

Service Manual

COMPACT
disc
DIGITAL AUDIO

DIGITAL

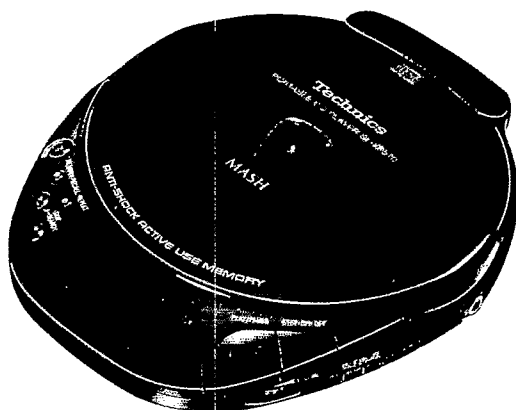
MASH [※]
multi-stage noise shaping

Portable CD Player

SL-XP570

Colour

(A)... Blue Type



Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(A)
(EB)	Great Britain.	
(GC)	Asia, Latin America, Middle Near East and Africa.	
(GN)	Oceania.	

- ※
- Technics (or Panasonic) developed the world's first MASH type DAC and ADC. MASH technology was invented by NTT (LSI Labs).
 - MASH is a trademark of NTT.

TRAVERSE DECK: RAE0132Z MECHANISM SERIES

SPECIFICATIONS

Audio

No. of channels: 2 (left and right, stereo)
Frequency response: 20~20,000 Hz (+0.5dB, -1.5dB)
Output voltage: 0.7V (50kΩ)
S/N: more than 96dB*
Wow and flutter: Below measurable limit
DA converter: 1 bit, MASH
Headphones output level: Max. 5mW+5mW/16Ω (variable) φ3.5

Pickup

Light source: Semiconductor laser
Wavelength: 780nm
Lens: Glass pressed lens

General

Power requirement: AC; with an included panasonic AC adaptor
 (RFEA406B-W): (EB)
 (RFEA401E-1S): (E)
 (RFEA402Z-W): (GC)
 (RFEA404A-W): (GN)
 Batteries; DC 3V (two "AA" size batteries, not included)
 (Panasonic LR6 (UM-3) or equivalent, not included)
 Rechargeable Batteries; DC 2.4V with an included Panasonic Rechargeable Batteries
 (RP-BP60EY) × 2
 Car Battery; with an optional panasonic car adaptor (SH-CDC9)

DC IN:

Power consumption:

DC 4.5V

Type of power supply	Anti-shock memory OFF/ON
AC adaptor	3.7W/4.3W
Battery	0.6W/1.0W

Dimensions (W × H × D): 140 × 30.9 × 172.1 mm
Weight: 335g (with batteries)
 295g (without batteries)

*These specifications were measured with anti-shock memory in the off state.

Note: Design and specifications are subject to change without notice.
 Weight and dimensions are approximate.

Technics

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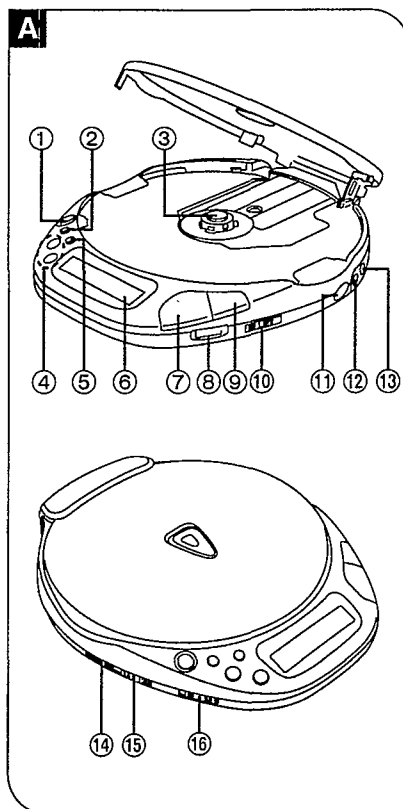
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LOCATION OF CONTROLS

Portable CD player **A**

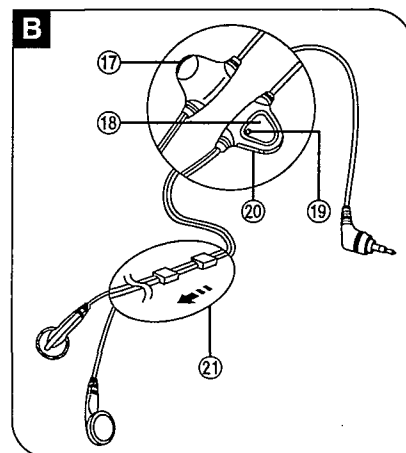
- ① Open button (OPEN)
- ② Memory/recall button (MEMORY/RECALL)
- ③ Push button (PUSH)
- ④ Skip/search buttons (◀◀-SKIP/-SEARCH ▶▶)
- ⑤ Repeat button (REPEAT)
- ⑥ Display
- ⑦ Play/pause button (▶ || PLAY/PAUSE)
- ⑧ Earphones/headphones volume control (VOLUME)
- ⑨ Stop/operation off button (■ STOP/OPR OFF)
- ⑩ ASC/S-XBS selector (ASC, S-XBS, OFF)
- ⑪ Earphones/headphones jack (⌀) 16Ω ϕ3.5
- ⑫ Out jack (OUT)
- ⑬ DC in jack (DC IN 4.5 V ⬡⬢⬢⬢)
- ⑭ Anti-shock memory switch (ANTI-SHOCK MEMORY)
- ⑮ Play mode selector (PLAY MODE)
- ⑯ Hold switch (HOLD)



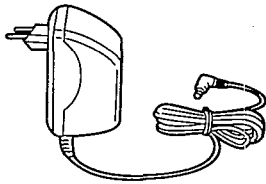
Remote control **B**

- ⑰ Volume control (VOLUME)
- ⑱ Remote control button
- ⑲ Operation indicator (OPR)
- ⑳ Hold switch (HOLD)
- ㉑ Slider

Slide up to prevent entangling of the cord when the stereo earphones are not in use.



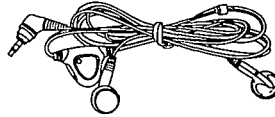
ACCESSORIES



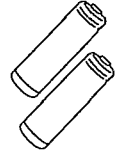
AC adaptor..... 1 pc.
 [(RFEA401E-1S): (E) (RFEA406B-W): (EB)]
 [(RFEA402Z-W): (GC) (RFEA404A-W): (GN)]

Note:

The configuration of the AC adaptor differs according to area.



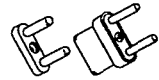
Stereo earphones..... 1 pc.
 with remote control
 (RFEV116ACKA)



Rechargeable batteries..... 2 pcs.
 (RP-BP60EY)



Stereo connection cable 1 pc.
 (RJL2P001X10)



Power plug adaptor 1 pc.
 (RJP120ZDS-K): (GC)

PRECAUTION OF LASER DIODE

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
 Wave length: 780 nm
 Maximum output radiation power from pickup: 100µW/VDE

Laser radiation from the pickup lens is safety level, but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG: Dieses Produkt enthält eine Lasereinheit. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge: 780 nm
 Maximale Strahlungsleistung der Lasereinheit: 100µW/VDE

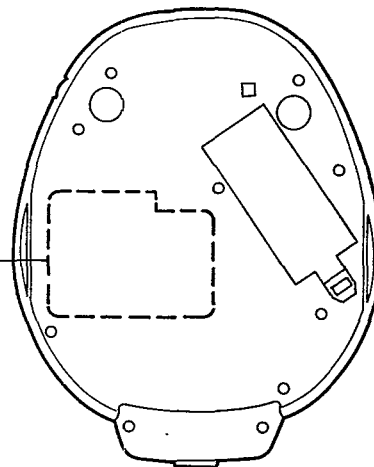
Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Lasereinheit gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

ADVARSEL: I dette apparat anvendes laser.

RQLS0077-1

CLASS 1 LASER PRODUCT		VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymätön lasersäteilylle. Älä katso säteeseen.
ADVARSEL: USYNTLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSÅFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.		WARNING! Usynlig laserstråling når denne del er åben og spærren er udkoplet. Betragt ej strålen.
VORSICHT: Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. Nicht dem Strahl aussetzen.	DANGER: Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.	ADVARSEL! Usynlig laserstråling når deksel åbnes og sikkerhedslås brytes. Unngå eksponering for strålen. RQLS0077-1



(Bottom side)

■ ACCIDENTAL OPERATION PREVENTION FUNCTION

When this function is in use, the unit will not operate even if a control button is accidentally pressed. (The disc lid, however, can still be opened and closed.) Use this function to prevent the following types of situations.

- While the unit is not in use, the power is turned on and the batteries become worn down.
- While the unit is in use, the music being played gets turned off.

There are hold switches on both the main unit and the remote control.

■ To use the accidental operation prevention function

Move the hold switch on the control source being used (i.e., the unit or the remote control) to the HOLD position, as shown in the diagram.

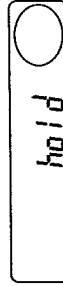
■ To cancel the accidental operation prevention function

Move the hold switch to the position opposite the HOLD position.

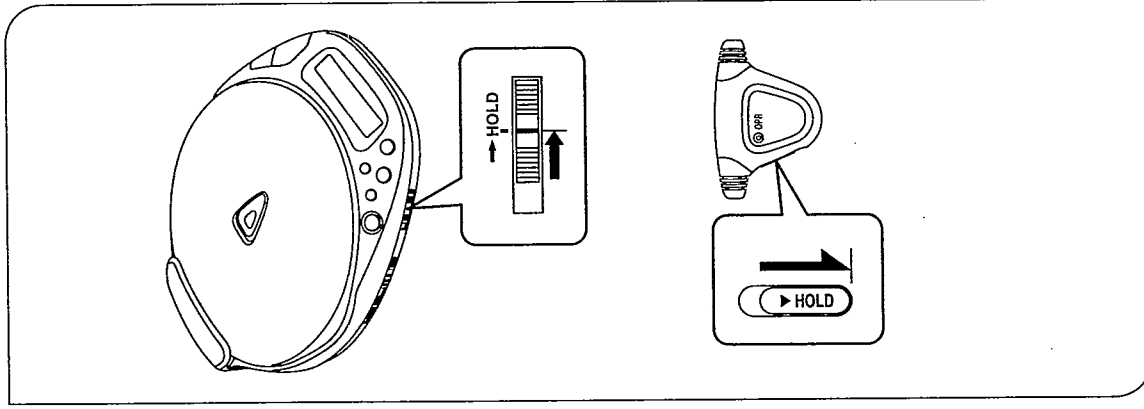
Before using the control buttons, be sure to release the unit from the **hold** state.

■ The HOLD indicator

If "hold" appears on the display when the control buttons on the main unit are pressed, this indicates that the unit is in the hold mode.



When the power is off, however, this indicator only appears when PLAY/PAUSE is pressed.



■ POWER SOURCE

Rechargeable batteries

Make sure that the batteries have been charged before use.

■ Recharging batteries **A**

1 Install two rechargeable batteries.

2 Connect the AC adaptor.

It takes about 3 hours to fully recharge them.

- When fully recharged, the unit can be used for about 2 hours 30 minutes with anti-shock memory off, or for about 2 hours with anti-shock memory on (when the unit is used at 25°C on a flat and stable surface). The play time may be shorter depending on the operating conditions.
- While recharging, the AC adaptor and rechargeable batteries may get warm. This is normal.

3 After completing recharging of the batteries, disconnect the AC adaptor from the DC in jack and the AC power outlet.

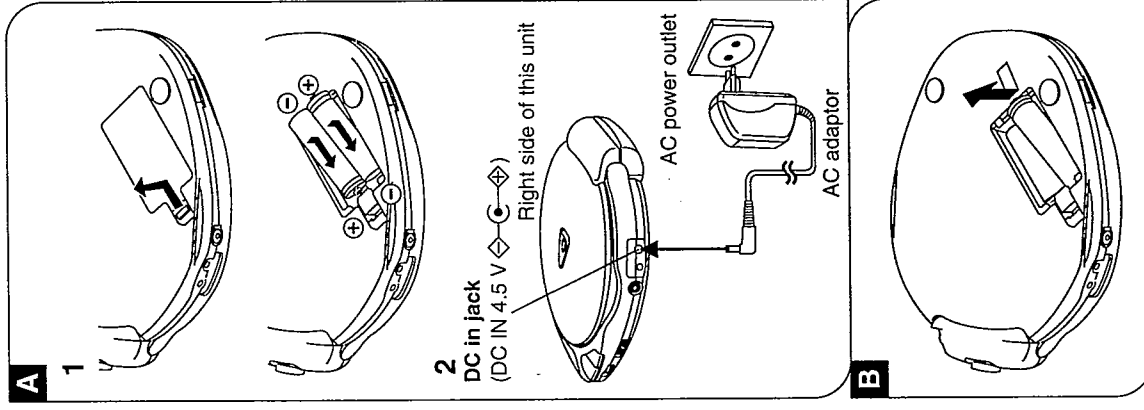
■ Battery removal **B**

Press and push up batteries in the direction of the arrow to remove them.

- You can continue to recharge the same batteries for about 10 months (300 times). After that, their operating time will be shortened, and you will need to replace them.

Obtain new rechargeable batteries (SH-CDB8D) designed exclusively for the unit.

- You can operate the unit with the AC adaptor while recharging the batteries, but it will lengthen the recharging time.



For areas except Continental Europe, United Kingdom and Australia
If the power supply in your area is 110 V or 220 V, the time for complete recharging takes 5 hours, which is different from the time described in this booklet.

Dry cell batteries (not included)

Install two LR6 (UM-3) type alkaline batteries as shown in the figure. A

Make sure that the AC adaptor is disconnected from the AC power outlet and the unit. Two LR6 alkaline batteries will provide about 7 hours of playing time with anti-shock memory off, or about 4 hours of playing time with anti-shock memory on (when the unit is used at 25°C on a flat and stable surface). The play time may be shorter depending on the operating conditions.

Battery removal B

Press and push up batteries in the direction of the arrow to remove them. Be sure to do this with the power off.

