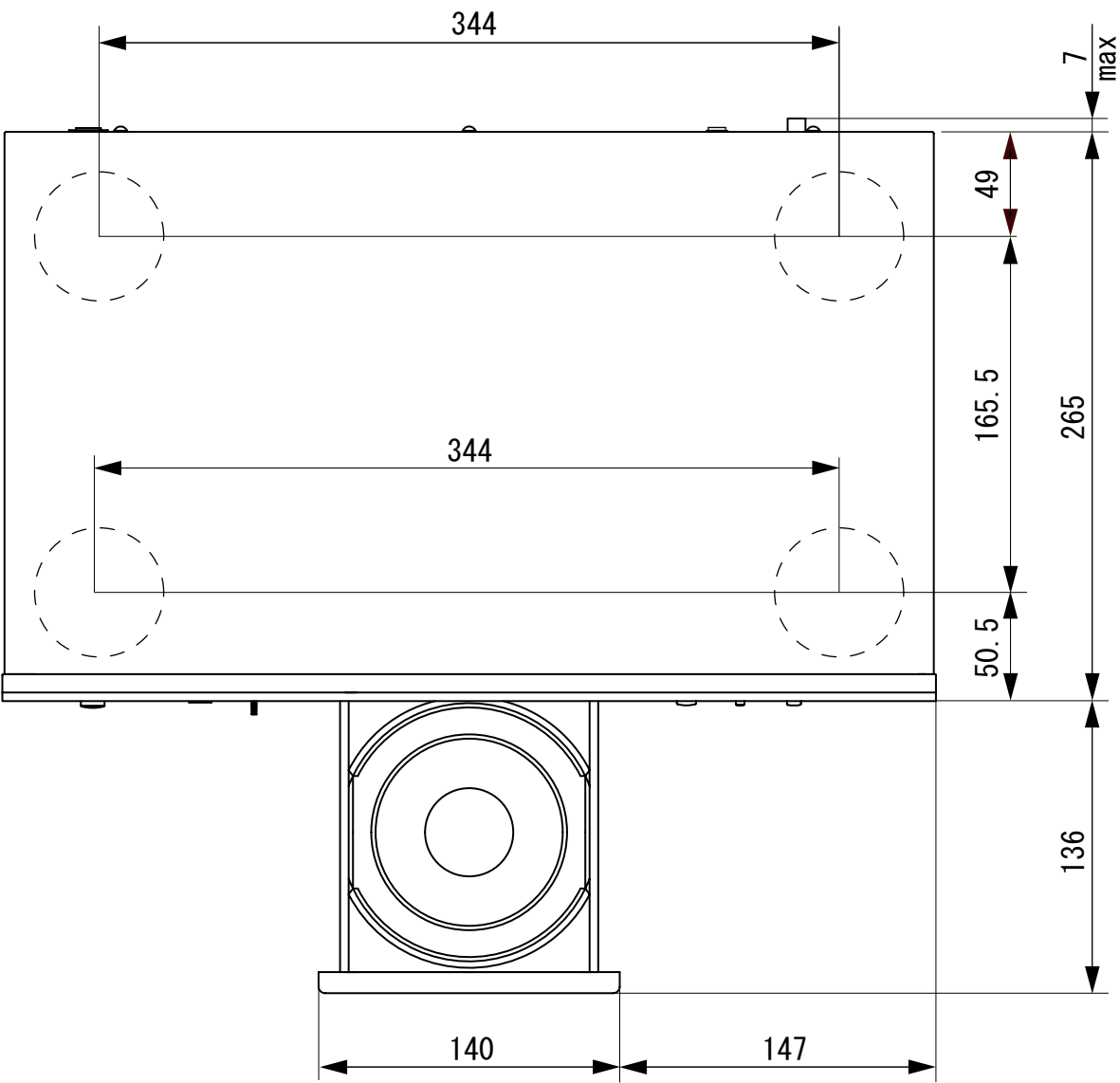
CAUTION Concerning important safety parts

Many of the electric and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and parts lists in this service manual. Be sure to replace them with parts with the designated part number.

- (1) Schematic diagrams ... Indicated by the \triangle mark.
- (2) Parts lists ... Indicated by the \triangle mark.

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

DIMENSION

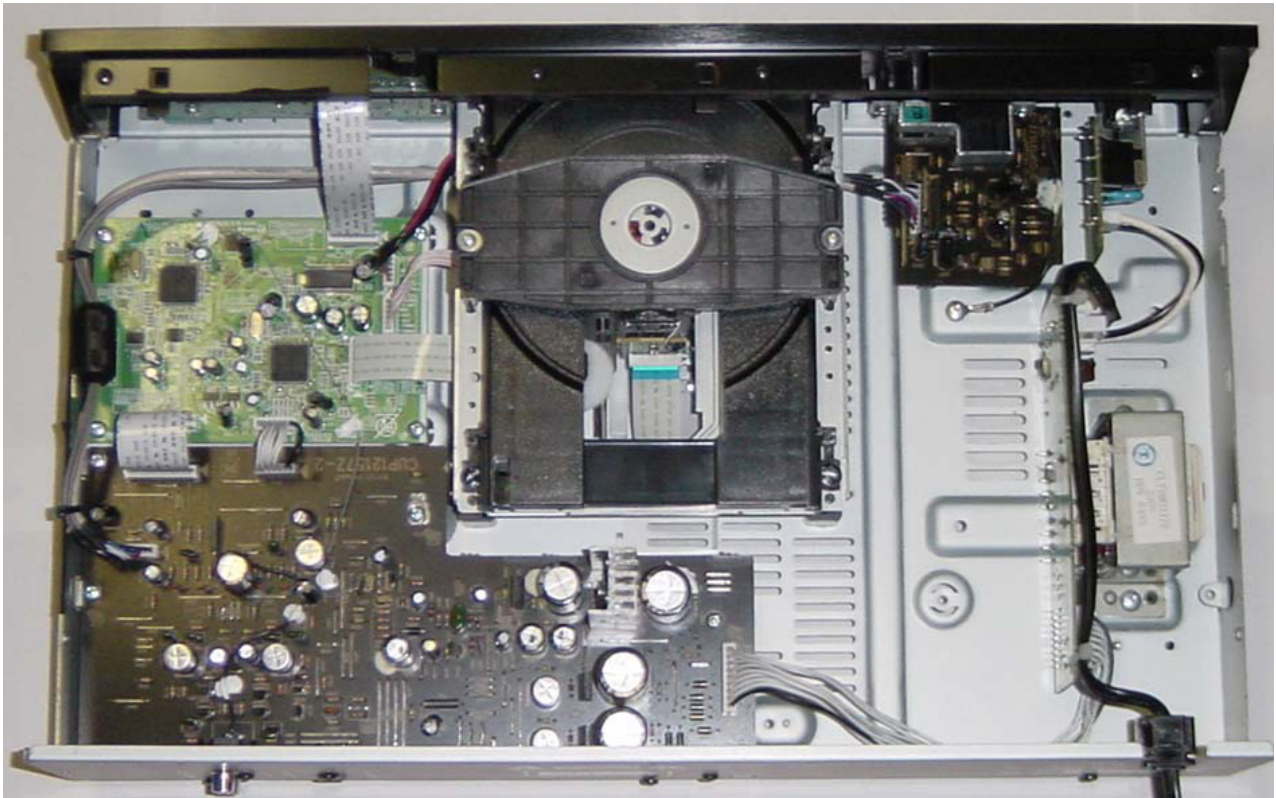


WIRE ARRANGEMENT

If wire bundles are untied or moved to perform adjustment or parts replacement etc., be sure to rearrange them neatly as they were originally bundled or placed afterward.
Otherwise, incorrect arrangement can be a cause of noise generation.

Wire arrangement viewed from the top

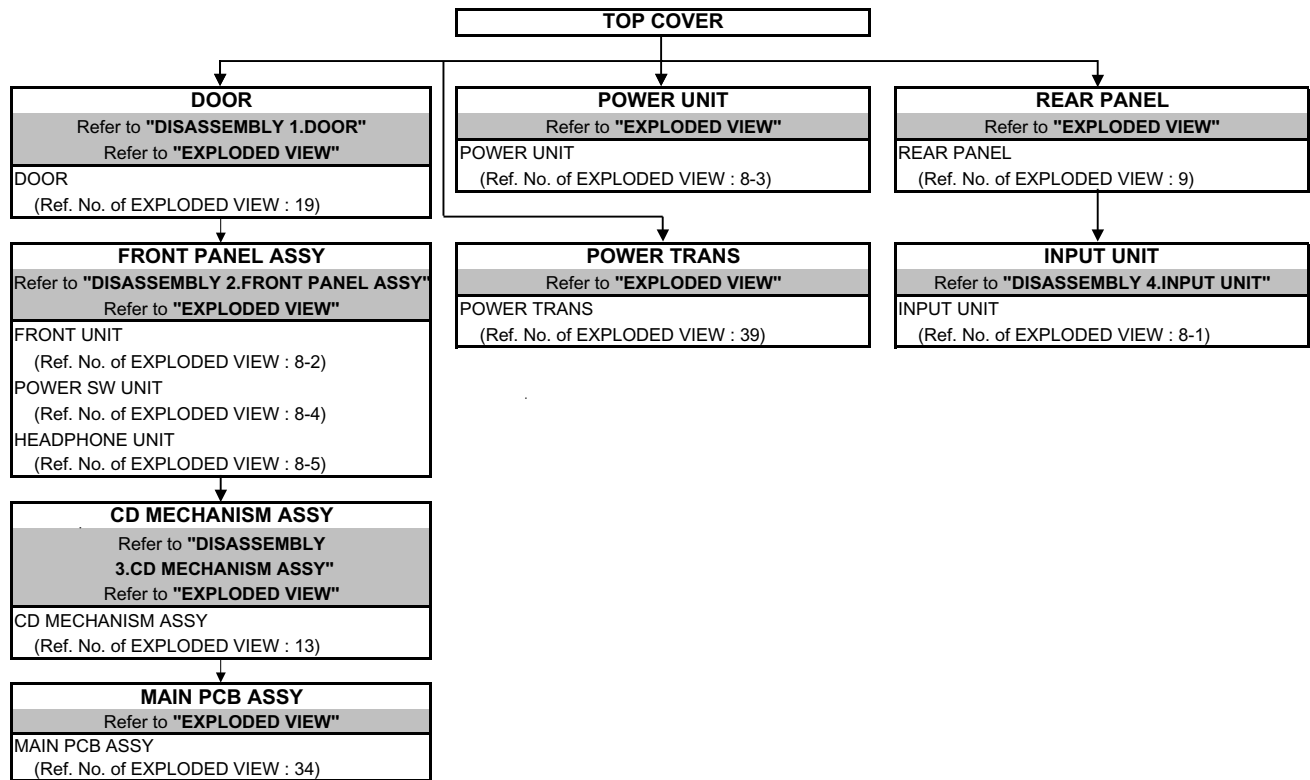
Front Panel side



Back Panel side

DISASSEMBLY

- Disassemble in order of the arrow of the figure of following flow.
- In the case of the re-assembling, assemble it in order of the reverse of the following flow.
- In the case of the re-assembling, observe "attention of assembling" it.



About the photos used for descriptions in the “DISASSEMBLY” section.

- The direction from which the photographs used herein were photographed is indicated at "Direction of photograph: ****" at the left of the respective photographs.
- Refer to the table below for a description of the direction in which the photos were taken.
- Photographs for which no direction is indicated were taken from above the product.

The viewpoint of each photograph
(photography direction)

[View from above]



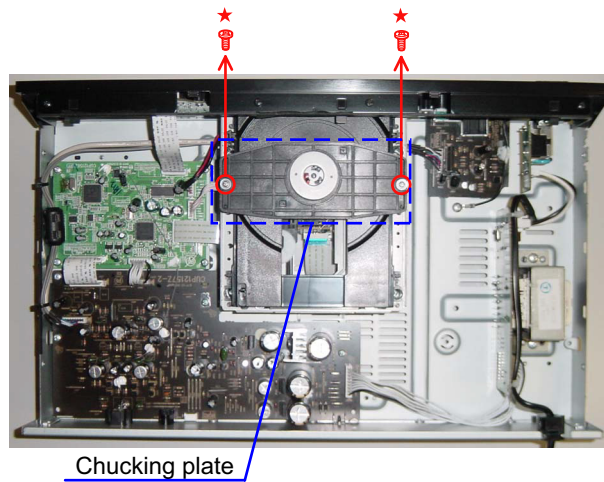
Front side

Direction of photograph: A

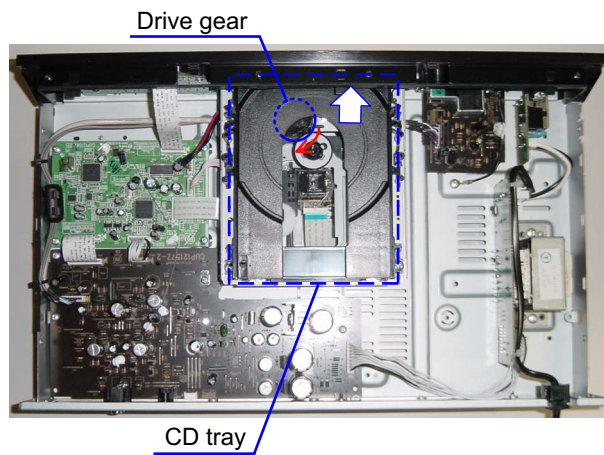
1. DOOR

Proceeding : **TOP COVER** → **DOOR**

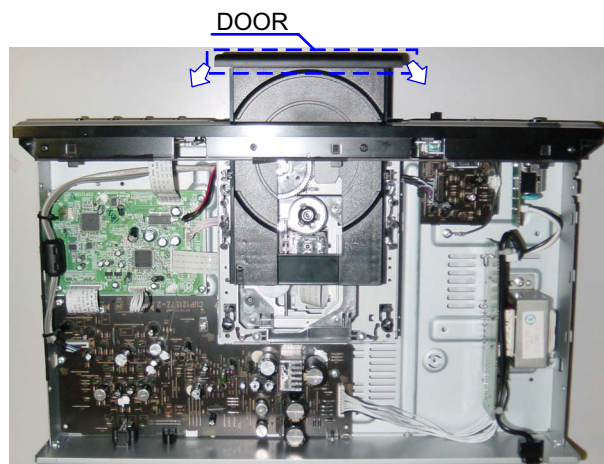
- (1) Take off the Chucking plate after removing screws.



- (2) Open the CD tray by turning the Drive gear clockwise.



- (3) Detach the DOOR.

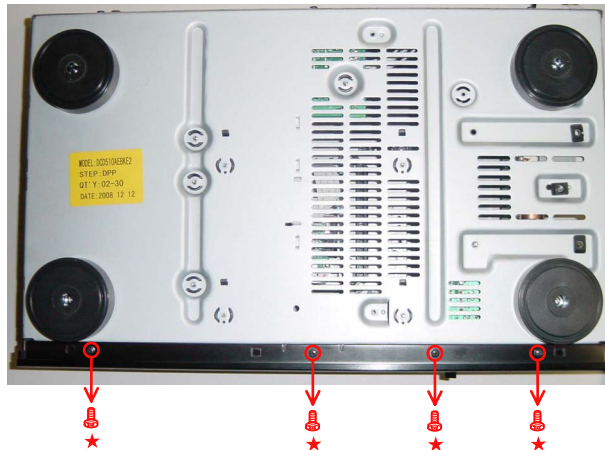


2. FRONT PANEL ASSY

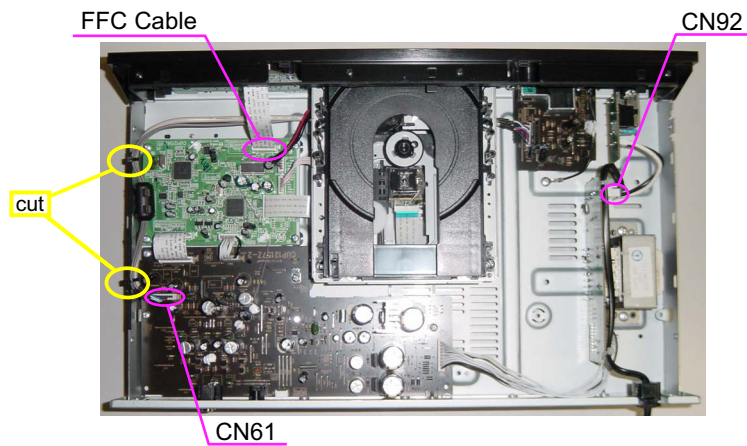
Proceeding : **TOP COVER** → **DOOR** → **FRONT PANEL ASSY**

- (1) Remove the screws.

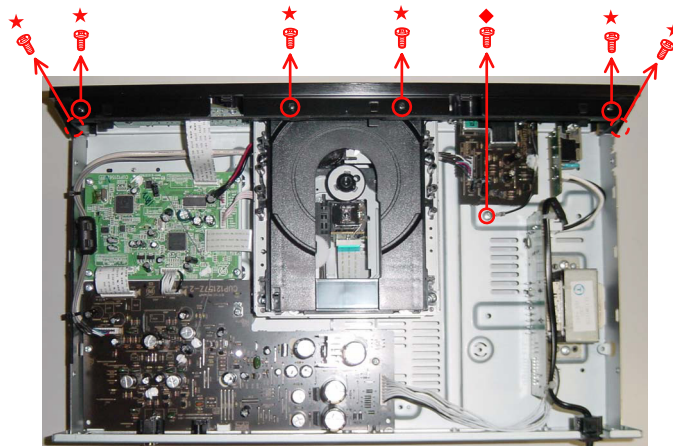
View from bottom



- (2) Cut the clamp bands, disconnect the connector wires and FFC Cable.



- (3) Remove the screws.

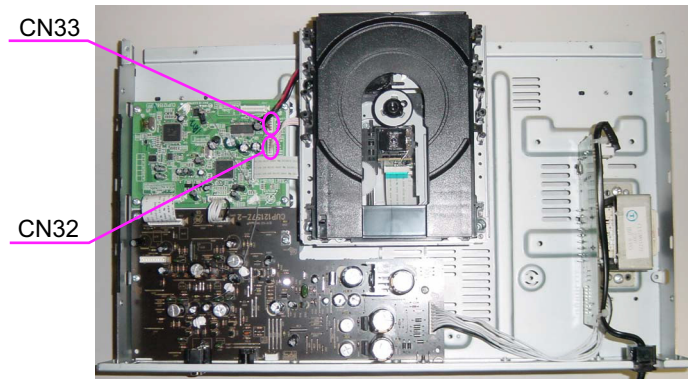


Please refer to **"EXPLODED VIEW"** for the disassembly method of each PCB included in FRONT PANEL ASSY.

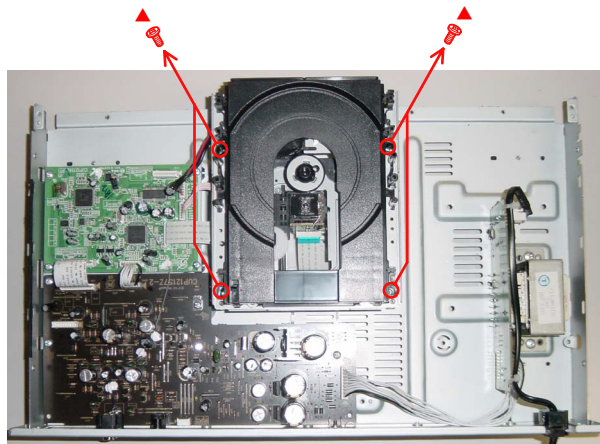
3. CD MECHANISM ASSY

Proceeding : **TOP COVER** → **DOOR** → **FRONT PANEL ASSY**
→ **CD MECHANISM ASSY**

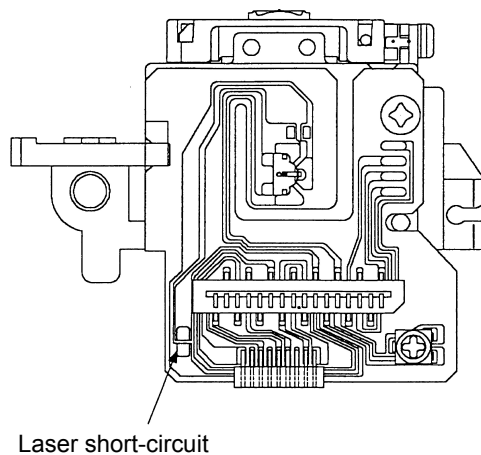
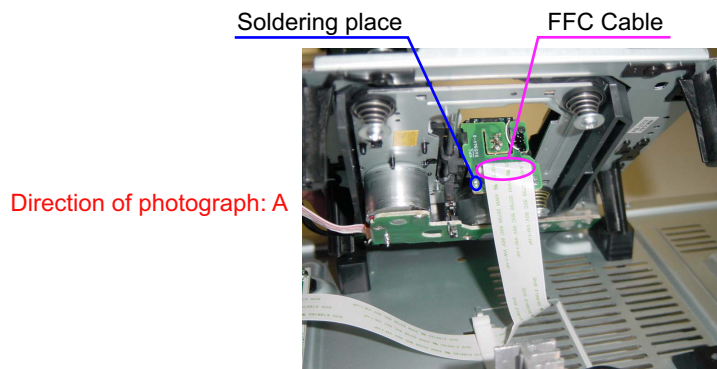
- (1) Disconnect the connector wires.



- (2) Remove the screws.



- (3) Laser short-circuit in Pick-up of CD MECHANISM, then disconnect the FFC Cable.



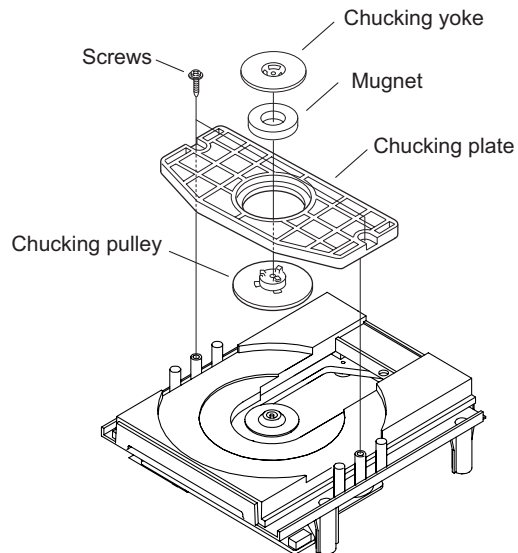
DISASSEMBLY OF MECHANIC

(Follow the procedure below in reverse order when reassembling.)

Caution : The optical pickup can be damaged by static electricity charged on human body. Take necessary anti-static measures when repairing around the optical pickup.

1. Chucking plate

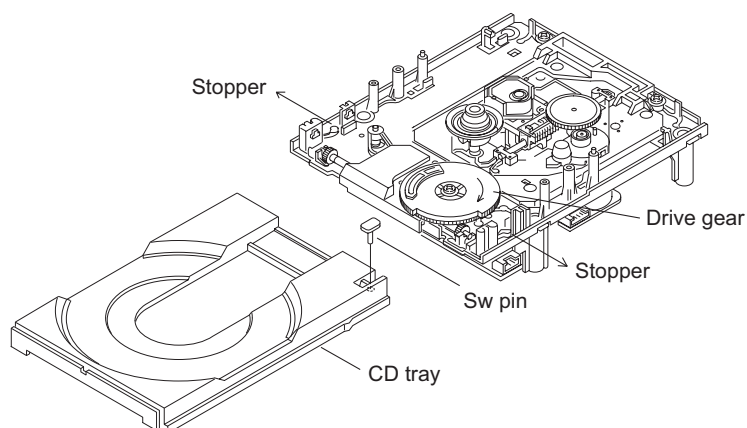
- (1) Remove 2 top screws, then detach the Chucking plate.
- (2) Detaching the Chucking pulley and chucking yoke by removing the 3 hooks, when abandoning CD MECHA ass'y.



2. CD tray

When abandoning CD MECHA ass'y, please detach the CD tray.

- (1) Detach the Sw pin on the CD tray.
- (2) Open the CD tray by turning the Drive gear clockwise.
- (3) Open the Stopper as shown in the fig., then detach CD tray.



Note Handling and Replacement of the Laser pick-up

1. Protection of the LD

Short a part of the LD circuit by soldering. After connection to a circuit, remove the short solder.

2. Precautions when handling the laser CD mechanism

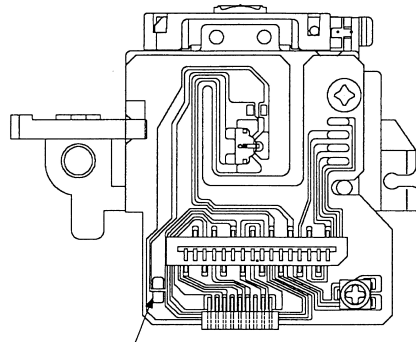
- Handle the laser pick-up so that it is not exposed to dust.
- Do not leave the laser pick-up bare. Be sure to cover it.
- If dust adheres on lens of the pick-up, blow it off with a blower brush.
- Do not shock the laser pick-up.
- Do not watch the light of the laser pick-up.

3. Cautions on assembling and adjustment

- Be sure that to the bench, jig, head of soldering iron (with ceramic) and measuring instruments are well grounded.
- Workers who handle the laser pick-up must be grounded.
- The finished mechanism (prior to anchoring in the set) should be protected against static electricity and dust. The mechanism must be stored that damaging outside forces are not received.
- When carrying the finished mechanism, hold it by the chassis body
- For proper operation, storage and operating environment should not contain corrosive gases. For example H_2S , SO_2 , NO_2 , Cl_2 etc. In addition storage environment should not have materials that emit corrosive gases especially from silicic, cyanic, formalin and phenol group. I the mechanism or the set, existence of corrosive gases may cause no rotation in motor.

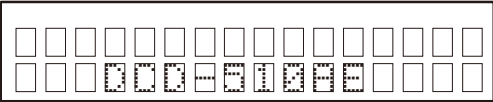
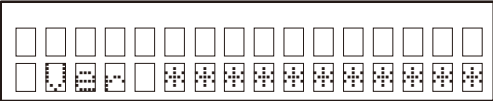
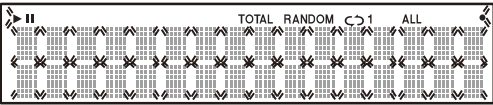
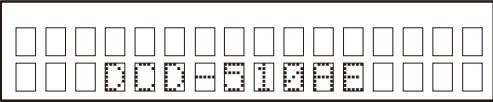
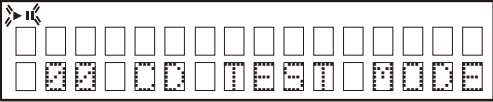
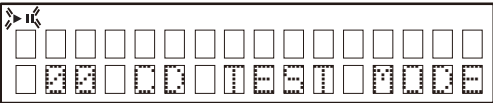
4. Determining whether the laser pick-up is defective

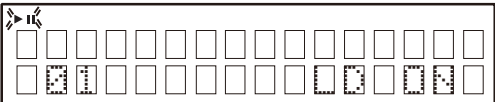
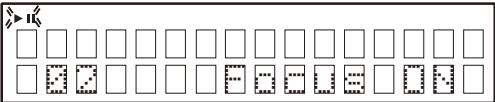
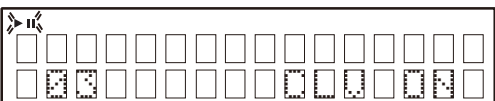

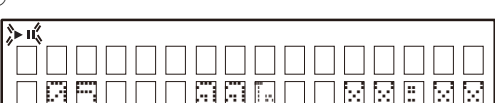
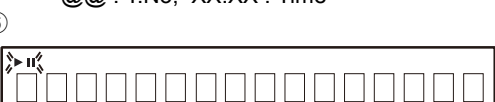
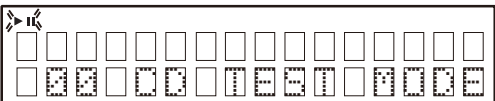
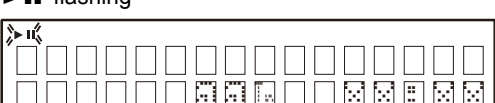
- Measure the waveform at RFO-VC on "MCU P.W.B. Unit".
(For measuring points and waveforms, see pages 21.)
- The laser pick-up is OK if the amplitude level of the measured RFO waveform is between 0.4 and 1.1 Vp-p, defective otherwise.


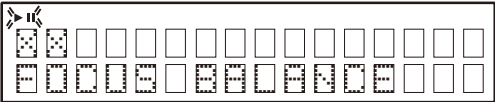
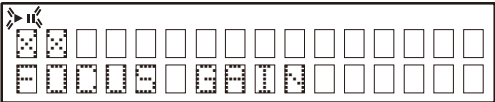
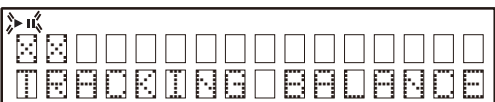
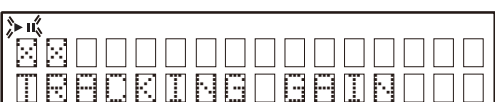

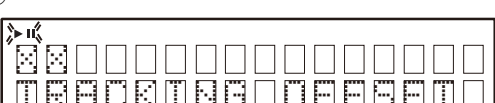



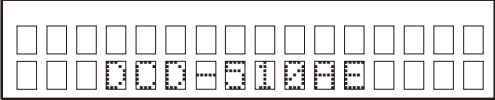
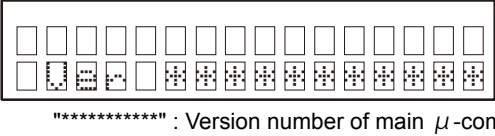

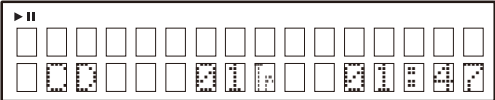

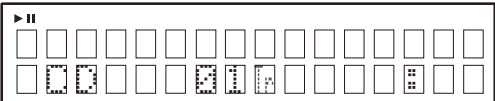

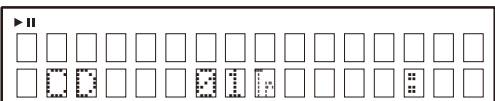
Protective soldering place for laser diode.

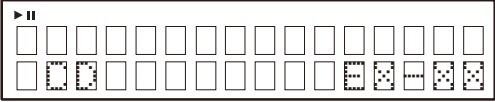
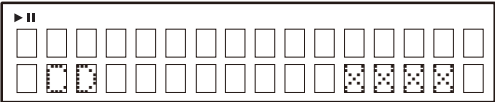
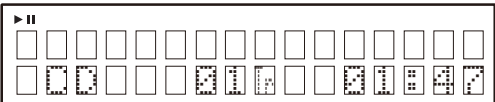
CD TEST MODE

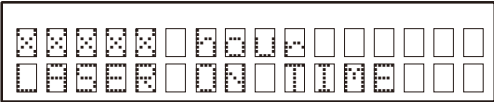
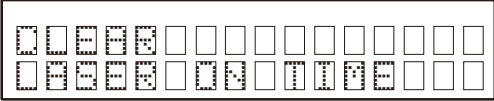
No	Key name	Function	Display
1	Version No. of main μ -com Display	<p>① POWER switch is turned to on while pressing the ■ button on DCD-510AE.(Model name display)</p> <p>② Press the ►►I button continuously for over 3 seconds to display the version number of main μ-com. Version number of main μ-com is displayed for 5 seconds, the model name display reappears.</p> <p>• Turn off the POWER switch to clear this mode.</p>	<p>①</p>  <p>②</p>  <p>***** : Version number of main μ-com</p>
2	FLD checking mode	<p>• Plug AC cord into power outlet while pressing DIMMER button on DCD-510AE.</p> <p>• All segment of FLD is turning on and off every one second. MUTING ON.</p> <p>• Turn off the POWER switch to clear this mode.</p>	<p>• All segment turn on and off.</p> 
3	Initialize	<p>• Plug AC cord into power outlet while pressing TIME/DISPLAY button on DCD-510AE.</p> <p>• The system is reset, and once this is completed the unit is set to the normal mode. DIMMER : 100%</p> <p>• The laser current initial value and laser accumulated on time is not cleared.</p>	
4	CD test mode	<p>① POWER switch is turned to on while pressing the ■ button on DCD-510AE.(Model name display)</p> <p>② Press the ►/II button continuously for over 3 seconds. (CD test mode display)</p> <p>• Move the slide to the initially set position (10 mm towards the outside from the innermost position).</p> <p>• Check by performing button input. Refer to 4.1 to 4.7.</p> <p>• Cancel the mode by turning the power back on.</p> <p>• Input of buttons other than those used in this mode is not guaranteed. (OK if malfunction occurs)</p>	<p>①</p>  <p>② ►II flashing</p> 
4.1	Disc loading	<p>• Press the ▲ button to open the tray.</p> <p>• Set a disc on the tray, then press the ▲ button again to close the tray. The disc is mounted automatically.</p> <p>• Move the slide to the initially set position (10 mm towards the outside from the innermost position) and stop in this status.</p>	<p>• ►II flashing</p> 

No	Key name	Function	Display
4.2	Servo check	<ul style="list-style-type: none"> Press the ►/ button. Execute the following steps. ① LD ON (with servo still stopped) ② FOCUS ON (disc rotation, tracking off) If no disc loaded, retry then stop. ③ CLV ON ④ TRACKING ON ⑤ SUB CODE readout (playback sound output) ⑥ When display is as in ⑤ and the ►/ button is pressed, conduct BER (Block Error Rate) display for 2 seconds. Press the ■ button, CD test mode display reappears. ※Press ►/ button continuously for over 1 second to switch directly to SUB CODE readout in step ⑤. 	<ul style="list-style-type: none"> ►/ flashing ①  ②  ③  ④  ⑤  @@ : T.No, XX:XX : Time ⑥  ##### : B.E.R.
4.3	Pickup movement	<ul style="list-style-type: none"> In the stop mode, pickup moves in REV (inwards) or FWD (outwards) direction when I◀◀ or ▶▶I button pressed. When I◀◀ button pressed, move to stop operation after detection that inner switch has turned on. Pickup movement stops when button released. 	Continuous display of previous time
4.4	Stop	<ul style="list-style-type: none"> When ■ button is pressed, play operation and servo stop. After stopping, conduct reading of auto adjust values. 	<ul style="list-style-type: none"> ►/ flashing 
4.5	All servo on	<ul style="list-style-type: none"> When TIME/DISPLAY button is pressed, all servos turn on, auto adjustment is performed and switch to playback operation. (Playback sound output) 	<ul style="list-style-type: none"> ►/ flashing  @@ : T.No, XX:XX : Time

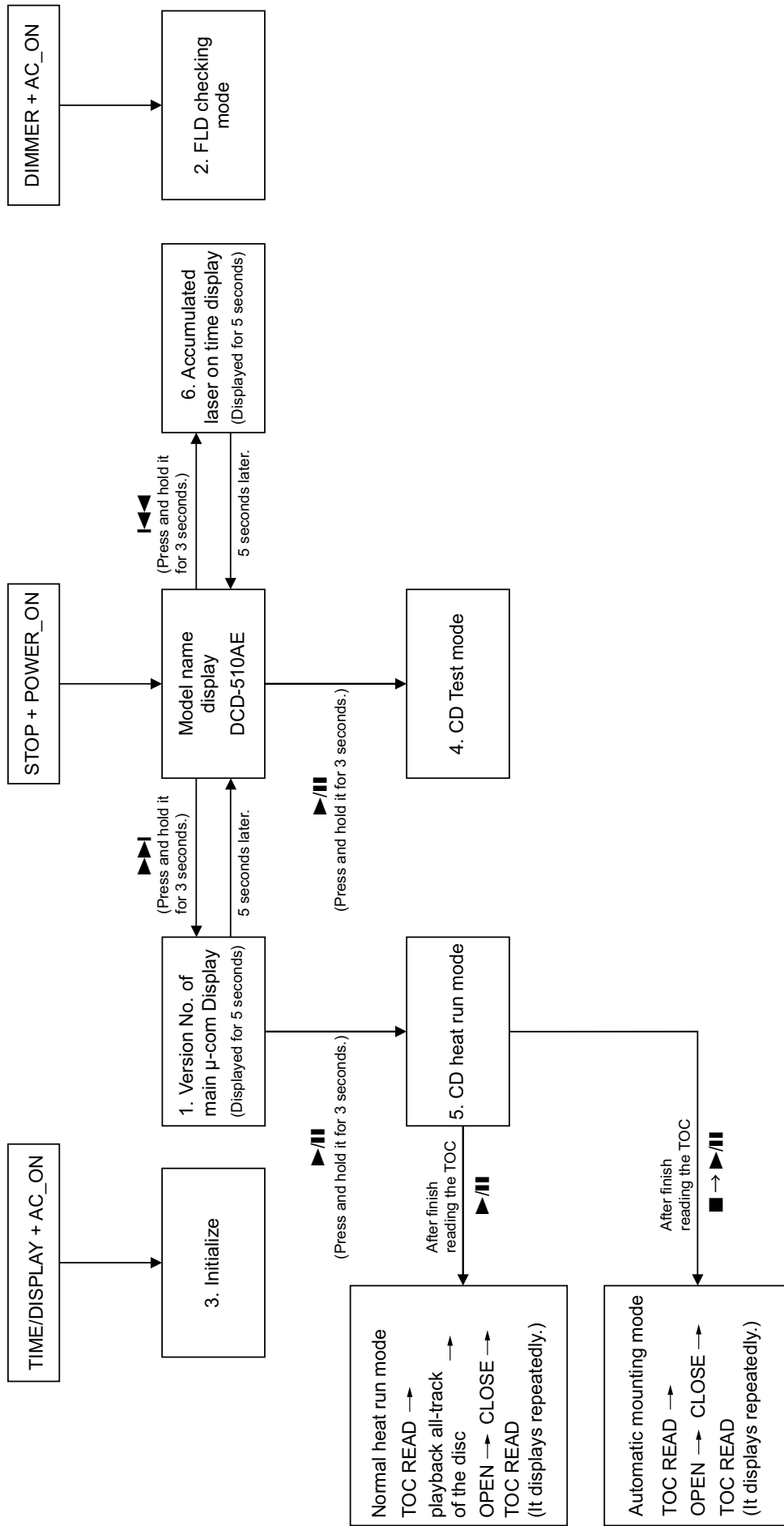
No	Key name	Function	Display
4.6	Adjustment value display	<ul style="list-style-type: none"> When DIMMER button is pressed, the adjustment values are displayed in the following order. <p>① FOCUS BALANCE</p> <p>② FOCUS GAIN</p> <p>③ TRACKING BALANCE</p> <p>④ TRACKING GAIN</p> <p>⑤ FOCUS OFFSET</p> <p>⑥ TRACKING OFFSET</p> <p>⑦ RFRP</p> <p>⑧ Return to ①.</p> <ul style="list-style-type: none"> Press the  button, CD test mode display (4 ②) reappears. <p>(Note) If auto adjustment is not completed, proper values are not displayed.</p>	<ul style="list-style-type: none"> ▶ flashing <p>①</p>  <p>XX : Adjustment value</p> <p>②</p>  <p>XX : Adjustment value</p> <p>③</p>  <p>XX : Adjustment value</p> <p>④</p>  <p>XX : Adjustment value</p> <p>⑤</p>  <p>XX : Adjustment value</p> <p>⑥</p>  <p>XX : Adjustment value</p> <p>⑦</p>  <p>XX : Adjustment value</p>