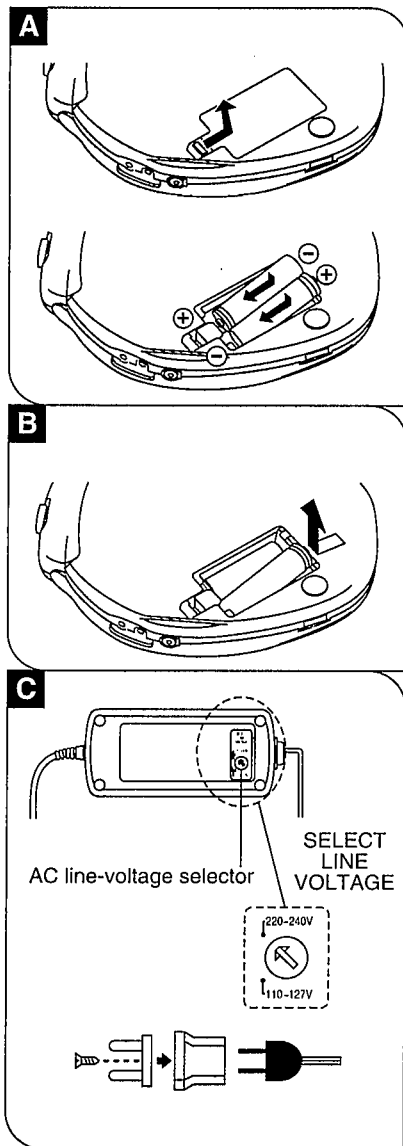
AC adaptor

Before use C

(For areas except Continental Europe, United Kingdom and Australia)

Make sure the preset voltage of your AC adaptor fits to your local voltage before plugging it into the AC power outlet. If it doesn't, turn the AC line-voltage selector with a screwdriver so that it corresponds to your local voltage.

If the power plug will not fit your socket, use the power plug adaptor.



Connect the AC adaptor. A

Use only the AC adaptor provided with this unit.

CAUTION

Do not use the AC adaptor provided with this unit for other products.

Note:

The unit is in the standby condition when the AC adaptor is connected. The primary circuit is always "live" as long as the AC adaptor is connected to an electrical outlet.

Car adaptor (not included)

CAUTION

Use only car adaptor, Model: SH-CDC9, manufactured by Matsushita Electric Industrial Co., Ltd.

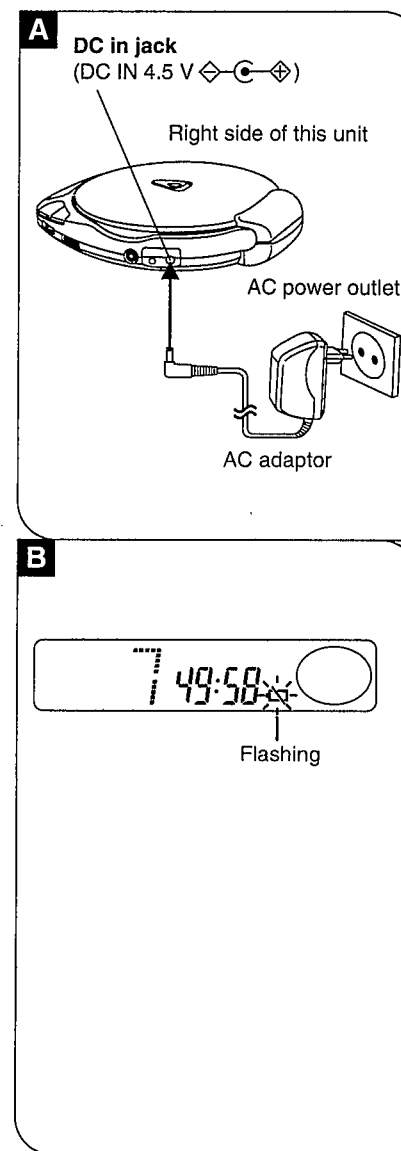
For installations details, refer to the operating instructions for the SH-CDC9. The rechargeable battery can be recharged with the car adaptor.

When the car adaptor or AC adaptor is used, the backlight of the display comes on.

Battery indicator B

The period during which the battery indicator flashes differs depending on the power source.

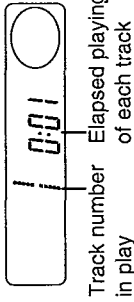
Type of battery	When the indicator flashes	Remedial action
Rechargeable batteries	The battery is fully-used.	In a short while the unit will be automatically turned off. Recharge the batteries.
Dry cell batteries	The battery is half-used.	Play is still possible while the indicator is flashing.



■ LISTENING TO CD TRACKS IN THEIR ORIGINAL SEQUENCE (Normal play)

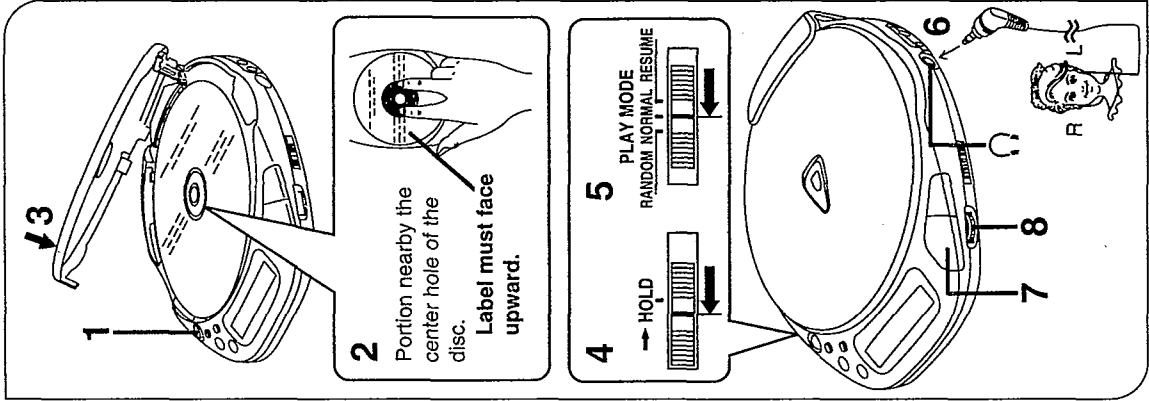
- 1 Press OPEN to open the disc lid.
- 2 Insert the disc.
Press the portion near the center hole of the disc until a "click" sound can be heard.
- 3 Close the disc lid.
- 4 Release the unit from the hold state.
- 5 Set PLAY MODE to NORMAL.
- 6 Connect the plug of the stereo earphones with remote controller (included) to the earphones/headphones jack.
(Plug in firmly.)

- 7 Press PLAY/PAUSE.
This turns on the unit and begins the first track.



- 8 Adjust the volume level.

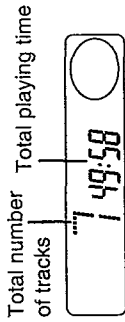
The unit plays the tracks on the disc in order and stops automatically when the last track ends.



■ The "OPEN" display
When the disc lid is opened, this indicator is displayed for about four minutes. It is not displayed, however, when the power is off.

■ The "no disc" display
When the PLAY/PAUSE button is pressed with no disc installed or with a disc improperly installed, this indicator is displayed for about 30 seconds.

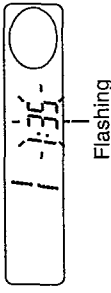
■ To stop play A
Press STOP/OPR OFF in the play mode.



The disc will stop rotating, and the display will show the total number of tracks and total playing time on the disc.

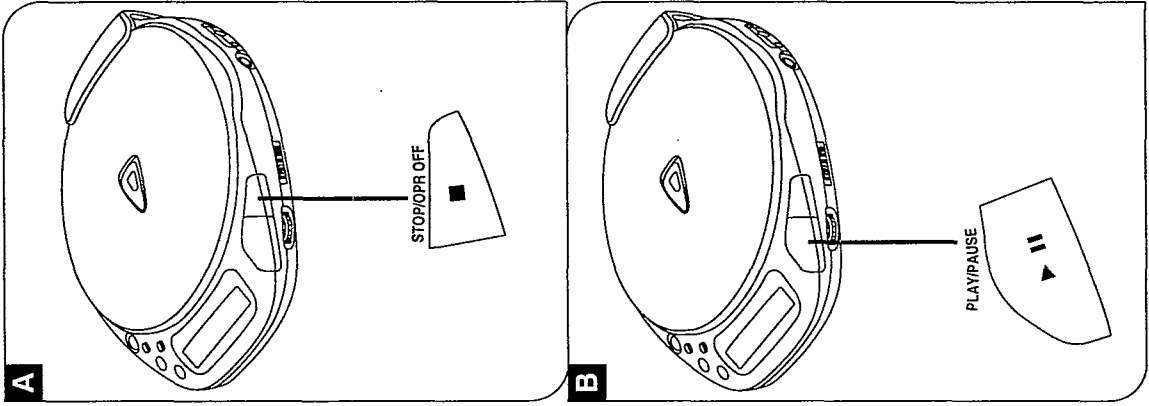
To turn off the unit:
Press STOP/OPR OFF again.

■ To temporarily stop disc play B
Press PLAY/PAUSE in the play mode.



To resume play:
Press PLAY/PAUSE again.

Automatic Shut-Off
This function, in order to prevent rechargeable and other batteries to become worn down, causes the power to automatically shut off if you leave the unit in the stop mode or pause mode for about four minutes.



■ USING THE REMOTE CONTROL

Using the provided stereo earphones, a variety of operations can be performed by hand using a single button.

Before operation, release the remote control from the hold state (as shown in the diagram).

■ To use the remote control (see diagram at lower right)

The remote control can be operated regardless of the hold mode of the unit.

■ The operation (confirmation) tone

An operation tone ("Beep") sounds whenever the remote control button is pressed. In addition, a confirmation tone sounds following every operation (see diagram at lower right).

- When pressing the remote control button two or three times, do so as quickly and evenly as possible.

- When the button is pressed three times and then three times again, the unit will skip to the beginning of the previous track.

(When the play mode switch on the unit is in the RANDOM position, however, this operation is not possible.)

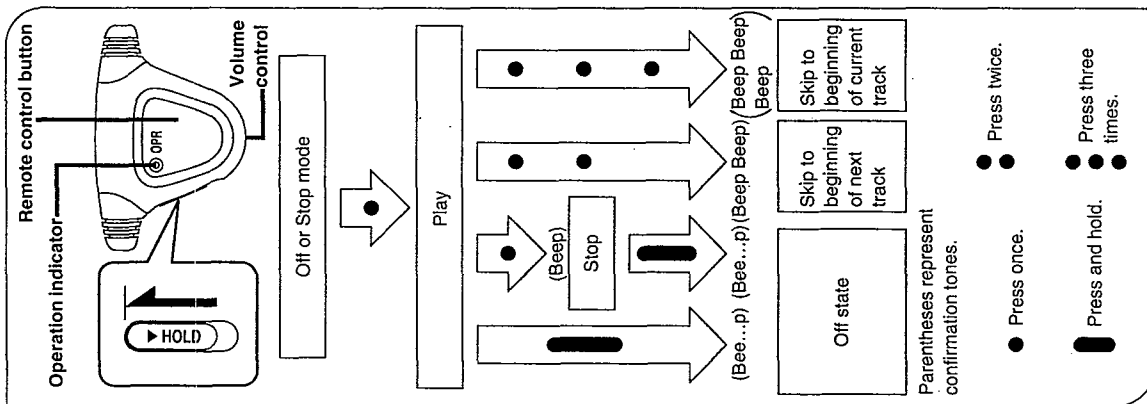
■ To adjust the volume

When adjusting the volume using the remote control, position the volume control on the unit to between 5 and 7.

■ OPR indicator

This indicator is illuminated when the unit is playing a track, and flashes when the unit is halted.

It is not illuminated when the power is off.

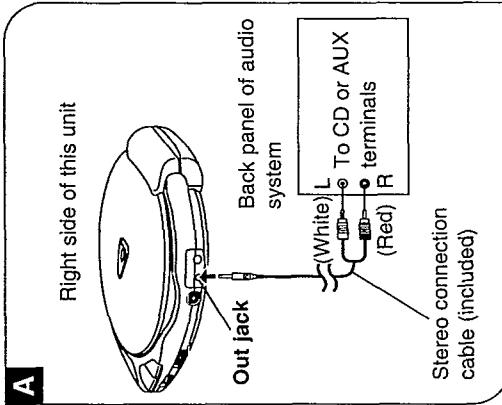


■ USING THE UNIT WITH OPTIONAL ACCESSORIES

Listening through an audio system **A**

Discs can be played as part of an audio system by connecting the portable CD player to the system using the stereo connection cable (included).

- Before connecting the portable CD player to your audio system, make sure to turn off the power on all other system components.
- Do not connect the cable to the turntable (PHONO) connectors on the amplifier.
- If you have an amplifier which is equipped with mini phone jack, obtain the optional connecting cable (RP-CA102A).



Using the unit together with a car audio system **B**

The car kit, available as an optional accessory, makes it possible to listen to CDs in a car.

The structure of the cassette adaptor may not allow connection to some car stereo systems.

■ What should be purchased

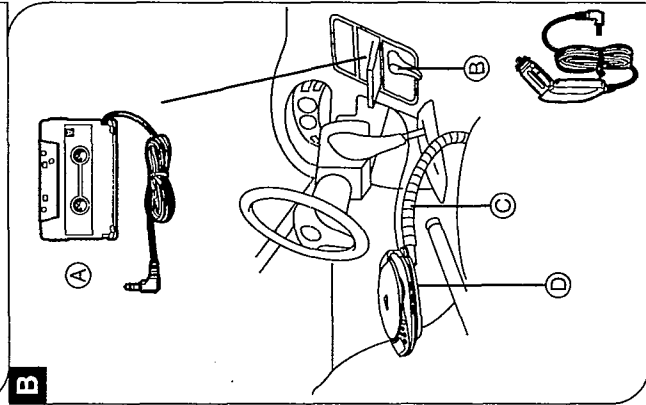
For connection to the car audio system:

Car stereo cassette adaptor (SH-CDM9) **A**

For securing the unit and connecting the power supply:

• Car adaptor (SH-CDC9) **B**

• Car mounting arm **C**, Car mounting base **D** (SH-CDF20)



For further details, refer to the Operating Instructions of the respective products.