No	Key name	Function	Display
5	CD heat run mode	<p>① Set the disc in the tray. POWER switch is turned to on while pressing the ■ button on DCD-510AE.(Model name display)</p> <p>② Press the ►► button continuously for over 3 seconds to display the version number. Version number is displayed for 5 seconds, the error display reappears.</p> <p>③ Press the ►/ button continuously for over 3 seconds while the version number is displayed.</p> <ul style="list-style-type: none"> Switches to mode according to button input. See 5.1 and 5.2. If an error occurs, display the error and stop operation at that point. Number of operations held. See 5.3 to 5.5. Heat run no. cleared when ■ button pressed. Mode canceled and tray opened after ▲ button pressed. Turn off the POWER switch to clear this mode. 	<p>①</p>  <p>②</p>  <p>③ Normal display except when ► lights.</p> 
5.1	Normal heat run mode	<ul style="list-style-type: none"> The CD heat run mode is launched. Once writing of the TOC data is completed, press the ►/ button. Count this as the 0th heat run repetition. <p>① Play from the first to last track on disc.</p> <p>② If disc being used has less than 20 tracks, play all tracks. If disc has 21 or more tracks, skip to final track after playback of first track has finished.</p> <p>③ After disc playback has finished, move pickup to innermost position and open tray.</p> <p>④ When loader open status detected, close tray again, re-read TOC and start playback from the first track on the disc.</p> <p>⑤ The heat run repetition no. is incremented (increased by 1) when the tray is opened.</p> <p>⑥ Conduct ① to ⑤ repeatedly.</p>	<ul style="list-style-type: none"> ► lights <p>①,② In cases other than when ► is lights, same display as during normal playback.</p>  <p>③</p>  <p>XXXX : No. of heat run repetitions</p> <p>④</p> 
5.2	Automatic mounting mode	<ul style="list-style-type: none"> After CD heat run mode has started and reading the TOC has finished, press the ■ button once in the stop mode. TOC reading ⇒ Search for first track on disc ⇒ tray open ⇒ tray close ⇒ TOC reading ⇒ repeat. No. heat run repetitions displayed on time display section. Increment the heat run repetition no. at the point when the loader has finished opening. 	<ul style="list-style-type: none"> ► lights <p>While tray opened</p>  <p>When tray closed</p> 

No	Key name	Function	Display
5.3	Error display	<p>E1-00 : Disc cannot be detected E1-01 : Tracking offset adjustment not possible E1-02 : Focus offset adjustment not possible</p> <p>E2-00 : Focus servo dropped during playback. E2-01 : Focus servo dropped during searching. E2-03 : Focus servo dropped during TOC reading. E2-06 : Focus servo dropped during manual search. E2-10 : Subcode can no longer be read during playback E2-11 : Subcode can no longer be read during searching E2-12 : Subcode can no longer be read during TOC reading E2-14 : Subcode cannot be read during pause E2-15 : Subcode cannot be read during manual search</p> <p>E3-00 : TOC could not be read within specified time E3-01 : PVD/SVD analysis could not be completed within specified time</p> <p>E4-04 : Search time out E4-05 : Error in communications with CD decoder</p> <p>E5-00 : Inner switch not on E6-00 : Inner switch not off</p> <p>E9-00 : Error in CD microprocessor E9-01 : Other error</p>	<p>• ► lights</p>  <p>X-XX : Error display</p>
5.4	Error display switching (1)	<p>• Press the ► button while the error is displayed. • No. heat runs is displayed for 5 seconds, the error display reappears.</p>	<p>• ► lights</p>  <p>XXXX : No. of heat run repetitions</p> <p>• Error display reappears after 5 seconds. See 5.3.</p>
5.5	Error display switching (2)	<p>• Press the ◀◀ button while the error is displayed. • The track no. and time when the error occurred is displayed for 5 seconds, then error display reappears.</p>	<p>• In cases other than when ► is lights, same display as during normal playback.</p>  <p>• Error display reappears after 5 seconds. See 5.3.</p>

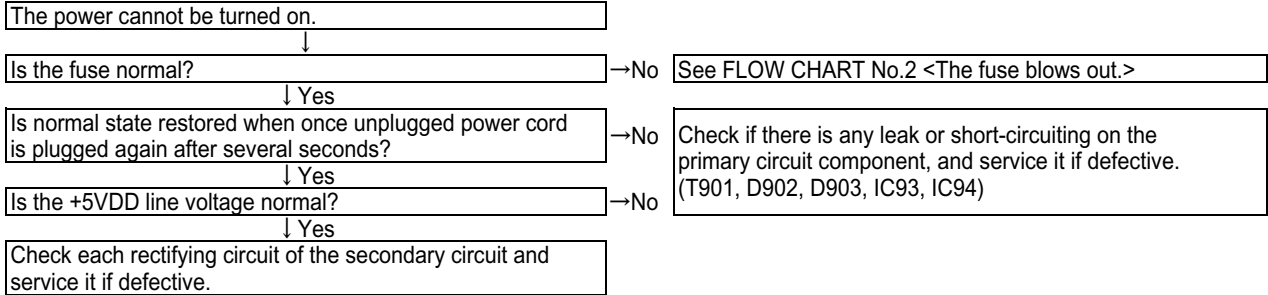
No	Key name	Function	Display
6	Accumulated laser on time display	<p>① POWER switch is turned to on while pressing the ■ button on DCD-510AE.(Model name display)</p> <p>② Press the I◀◀ button continuously for over 3 seconds to display the accumulated laser on time. Accumulated laser on time is displayed for 5 seconds, the error display reappears.</p> <ul style="list-style-type: none"> • The laser drive times are added and the result is displayed. • One count corresponds to 10 minutes. (Values under 10 minutes are discarded.) • Count values are stored in the EEPROM every 10 minutes. • The accumulated laser on time is displayed in hours. • The count values are not cleared, even when the set is reset. • Minimum display specification (possible even with display times above those below) No. digits store in EPROM: 4, 0xFFFF No. digits displayed: 5 • When the time exceeds 10922 hours, the stored data is not updated and the value is fixed to 0xFFFF. (The display is fixed to 10922 hours.) 	
6.1	Initialization of a count value	<ul style="list-style-type: none"> • When the ►/■ button is pressed for over 5 seconds while the accumulated laser on time is displayed, the count value is reset. • After resetting is completed, the display in 6(00000hours on the top line) reappears, and after 5 seconds the model name display reappears. • Initialization of a count value is performed upon shipment from the factory and when the mechanism is replaced. 	

CD TEST MODE & SERVICE MODE

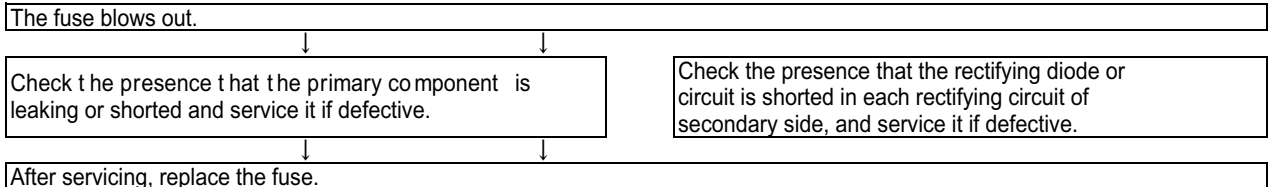


TROUBLE SHOOTING

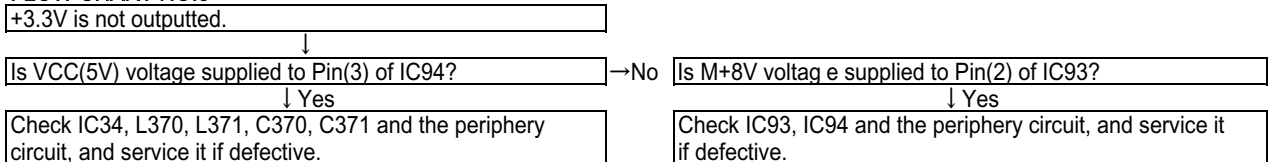
FLOW CHART NO.1



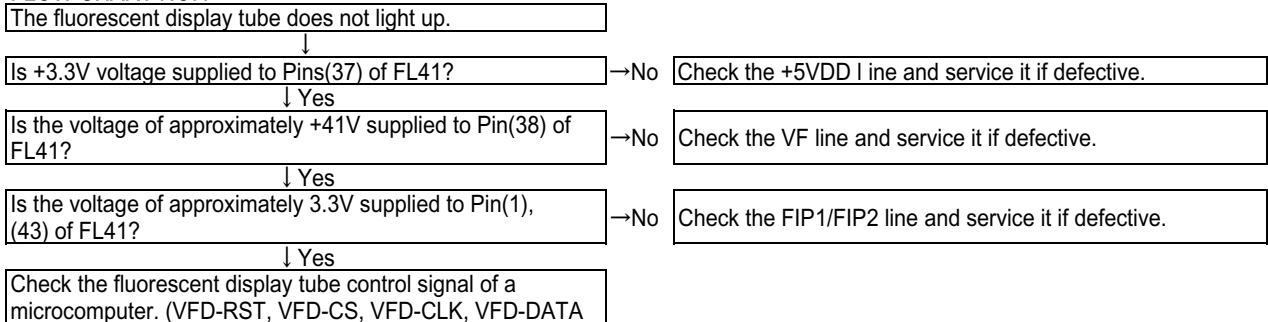
FLOW CHART NO.2



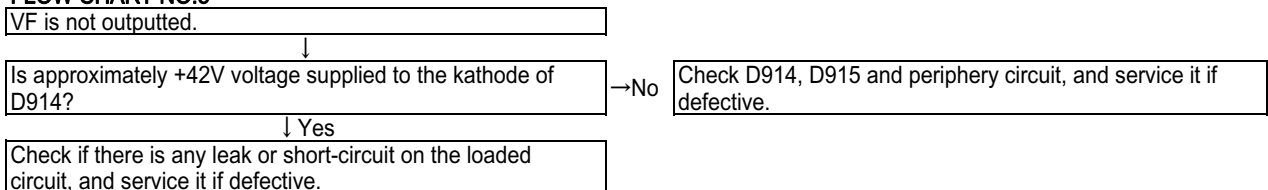
FLOW CHART NO.3



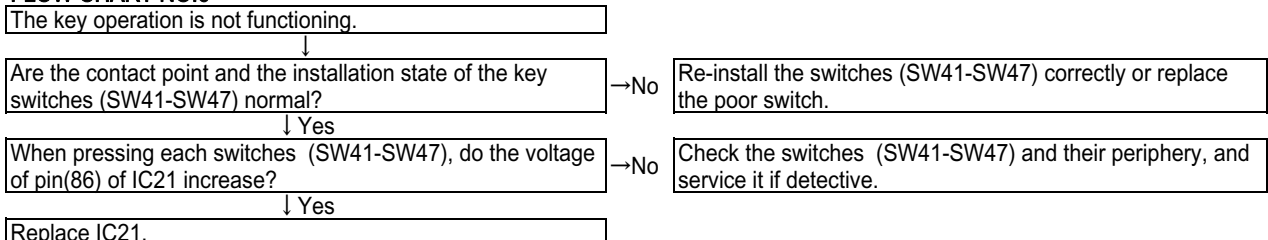
FLOW CHART NO.4



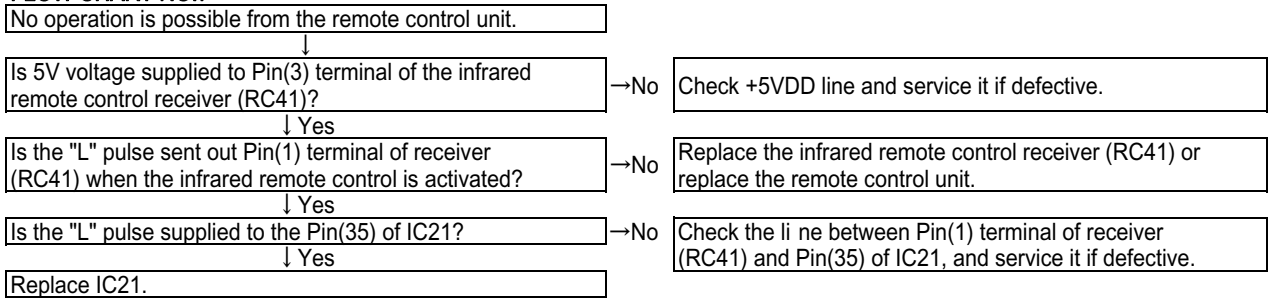
FLOW CHART NO.5



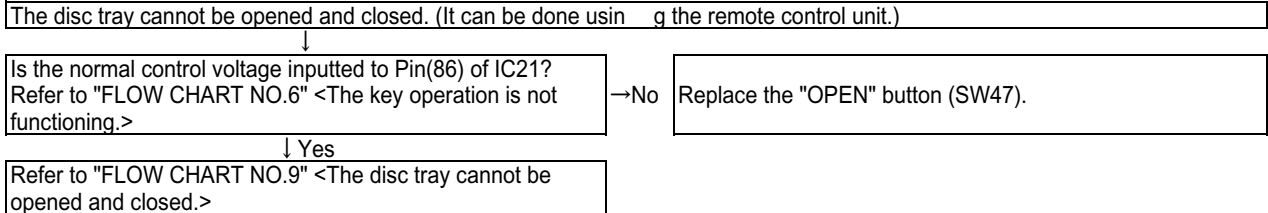
FLOW CHART NO.6



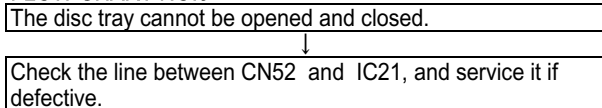
FLOW CHART NO.7



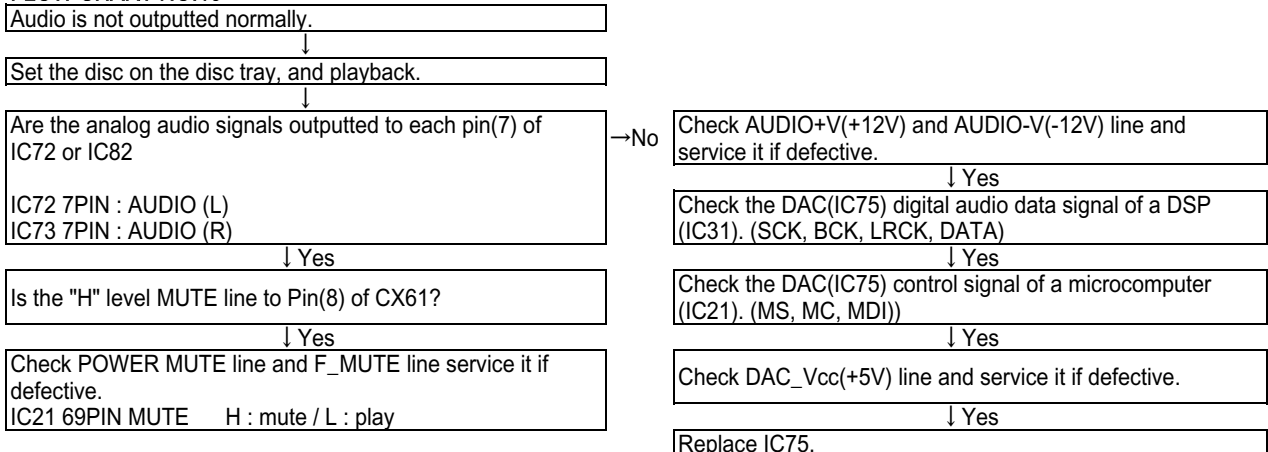
FLOW CHART NO.8



FLOW CHART NO.9



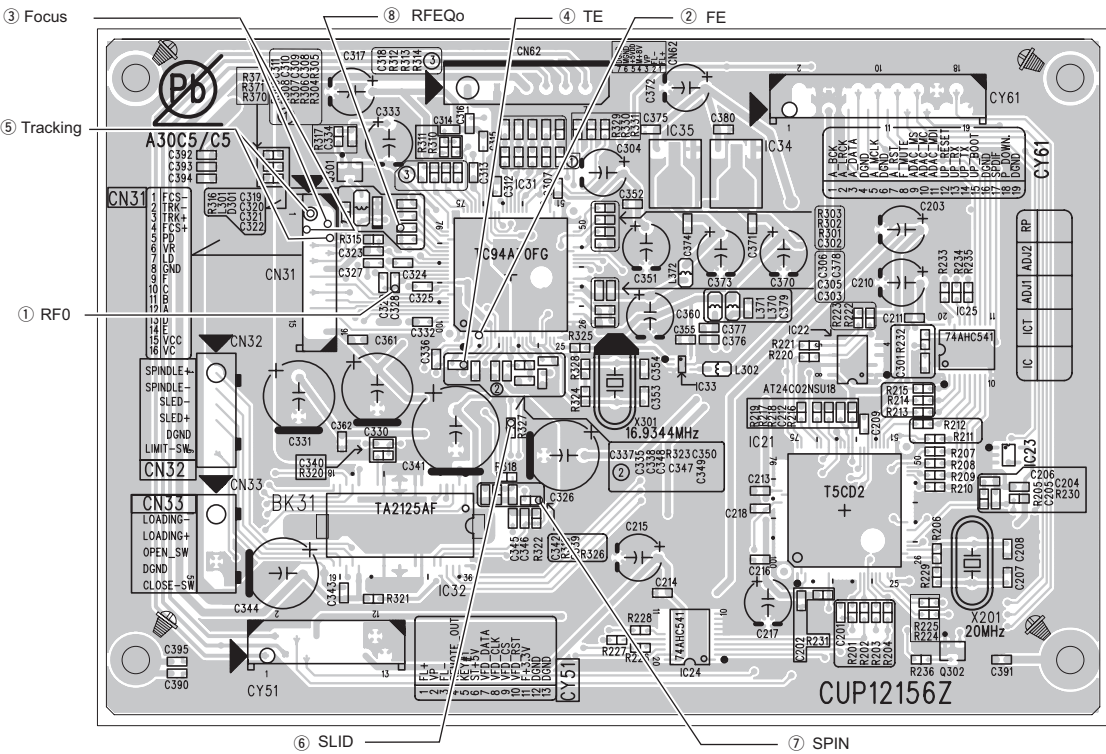
FLOW CHART NO.10



---MEMO---

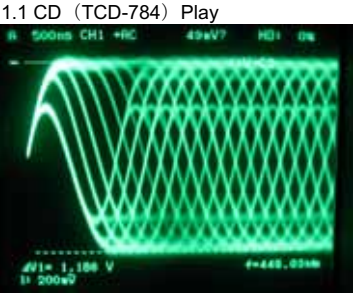
MEASURING POINT AND WAVEFORMS

MEASURING POINT
CUP12156Z MCU UNIT (Component side)

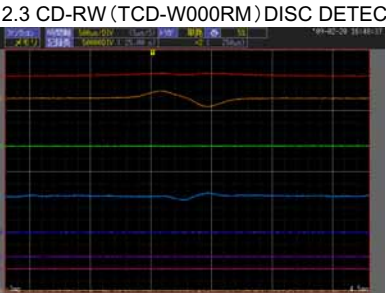
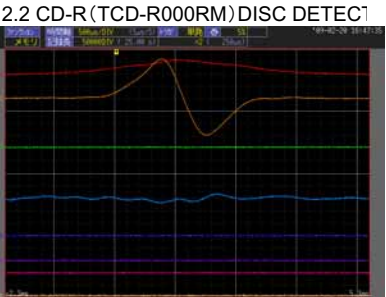
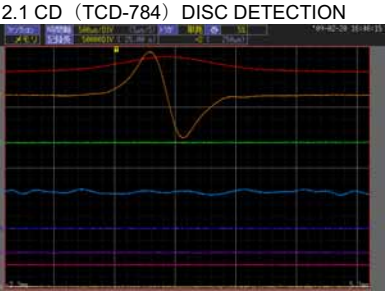


WAVEFORMS

1. DISC PLAY RF WAVEFORM (EYE-PATTERN)

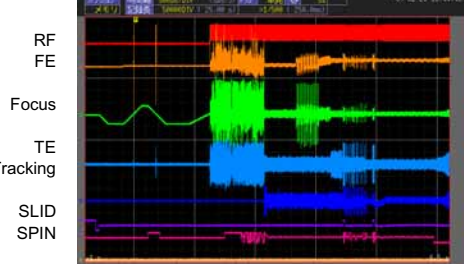


2. DISC DETECTION



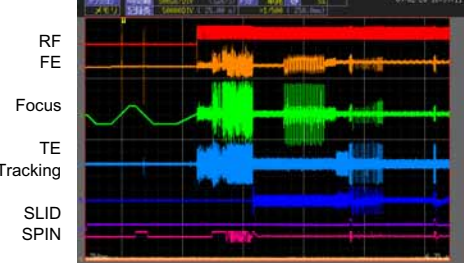
3. TOC READ

3.1 CD (TCD-784) TOC READ



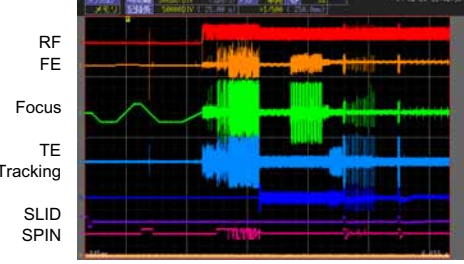
1V
200mV
2V
500Mv
2V
1V
2V

3.2 CD-R (TCD-R000RM) TOC READ



1V
200mV
2V
500Mv
2V
1V
2V

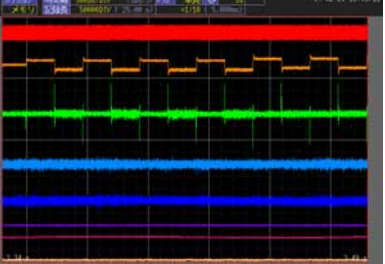
3.3 CD-RW (TCD-W000RM) TOC READ



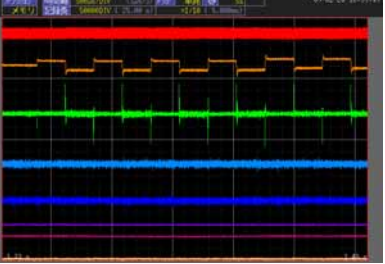
1V
200mV
2V
500Mv
2V
1V
2V

4. FOCUS ADJUSTMENT

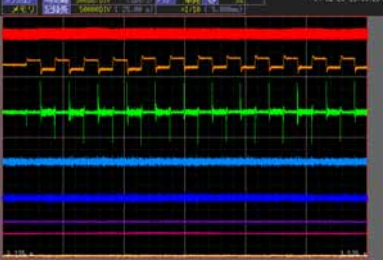
4.1 CD (TCD-784) FOCUS ADJUSTMENT



4.2 CD-R (TCD-R000RM) FOCUS ADJUSTMENT



4.3 CD-R (TCD-R000RM) FOCUS ADJUSTMENT



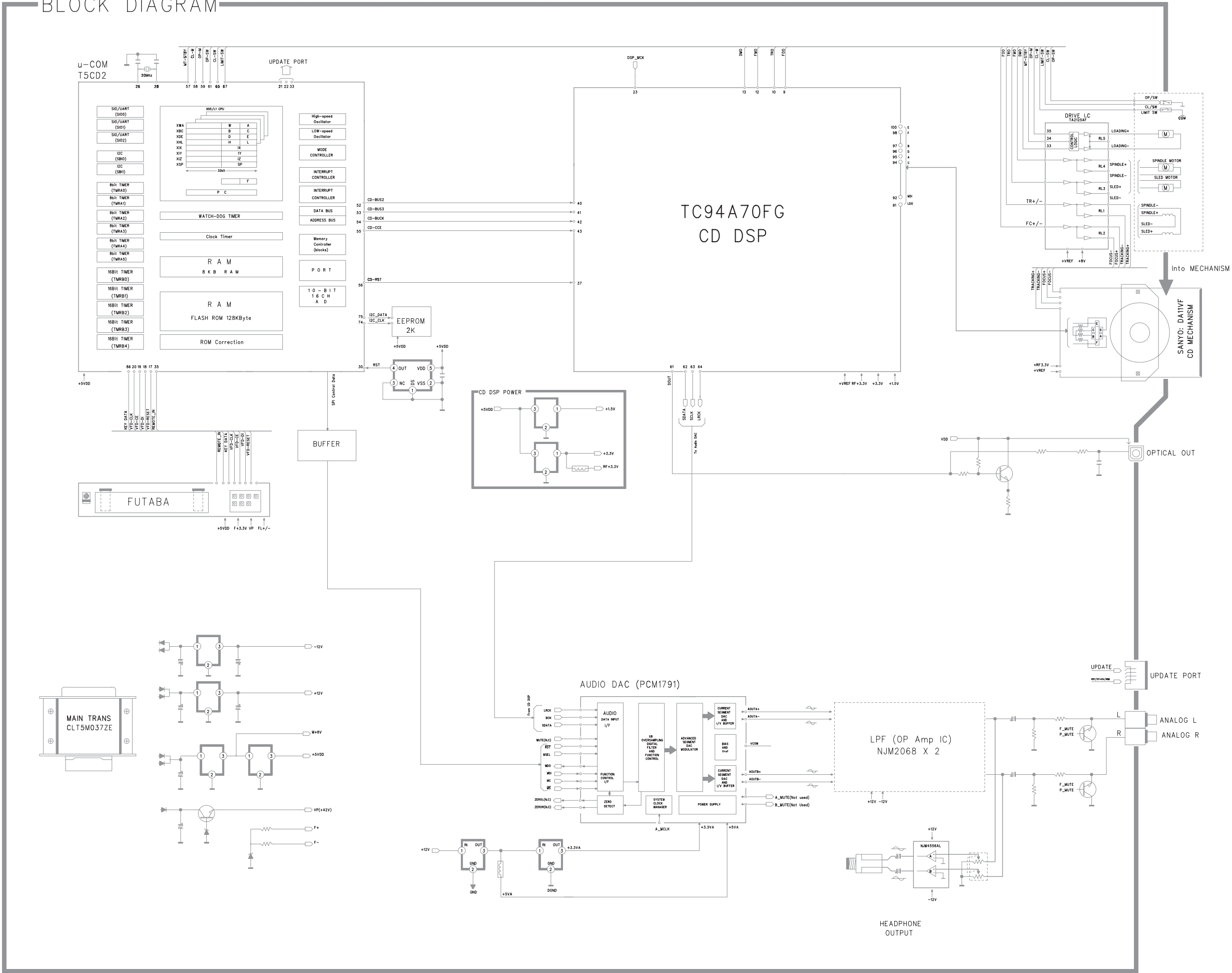
5. LOADER OPEN-CLOSE



5V
5V
5V
5V

BLOCK DIAGRAM

BLOCK DIAGRAM

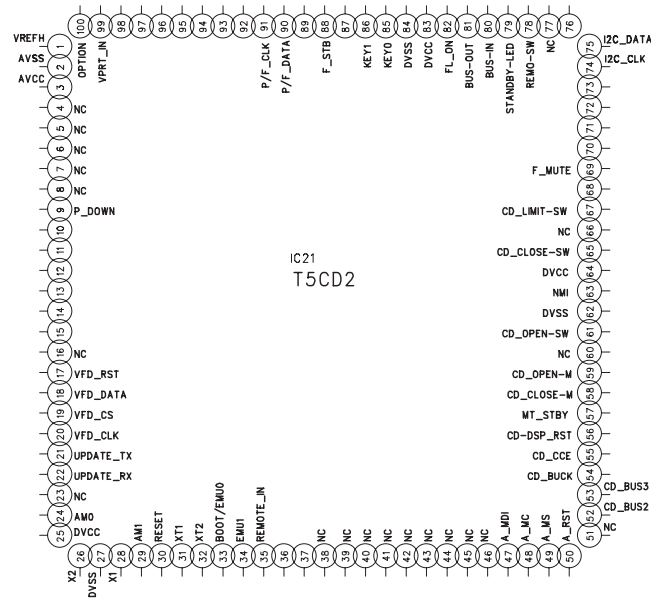


SEMICONDUCTORS

Only major semiconductors are shown, general semiconductors etc. are omitted to list.

1. IC's

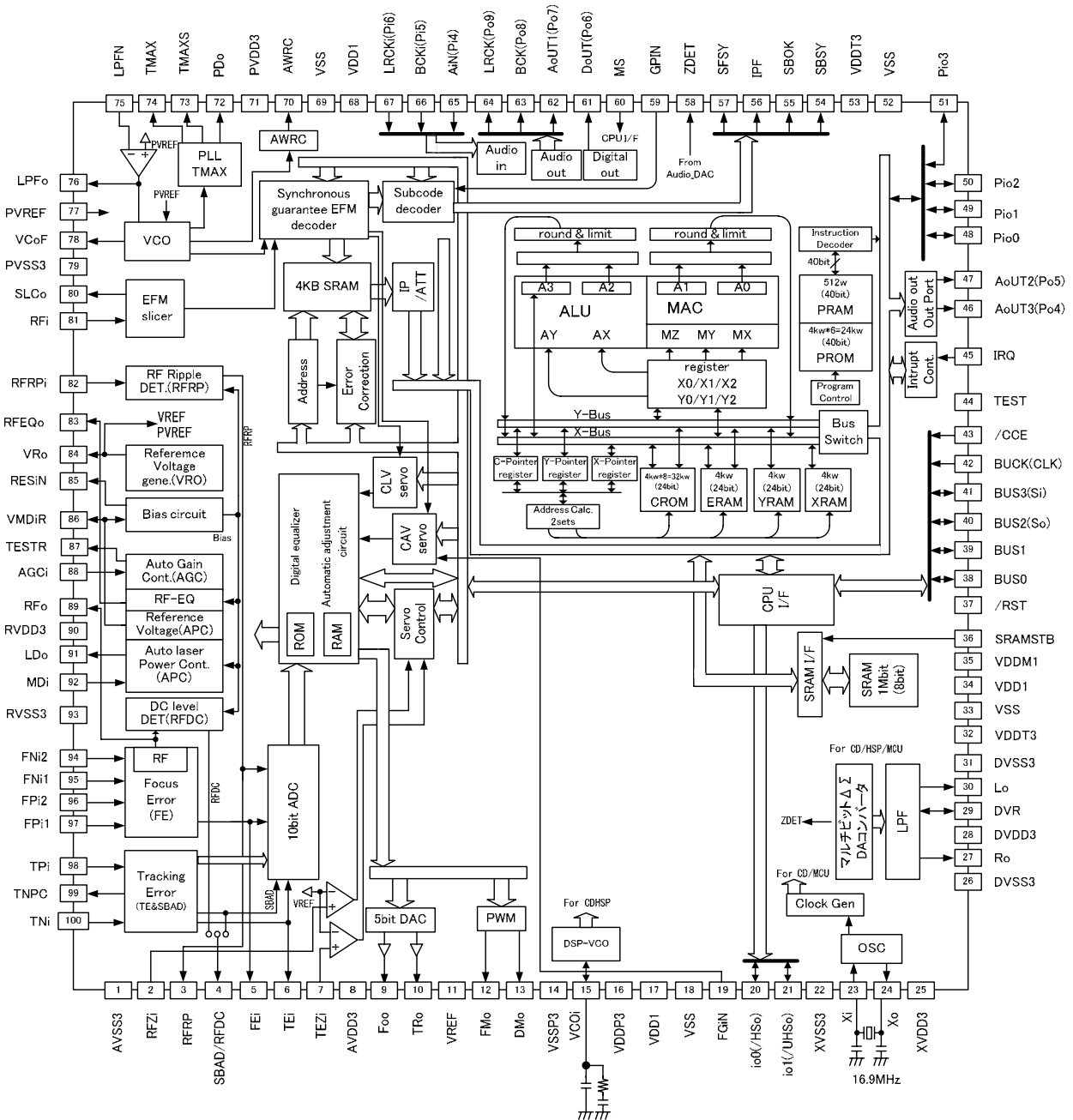
T5CD2 (IC21)



T5CD2 Terminal Functions

pin No	Port Name	I/O	use	Name	Port Setting					Note
					pull up/down	init	stby	Nor	Act.	
1	Vref			VREFH						ADC power, connect with +5V
2	AVSS			GND						ADC_GND
3	AVCC			AVCC						MCU power, connect with +5V
4	P70/TA0IN	I/O	O	NC						
5	P71/TA1OUT	I/O	O	NC						
6	P72/TA3OUT	I/O	O	NC						
7	P73/TA4IN	I/O	O	NC						
8	P74/TA5OUT	I/O	O	NC						
9	P75/INT0	I/O	I	P_Down	Pull up	I	I			Power Down
10	P80/TB0IN0/INT5	I/O	O	NC						
11	P81/TB0IN1/INT6	I/O	O	NC						
12	P82/TB0OUT0	I/O	O	NC						
13	P83/TB0OUT1	I/O	O	NC						
14	P84/TB1IN0/INT7	I/O	O	NC						
15	P85/TB1IN1/INT8	I/O	O	NC						
16	P86/TB1OUT0	I/O	O	NC						
17	P87/TB1OUT1	I/O	O	VFD_RESET		I	L	H	L	VFD reset
18	P90/TXD0	I/O	O	VFD_DI		I	L		-	VFD data
19	P91/RXD0	I/O	O	VFD_CS		I	L		-	VFD chip select
20	P92/SCLK0/CTS0	I/O	O	VFD_CLK		I	L		-	VFD clock
21	P93/TXD1	I/O	O	UPDATE_TXD		I	L		-	Used when connect with update tool
22	P94/RXD1	I/O	I	UPDATE_RXD		I	I		-	Used when connect with update tool
23	P95/SCLK1/CTS1	I/O	O	NC						
24	AM0			AM0						Chip operate select, connect with +5V
25	DVCC			DVCC						MCU power, connect with +5V
26	X2			X2						Oscillator(20MHz)
27	DVSS			DVSS						GND
28	X1			X1						Oscillator(20MHz)
29	AM1			AM1						Chip operate select, connect with +5V
30	/RESET			/RESET		I	I	H	L	MCU reset
31	P96/XT1			NC						
32	P97/XT2			NC						
33	/BOOT/EMU0			BOOT	Pull up	I	I	H	-	Update mode select
34	EMU1	I/O	O	NC						
35	PA0/TB2IN0/INT1	I/O	I	REMOTE		I	I		-	Remote in

pin No	Port Name	I/O	use	Name	Port Setting					Note
					pull up/down	init	stby	Nor	Act.	
36	PA1/TB2IN1/INT2	I/O	O	NC						
37	PA2/TB2OUT0	I/O	O	NC						
38	PA3/TB2OUT1	I/O	O	NC						
39	P40/CS0/SCOUT	I/O	O	NC						
40	P41/CS1/TXD2	I/O	O	NC						
41	P42/CS2/RXD2	I/O	O	NC						
42	P43/CS3/SCLK2/CTS2	I/O	O	NC						
43	P44/ALE	I/O	O	NC						
44	P00/AD0	I/O	O	NC						
45	P01/AD1	I/O	O	NC						
46	P02/AD2	I/O	O	NC						
47	P03/AD3	I/O	O	ADC_DATA						ADAC(MDI) INPUT DATA
48	P04/AD4	I/O	O	ADC_CLK						ADAC(MC) INPUT CLK
49	P05/AD5	I/O	O	ADC_CS						ADAC(MS) CHIP SELECT
50	P06/AD6	I/O	O	ADC_RESET						ADAC(RESET)
51	P07/AD7	I/O	O	NC						
52	P10/AD8/A8	I/O	I	CD_BUS2		I	I		-	Receive data from CD DSP
53	P11/AD9/A9	I/O	O	CD_BUS3		I	L		-	Send command to CD DSP
54	P12/AD10/A10	I/O	O	CD_BUCK		I	L		-	Communication clock with CD DSP
55	P13/AD11/A11	I/O	O	CD_CCE		I	L		-	Communication chip enable with CD DSP
56	P14/AD12/A12	I/O	O	DSP_RESET		I	L	H	L	CD DSP reset
57	P15/AD13/A13	I/O	O	MT_STBY		I	L	H	H	Motor stanby
58	P16/AD14/A14	I/O	O	CD_CLOSE_M		I	L		-	CD close motor
59	P17/AD15/A15	I/O	O	CD_OPEN_M		I	L		-	CD open motor
60	P20/A0/A16	I/O	O	NC						
61	P21/A1/A17	I/O	I	CD_OPEN_SW	Pull up	I	I		-	CD open switch
62	DVSS			DVSS						GND
63	/NMI			/NMI						External interrupt, connect with +5V
64	DVCC			DVCC						MCU power, connect with +5V
65	P22/A2/A18	I/O	I	CD_CLOSE_SW	Pull up	I	I		-	CD close switch
66	P23/A3/A19	I/O	O	NC						
67	P24/A4/A20	I/O	I	CD_LIMIT_SW	Pull up	I	I		-	CD inner switch
68	P25/A5/A21	I/O	O	N.C						
69	P26/A6/A22	I/O	O	F_MUTE		I	L	L	H	Function mute
70	P27/A7/A23	I/O	O	NC	Pull down					
71	PZ0/RD	O	O	NC						
72	PZ1/WR	O	O	NC						
73	PZ2/HWR	I/O	O	NC						
74	PZ3/R/W	I/O	O	EEPROM_CLK						I2C_CLK(EEPROM)
75	P30/TB3IN0/INT3/SDA0	I/O	O/I	EEPROM_DATA						I2C_DATA(EEPROM)
76	P31/TB3IN1/INT4/SCL0	I/O	O	NC						
77	P32/WAIT/TB3OUT0	I/O	O	NC						
78	P33/TB3OUT1	I/O	O	NC						
79	PB0/TB4IN0/INT9/SDA1	I/O	O	NC						
80	PB1/TB4IN1/INT10/SCL1	I/O	O	NC						
81	PB2/TB4OUT0	I/O	O	NC						
82	PB3/TB4OUT1	I/O	O	NC						
83	DVCC			DVCC						MCU power, connect with +5V
84	DVSS			DVSS						GND
85	P50/AN0	I/O	O	NC						
86	P51/AN1	I/O	I	KEY1	Pull up	I	I		-	Key1 input
87	P52/AN2	I/O	O	NC						
88	P53/AN3	I/O	O	NC						
89	P54/AN4	I/O	O	NC						
90	P55/AN5	I/O	O	NC						
91	P56/AN6	I/O	O	NC						
92	P57/AN7	I/O	O	NC						
93	P60/AN8	I/O	O	NC						
94	P61/AN9	I/O	O	NC						
95	P62/AN10	I/O	O	NC						
96	P63/AN11	I/O	O	NC						
97	P64/AN12	I/O	O	NC						
98	P65/AN13	I/O	O	NC						
99	P66/AN14	I/O	O	NC						
100	P67/AN15	I/O	O	NC						