■ ANTI-SHOCK MEMORY FUNCTION

This function reduces the number of sound jumps which result from vibrations when listening to the unit while walking, riding in a car or train, etc.

When the anti-shock memory is in use, a maximum of about three seconds of playback data can be stored. As a result, even if the unit is jolted, the stored data is utilized, and interruptions during playback are minimized.

Before operation, release the unit from the hold state.

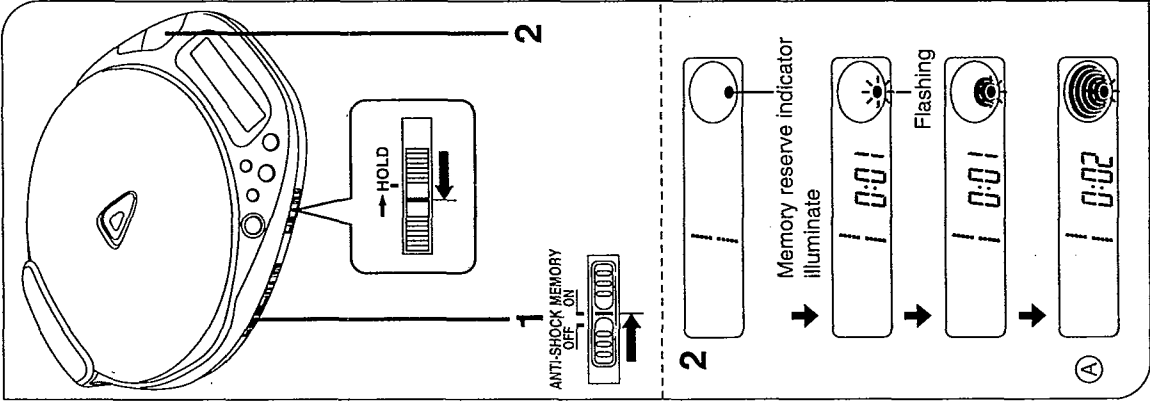
1 Set ANTI-SHOCK MEMORY to ON.

2 Press PLAY/PAUSE.
Storage of playback data begins, and the memory reserve indicator displays the data storage volume.

When the display shown in ① is achieved:
This indicates that a sufficient amount of playback data has been stored.

■ To cancel the anti-shock memory function

Set ANTI-SHOCK MEMORY to OFF.



■ The memory reserve indicator
This indicator varies based on the state of the unit.

State of Unit	State of Playback (State of Playback Data)
Stable	● Normal (Sufficient amount of data is stored)
Unit jolted	● Normal (Stored data is utilized)
Jolt dies down	● Normal (Data storage is begun)
Unit repeatedly jolted	● Interruptions occur (Data is used up)

Notes:

- When anti-shock memory is operating, the disc rotation speed increases in order to store playback data, causing a decrease in battery life and a slight increase in the sound of the rotating disc.
- The anti-shock memory switch can be re-positioned during playback, but due to the resulting change in the disc's rotation speed, a short interruption will be heard.
- When using functions such as random and repeat, it may not be possible to activate the anti-shock memory function during the last three seconds of a track.

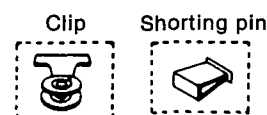
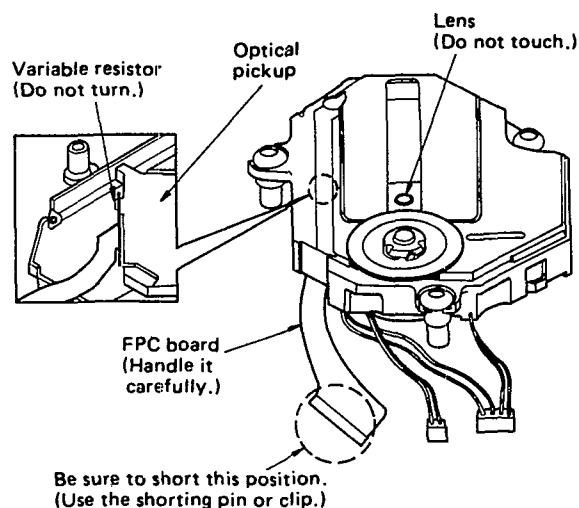
HANDLING PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FPC board).
When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

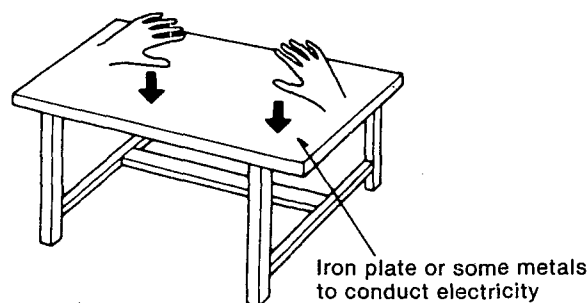
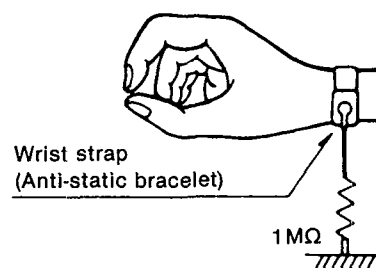


• Grounding for electrostatic breakdown prevention

1. Human body grounding.
Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

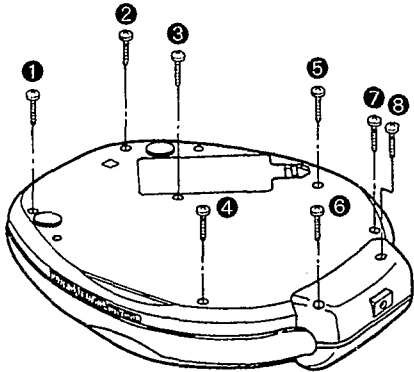
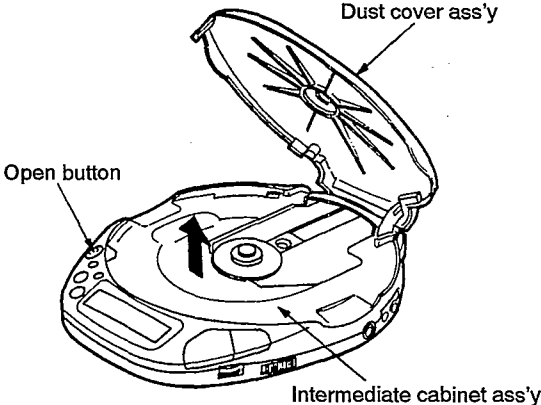
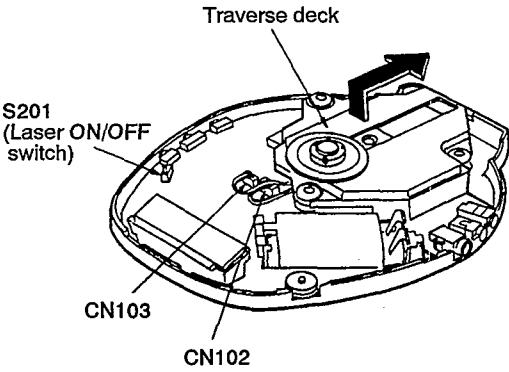
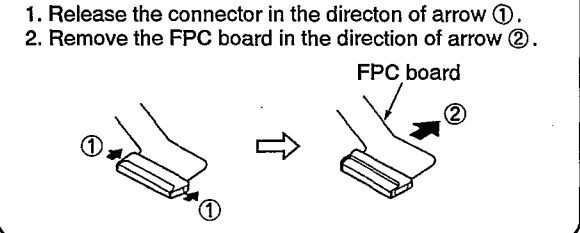
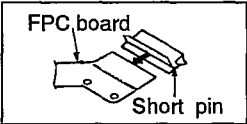


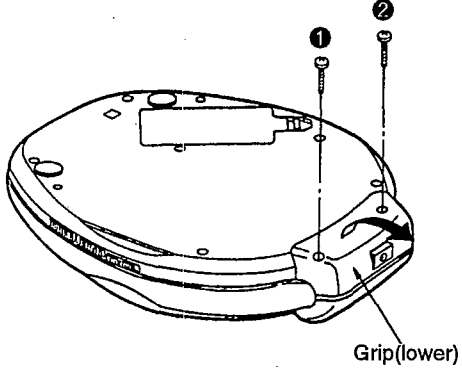
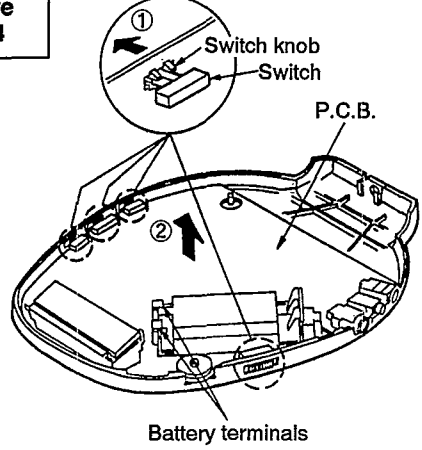
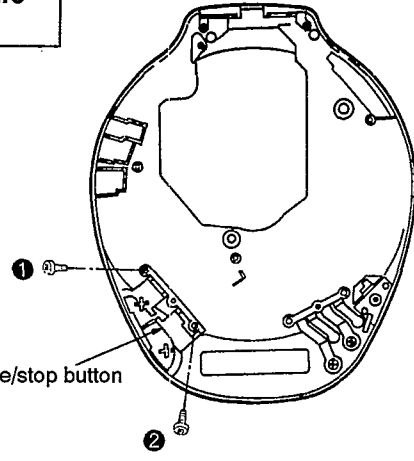
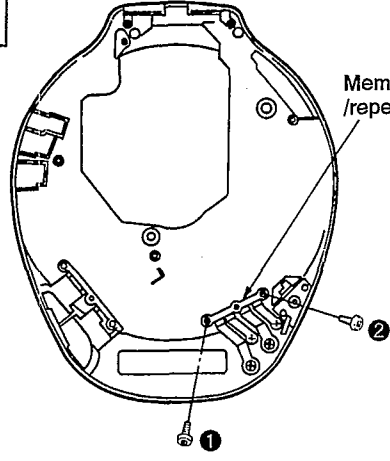
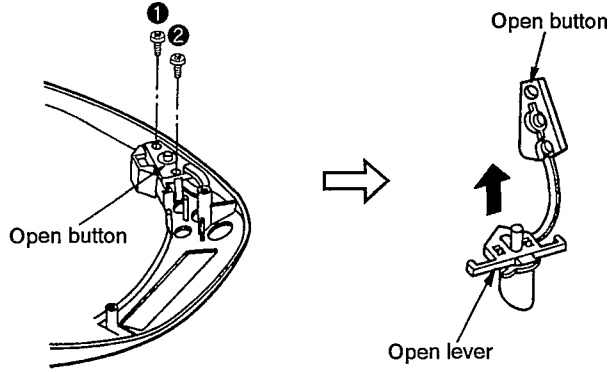
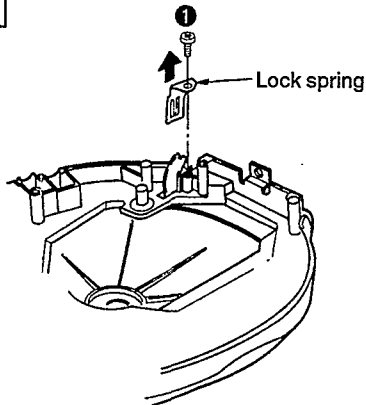
DISASSEMBLY INSTRUCTION

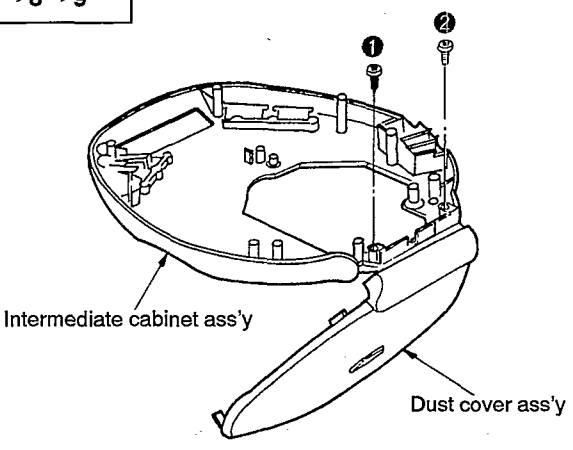
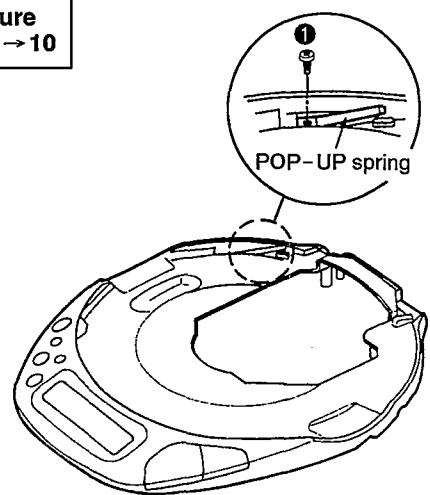
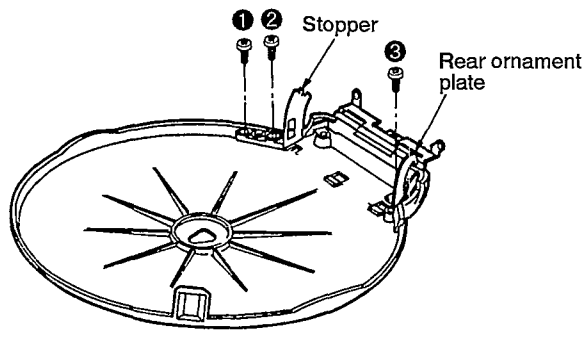
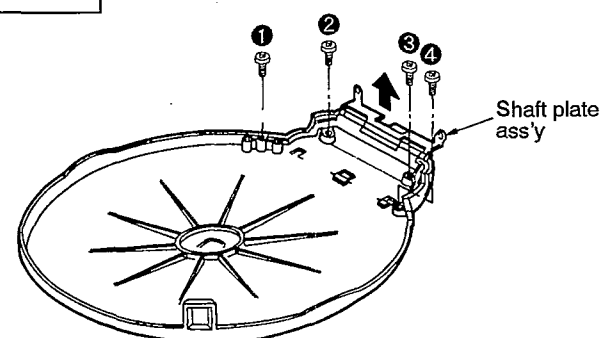
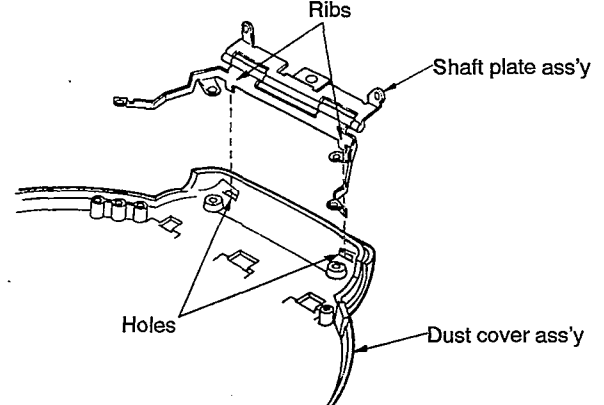
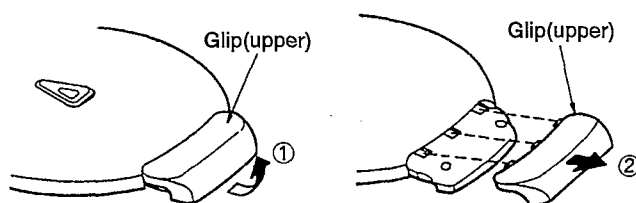
Warning: This product uses a laser diode. Refer to caution statements on page 3.