TC94A70FG Terminal Functions

Pin No.	Symbol	I/O	Description	Default	Remarks
1	AVSS3	—	Grounding pin for 3.3V CD analog circuits.	—	
2	RFZi	I 3AI/F	Input pin for RF ripple zero-cross signal.	I	Connect to RFRP by 0.033uF
3	RFRP	O 3AI/F	RF ripple signal output pin.	O	Monitor pin for the signal.
4	SBAD/RFDC	O 3AI/F	Sub beam addition signal or RFDC (Hologram PUH RF peak detection signal) signal output pin	O	
5	FEi	O 3AI/F	Focus error signal input pin.	O	
6	TEi	O 3AI/F	Tracking error signal input pin.	O	
7	TEZi	I 3AI/F	Tracking error signal zero-cross input pin.	I	Connect to TEI by 0.033uF
8	AVDD3	—	Power supply pin for 3.3 V CD analog circuits.	—	
9	Foo	O 3AI/F	Focus servo equalizer output pin.	O	Built-in series resistor 3.3k Ω
10	TRo	O 3AI/F	Tracking servo equalizer output pin.	O	
11	VREF	—	Reference voltage pin for analog circuits(1.65V)	—	Connect to VRO and PVREF. Connect 0.1uF
12	FMo	O 3AI/F	Feed servo equalizer output pin.	O	Built-in series resistor 3.3k Ω 3-state output (AVDD3,AVSS3,VREF)
13	DMo	O 3AI/F	Disc servo equalizer output pin	O	
14	VSSP3	—	Grounding pin for 3.3V DSP VCO circuits.	—	
15	VCOi	O	PD output for VCO (control voltage input for VCO)	O	Three-state output
16	VDDP3	—	Power supply pin for 3.3V DSP VCO circuit.	—	
17	VDD1	—	Power supply pin for 1.5V digital circuit	—	
18	VSS	—	Grounding pin for 1.5V digital circuit.	—	
19	FGiN	I 3I/F	FG signal input pin for CAV. CLV: "L", CAV: FG input	I	Analog input
20	io0(/HSO)	I/O 3I/F	General Input/output port -0 (CD) (Playback speed mode flag output pin.)	I	Schmitt input CMOS PORT
21	io1(/UHSO)	I/O 3I/F	General Input/output port -1 (CD) (Playback speed mode flag output pin.)	I	Schmitt input CMOS PORT
22	XVSS3	—	Grounding pin for 3.3V system clock oscillator circuit.	—	
23	Xi	I 3AI/F	Input pin for system clock oscillator Circuit (External Rfb=1M Ω)	I	X'tal
24	Xo	O 3AI/F	Output pin for system clock oscillator circuit	O	X'tal
25	XVDD3	—	Power supply pin for 3.3 V system clock oscillator circuit	—	

Pin No.	Symbol	I/O	Description	Default	Remarks
26	DVSS3	—	Grounding pin for 3.3V DAC circuit	—	No capacitor required to DVR pin when built-in audio DAC is not in use, however , connect 3.3V to DVDD3 and GND to DVSS3.
27	Ro	O 3A/I/F	R channel audio output pin of Audio DAC.	O	
28	DVDD3	—	Power supply pin for 3.3V Audio DAC circuit.	—	
29	DVR	—	Reference voltage pin for Audio DAC.	—	
30	Lo	O 3A/I/F	L channel audio output pin of Audio DAC	O	
31	DVSS3	—	Grounding pin for 3.3V Audio DAC circuit	—	
32	VDDT3	—	Power supply pin for 3.3 V digital I/O circuit.	—	-
33	VSS	—	Grounding pin for 3.3V digital circuit	—	-
34	VDD1	—	Power supply pin for 1.5V digital circuit.	—	-
35	VDDM1	—	Power supply pin for 1.5V 1Mbit SRAM.	—	
36	SRAMSTB	I 3I/F	1Mbit SRAM stand-by pin	I	Schmitt input
37	/RST	I 3I/F	Reset signal input pin.	I	Schmitt input
38	BUS0	IO 3I/F	Data input/output pin -0 for microcontroller interface	I	Schmitt input CMOS PORT
39	BUS1	IO 3I/F	Data input/output pin -1 for microcontroller interface	I	Schmitt input CMOS PORT
40	BUS2(So)	IO 3I/F	Data input/output pin -2 for microcontroller interface (Serial output)	I	Schmitt input CMOS PORT
41	BUS3(Si)	IO 3I/F	Data input/output pin -3 for microcontroller interface (Serial input)	I	Schmitt input CMOS PORT
42	BUCK(CLK)	I 3I/F	Clock input pin for the microcontroller interface. (Clock input for Serial communication interface)	I	Schmitt input
43	/CCE	I 3I/F	Chip enable signal input pin for microcontroller interface.	I	Schmitt input
44	TEST	I 3I/F	Setting pin for LSI test mode. (Connect to GND in normal operation)	I	Schmitt input
45	IRQ	I 3I/F	DSP interruption pin.(Pull down by 100kΩ when not in use)	I	Schmitt input
46	AoUT3(Po4)	O 3I/F	Audio data output pin -3 (DSP general output port -4)	O	CMOS PORT
47	AoUT2(Po5)	O 3I/F	Audio data output pin -2 (DSP general output port -5)	O	CMOS PORT
48	Pio0	I/O 3I/F	DSP general input/output port -0	I	Schmitt input CMOS PORT
49	Pio1	I/O 3I/F	DSP general input/output port -1	I	Schmitt input CMOS PORT
50	Pio2	I/O 3I/F	DSP general input/output port -2	I	Schmitt input CMOS PORT
51	Pio3	I/O 3I/F	DSP general input/output port -3	I	Schmitt input CMOS PORT
52	VSS	—	Grounding pin for 3.3V digital circuit	—	-
53	VDDT3	—	Power supply pin for 3.3 V digital I/O circuit.	—	-
54	SBSY	O 3I/F	Sub code block sync output pin	O	CMOS PORT
55	SBOK	O 3I/F	CRCC check result output pin for sub code Q data.	O	CMOS PORT

Pin No.	Symbol	I/O	Description	Default	Remarks
56	IPF	O 3I/F	Correction flag output	O	CMOS PORT
57	SFSY	O 3I/F	Servo internal register read clock output pin	O	CMOS PORT
58	ZDET	O 3I/F	Internal Audio DAC Zero data detection flag output	O	CMOS PORT
59	GPIN	I 3I/F	CD General Input port(Pull down by 100K Ω when not in use)	I	Schmitt input
60	MS	I 3I/F	Microprocessor I/F mode selection pin. “H”: Parallel I/F, “L”: Serial I/F	I	
61	DoUT(Po6)	O 3I/F	Digital Audio output (SPDIF) pin (DSP general output port -6)	O	CMOS PORT
62	AoUT1(Po7)	O 3I/F	Audio data output pin -1(DSP general output port -7)	O	CMOS PORT
63	BCKo(Po8)	O 3I/F	Bit clock output pin for AoUT (DSP general output port -8)	O	CMOS PORT
64	LRCKo(Po9)	O 3I/F	L/R channel clock output pin (DSP general output port -9)	O	CMOS PORT
65	AiN(Pi4)	I 3I/F	Audio data input for Audio DAC (DSP general input port -4)	I	Schmitt input
66	BCKi(Pi5)	I 3I/F	Bit clock input pin for AiN (DSP general input port -5)	I	Schmitt input
67	LRCKi(Pi6)	I 3I/F	L/R channel clock for AiN (DSP general input port -6)	I	Schmitt input
68	VDD1	—	Power supply pin for 1.5V digital circuit.	—	
69	VSS	—	Grounding pin for 1.5V digital circuit.	—	
70	AWRC	O 3AI/F	VCO control pin for active wide-range PLL	O	Applicable in CLV/CAV mode. Connect 0.033 μ F.
71	PVDD3	—	Power supply pin for 3.3V CD PLL circuit.	—	
72	PDo	O 3AI/F	EFM and PLCK Phase difference signal output pin.	O	4-state output (PVDD3, HiZ,PVSS3,PVREF)
73	TMAXS	O 3AI/F	TMAX detection result output pin	O	3-state output (PVDD3,PVSS3,HiZ)
74	TMAX	O 3AI/F	TMAX detection result output pin	O	3-state output(PVDD3,PVSS3,HiZ)
75	LPFN	I 3AI/F	PLL circuit LPF amplifier inversion input pin	I	Connect resistor of LPF, refer to application circuit diagram.
76	LPFo	O 3AI/F	PLL circuit LPF amplifier Output pin	O	Connect capacitor of LPF, refer to application circuit diagram.
77	PVREF	—	PLL circuit 1.65 V reference voltage pin.	—	Connected to VREF and VRO inside of IC. Connect 0.1 μ F.
78	VCoF	O 3AI/F	VCO filter pin	O	Connect 0.01 μ F.
79	PVSS3	—	Grounding pin for 3.3V CD PLL circuit.	—	
80	SLCo	O 3AI/F	EFM slice level output pin. Output impedance =2.5k Ω both of analog/digital slice mode.	O	Connect capacitor according with servo frequency band.
81	RFi	I 3AI/F	RF signal input pin Zin is selectable by command.	I	Zin : 20k Ω , 10k Ω , 5k Ω
82	RFRPi	I 3AI/F	RF ripple signal input pin	I	

Pin No.	Symbol	I/O	Description	Default	Remarks
83	RFEQo	O 3A/I/F	RF equalizer circuit output pin.	O	Connect to RFRPI by 0.1uF, to RFI by 4700pF.
84	VRo	O 3A/I/F	1.65 V reference voltage output pin.	O	Connected to VREF and PVREF inside of IC. Connect 0.1uF+100uF.
85	RESiN	O 3A/I/F	Pin for connecting a resistor for reference current generation.	O	Connect 22k Ω // 0.01uF.
86	VMDiR	—	Reference voltage output pin for LD APC.	—	Connect 0.1uF
87	TESTR	O 3A/I/F	LPF connection pin for RFEQO offset correction circuit.	O	Connect more than 0.015uF.
88	AGCi	I 3A/I/F	RF signal AGC amplifier input pin	I	
89	RFo	O 3A/I/F	RF signal generation amplifier output pin	O	
90	RVDD3	—	Power supply for 3.3V RF amplifier core circuit.	—	
91	LDo	O 3A/I/F	Laser diode amplifier output pin.		
92	MDi	I 3A/I/F	Monitor photodiode amplifier input pin.	I	Reference Voltage=178mVtyp.
93	RVSS3	—	Grounding pin for RF amplifier core circuit	—	
94	FNi2	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode C.	I	
95	FNi1	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode A.	I	
96	FPi2	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode D.	I	
97	FPi1	I 3A/I/F	Main beam signal input pin. To be connected to PIN diode B.	I	
98	TPi	I 3A/I/F	Sub beam signal input pin. To be connected to PIN diode F.	I	
99	TNPC	O 3A/I/F	TNI/TPI input common capacitor connection pin.	O	Connect to VRO by capacitor.
100	TNi	I 3A/I/F	Sub beam signal input pin. To be connected to PIN diode E.	I	

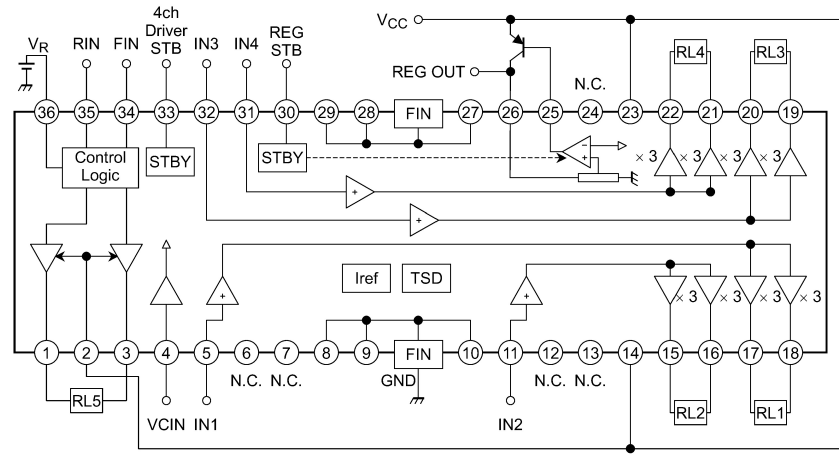
- * 3A I/F : : 3 V analog circuit input/output pin.
1.5 I/F : 1.5Vdigital input/output pin.
3 I/F : 3 V digital input/output pin.

Note: The servo output pins (FOO, TRO, FMO, and DMO) become undefined or GND level under the following conditions:

- /RST pin = Low
- Crystal oscillation stopped according to the instructions by the Stop crystal oscillation command
- Power supply for CD is OFF.
- SRAMSTB pin = High

To prevent the undefined pin states from affecting the servo circuitry or any other mechanical blocks in the system, appropriate measures should be taken, such as using a driver IC supporting a standby feature to place the system in standby mode while either of the above conditions is satisfied.

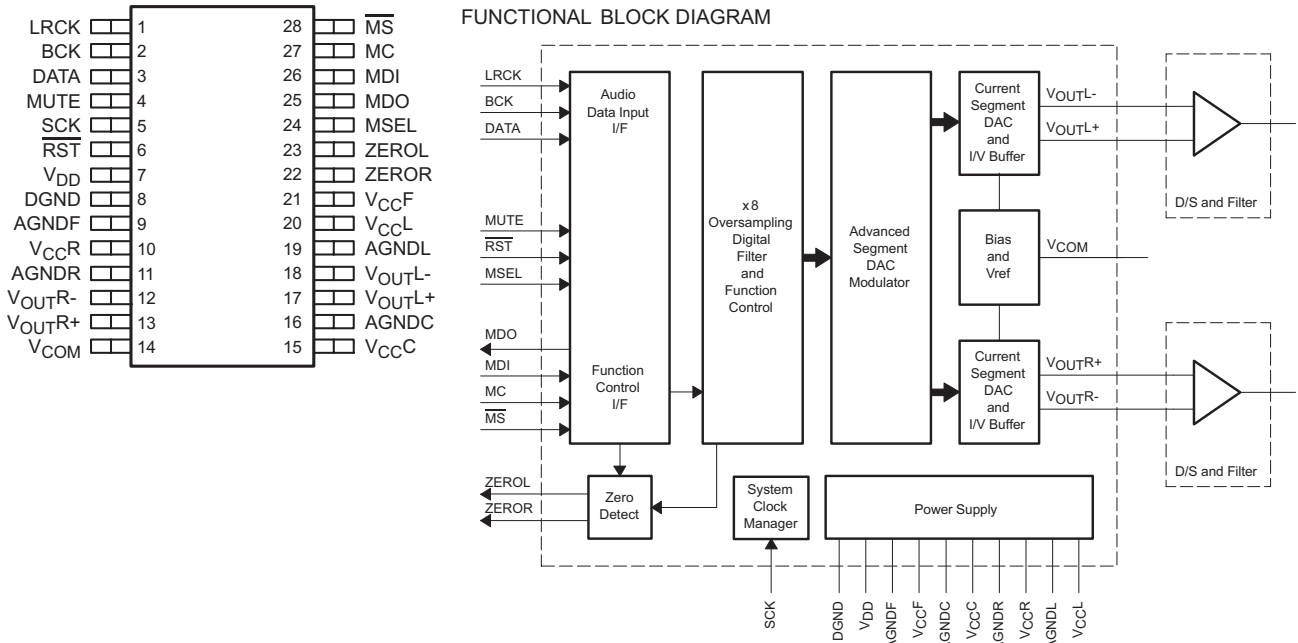
TA2125AFG (IC32)



TA2125AF Terminal Function

No.	Symbol	Function	
1	OUT5A	Output terminal	H-bridge
2	V _M	Supply voltage terminal for Logic	H-bridge
3	OUT5B	Output terminal	H-bridge
4	V _{CIN}	Input reference voltage	4ch BTL
5	IN1	Input for ch1	4ch BTL
6	N.C.	Open	—
7	N.C.	Open	—
8	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (FIN)	—
9	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (FIN)	—
10	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (FIN)	—
11	IN2	Input for ch2	4ch BTL
12	N.C.	Open	—
13	N.C.	Open	—
14	V _{CC1}	Supply voltage terminal for ch1/ch2	4ch BTL
15	OUT2M	Inverted output for ch2	4ch BTL
16	OUT2P	Non-inverted output for ch2	4ch BTL
17	OUT1M	Inverted output for ch1	4ch BTL
18	OUT1P	Non-inverted output for ch1	4ch BTL
19	OUT3P	Non-inverted output for ch3	4ch BTL
20	OUT3M	Inverted output for ch3	4ch BTL
21	OUT4P	Non-inverted output for ch4	4ch BTL
22	OUT4M	Inverted output for ch4	4ch BTL
23	V _{CC2}	Supply voltage terminal for ch3/ch4	4ch BTL
24	N.C.	Open	—
25	REG	Connection with BASE of PNP Tr	Regulator
26	REG OUT	Output for regulator (5 V)	Regulator
27	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (FIN)	—
28	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (FIN)	—
29	N.C.	8, 9, 10, 27, 28, 29 are connected to PW GND (FIN)	—
30	REG STBY	Standby control for regulator	Regulator
31	IN4	Input for ch4	4ch BTL
32	IN3	Input for ch3	4ch BTL
33	STBY	Standby control for 4ch BTL	4ch BTL
34	FIN	Logic control input	H-bridge
35	RIN	Logic control input	H-bridge
36	VR	Supply voltage terminal for motor driver	H-bridge

PCM1791ADBR (IC75)



Terminal Functions

TERMINAL NAME	PIN	I/O	DESCRIPTIONS
AGNDC	16	-	Analog ground (internal bias and current DAC)
AGNDF	9	-	Analog ground (DACFF)
AGNDL	19	-	Analog ground (L-channel I/V)
AGNDR	11	-	Analog ground (R-channel I/V)
BCK	2	I	Bit clock input (1)
DATA	3	I	Serial audio data input (1)
DGND	8	-	Digital ground
LRCK	1	I	Left and right clock (f _S) input (1)
MC	27	I	Mode control clock input (1)
MDI	26	I/O	Mode control data input (2)
MDO	25	O	Mode control readback data output (3)
MS	28	I/O	Mode control chip select input (4)
MSEL	24	I	I ² C/SPI select (1)
MUTE	4	I	Analog output mute control (1)
RST	6	I	Reset (1)
SCK	5	I	System clock input (1)
VCC _C	15	-	Analog power supply (internal bias and current DAC), 5 V
VCC _F	21	-	Analog power supply (DACFF), 5 V
VCC _L	20	-	Analog power supply (L-channel I/V), 5 V
VCC _R	10	-	Analog power supply (R-channel I/V), 5 V
VCOM	14	-	Internal bias decoupling pin
VDD	7	-	Digital power supply, 3.3 V
VOUTL+	17	O	L-channel analog voltage output +
VOUTL-	18	O	L-channel analog voltage output -
VOUTR+	13	O	R-channel analog voltage output +
VOUTR-	12	O	R-channel analog voltage output -
ZEROL	23	O	Zero flag for L-channel
ZEROR	22	O	Zero flag for R-channel

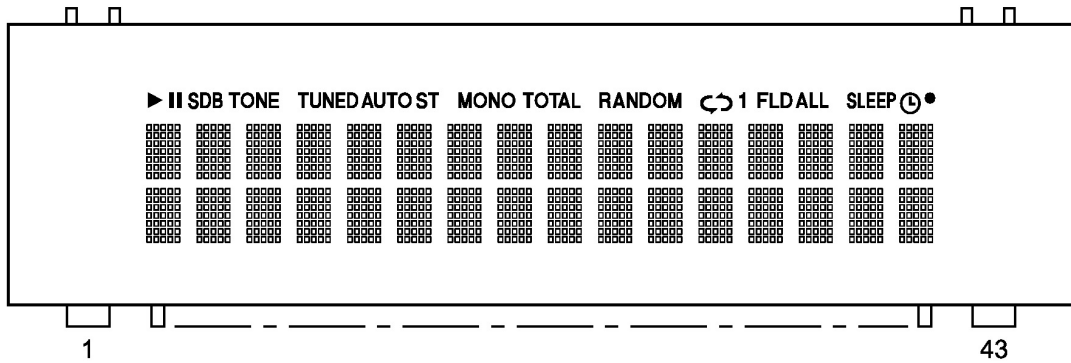
(1) Schmitt-trigger input, 5-V tolerant

(2) Schmitt-trigger input and output. 5-V tolerant input. In I²C mode, this pin becomes an open-drain 3-state output; otherwise, this pin is a CMOS output.

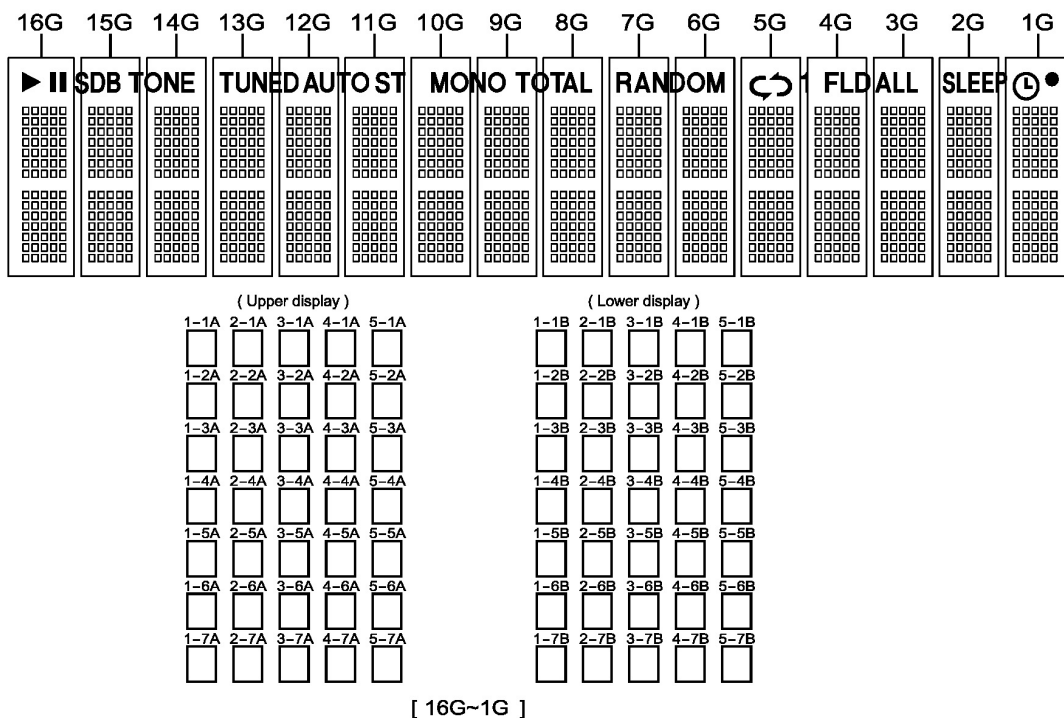
(3) 3-state output

(4) Schmitt-trigger input and output. 5-V tolerant input and CMOS output

2. FL DISPLAY VFD 16ST85GINK (FL41)



Grid Assignment

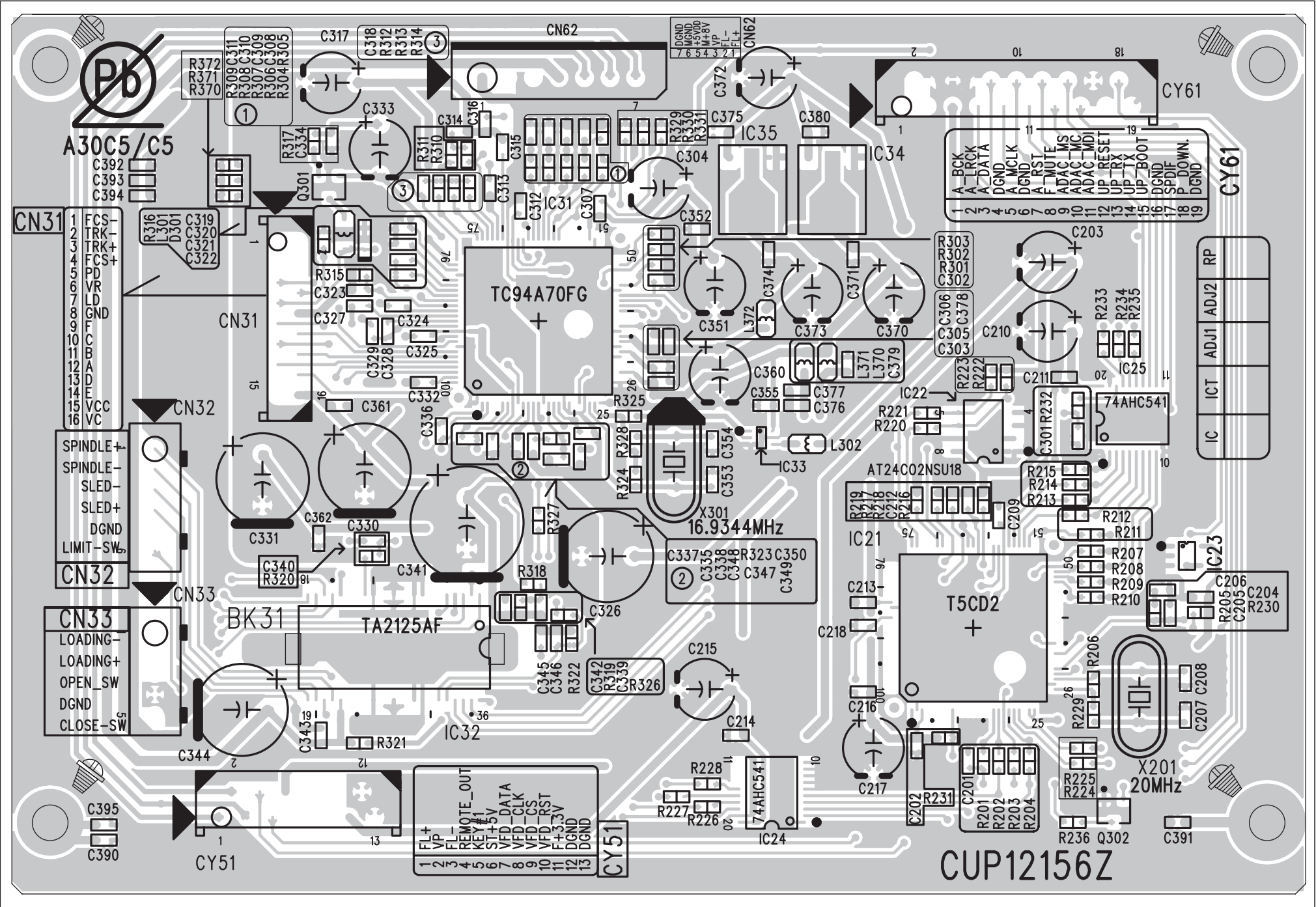


Pin Connection

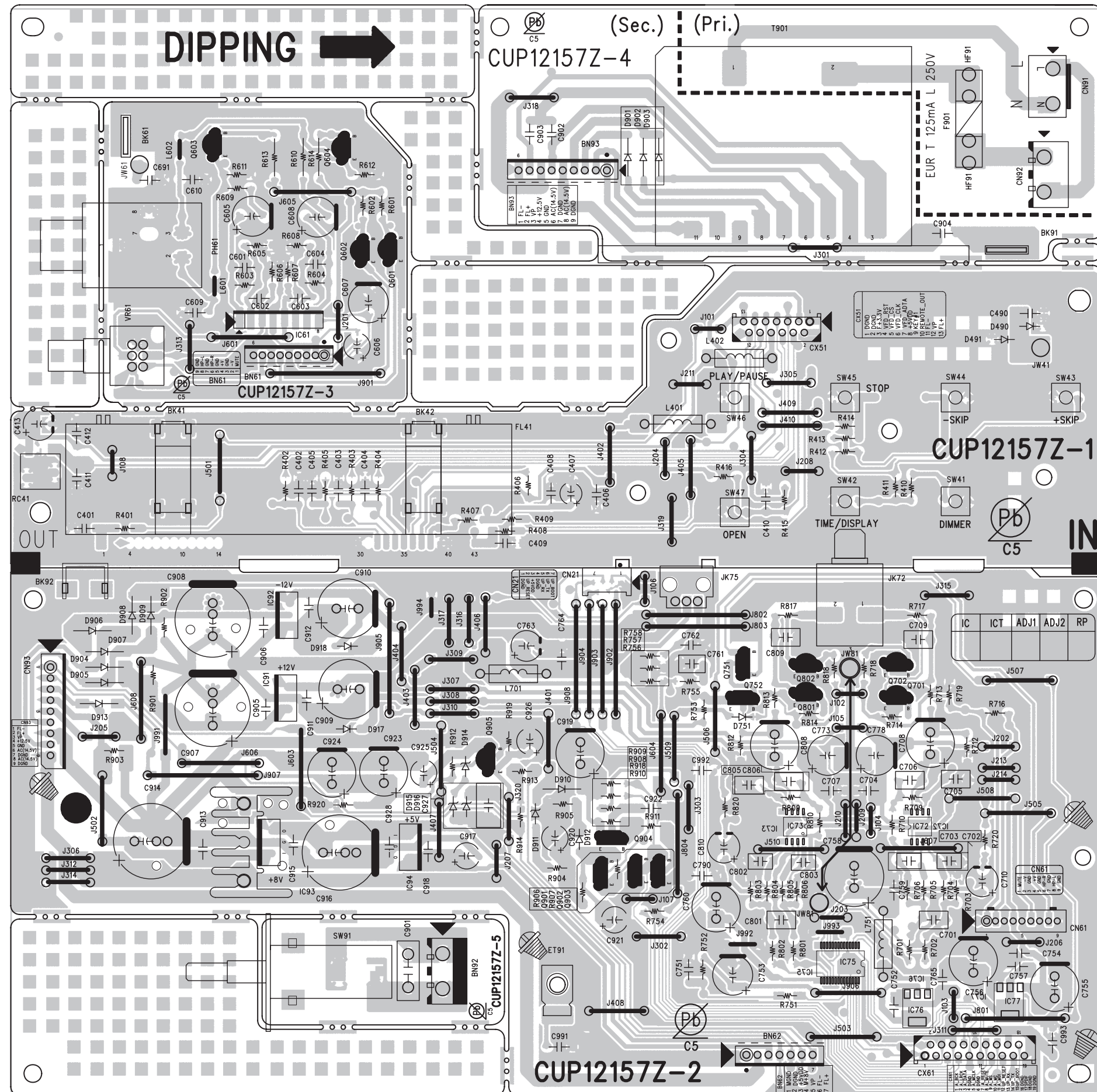
Pin No.	44	44	44	44	33	33	33	33	33	33	33	33	22	11	11	33	22	11
Connection	F2	N2	N1	P2	L2	G2	V2	D2	H2	O2	S2	E2	C2	D2	S2	A2	T2	X2

- NOTE
- 1) F1,F2 : Filament
 - 2) NP : No pin
 - 3) NC : No connection
 - 4) NX : No extend pin
 - 5) DL : Datum Line
 - 6) LGND : Logic GND pin
 - 7) PGND : Power GND pin
 - 8) VH : High Voltage Supply pin
 - 9) VDD : Logic Voltage Supply pin
 - 10) CP : Shift Register Clock
 - 11) DA : Serial Data Input
 - 12) TSA,B : Test pin
 - 13) CS : Chip Select Input pin
 - 14) RESET : Reset Input
 - 15) OSC : Pin for self-oscillation

PRINTED WIRING BOARDS
MAIN PCB UNIT(1/1)



COMPONENT SIDE



COMPONENT SIDE

NOTE FOR PARTS LIST

- Parts for which "nsp" is indicated on this table cannot be supplied.
- When ordering of part, clearly indicate "I" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including General-purpose Carbon Film Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
- Not including General-purpose Carbon Chip Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others
	↓	↓	↓	↓	↓	↓
	RD: Carbon RC: Composition RS: Metal oxide film RW: winding RN: Metal film RK: Metal mixture	2B: 1/8 W 2E: 1/4 W 2H: 1/2 W 3A: 1 W 3D: 2 W 3F: 3 W 3H: 5 W	F: ±1% G: ±2% J: ±5% K: ±10% M: ±20%	P: Pulse-resistant type NL: Low noise type NB: Non-burning type FR: Fuse-resistor F: Lead wire forming		

* Resistance

$\overline{18} \overline{2} \Rightarrow 1800\text{ohm}=1.8\text{kohm}$
 ↑ ↑ Indicates number of zeros after effective number.
 2-digit effective number.

$\overline{1R} \overline{2} \Rightarrow 1.2\text{ohm}$
 ↑ ↑ 1-digit effective number.
 2-digit effective number, decimal point indicated by R.
 : Units: ohm

● Capacitors

Ex.:	CE	04W	1H	3R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others
	↓	↓	↓	↓	↓	↓
	CE: Aluminum foil electrolytic CA: Aluminium solid electrolytic CS: Tantalum electrolytic CQ: Film CK: Ceramic CC: Ceramic CP: Oil CM: Mica CF: Metallized CH: Metallized	0J: 6.3 V 1A: 10 V 1C: 16 V 1E: 25 V 1V: 35 V 1H: 50 V 2A: 100 V 2B: 125 V 2C: 160 V 2D: 200 V 2E: 250 V 2H: 500 V 2J: 630 V	F: ±1% G: ±2% J: ±5% K: ±10% M: ±20% Z: ±80% P: +100% C: ±0.25pF D: ±0.5pF =: Others	HS: High stability type BP: Non-polar type HR: Ripple-resistant type DL: For charge and discharge HF: For assuring high frequency U: UL part C: CSA part W: UL-CSA part F: Lead wire forming		

* Capacity (electrolyte only)

$\overline{22} \overline{2} \Rightarrow 2200 \mu\text{F}$
 ↑ ↑ Indicates number of zeros after effective number.
 2-digit effective number.
 • Units: μF .

$\overline{2R} \overline{2} \Rightarrow 2.2 \mu\text{F}$
 ↑ ↑ 1-digit effective number.
 2-digit effective number, decimal point indicated by R
 • Units: μF .

* Capacity (except electrolyte)

$\overline{22} \overline{2} \Rightarrow 2200\text{pF}=0.0022 \mu\text{F}$
 ↑ ↑ Indicates number of zeros after effective number.
 (More than 2)
 2-digit effective number.
 • Units:pF

$\overline{22} \overline{1} \Rightarrow 220\text{pF}$
 ↑ ↑ Indicates number of zeros after effective number.
 (0 or 1)
 2-digit effective number.
 • Units:pF

- When the dielectric strength is indicated in AC,"AC" is included after the dielectric strength value.

PARTS LIST OF P.W.B. UNIT

* Parts for which "nsp" is indicated on this table cannot be supplied.