ACHTUNG: • Die lasereinheit nicht zerlegen.
• Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

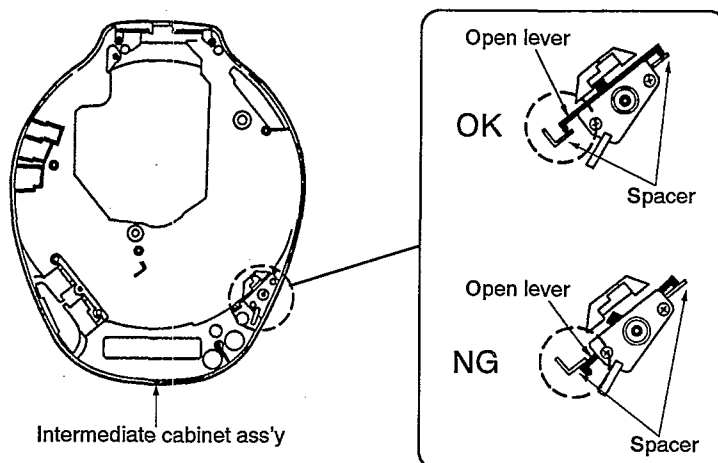
※ This CD player is equipped with FPC boards, so handle them with care during disassembly and reassembly.

Ref.No. 1	Removal of the intermediate cabinet ass'y		
Procedure 1			
			
1. Remove the 8 screws(①~⑧).		2. Push the open button and open the dust cover ass'y. 3. Remove the intermediate cabinet ass'y in the direction of arrow.	
Ref.No. 2	Removal of the traverse deck		
Procedure 1 → 2			
			
1. Disconnect the 2 connectors(CN102, CN103). 2. Move the traverse deck in the direction of arrow.		3. Remove the FPC board(CN101).	
Caution: Insert a short pin into the traverse deck's FPC board. (Refer to "handling precautions for traverse deck" on page 9.)			

Ref.No. 3	Removal of the grip(lower)	Ref.No. 4	Removal of the P.C.B.
Procedure 3	 Grip(lower) 1. Remove the 2 screws(①, ②). 2. Remove the grip(lower) in the direction of arrow.	Procedure 1 → 2 → 4	 Switch knob Switch P.C.B. Battery terminals 1. Put out the switch knob from the inboard sides with a tweezers in the direction of arrow ① .(4 points) 2. Remove the P.C.B. and battery terminals in the direction of arrow ② .
Ref.No. 5	Removal of the play/pause/stop button	Ref.No. 6	Removal of the memory/recall/repeat button
Procedure 1 → 5	 Play/pause/stop button • Remove the 2 screws(①, ②).	Procedure 1 → 6	 Memory/recall/repeat button • Remove the 2 screws(①, ②).
Ref.No. 7	Removal of the open button and open lever	Ref.No. 8	Removal of the lock spring
Procedure 1 → 6 → 7	 Open button Open lever 1. Remove the 2 screws(①, ②) and the open button. 2. Remove the open lever in the direction of arrow.	Procedure 1 → 8	 Lock spring 1. Remove the 1 screw(①). 2. Remove the lock spring in the direction of arrow.

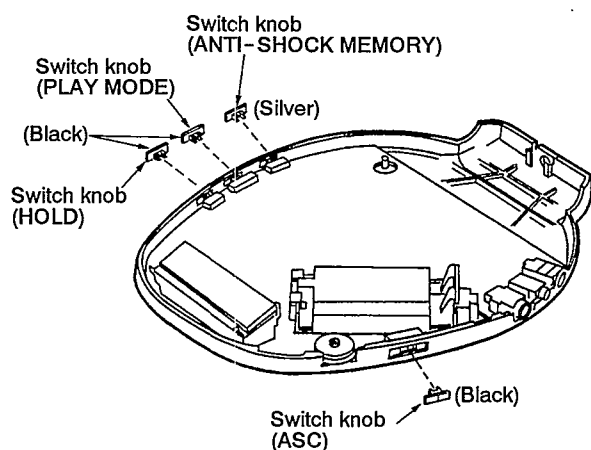
Ref.No. 9	Removal of the dust cover ass'y	Ref.No. 10	Removal of the POP-UP spring
Procedure 1→8→9	 Intermediate cabinet ass'y Dust cover ass'y • Remove the 2 screws(①, ②)	Procedure 1→8→9→10	 POP-UP spring • Remove the 1 screw(①).
Ref.No. 11	Removal of the stopper and rear ornament plate	Ref.No. 12	Removal of the shaft plate ass'y
Procedure 1→8→9→11	 Stopper Rear ornament plate 1. Remove the 2 screws(①, ②), and then remove the stopper. 2. Remove the 1 screw(③), and then remove the rear ornament plate.	Procedure 1→8→9→11→12	 Shaft plate ass'y 1. Remove the 4 screws(① ~ ④). 2. Remove the shaft plate ass'y in the direction of arrow.
Ref.No. 13	Removal of the glip (upper)	■ NOTE FOR ASSEMBLING THE SHAFT PLATE ASS'Y  Ribs Shaft plate ass'y Holes Dust cover ass'y • Align the 2 ribs of shaft plate ass'y with the holes of dust cover ass'y.	
Procedure 1→8→9→11→12→13	 Glip(upper) ① ② • Lift up the grip(upper) in the direction of arrow ①, and then remove it in the direction of arrow ②.		

NOTE FOR ASSEMBLING THE OPEN LEVER



- When installing the open lever and open button, put the both ends of open lever inside the spacer.

HOW TO INSTALL THE SWITCH KNOB (HOLD, PLAY MODE, ANTI-SHOCK MEMORY, ASC)



- Make sure the bosses of the switch are fit in the claws of switch knobs when inserting the switch knob.

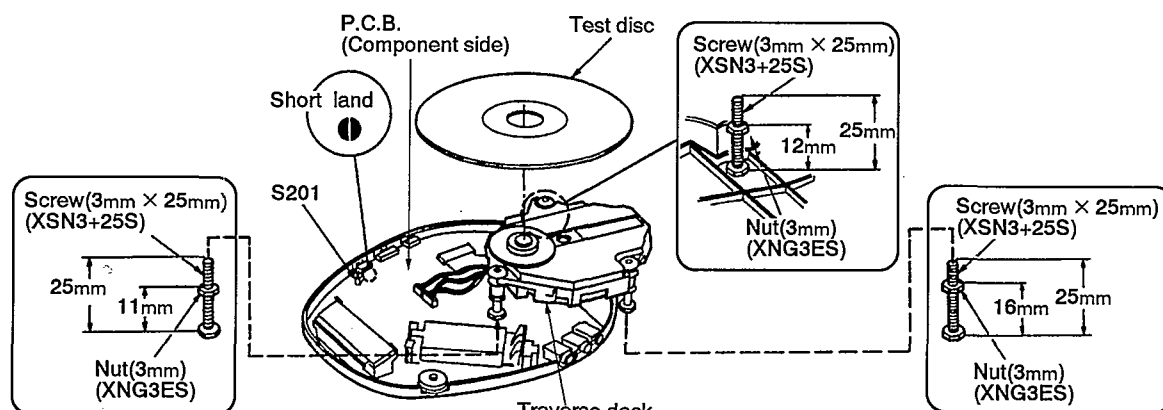
※ Before installing the switch knob, be sure to check the claws for defects that would render the claws unserviceable. (If a white line like white wax on a claw is found, the claw may be broken when installing the switch knob.)

HOW TO CHECK THE P.C.B. (Component Side)

1. Remove the intermediate cabinet according to the disassembly instructions, procedure 1 "Removal of the intermediate cabinet ass'y" on page 10.
2. Lift up the traverse deck and keep it with 3 screws as shown below.
3. Put the test disc on the traverse deck.
4. Short-circuit the short lands of the laser ON/OFF SW(S201) by soldering them. (See page 16.)

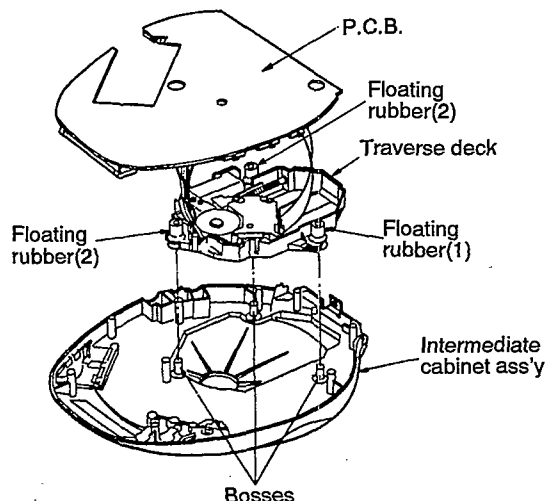
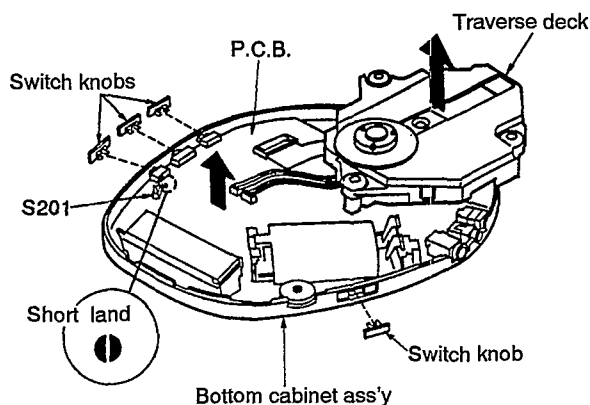
Note: • After checking the P.C.B., remove the solders from the short lands.

- The tip of screw must not protrude out the floating rubber. (The protruded screw will damage the test disc.)



■ HOW TO CHECK THE MAIN P.C.B. (Solder Side)

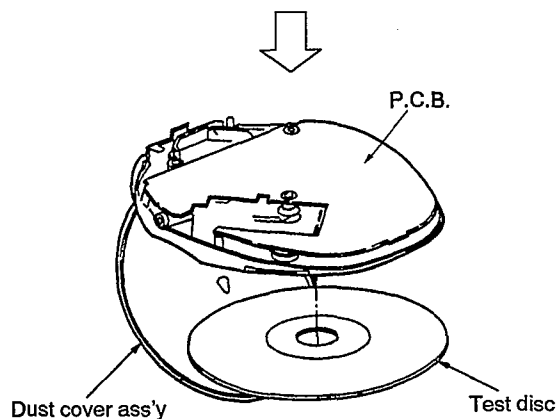
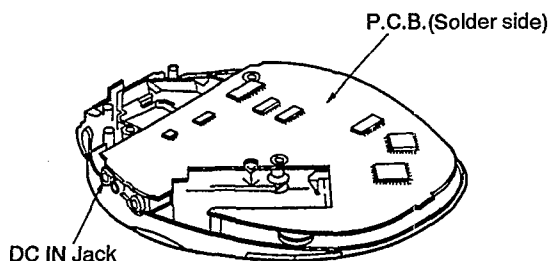
1. Remove the intermediate cabinet ass'y according to the disassembly instructions, procedure 1 "Removal of the intermediate cabinet ass'y" on page 10.



2. Remove the 4 switch knobs.
 3. Remove the P.C.B. and traverse deck from the bottom cabinet ass'y.
 4. Short-circuit the lands of the laser ON/OFF SW(S201) by soldering them. (See page 16.)
- Note:** After checking the P.C.B., remove the solders from the short lands.

5. Place the traverse deck and P.C.B. on the intermediate cabinet ass'y.

Note: Engage the rubber sections of the traverse deck in the bosses on the intermediate cabinet ass'y.



9. With the P.C.B. in place as shown in the figure above, connect the AC adapter to the DC IN Jack, and then check the voltage and waveform in play mode.

6. Open the dust cover ass'y.
7. Install the unit in place by holding the traverse deck and P.C.B. firmly, and then install the test disc.
8. Close the dust cover ass'y.

■ NOTE FOR SERVICE

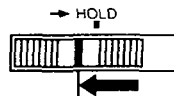
• About hold switch

Before checking the operation problems and adjustments, be sure to release the hold state.

• Connection of the FPC board of the optical pickup

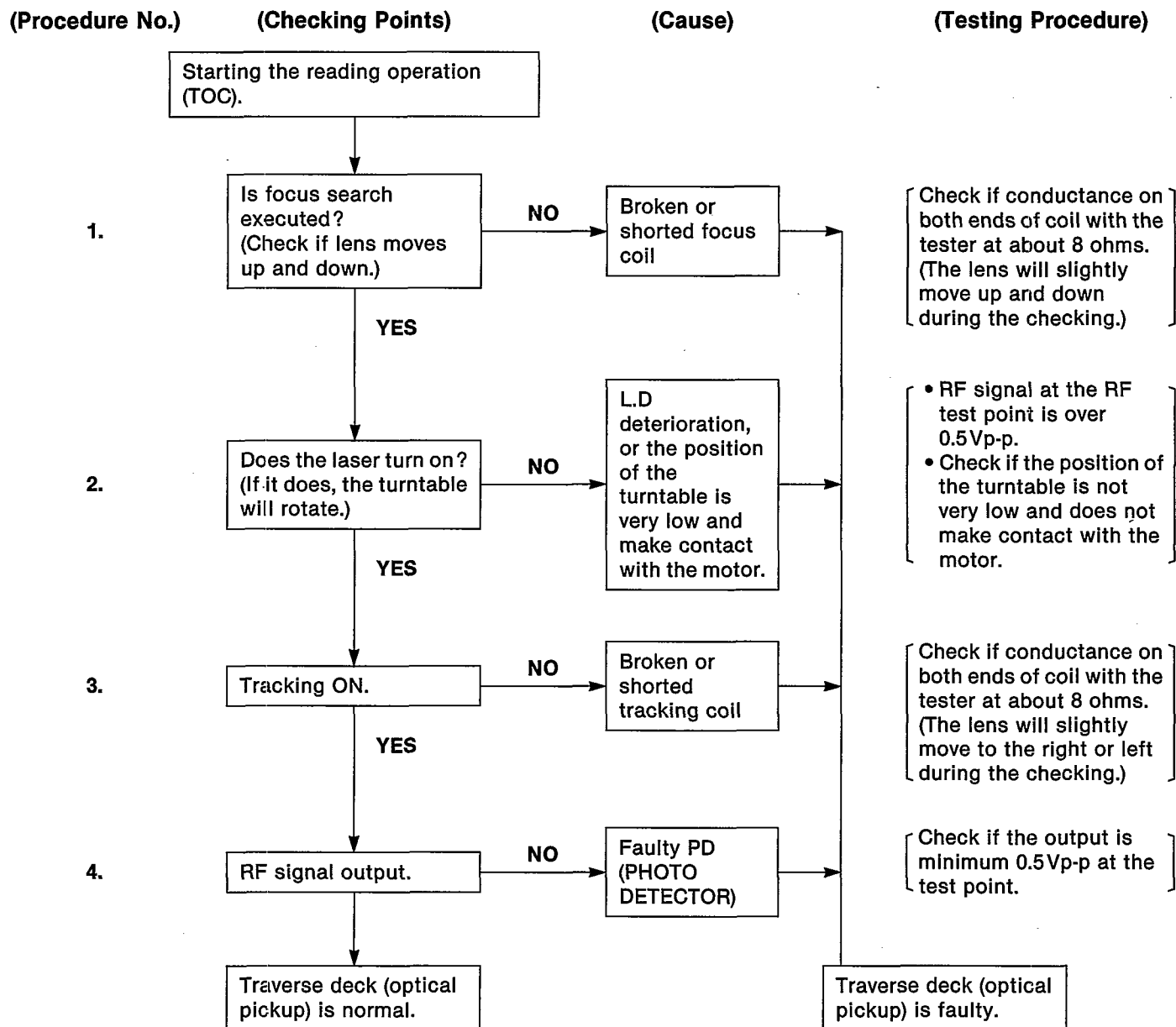
Before you put the power supply to work from the AC adaptor or batteries to check the set's operations and voltage, be sure to connect the FPC board of the optical pickup to the connector CN101 on the P.C.B. If you disconnected the FPC board from the connector CN101, the protection circuitry may be operated when the PLAY/PAUSE button is pressed with the FPC board disconnected.

Before operating the front panel button, be sure to release the hold state.



■ CHECKING THE OPERATION PROBLEMS ON THE TRAVERSE DECK (OPTICAL PICKUP)

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pickup) before replacing it. Replace the traverse deck only after the problem is identified.



※ Replace traverse deck.

- Check electrical circuit.
- Check for flaws on disc or if it is warped or not centered.

- Check the operations described below on the traverse deck after replacing it.

- * **Checking Skip Search**
 1. Play an ordinary musical program disc.
 2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

- * **Checking Manual Search**
 1. **Play an ordinary musical program disc.**
 2. **Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).**

- * Checking Playability**
1. Play the 0.7mm black dot and the 0.7mm wedge on the playability test disc (SZZP1054C) and verify that no sound skip or noise occurs.
 2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

MEASUREMENTS AND ADJUSTMENTS

Warning: This product uses a laser diode. Refer to caution statements on page 3.

Measuring instruments and special tools

Test discs

- | | |
|--------------------------------------|-----------------------------------|
| 1. Playability test disc (SZZP1054C) | • Musical program disc (ordinary) |
| 2. Uneven test disc (SZZP1056C) | • DC voltmeter |
| | • Lead wire (for test points) |

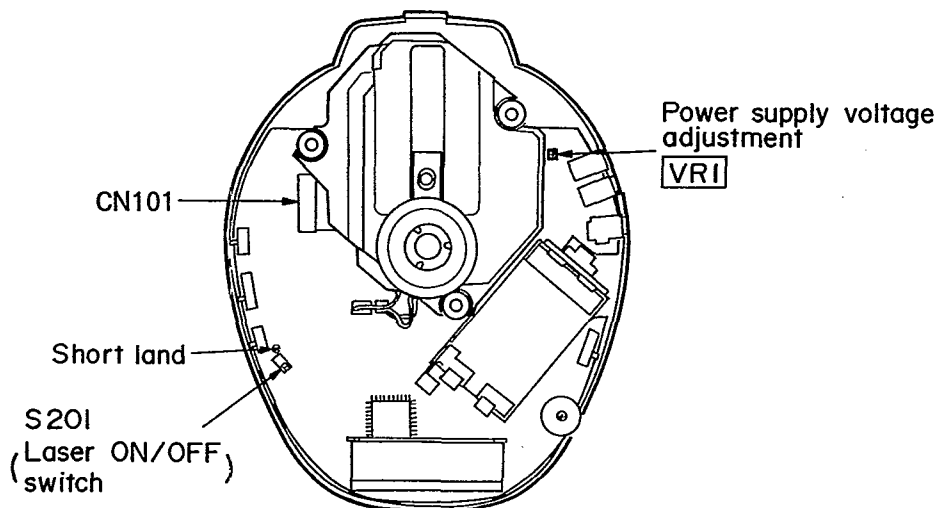
Test short land

Short-circuit the lands of the laser ON/OFF switch (S201) by soldering them. It turns "ON" position. (Refer to below figure or printed circuit board and wiring connection diagram for short land location on pages 30~32.)

Note: Remove the solders from the lands after adjustment.

Adjustment point

Notes: 1. Please refer to the printed circuit board and wiring connection diagram for test point locations.
2. Take care to connect CN101.



Adjustment procedure

(1) POWER SUPPLY VOLTAGE ADJUSTMENT

- | | |
|--|--|
| 1. Connect the DC voltmeter to TP3 (VCC) (+) and TP4 (GND) on the P.C.B. | 3. Insert the test disc, and switch the player power ON. |
| 2. Connect the AC adaptor cord to the DC (IN) port and move the PLAY switch to the ON position. (Use a new dry cell battery or a rechargeable battery that is full charged.) | 4. Adjust VR1 on the P.C.B. at $3.55 \pm 0.05V$. |

(2) CHECK OF PLAY OPERATION

* Checking Skip Search

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and backward directions).

* Checking Manual Search

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and backward directions).

* Checking Playability

1. Play the 0.7mm black dot and the 0.7mm wedge on the playability test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

• Automatic adjustment

On our conventional type portable CD player, there were mounted 6 semi-fixed controls for each adjustment. Since the SL-XP570 servo circuit is equipped with an automatic adjusting circuit, these controls are removed from SL-XP570.

On conventional portable CD player
Use for Old Servo IC (AN8373, AN8374)

1. Tracking Offset Adjustment VR (TOG) ☐
2. Focus Offset Adjustment VR (FOC) ☐
3. Tracking Gain Adjustment VR (TGC) ☐
4. Focus Gain Adjustment VR (FGC) ☐
5. Tracking Balance Adjustment VR (TBC) ☐
6. Focus Balance Adjustment VR (FBC) ☐

On SL-XP570
Use for New Servo IC (AN8383, AN8384)

Non Adjustment

Automatic Adjusting Circuit

Total 6 Adjustment VRs → No Adjustment VR

Although all discs are manufactured according to the same specifications, their characteristics are not always precisely the same because they are produced by different manufacturers in various lots, or have different warp etc. SL-XP570 automatically controls the servo circuit to obtain optimum performance according to any disc's characteristics. Therefore, no malfunction occurs because of mis-adjustment.

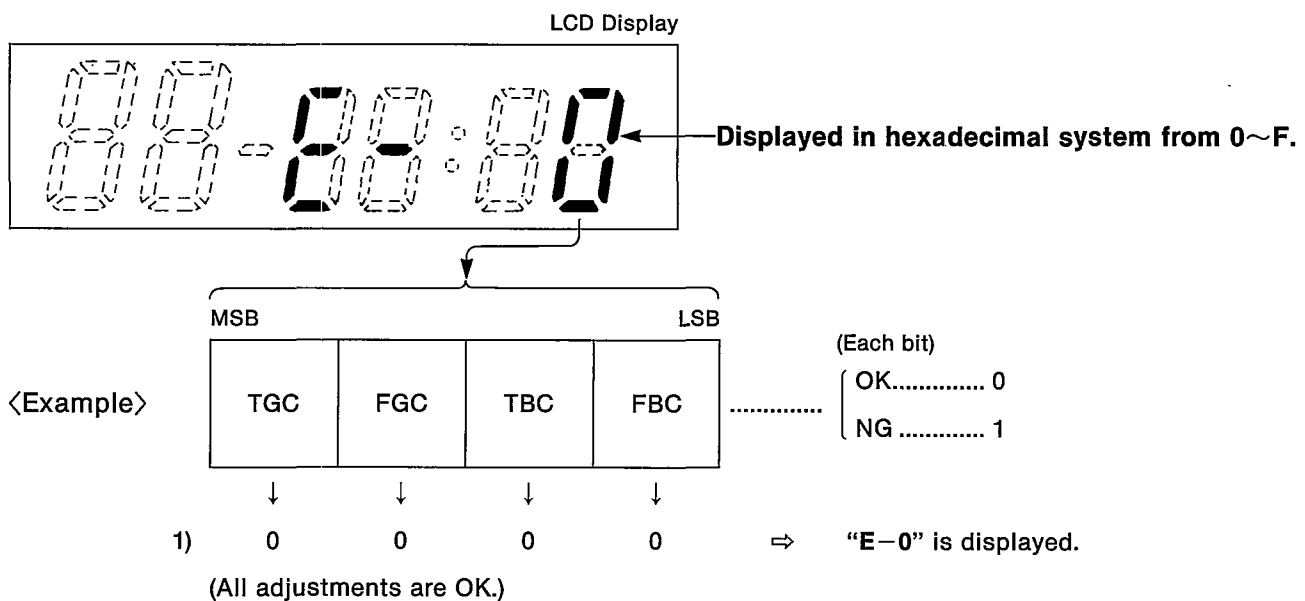
■ DISPLAY FUNCTION OF AUTOMATICALLY-ADJUSTED RESULTS (SELF-CHECK FUNCTION)

On this unit (SL-XP570), each automatically-adjusted result are displayed on the LCD. This function is convenient to check or identify which automatic adjustment circuit is incorrect. The followings are the contents of the automatically-adjusted result displays (self-check function).

• How to display automatically-adjusted results

1. Load the test disc (SZZP1054C).
2. Press the ◀◀ (SKIP/SEARCH) and ▶▶ (SKIP/SEARCH) Buttons simultaneously and hold them, and additionally press the ▶/II (PLAY/PAUSE) Button.
3. Press the ■ (STOP/POWER OFF) Button once.
4. An automatically-adjusted result is displayed on the LCD. (Refer to the next page.)

• Display of automatically-adjusted results (self-check function)



2) 0 1 0 0 ⇒ “E-4” is displayed.
 (OK) (NG) (OK) (OK)
 (Focus gain adjustment is NG (incorrect.)

3) 1 0 1 0 ⇒ “E-A” is displayed.
 (NG) (OK) (NG) (OK)
 (Tracking gain and tracking balance adjustments are NG.)

4) 1 1 1 1 ⇒ “E-F” is displayed.
 (All adjustments are NG.)

〈Example〉 **Follow the below steps when “E-4” is displayed.**

(Cause: Focus gain is set beyond the limit.)

- Check if
 - (1) the waveform or voltage of the focus servo circuit is correct,
 - (2) the focus coil of the optical pickup is correct (around 8 ohms), and
 - (3) the optical pickup returns to the normal state by exchanging the traverse deck.

Follow the below steps when “E-1” is displayed.

(Cause: Focus balance is set beyond the limit.)