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

MAIN P.C.B. ASS'Y

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
SEMICONDUCTORS GROUP							
	IC21	943243004840D	IC U-COM DCD-510AE (T5CD2)		CVIANAM1460C		
	IC22	00D9430182900	IC AT24C02NSU EEPROM(2K)		CVIAT24C02NSU18		
	IC23	00MHC1009954	IC RESET S-80145ALMC		HVIS-80145ALMC		
	IC24,25	90M-HC109400R	IC SN74AHC541PW(TSSOP-20 PKG)		HVISN74AHC541PW		
	IC31	90M-HC110060R	IC TC94A70FG CD DSP		CVITC94A70FG		
	IC32	00D9430184209	IC TA2125AFG (Pb Free)		HVITA2125AFG		
	IC33	90M-HC109360R	IC KIC7SH08FU-RTK		HVIKIC7SH08FU		
	IC34	00D9430209701	IC KIA1117S/F33, SOT-223		CVIKIA1117S33		
	IC35	90M-HC900160R	IC LM1117S15 REG. (SOT-223)		CVIKIA1117S15		
	Q301	nsp	TR KTA1504S Y RTK		HVTKTA1504SYRTK		
	Q302	00D9630121606	TR KRC107S		HVTKRC107S		
	D301	00D2760717903	DIODE 1SS355TE-17		HVD1SS355T		
CAPACITORS GROUP							
	C201,202	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C203	nsp	ELECT CAP 100uF 16V		CCEA1CH101T		
	C204	nsp	CHIP CAP 1UF 10V K		CCUS1A105KC		
	C205	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C206	nsp	CHIP CAP 220PF 50V J		CCUS1H221JA		
	C207	nsp	CHIP CAP12PF 50V J		CCUS1H120JA		
	C208	nsp	CHIP CAP 15PF 50V J		CCUS1H150JA		
	C209	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC		
	C210	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C211-214	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C215	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C216	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C217	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C301	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C302	nsp	CHIP CAP 1000PF 50V K		CCUS1H102KC		
	C303	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C304	nsp	ELECT CAP 100uF 16V		CCEA1CH101T		
	C305-307	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C309-311	nsp	CHIP CAP 22PF 50V J		CCUS1H220JA		
	C312,313	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C314	nsp	CHIP CAP 47PF 50V J		CCUS1H470JA		
	C315	nsp	CHIP CAP 0.033UF 50V K		CCUS1H333KC		
	C316	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C317	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C318	nsp	CHIP CAP 0.015UF 50V K		CCUS1H153KC		
	C319,320	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC		
	C321	nsp	CHIP CAP 4700PF 50V K		CCUS1H472KC		
	C322	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C323	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC		
	C324,325	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C326	nsp	ELECT CAP 470UF 16V		CCEA1CH471T		
	C327	nsp	CHIP CAP 0.015UF 50V K		CCUS1H153KC		
	C328	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	C329	nsp	CHIP CAP 68PF 50V J		CCUS1H680JA		
	C330	nsp	ELECT CAP 220UF 25V		CCEA1EH221T		
	C331	00D9430174206	ELECT CAP 1000UF 6.3V		CCEA0JH102T		
	C332	nsp	CHIP CAP 1000PF 50V K		CCUS1H102KC		
	C333	nsp	ELECT CAP 100uF 16V		CCEA1CH101T		
	C334,335	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C336,337	nsp	CHIP CAP		CCUS1H333KC		
	C338	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C339,340	nsp	CHIP CAP 470PF 50V J		CCUS1H471JA		
	C341	943134004980S	ELECT CAP KZH 6.3V/1000UF		CCEA0JKZH102KS		
	C342	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC		
	C343	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C344	nsp	ELECT CAP 220UF 25V		CCEA1EH221T		
	C345,346	00MDK96473300	CHIP CAP 0.047UF 50V K		CCUS1H473KC		
	C347	nsp	CHIP CAP 2200PF 50V K		CCUS1H222KC		
	C348-350	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C351	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C352	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C353	nsp	CHIP CAP 15PF 50V J		CCUS1H150JA		
	C354	nsp	CHIP CAP12PF 50V J		CCUS1H120JA		
	C355	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C360	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C361,362	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C370	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C371	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C372	nsp	ELECT CAP 100uF 16V		CCEA1CH101T		
	C373	nsp	ELECT CAP 47UF 25V		CCEA1EH470T		
	C374-380	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C392-394	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
OTHERS PARTS GROUP							
	CN31	nsp	WAFER CD MECHA		CJP16GA117ZY		
	CN32	nsp	WAFER STRAIGHT(DVD LOADER)		CJP06GA19ZY		
	CN33	nsp	WAFER STRAIGHT		CJP05GA19ZY		
	CN62	nsp	WAFER STRAIGHT(7PIN)		CJP07GA01ZY		
	CY51	943644005070S	WAFER CARD CABLE		CJP13GA115ZY		
	CY61	nsp	WAFER		CJP19GA115ZY		
	L301	943115004990S	CHIP COIL(10uH, 3216)		CLQ09E100KRZ		
	L302	943119005000S	FERRITE BEAD(HCB2012KF-151T20 150ohm)		CLZ9R013Z		
	L370-372	943119005010S	CHIP FERRITE BEAD(60ohm, 2012)		CLZ9R001Z		
	X201	943141005020S	CRYSTAL HC-49/S 20MHz (12P)		COX20000E120TF		
	X301	943141003500S	CRYSTAL 16.934MHZ		HOX16934E120C		

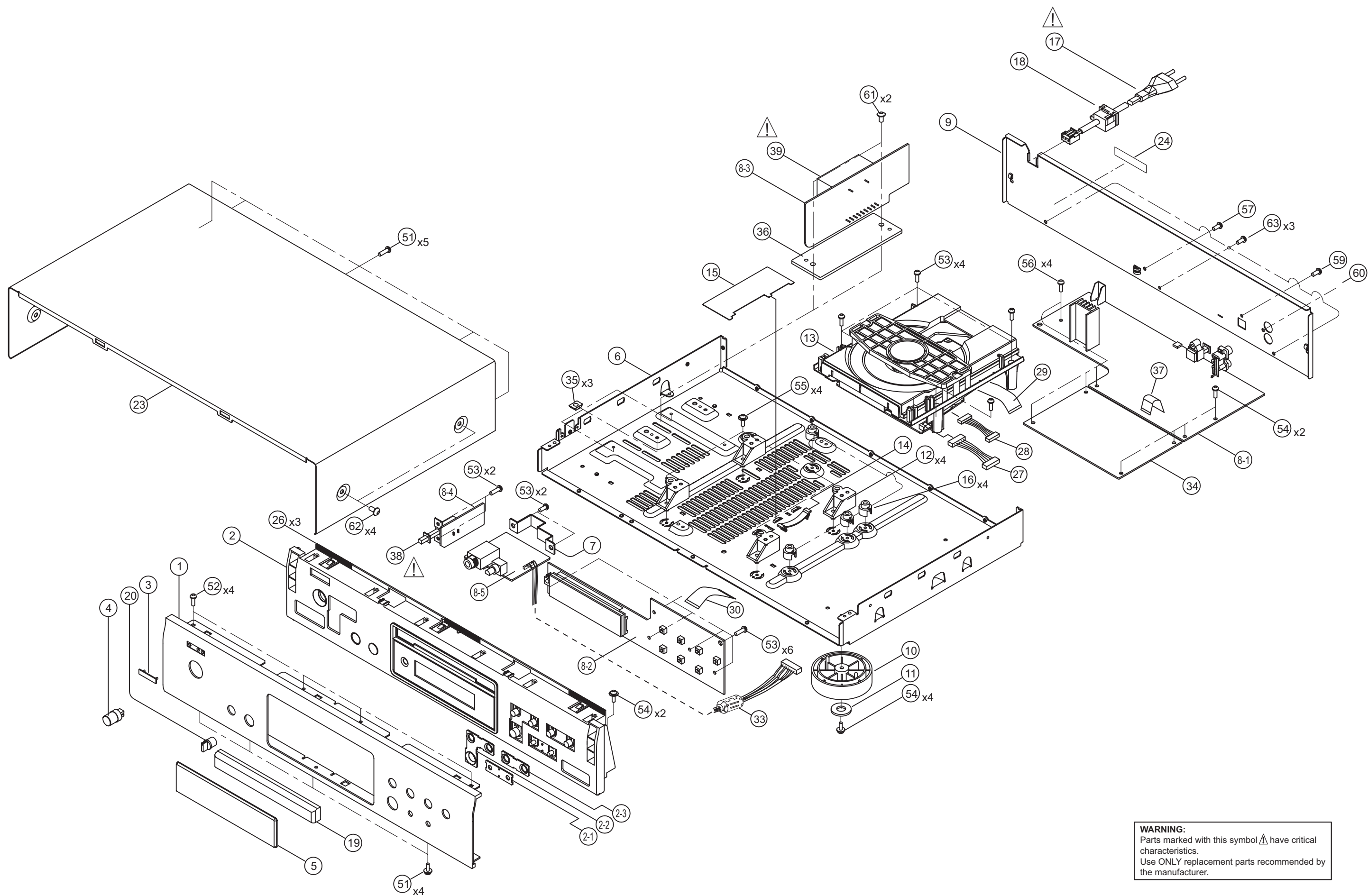
FRONT P.C.B. ASS'Y


	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
SEMICONDUCTORS GROUP							
	IC61	00D9430059800	IC NJM4556AL		HVINJM4556AL		
	IC72,73	00MHC10102090	IC NJM2068M-TE1		HVINJM2068MTE1		
	IC75	00D2623332904	IC PCM1791ADBR		HVIPCM1791ADBR		
	IC76	00D9430209701	IC KIA1117S/F33, SOT-223		CVIKIA1117S33		
	IC77	00D9430213300	IC KIA1117S50-RTK/P		CVIKIA1117S50		
	IC91	00D9430183705	IC KIA78XXAPI		HVIKIA7812API		
	IC92	00D9430183909	IC KIA79XXPI		HVIKIA7912PI		
	IC93	00D9430126209	IC KIA7808 (KEC)		HVIKIA7808API		
	IC94		IC 7805API (KEC)		HVIKIA7805API		
	D751	00D9430086404	DIODE 1SS133T-77		HVD1SS133MT		
	D901-910	00D9430182502	DIODE 1N4003		CVD1N4003T		
	D911	90M-HD302330R	DIODE MTZJ4.7B 1/2W		HVDMTZJ4.7BT		
	D912	00D9430086404	DIODE 1SS133T-77		HVD1SS133MT		
	D913	00D9430182502	DIODE 1N4003		CVD1N4003T		
	D914,915	00D9430087102	DIODE MTZJ20B 1/2W		HVDMTZJ20BT		
	D916	00D9430087607	DIODE MTZJ6.2B		HVDMTZJ6.2BT		
	D917,918	00D9430086404	DIODE 1SS133T-77		HVD1SS133MT		
	Q601-604	00D9430006002	TR KTD1302		HVTKTD1302T		
	Q701,702	00D9430006002	TR KTD1302		HVTKTD1302T		
	Q751	00D9430004305	TR KRC107M		HVTKRC107MT		
	Q752	00D9430184607	TR KRA104M		HVTKRA104MT		
	Q801,802	00D9430006002	TR KTD1302		HVTKTD1302T		
	Q901,902	00D9430072609	TR KTC3199Y		HVTKTC3199YT		
	Q903	90M-BA001530R	TR KTC114M		HVTKRC114MT		
	Q904	00MHT600111B0	TR KTA1267Y		HVTKTA1267YT		
	Q905	00D9430059004	TR KSC2316Y		HVTKSC2316YT		
	FL41	00D3938086009	VFD 16ST85GINK		CFL16ST85GINK		
CAPACITORS GROUP							
	C401	nsp	CERAMIC CAP 0.01uF 50V ZF		CCBS1H103ZFT		
	C405,406	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C407	nsp	ELECT CAP 1UF 50V SMALL SIZE		CCEA1HKS1R0T		
	C408	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C409	nsp	CERAMIC CAP 0.01uF 50V ZF		CCBS1H103ZFT		
	C410	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C411	nsp	CERAMIC CAP CH UP025 B102K-A-B Z(1000PF/50V)		CCBS1H102KBT		
	C412	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C413	nsp	ELECT CAP 47UF 16V		CCEA1CKS470T		
	C601	nsp	CERAMIC CAP CH UP025 B151K-A-B Z(150PF/50V)		CCBS1H151KBT		
	C602,603	nsp	CERAMIC CAP CH UP025 B221K-A-B Z(220PF/50V)		CCBS1H221KBT		
	C604	nsp	CERAMIC CAP CH UP025 B151K-A-B Z(150PF/50V)		CCBS1H151KBT		
	C605	00D9430185402	ELECT CAP (ELNA RFO 100uF/25V)		CCEA1ERFO101T		
	C606	nsp	ELECT CAP 100UF 16V		CCEA1CH101T		
	C607	nsp	ELECT CAP 100UF 50V		CCEA1HH101T		
	C608	00D9430185402	ELECT CAP (ELNA RFO 100uF/25V)		CCEA1ERFO101T		
	C609,610	nsp	CERAMIC CAP CH UP025 B221K-A-B Z(220PF/50V)		CCBS1H221KBT		
	C691	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C701	943139005030S	MYLAR CAP 1500PF 50V J		HCQ1H152JZT		
	C702,703	nsp	CERAMIC CAP 180PF 50V K		CCKT1H181KB		
	C704	nsp	CERAMIC CAP 0.1UF 50V Z		CCBS1H104ZFT		

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	C705	nsp	MYLAR CAP 1800PF 50V J		HCQI1H182JZT		
	C706	00D9430044909	MYLAR CAP 2200PF 50V J		HCQI1H222JZT		
	C707	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C708	943134005040S	ELECT CAP (ELNA RFOII 50V/220uF)		CCEA1HRFOII221E		
	C709	nsp	MYLAR CAP 1800PF 50V J		HCQI1H182JZT		
	C710	nsp	ELECT CAP 47UF 50V		CCEA1HH470T		
	C751,752	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C753	00D9430185402	ELECT CAP (ELNA RFO 100uF/25V)		CCEA1ERFO101T		
	C754	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C755	00D9430185402	ELECT CAP (ELNA RFO 100uF/25V)		CCEA1ERFO101T		
	C756	nsp	ELECT CAP 100UF 16V		CCEA1CH101T		
	C757	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C758	943134005080S	ELECT CAP (ELNA ROA 50V/100uF)		CCEA1HROA101E		
	C759	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C760	134050059238S	ELECT CAP (ELNA RFG50V/220uF)		CCEA1HRFY221E		
	C761	nsp	CERAMIC CAP 100PF 50V K		CCKT1H101KB		
	C762	nsp	CERAMIC CAP CH UP025CH120J-A-B Z(12PF/50V)		CCBS1H120JCT		
	C763	nsp	ELECT CAP 220UF 16V		CCEA1CH221T		
	C764,765	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C773	00D9430185402	ELECT CAP (ELNA RFO 100uF/25V)		CCEA1ERFO101T		
	C778	00D9430185402	ELECT CAP (ELNA RFO 100uF/25V)		CCEA1ERFO101T		
	C801	943139005030S	MYLAR CAP 1500PF 50V J		HCQI1H152JZT		
	C802,803	nsp	CERAMIC CAP 180PF 50V K		CCKT1H181KB		
	C805	nsp	MYLAR CAP 1800PF 50V J		HCQI1H182JZT		
	C806	00D9430044909	MYLAR CAP 2200PF 50V J		HCQI1H222JZT		
	C808	943134005040S	ELECT CAP (ELNA RFOII 50V/220uF)		CCEA1HRFOII221E		
	C809	nsp	MYLAR CAP 1800PF 50V J		HCQI1H182JZT		
	C810	nsp	ELECT CAP 47UF 50V		CCEA1HH470T		
	C901	00D9430024408	CERAMIC CAP 0.0047UF/2.5KV(X1/Y2/SC)		KCKDKS472ME		
	C902-906	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C907,908	0D2544763704	ELECT CAP (ELNA RFO 35V/3300uF)		CCEA1VRFO332E		
	C909,910	943134005040S	ELECT CAP (ELNA RFOII 50V/220uF)		CCEA1HRFOII221E		
	C911-913	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C914	0D2544763704	ELECT CAP (ELNA RFO 35V/3300uF)		CCEA1VRFO332E		
	C915	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C916	943134005050S	ELECT CAP		CCEA1EH332E		
	C917	nsp	ELECT CAP 100UF 16V		CCEA1CH101T		
	C918	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C919	00D9430188603	ELECT CAP 1000UF 25V		CCEA1EH102E		
	C920	nsp	ELECT CAP 1UF 50V		CCEA1HH1R0T		
	C921	nsp	ELECT CAP 4.7UF 50V		CCEA1HH4R7T		
	C922	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
	C923,924	943134005060S	ELECT CAP 100UF 63V		CCEA1JH101E		
	C925,926	nsp	ELECT CAP 10UF 50V		CCEA1HH100T		
	C927	nsp	MYLAR CAP 0.1UF 50V J		HCQI1H104JZT		
	C928	nsp	CERAMIC CAP 0.01uF 50V ZF		CCBS1H103ZFT		
	C991	nsp	CERAMIC CAP 0.1uF 50V ZF		CCBS1H104ZFT		
OTHERS PARTS GROUP							
	BK41,42	nsp	FIP BRACKET		CMD1A504		
	BK61	nsp	EARTH PLATE				
	BK91	nsp	EARTH PLATE		CMD1A504		
	BK92	nsp	PCB BRACKET		CMD1A569		
	BN61	nsp	WIRE ASS'Y		CWZDCD500AEBN31		

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	BN62 BN92 BN93	nsp nsp nsp	WIRE ASS'Y WIRE ASS'Y WIRE ASS'Y		CWB2B907050BM CWB4D932100UZ CWB1D909200BM		
	CN21 CN61 CN91 CN92 CN93	nsp nsp nsp nsp	WAFER CARD CABLE WAFER STRAIGHT 9PIN WAFER WAFER CON WAFER YMW025-09R		CJP07GB113ZY CJP09GA19ZY CJP02KA060ZY CJP02GA89ZY CJP09GA01ZY		
	CX51 CX61 ET91	943644005070S nsp nsp	WAFER CARD CABLE WAFER EARTH PLATE		CJP13GA115ZY CJP19GA115ZY HJT1A025		
	F901 HF91,92	00D2061095007 nsp	FUSE 218 SERIES, 0.125A FUSE HOLDER		CBA2C0125TLEY KJCFC5S		
	JK72 JK75 JW81	00D9430186304 00D9430183103 nsp	JACK L/R(2P SILVER) OPTICAL MODULE(TX) TOTX177L WIRE ASS'Y		CJJ4N062Z HJSTOTX177L CWE7202080AA		
	L401,402 L601,602 L701 L751	00D9430109608 nsp 00D9430109608 00D9430109608	BEAD CORE COPPER WIRE SN95/PB5 , 0.6 BEAD CORE BEAD CORE		KLZ9H001Z C3A206 KLZ9H001Z KLZ9H001Z		
	PH61 RC41 SW41-47	00D9430181600 00D9430194706 00D9430004402	JACK REMOCON SENSOR KSM603TH2E TACT SW		CJJ2E020Z CRVKSM603TH2E CST1A012ZT		
	SW91 T901 VR61	00D9430140609 943101004730D 00D9430183006	CSH1A010ZV(SDL1P-B) POWER TRANS (EUR) VARIABLE RES		CSH1A010ZV CLT5M037ZE CVV2J02B103Z		
		nsp nsp	HEAT SINK SCREW		CMY4A222 CTB3+8JR		

EXPLODED VIEW



WARNING:
Parts marked with this symbol  have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST OF EXPLODED VIEW

* Parts for which "nsp" is indicated on this table cannot be supplied.

* P.W.B. ASS'Y for which "nsp" is indicated on this table cannot be supplied. When repairing the P.W.B. ASS'Y, check the board parts table and order replacement parts.

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

Note: The symbols in the column "Remarks" indicate the following destinations.

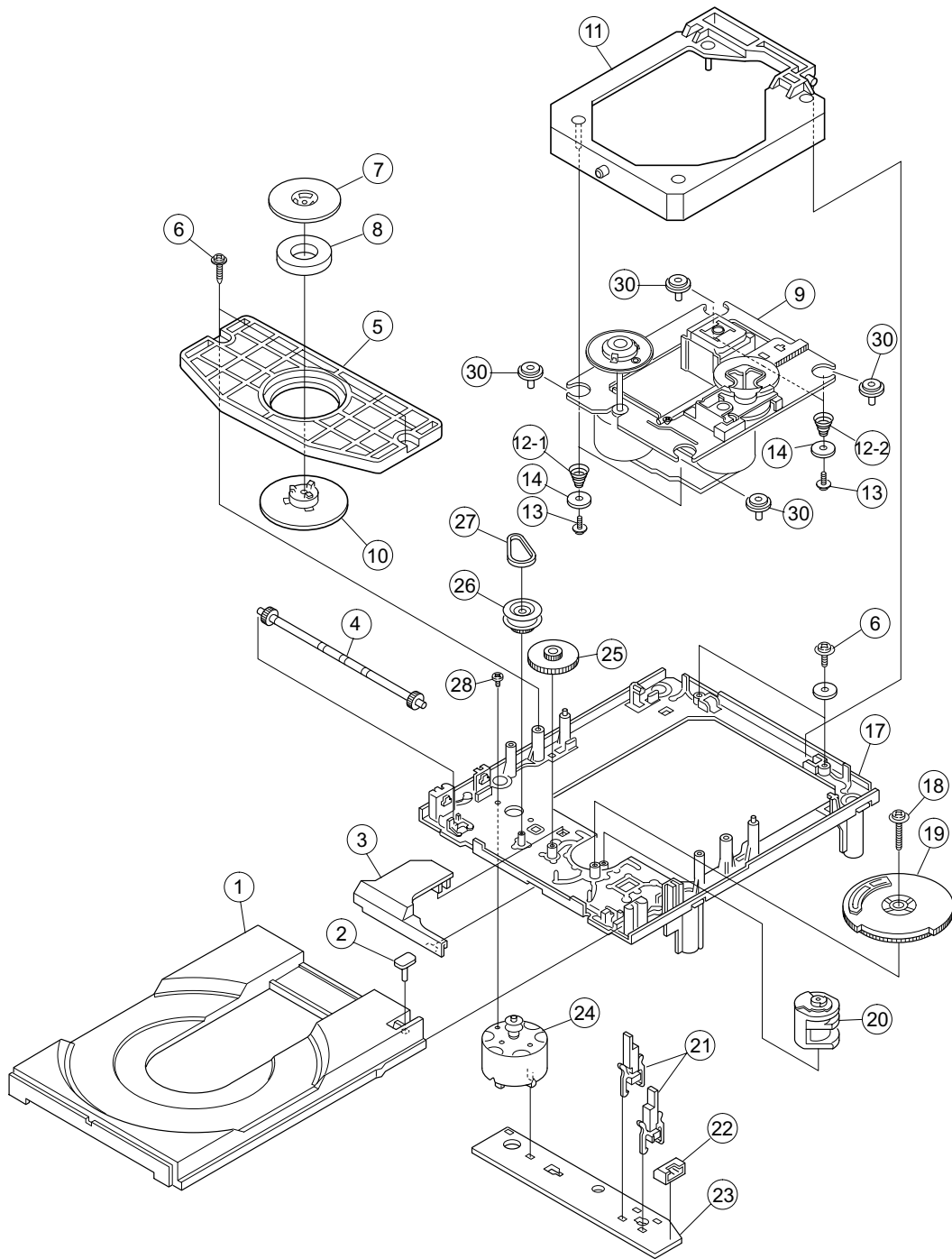
BK : Black model

SP : Premium silver model

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	8	nsp	FRONT PCB ASSY		COP12157B	1	*
	8-1	-	INPUT UNIT				
	8-2	-	FRONT UNIT				
	8-3	-	POWER UNIT				
	8-4	-	POWER SW UNIT				
	8-5	-	HEADPHONE UNIT				
	34	-	MAIN PCB ASSY		COP12156B	1	*
	1	943402004710D	FRONT PANEL	BK	CKM1A180WC45	1	*
	1	943402004720D	FRONT PANEL	SP	CKM1A180VC62	1	*
	2	00D9430178901	INNER PANEL	BK	CGW1A424B28	1	
	2	00D9430179007	INNER PANEL	SP	CGW1A424RGG45	1	
	2-1	-	KNOB GUIDE		CGW1A424-1	1	
	2-2	-	KNOB GUIDE		CGW1A424-2	1	
	2-3	-	KNOB GUIDE		CGW1A424-3	1	
	3	00D1310169038	DENON BADGE	BK	CGB1A140U	1	
	3	00D1310169041	DENON BADGE	SP	CGB1A140T	1	
	4	00D9430179502	POWER KNOB	BK	CGK1A124ZA	1	
	4	00D9430179609	POWER KNOB	SP	CGK1A124YA	1	
	5	00D9430179706	FIP WINDOW		CGU1A397Z	1	
	6	nsp	BOTTOM CHASSIS		CUA2A269	1	*
	7	nsp	PHONE BRACKET		CMD1A598	1	
	9	943406004760D	REAR PANEL		CKF2A316V	1	*
	10	00D1040334007	FOOT		CKL1A093	4	
	11	00D9430179900	FOOT CUSHION		CHG2A289	4	
	12	nsp	MECHA SUPPORT		CMH1A259	4	
	13	943302000090D	CD MECHANISM ASSY		CJDWSL11TCNA	1	*
	14	nsp	FLAT CABLE CLAMP		CMH1A261	1	
	15	nsp	INSULATOR		CMX1A185	1	
	16	nsp	P.W.B. HOLDER		CHE170	4	
⚠	17	00D9430180407	POWER CORD(EUR)		CJA2B043ZA	1	
	18	00D9430180601	AC CORD BUSHING		KHR1A028	1	
	19	00D9430180708	DOOR	BK	CGR2A404WB28	1	
	19	00D9430180805	DOOR	SP	CGR2A404RGYG45	1	
	20	00D9430180902	LEVEL KNOB	BK	CBC1A157B28	1	
	20	00D9430181008	LEVEL KNOB	SP	CBC1A157RGG45	1	
	23	00D9430181105	TOP COVER	BK	CKC1A175S56	1	
	23	00D9430181202	TOP COVER	SP	CKC1A175S55	1	
	24	nsp	SERIAL NO. LABEL		CQB1A622	1	
	26	00D9430186401	HIMERON TAPE		CHS1A032	3	
	27	00D9430186508	WIRE ASSY		CWB1B005080EG	1	
	28	00D9430186605	WIRE ASSY		CWB5A906080EG	1	
	29	00D9430186702	CARD CABLE		CWC4F1A16A220B	1	
	30	943606004750S	CARD CABLE		CWC4F4A13B120A08	1	
	33	00D9430201000	FERRITE CORE		CLZ9Z071Z	1	
	35	00D9430094700	RUBBER		CHG1A113	3	*
	36	nsp	TRANS PLATE		CMD1A713	1	*
	37	943606004740S	CARD CABLE		CWC4F4A19B060B10	1	*
⚠	38	00D9430184801	POWER SWITCH		CSH1A010ZV	1	
⚠	39	943101004730D	POWER TRANS		CLT5M037ZE	1	*

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
SCREWS							
	51	nsp	SCREW 3X8	BK	CTBD3+8JFZR	9	
	51	nsp	SCREW 3X8	SP	CTBD3+8JFN	9	
	52	nsp	SCREW 3X8	BK	CTB3+8JFZR	4	
	52	nsp	SCREW 3X8	SP	CTB3+8JFN	4	
	53	nsp	SCREW 3X10		CTB3+10JR	14	
	54	nsp	SCREW 3X8		CTB3+8JR	6	
	55	nsp	SCREW 3X6		CTW3+6JR	8	
	56	nsp	SCREW 3X12		CTB3+12JR	4	
	57	nsp	SCREW 3X6		CTB3+6FFZR	1	
	59	nsp	SCREW 3X8		CTB3+8JFZR	1	
	60	nsp	SCREW 3X10		CTB3+10JFZR	1	
	61	nsp	SCREW 4X6		CTB4+8FR	2	
	62	nsp	SCREW 4X6	BK	CTWD4+6FFZR	4	
	62	nsp	SCREW 4X6	SP	CTWD4+6FFN	4	
	63	nsp	SCREW 3X8		CTBD3+8JFZR	3	

EXPLODED VIEW OF CD MECHANISM UNIT



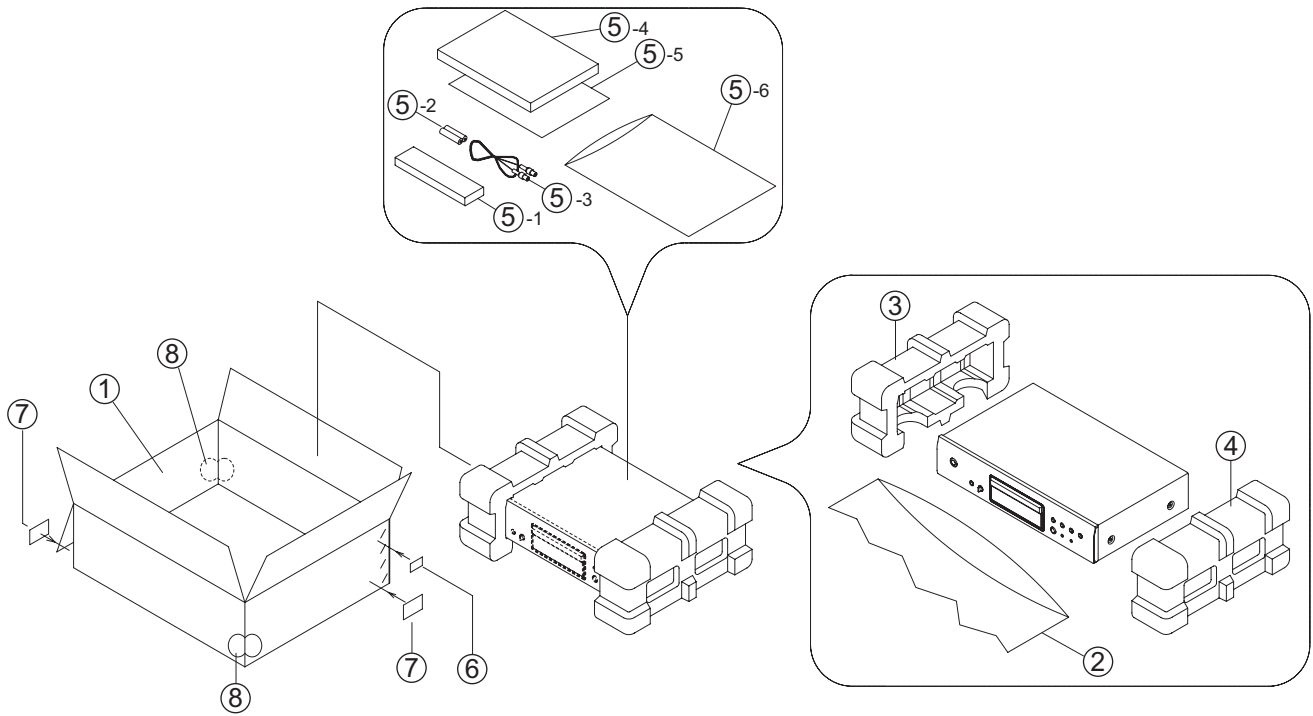
PARTS LIST OF CD MECHANISM UNIT

* Parts for which "nsp" is indicated on this table cannot be supplied.\

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

	Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
	1	00DS264629001	Tray (C)	This part (No.2)doesn't belong to the tray. Take it down from old tray and use again when changing the tray.	1	
	2	-	-			
	3	00DS262554401	Gear cover(S)		1	
	4	00DS262553501	Tray gear(S)		1	
	5	00DS262554601	Chucking plate		1	
	6	nsp	Screw 2.6 x 7 +PTPWH		4	
	7	nsp	Chucking yoke		1	
	8	nsp	Magnet		1	
	9	00D9640011007	MECHA DA11T3CN		1	
	10	nsp	Chucking pulley		1	
	11	nsp	Sub chassis Ass'y	No slit type2	1	
	12-1	00DS262723601	Coil spring(front)		2	
	12-2	00DS262723501	Coil spring(back)		2	
	13	nsp	Screw 2.6 x 10 +P		4	
	14	nsp	Washer 2130		4	
	17	nsp	Outsert main chassis(S)		1	
	18	nsp	Screw 2.6 x 16 +PTPWH		1	
	19	00DS262554701	Drive gear(S)		1	
	20	00DS262554504	Contorol cam(S)		1	
	21	00DS169266711	Leaf switch		2	
	22	nsp	5P connector		1	
	23	nsp	Loading P.W.B		1	
	24	00DSX26251171	Loading motor Ass'Y		1	
	25	00DS262553402	Middle gear		1	
	26	00DS262553602	Loading pulley		1	
	27	00DS365338700	LM belt		1	
	28	nsp	Screw 2.6 x 2.5 +B		1	
	30	00DS262723401	Insulator		4	

PACKING VIEW



PARTS LIST OF PACKING & ACCESSORIES

* Parts for which "nsp" is indicated on this table cannot be supplied.

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

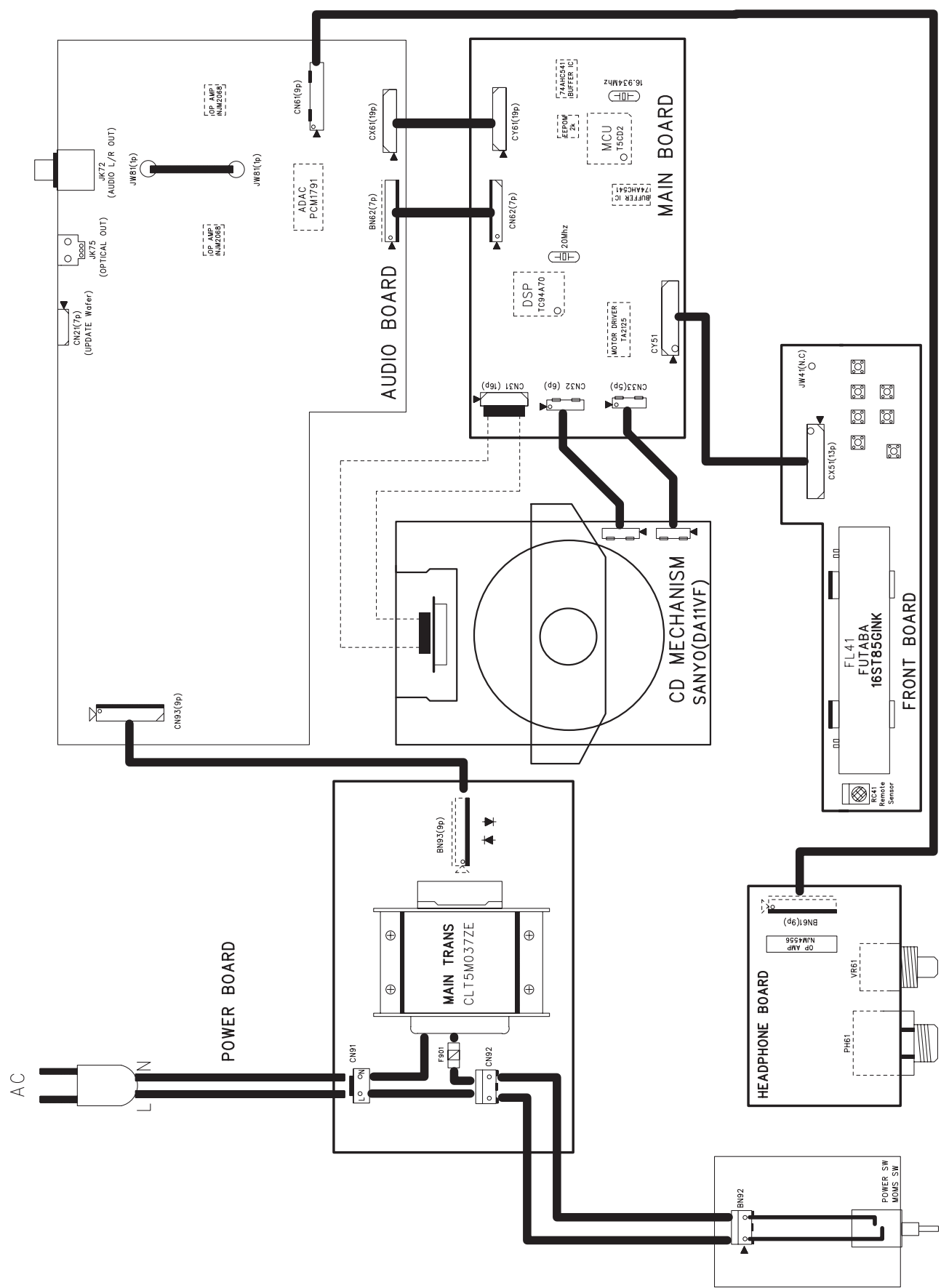
Note: The symbols in the column "Remarks" indicate the following destinations.

BK : Black model

SP : Premium silver model


Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
1	943531004770D	CARTON BOX		CPG2A819W	1	*
2	00D9430177902	SNOW PAD		CPS1A748	1	
3	00D9430178008	SNOW PAD		CPS1A749	1	
4	nsp	POLY BAG(Set)		CPB1A013Y	1	
5-1	943307004860D	REMOCON	BK	CARTDCD510AEBKY	1	*
5-1	943307004850D	REMOCON	SP	CARTDCD510AESPYP	1	*
5-2	nsp	BATTERY (SIZE 'AAA')		CABR03PPB	2	
5-3	00D9430178406	PIN CORD		CJS4N014Z	1	
5-4	943541004780D	INSTRUCTION MANUAL		CQX1A1422Z	1	*
5-5	nsp	S.S.LIST(EX)		CQE1A226R	1	
5-6	nsp	POLY BAG		CPB1061W	1	
6	nsp	POS LABEL	BK	CQB1A772W	1	*
6	nsp	POS LABEL	SP	CQB1A772V	1	*
7	nsp	CONTROL LABEL		CQB1A627	2	*
8	00D9430194804	COLOR LABEL	SP	CQB1A676	2	

WIRING DIAGRAM



NOTE FOR SCHEMATIC DIAGRAM

WARNING:

Parts marked with this symbol  have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM

M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD.

P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT
NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE
WITHOUT PRIOR NOTICE.

---MEMO---