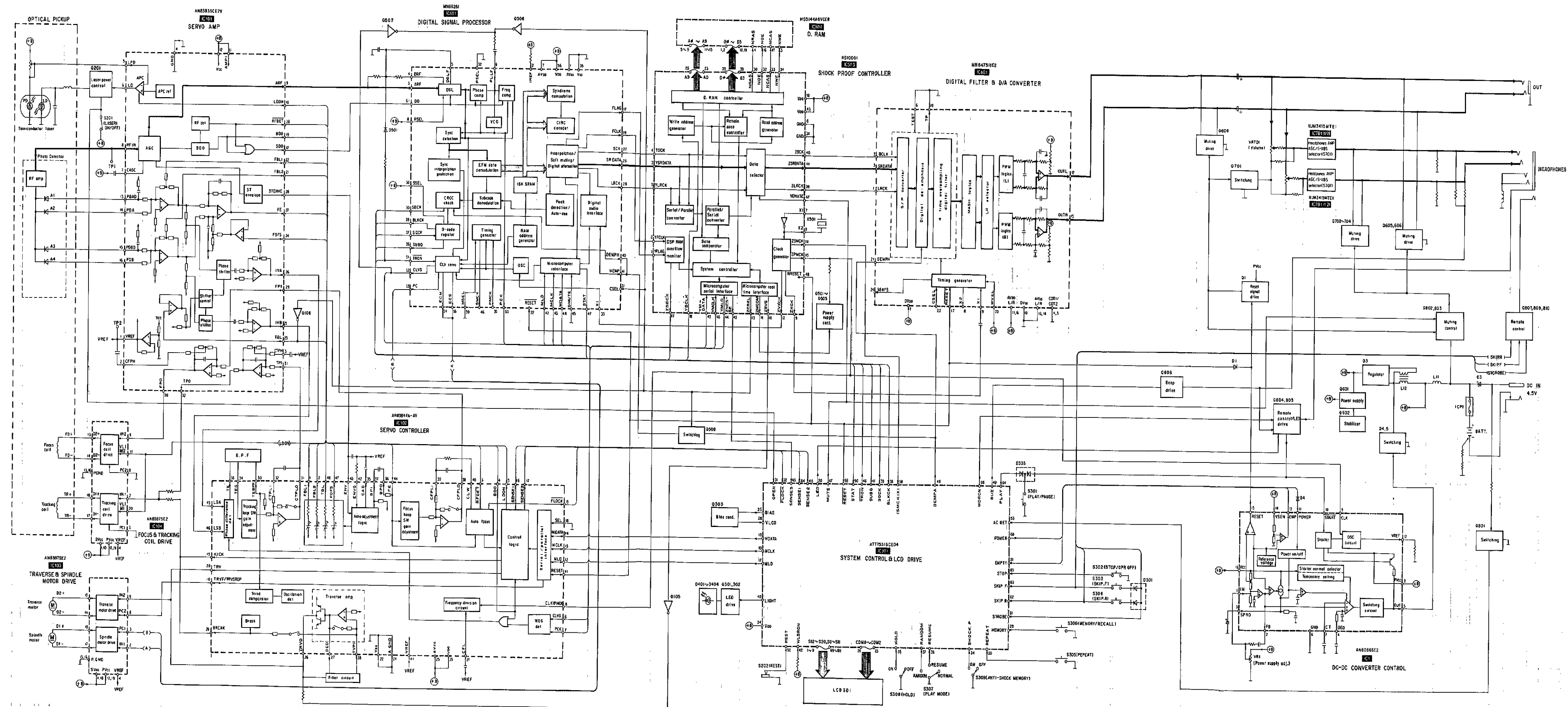
- Check if
 - (1) R127 (4 resistors) is not defective by measuring the value,
 - (2) the waveform or voltage of the focus servo circuit is correct, and
 - (3) the optical pickup returns to the normal state by exchanging the traverse deck.

Note:

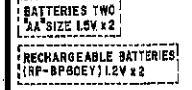
It is not always necessary to exchange the traverse deck when an error message is displayed. Be sure to check if the circuit is defective or not before exchanging the traverse deck.

Note:

If any other disc than the test disc (SZZP1054C) is used, an error message may be displayed. This is not a malfunction.



Note:
 Audio signal



■ SCHEMATIC DIAGRAM (Parts list on pages 39, 40, 42, 43)

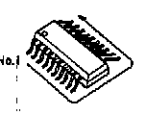
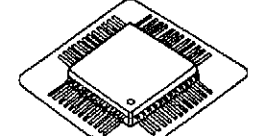
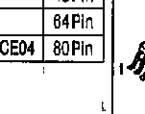
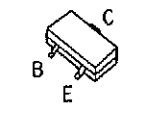
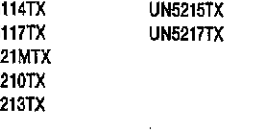
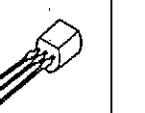
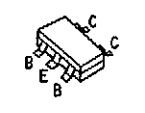
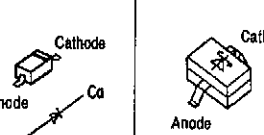
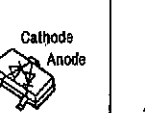
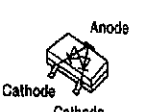
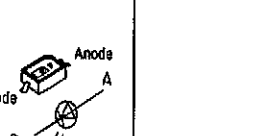
(This schematic diagram may be modified at any time with development of new technology.)

Notes:

- S201: Laser ON/OFF switch in "OFF" position.
(It turns "ON" with disc holder closed.)
- S202: Rest detector in "OFF" position.
(It turns "ON" when optical pickup comes to innermost periphery.)
- S301: Play/pause (▶▶ PLAY/PAUSE) switch.
- S302: Stop/operation off (■ STOP/OPR OFF) switch.
- S303, S304:
Skip/search (◀◀ SKIP-SEARCH ▶▶) switches.
(S303: ▶▶, S304: ◀◀)
- S305: Repeat (REPEAT) switch.
- S306: Memory/recall (MEMORY/RECALL) switch.
- S307: Play mode selector (PLAY MODE) switch in "NORMAL" position.
(RANDOM ↔ NORMAL ↔ RESUME)
- S308: Hold (HOLD) switch in "OFF" position.
- S309: Anti-shock memory (ANTI-SHOCK MEMORY) switch in "OFF" position.
- S701: ASC/S-XBS (ASC, S-XBS, OFF) selector switch in "OFF" position.
(ASC ↔ S-XBS ↔ OFF)

The voltage value and waveforms are the reference voltage of this measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of GND terminal (DC IN Jack).
Accordingly, there may arise some errors in the voltage values and waveforms depending upon the internal impedance of the tester or measuring unit.

• Terminal guide of IC's, transistors and diodes

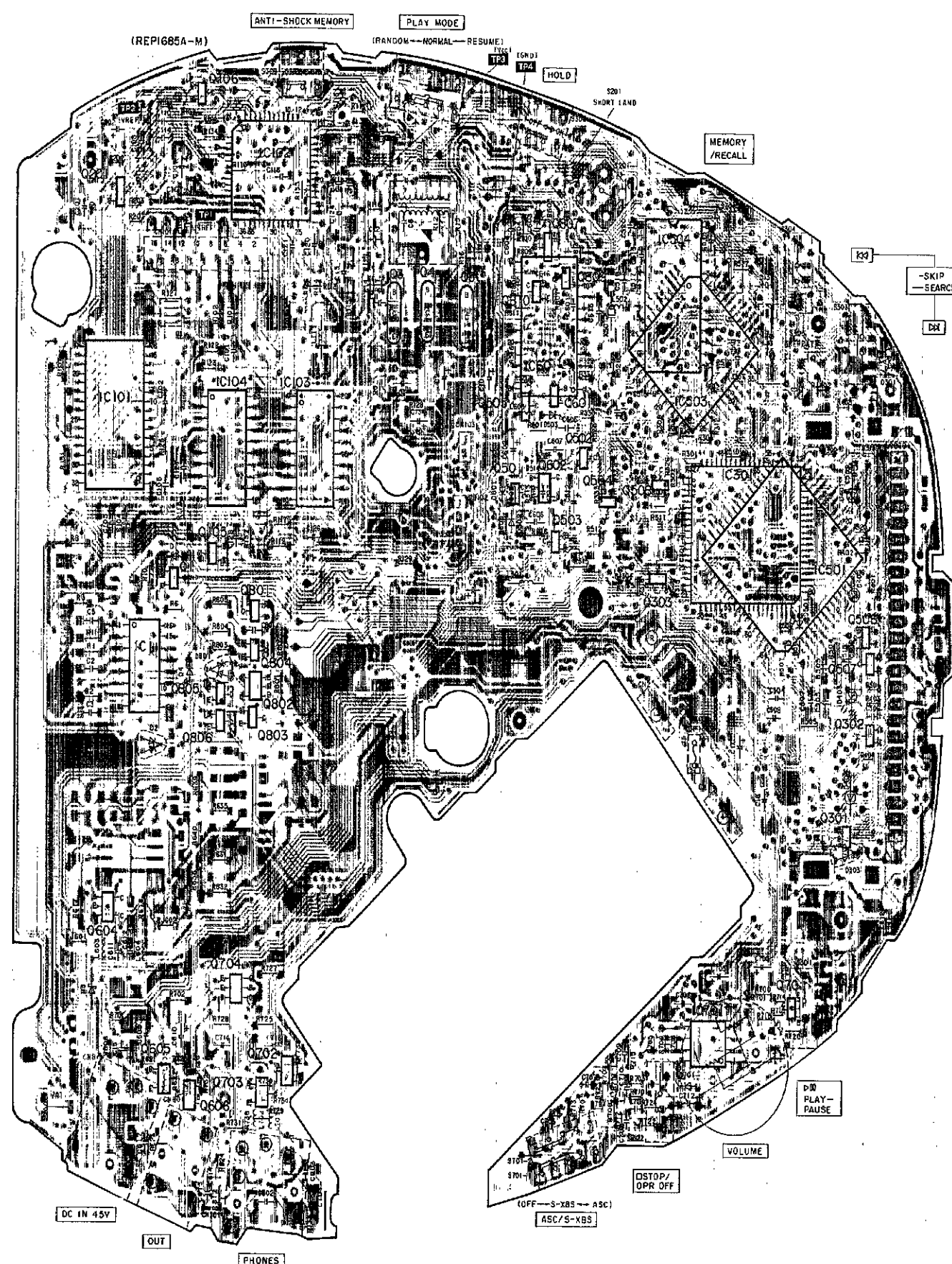
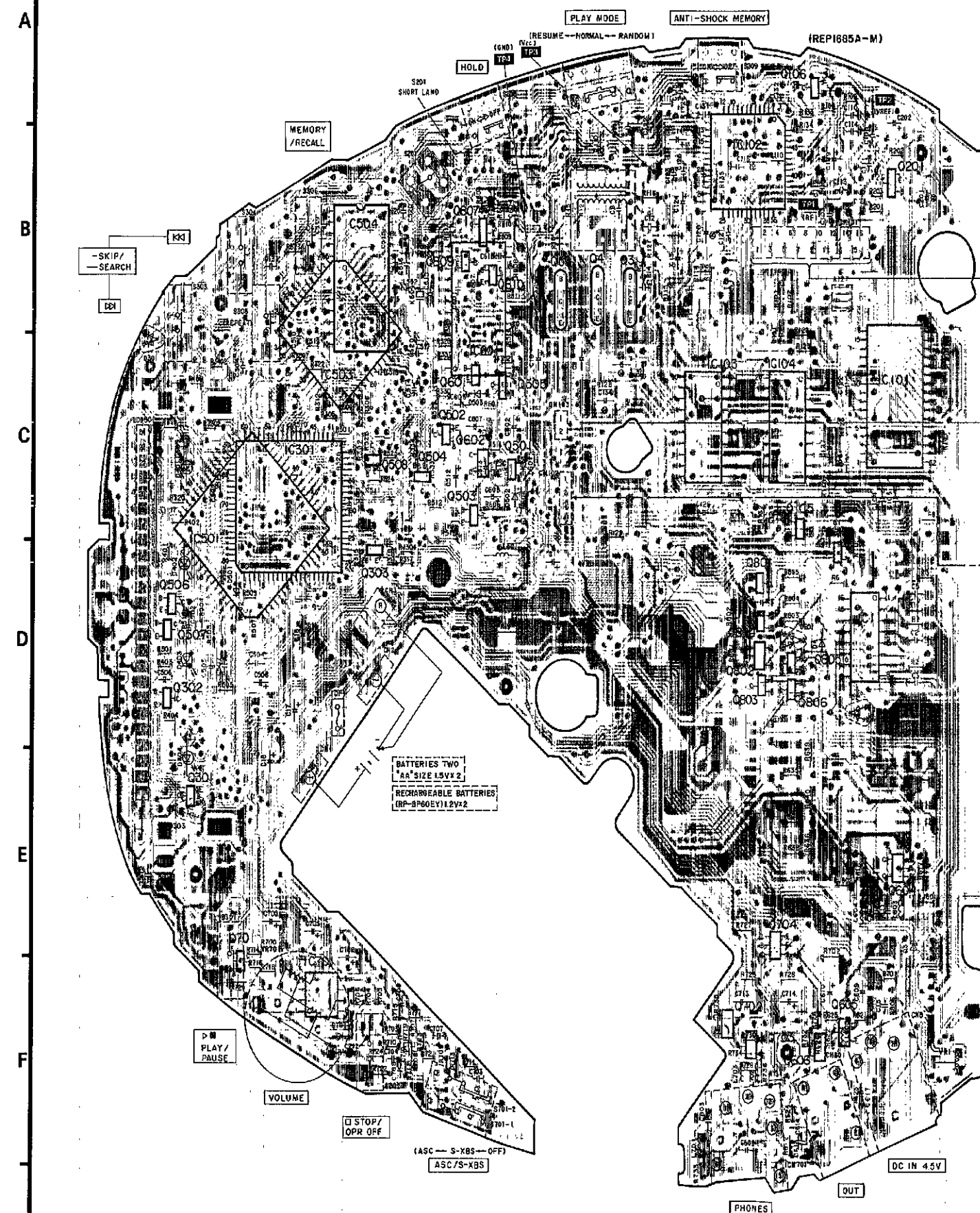
 16 Pin	 16 Pin	 16 Pin
 16 Pin	 16 Pin	 16 Pin
 16 Pin	 16 Pin	 16 Pin
 16 Pin	 16 Pin	 16 Pin

- * The parenthesized is the voltage for test disc (1kHz, L+R, 0dB) in play mode, and the other, for no disc in stop mode.
- * AC adaptor is used for power supply.
- — : Positive voltage lines.
- — : Audio signal lines.
- Important safety notice:
Components identified by Δ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- The supply part number is described alone in the replacement parts.

Caution!

- IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the pins of IC or LSI with fingers directly.

■ PRINTED CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



Notes:

- WHT.....White
- BLU.....Blue
- RED.....Red
- BLK.....Black
- ORG.....Orange

Notes:

- In this printed circuit board diagram, the parts and foil patterns on the board facing toward you are printed in black. The opposite side is printed in blue.
- The "●" and "●" marks denote the connection points of double-faced foil patterns (through holes) on both sides of the printed circuit board.
- This printed circuit board diagram may be modified at any time with the development of new technology.

■ TERMINAL FUNCTION OF IC'S

• IC101 (AN8383SCE2V): Servo amp

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	VREF	O	Reference voltage output	19	BDO	O	Dropout detection output
2	CFPH	I	Focus phase compensating capacitor terminal	20	RFDET	O	RF detection signal output
3	CTPH	I	Tracking phase compensating capacitor terminal	21	FBL2	I	PD balance adjustment terminal (PDB)
4	GND	—	Ground terminal	22	FBL1	I	PD balance adjustment terminal (PDA)
5	LPD	I	Non-inverting laser power input	23	TBL	I	Tracking balance adjustment terminal
6	LD	O	Laser power auto control output	24	FOFS	I	Focus offset adjustment terminal
7	CAGC	I	AGC detecting capacitor terminal	25	IVB	O	Current/voltage conversion output (B)
8	RFIN	I	RF signal input	26	IVA	O	Current/voltage conversion output (A)
9	ARF	O	RF signal output	27	FE	O	Focus error signal output
10	AMP0	O	RF signal output (Not used, open)	28	3TENVE	O	3T envelope signal output
11	AMP1	I	RF signal input (×30 amp)	29	FPI	I	Focus phase compensating amp input
12	VCC	I	Power supply terminal	30	FPO	O	Focus phase compensating output
13	PDAD	I	Photo detector current input	31	TPI	I	Tracking phase compensating input
14	PDA	I	Photo detector current input	32	TPO	O	Tracking phase compensating output
15	PDBD	I	Photo detector current input				
16	PDB	I	Photo detector current input				
17	SDO	O	Dropout detection pulse output				
18	LDON	I	Laser ON/OFF control input				

• IC103, 104 (AN8387SE2): Motor/coil drive

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	S. VCC	I	Power supply terminal	10	S. VCC	I	Power supply terminal
2	IN1	I	Spindle motor drive signal input and tracking coil drive signal input	11	VLM2	I	Voltage limit terminal
3	PC1	I	Spindle motor power control signal input	12	P. VCC	I	Power supply terminal
4	VREF	I	Reference voltage input	13	D2+	O	Traverse motor drive signal output and focus coil drive signal output
5	P. GND	—	Ground terminal	14	D2—	O	Traverse motor drive signal output and focus coil drive signal output
6	S. GND	—	Ground terminal	15	P. GND	—	Ground terminal
7	S. GND	—	Ground terminal	16	P. GND	—	Ground terminal
8	PC2	I	Traverse motor power control input (Not used, connected to GND)	17	D1—	O	Spindle motor drive signal output and tracking coil drive signal output
9	IN2	I	Traverse motor drive signal input and focus coil drive signal input	18	D1+	O	Spindle motor drive signal output and tracking coil drive signal output
				19	P. VCC	I	Power supply terminal
				20	VLM1	I	Voltage limit terminal

• IC102 (AN8384FA-AV): Servo controller

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	FBL1	O	PD balance adjustment (PDA) terminal	26	TRVO	O	Traverse amp. output terminal (2)
2	FBL2	O	PD balance adjustment (PDB) terminal	27	DED	O	Traverse amp. output terminal (1)
3	RFDET	I	RF detection signal input	28	TVPI	I	Traverse amp. input terminal
4	BDO	I	Dropout detection input	29	BREAK	I	Break input terminal
5	LDON	O	Laser ON/OFF control output	30	TEBPF	I	Tracking error gain detecting filter
6	CLVS	I	Spindle servo condition det. terminal ("H": CLV, "L": Rough servo)	31	CTPLO	O	Tracking low level compensation amp. output terminal
7	PCK	I	PLL extract clock (f=4.3218MHz)	32	CTPLI	I	Tracking low level compensation amp. input terminal
8	CLK	I	Frequency division clock signal (f=88.2kHz) input	33	TE	O	Tracking error output
9	TRVR/ GUP	I/O	Traverse backward input/gain up output (Not used, open)	34	TEG	I	Tracking SW amp. input
10	TRVF/ TRV STOP	I/O	Traverse forward input/stop output terminal	35	CAD	O	Auto adjustment multiplier output terminal
11	CNT4/ RESET	I/O	CNT4 input/reset signal output terminal	36	BPO	O	Focus error for B.P.F. output terminal
12	CNT3/ MLD	I/O	CNT3 input/command load signal output terminal	37	BPI	I	Focus error for B.P.F. input terminal
13	CNT2/ MCLK	I/O	CNT2 input/command clock signal output terminal	38	CFPLO	O	Focus low level compensation amp. output terminal
14	CNT1/ MDATA	I/O	CNT1 input/command data signal output terminal	39	CFPLI	I	Focus low level compensation amp. input terminal
15	FLOCK	O	Focus lock signal output	40	CLW	O	Triangular wave oscillator output
16	SENSE1	O	Selector output (1) terminal	41	VREF	I	Reference voltage input
17	SENSE2	O	Selector output (2) terminal	42	ENVG	I	Envelope amp. gain adjustment terminal
18	SEL	I	Parallel/serial select terminal (Not used, connected to GND)	43	ENV	I	Envelope amp. input terminal
19	KICK	O	Track kick F/B control terminal	44	FE	I	Focus SW amp. input terminal
20	TRV	O	Traverse F/B control terminal	45	LSA	I	Current/voltage conversion input (A)
21	CFL	I	Capacitor connection terminal	46	LSB	I	Current/voltage conversion input (B)
22	VSS	—	Ground terminal	47	FOFS	O	Focus offset adjustment output terminal
23	VDD	I	Power supply terminal	48	TBL	O	Tracking balance adjustment output terminal
24	A. GND	—	Ground terminal				
25	A. VCC	I	Power supply terminal				

• IC1 (AN8086SE2): DC-DC converter control

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	IN	I	Error amp input	9	CLK	I	Clock signal input (f=88.2kHz)
2	FB	O	Error amp output	10	START	I	Start detection input
3	SPRO	I	Short protect input	11	POWER	I	Power ON/OFF detection terminal
4	DED	I	Dead time input	12	VREF	O	Reference voltage output
5	OUT	O	Switching output	13	EMP	O	Empty detection output
6	GND	—	Ground terminal	14	VSEN	I	Empty detection input
7	CT	I	Triangular wave oscillator capacitor input	15	RESET	O	Reset signal output
8	PVCC	I	Power supply terminal	16	VCC	I	Power supply terminal

• IC301 (ATT75316CE04): System cont./LCD drive

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	S12	O	LCD segment signal output	42	WLSRCN	I	Selector input (1) terminal (Not used open)
9	S20	O	LCD segment signal output	43	SENSE3	I	Selector (3) input terminal
10	S21	O	Segment signal output (Not used open)	44	SENSE1	I	Selector (1) input terminal
12	S23	O	Segment signal output (Not used open)	45	SENSE2	I	Selector (2) input terminal
13	ATT0	O	Attenuator control terminal	46	TRON	O	Tracking servo ON signal (Tracking servo ON at "L")
15	ATT2	O	Attenuator control terminal	47	MUTE	O	Muting signal output ("H": MUTE)
16	RPOWER	O	Remote control power supply output terminal	48	DEMPH	O	De-emphasis signal output
17	MLD	O	Command load signal output	49	BUZ	O	Beep control output terminal
18	MDATA	O	Command data signal output	50	STAT	I	Processing condition (CRU, CUE, CLVS, FCLV, TTSTOP) input
19	MCLK	O	Command clock signal output	51	EMPTY	I	Empty detection input terminal
20	LED	O	Remote control detection	52	REST	I	Rest detection terminal
21	COM0	O	LCD common signal output	53	ACDET	I	Power supply detection signal input
24	COM3	O	LCD common signal output	54	VDD	I	Power supply terminal
25	BIAS	O	Bias terminal	55	RSEL	—	Connected to GND (Not used)
26	VLC0	—	Power supply terminal	56	XT2	—	Not used open
28	VLC2	—	Power supply terminal	57	NTEST	—	Connected to power supply (Not used)
29	MEMORY	I	Key switch (MEMORY/ RECALL) input terminal	58	X1	I	Main-system clock input terminal
30	REPEAT	I	Key switch (REPEAT) input terminal	59	X2	—	Not used open
31	OPEN	I	Disc holder open detection terminal	60	POWER	O	Power ON/OFF output terminal
32	FLOCK	I	Focus lock signal output	61	STOROB	O	Strobe detection output terminal
33	VSS	—	GND terminal	62	SKIP. R	I	Key switch (SKIP/SEARCH. R) input terminal
34	SHOCK. P	I	Anti-shock memory signal input terminal	63	SKIP. F	I	Key switch (SKIP/SEARCH. F) input terminal
35	HOLD	I	Hold signal ON/OFF detection terminal	64	PLAY	I	Key switch (PLAY/PAUSE) input terminal
36	RESUME	I	Key switch (PLAY MODE: RESUME) input terminal	65	STOP	I	Key switch (STOP/POWER OFF) input terminal
37	RANDOM	I	Key switch (PLAY MODE: RANDOM) input terminal	66	WRDON	O	Remote control signal output
38	BLKCK	I	Sub-code block (Q data) clock (75Hz) output	67	NOWL	—	Connected to GND (Not used)
39	SQCK	O	Sub-code Q resistor clock output	68	RESET	I	Reset signal input terminal
40	LIGHT	O	LED drive command signal (Not used open)	69	S0	O	LCD segment signal output
41	SUBQ	I	Sub-code (Q data) output	80	S11	O	LCD segment signal output

• IC501 (MN66261): Digital signal processor

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	AVSS	—	GND terminal	38	CLDCK	O	Sub-code frame clock (f=7.35kHz) (Not used, open)
2	IREF	I	Reference current input	39	BLKCK	O	Sub-code block clock (f=75Hz)
3	ARF	I	RF signal input	40	DEMPH	O	De-emphasis ON signal ("H": ON)
4	DRF	I	DSL bias terminal (Not used, open)	41	MEMPH	I	Emphasis signal
5	DSLIF	I/O	DSL loop filter terminal	42	MLD	I	Command load signal ("L": LOAD)
6	PLLIF	I/O	PLL loop filter terminal	43	MCLK	I	Command clock signal
7	AVDD	I	Power supply terminal	44	MDATA	I	Command data signal
8	RSEL	I	RF signal polarity setting terminal (Not used, connected to VDD)	45	D MUTE	I	Muting Input ("H": MUTE)
9	TBUS7	O	Test terminal	46	SMCK	O	System clock (f=4.2336MHz)
16	TBUS0	O	Test terminal	47	STAT	O	Status signal (CRC, CUE, CLVS, TTSTOP, FCLV, SQOK)
17	FLAG	O	Flag terminal (Not used, open)	48	CRC	O	Sub-code CRC check terminal ("H": OK, "L": NG)
18	IPFLAG	O	Interpolation flag terminal (Not used, open)	49	SUBC	O	Sub-code serial output data (Not used, open)
19	FCLK	O	Crystal frame clock (Not used, open)	50	SBCK	I	Sub-code serial input clock (Not used, connected to GND)
20	BYTCK	O	Byte clock (Not used, open)	51	TRON	I	Tracking servo ON signal ("L": ON)
21	WDCK	O	Word clock (Not used, open)	52	CLVS	O	Turntable servo phase synchro signal ("H": CLV, "L": Rough servo)
22	RESET	I	Reset terminal	53	PC	O	Turntable motor ON signal ("L": ON)
23	TX	O	Digital audio signal	54	ECM	O	Turntable motor drive signal (Forced mode)
24	LDG	O	Lch deglitch signal (Not used, open)	55	ECS	O	Turntable motor drive signal (Servo error signal)
25	RDG	O	Rch deglitch signal (Not used, open)	56	VDD	I	Power supply terminal
26	SRDATA	O	Serial data output (MSB first)	57	TEST	I	Test terminal (Normal: "H")
27	SCK	O	Serial bit clock output	58	SSEL	I	"SUBQ" terminal mode select ("H": Q code buffer)
28	LRCK	O	L/R discriminating signal	59	MSEL	I	"SMCK" terminal frequency select ("L": SMCK=4.2336MHz) (Connected to GND)
29	XCK	O	Crystal OSC terminal (f=16.9344MHz) (Not used, open)	60	RESY	O	Re-synchronizing signal of frame sync. (Not used, open)
30	PMCK	O	Frequency division clock signal (Not used, open) (f=1/192 × CK=88.2kHz)	61	DO	I	Drop-out detection signal ("H": Drop-out)
31	CSEL	I	Test terminal (Connected to GND)	62	EFM	O	EFM signal (Not used, open)
32	PSEL	I	Test terminal (Connected to GND)	63	PCK	O	PLL extract clock (f=4.3218MHz)
33	X1	I	Crystal OSC terminal (f=16.9344MHz)	64	PDO	O	Phase compared signal of EFM and PCK (Not used, open)
34	X2	O	Crystal OSC terminal (f=16.9344MHz) (Not used, open)				
35	VSS	—	GND terminal				
36	SUBQ	O	Sub-code Q data				
37	SQCK	I	Sub-code Q register clock				

• IC503 (RSI0001): Shock proof controller

Pin No.	Mark	I/O Division	Function
1	YFLAG	I	Signal processing flag input terminal
2	YFCLK	I	Frame clock input terminal ANTI-SHOCK MEMORY selector (ON: 14.7kHz, OFF: 7.35kHz)
3	YSRDATA	I	Serial data input terminal
4	YSCK	I	Shyft clock input terminal ANTI-SHOCK MEMORY selector (ON: 5.64MHz, OFF: 2.82MHz)
5	YLCK	I	L/R clock input terminal ANTI-SHOCK MEMORY selector (ON: 88.2kHz, OFF: 44.1kHz)
6	GND	—	GND terminal
7	X1	I	Crystal OSC terminal (F=33.9MHz)
8	X2	O	
9	ZXCK	O	Clock output terminal (F=16.9MHz)
10	ZSMCK	O	Clock output terminal (F=4.23MHz)
11	TEST	I	Test input terminal (Normal: "L")
12	ZVXCK	O	Clock output terminal ANTI-SHOCK MEMORY selector (ON: 33.9MHz, OFF: 16.9MHz)
13	ZCSEL	O	Playback speed select output terminal ANTI-SHOCK MEMORY selector (ON: "H, OFF: "L")
14	ZMCOM	O	Voltage select output terminal ANTI-SHOCK MEMORY selector (ON: "H, OFF: "L")
15	ZPMCK	O	Clock output terminal (F=88.2kHz)
16	ZSVG	O	Traverse drive select output terminal
17	ZSBCK	O	Flag read out clock output terminal

Pin No.	Mark	I/O Division	Function
18	YBLKCK	I	Block clock input terminal ANTI-SHOCK MEMORY selector (ON: 150Hz, OFF: 75Hz)
19	VDD	I	Power supply terminal
20 } 29	A0 } A9	O	Address output terminal
30	NRAS	O	Low address strobe terminal
31	GND	—	GND terminal
32	NOE	O	Output enable terminal
33	NCAS	O	Column address strobe terminal
34	NWE	O	Write enable terminal
35 } 38	D0 } D3	I/O	Data input/output terminal
39	ZLRCK	O	L/R clock output terminal (F=44.1kHz)
40	ZSCK	O	Shyft clock output terminal (F=2.82MHz)
41	ZSRDATA	O	Serial data output terminal
42	ZSENSE	O	States output terminal
43	VDD	I	Power supply terminal
44	YMLD	I	Microcomputer command load input terminal
45	YMDATA	I	Microcomputer command data input terminal
46	YMCLK	I	Microcomputer command clock input
47	YDMUTE	I	Mute input terminal ("H"-MUTE: ON, "L"-MUTE: OFF)
48	RESET	I	Reset input terminal (Normal: "H", RESET: "L")

• IC504 (MS5144A8VCER): D. RAM

Pin No.	Mark	I/O Division	Function
1	D0	I/O	Data input/output terminal
2	D1	I/O	Data input/output terminal
3	NWE	I	Write enable terminal
4	NRAS	I	Low address strobe terminal
5	A9	I	Address input terminal
6	A0	I	Address input terminal
7 } 9	A1 } A3	I	Address input terminal
10	VCC	I	Power supply terminal

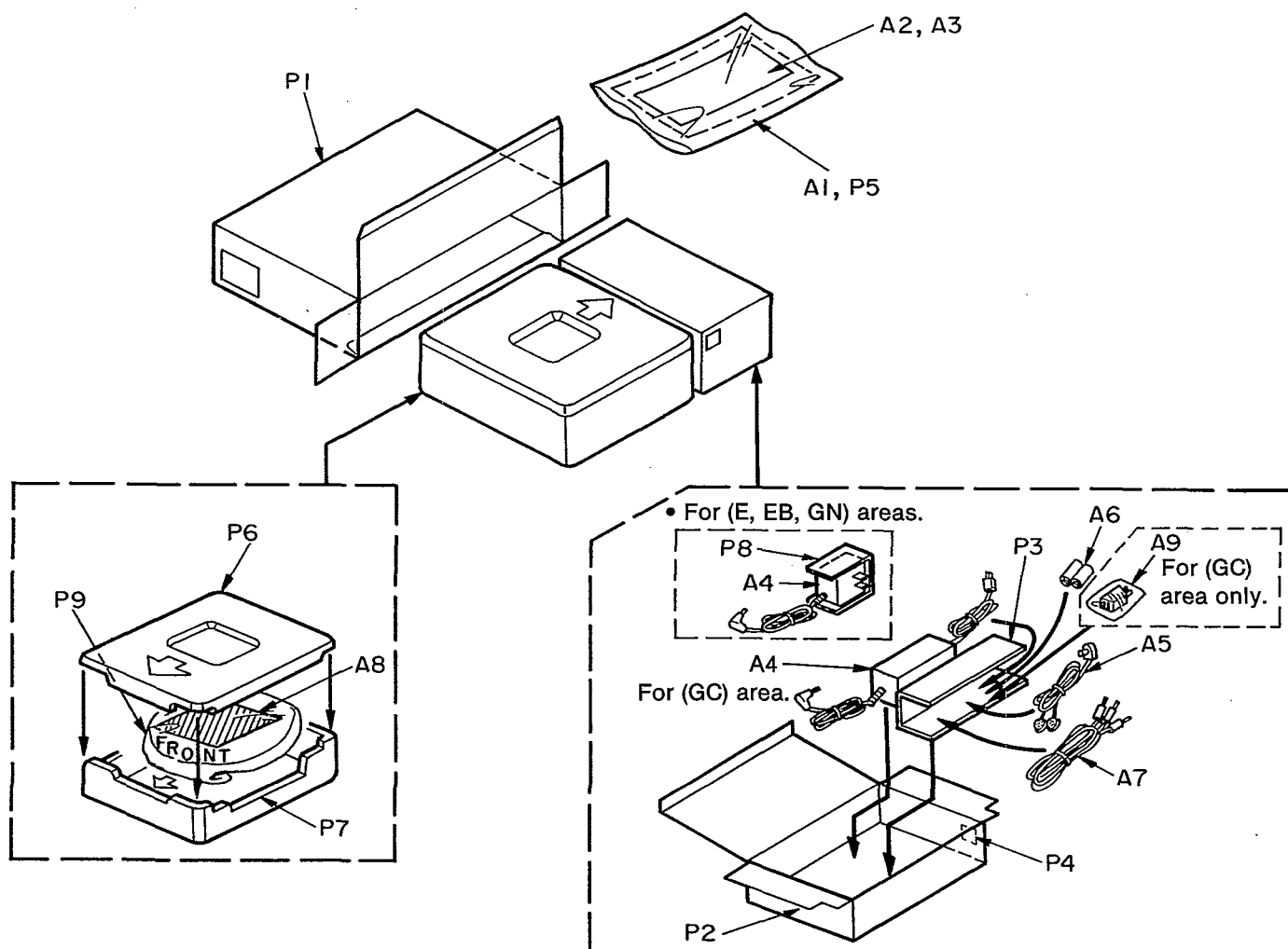
Pin No.	Mark	I/O Division	Function
11 } 15	A4 } A8	I	Address input terminal
16	NOE	I	Output enable terminal
17	NCAS	I	Column address strobe terminal
18	D3	I/O	Data input/output terminal
19	D2	I/O	Data input/output terminal
20	GND	—	GND terminal

• IC601 (MN647511E2): Digital filter & D/A converter

Pin No.	Mark	I/O Division	Function
1	LRCLK	I	L/R discriminating signal
2	BCLK	I	Serial bit clock input
3	SRDATA	I	Serial data output (MSB first)
4	COT 1	—	Test terminal (Ordinary: L)
5	COT 2		
6	TEST		
7	DV _{DD}	I	Digital power supply terminal
8	X2	O	Clock terminal (F=33.8688 MHz)
9	X1	I	
10	DV _{SS}	—	Digital GND terminal
11	AV _{DD} L	I	Analog power supply terminal 1
12	OUT. L	O	Analog signal output 1
13	AV _{SS} L	—	Analog GND terminal
14	AV _{SS} R		
15	OUT. R	O	Analog signal output 2

Pin No.	Mark	I/O Division	Function
16	AV _{DD} R	I	Analog power supply terminal 2
17	RESET	I	Reset signal input (Active: L)
18	PWM	O	PWM output (TP..."H": output "L": High impedance) (Not used, open)
19	TP	—	Test terminal (ordinary: L)
20	WVEL	I	Double velocity ("H": double, "L": single)
21	DEMPH	I	Digital de-emphasis ON/OFF ("H": ON)
22	CSEL	I	Clock frequency select of CK 192 (Not used, connected to GND)
23	192FS	O	192fs (8.4672 MHz) signal output (Not used, open)
24	384FS	O	Clock output terminal (384FS=16.9344 MHz)

PACKAGING



REPLACEMENT PARTS LIST

Notes: *Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

*Warning: This product uses a laser diode. Refer to caution statements on page 3.

*ACHTUNG: Die Lasereinheit nicht zerlegen.

Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		Q809	UN5210TX	TRANSISTOR	
				Q810	2SD1819QRSTX	TRANSISTOR	
						DIODE(S)	
IC1	AN8086SE2	DC-DC CONV. CONTROL		D1	MA110TX	DIODE	
IC101	AN8383SCE2V	SERVO AMP		D2	MA141WKTX	DIODE	
IC102	AN8384FA-AV	SERVO CONTROLLER		D3	D1FS4	DIODE	
IC103, 104	AN8387SE2	MOTOR/COIL DRIVE		D4	MA110TX	DIODE	
IC301	ATT75316CE04	SYSTEM CONT./LCD DRIVE		D301	MA141WATX	DIODE	
IC501	MN66261	DIGITAL SIGNAL PROCESSOR		D303	MA141WKTX	DIODE	
IC503	RS10001	SHOCK PROOF CONTROLLER		D401-404	LN1361CUI-TR	L. E. D.	
IC504	MS514A8VCER	D. RAM		D501	MA110TX	DIODE	
IC601	MN647511E2	DIGITAL FILTER&D/A CONV.		D502	MA784TX	DIODE	
IC701	NJM3415MTE1	HEADPHONES AMP		D503	MA110TX	DIODE	
		TRANSISTOR(S)		D601	MA110TX	DIODE	
				D701	MA110TX	DIODE	
Q1	UN5117TX	TRANSISTOR		D801	MA143TX	DIODE	
Q3-5	2SD1302STTA	TRANSISTOR				IC PROTECTOR(S)	
Q105	UN5217TX	TRANSISTOR					
Q106	UN5210TX	TRANSISTOR		ICP1	SRUN50T25	IC PROTECTOR	Δ
Q201	2SB709QRSTX	TRANSISTOR				VARIABLE RESISTOR(S)	
Q301	UN5214TX	TRANSISTOR					
Q302	UN511MTX	TRANSISTOR		VR1	EVM1YSX30B33	POWER SUPPLY VOLT, ADJ.	
Q303	2SD1819QRSTX	TRANSISTOR		VR701	EVUAMAT43C54	VOLUME	
Q501	2SB1218QRSTX	TRANSISTOR				COIL(S)	
Q502	UN5213TX	TRANSISTOR					
Q503	2SD1819QRSTX	TRANSISTOR		L11	RLQB330KT-K	COIL	
Q504	UN521MTX	TRANSISTOR		L12	RLZ0007-0	COIL	
Q505	2SB970RSTX	TRANSISTOR		L501	RLQB471KT-K	COIL	
Q506, 507	UN5112TX	TRANSISTOR		L601	RLB0003	COIL	
Q508	2SB1218QRSTX	TRANSISTOR		L603-605	RLB0003	COIL	
Q601	2SB1218QRSTX	TRANSISTOR				OSCILLATOR(S)	
Q602	FMW1T98	TRANSISTOR					
Q604	FMG4T148	TRANSISTOR		X501	RSXZ33M8M01T	OSCILLATOR(33.868MHz)	
Q605, 606	2SD1328QRSTX	TRANSISTOR				LCD(S)	
Q701	UN5215TX	TRANSISTOR					
Q702, 703	2SD1328QRSTX	TRANSISTOR		LCD301	EDD062CF2AFP	LCD	
Q704	IMH7T108	TRANSISTOR				SWITCH(ES)	
Q801	UN5217TX	TRANSISTOR					
Q802	FMG6T148	TRANSISTOR					
Q803	UN5114TX	TRANSISTOR					
Q804	UN5210TX	TRANSISTOR					
Q805	2SD1819QRSTX	TRANSISTOR					
Q806	UN5215TX	TRANSISTOR					
Q807	FMA6T99	TRANSISTOR					

Ref. No.	Part No.	Part Name & Description	Remarks
S201	RSH1A912A-A	LASER ON/OFF	
S202	SSHD5	REST DETECTOR	
S301	RSG0024-A	PLAY/PAUSE	
S302	RSG0024-A	STOP/OPR OFF	
S303	RSG0024-A	SKIP/SEARCH(F)	
S304	RSG0024-A	SKIP/SEARCH(B)	
S305	RSG0024-A	REPEAT	
S306	RSG0024-A	MEMORY/RECALL	
S307	ESD11H230	PLAY MODE	
S308	ESD11H220	HOLD	
S309	ESD11H220	ANTI-SHOCK MEMORY	
S701	ESD11H230	ASC/S-XBS SELECTOR	
		CONNECTOR(S) AND JACK(S)	
CN1, 2	RJC93015	BATTERY TERMINAL	
CN3	RJH5102-1	RECHARGEABLE BATT. TERMINAL	
CN8	RJJ4303-1	DC IN JACK	
CN101	RJU035T016-1	FPC SOCKET (16P)	
CN102	RJT068W04V	CONNECTOR (4P)	
CN103	RJT068W02V	CONNECTOR (2P)	
CN601	RJJD3S5ZB-C	OUT JACK	
CN701	RJJ36T02-C	HEADPHONES JACK	
		CABINET AND CHASSIS	
1	RKK0059-K	BATTERY COVER(A)	
2	RJF0019	LCD HOLDER	
3	SBND90ZK0A	VOLUME KNOB	
4	XQN17+C3FZ	SCREW	
5	RGV0052-K	ASC, HOLD, PLAY MODE KNOB	
6	RJC93007	COMMON BATTERY TERMINAL	
7	RGV0120-K	ANTI-SHOCK MEMORY KNOB	
8	RXA0137	SHAFT PLATE ASS'Y	
9	RAE0132Z	TRAVERSE DECK	
9-1	SHGD157	FLOATING RUBBER(1)	
9-2	SHGD165	FLOATING RUBBER(2)	
10	RMA0770	REAR ORNAMENT PLATE	
11	RHE5079YA	SCREW	
12	RFKLLXP570EA	DUST COVER ASS'Y	
13	RFKLLXP570EA	INTERMEDIATE CABINET ASS'Y	
14	RGU0962-K	PLAY/PAUSE/STOP BUTTON	
15	RGU0963-K	MEMORY/RECALL, REPEAT BUTTON	
16	RGU0964-K	OPEN BUTTON	
17	FMCO147	POP-UP SPRING	
18	FMCO223	LOCK SPRING	
19	FML0318	OPEN LEVER	
20	RFKJLXP570E	BOTTOM CABINET ASS'Y	(E)
20	RFKJLXP570EB	BOTTOM CABINET ASS'Y	(EB, GC, GN)
20-1	RKA0063-K	FOOT	
21	RGK0586-K	GRIP (LOWER)	

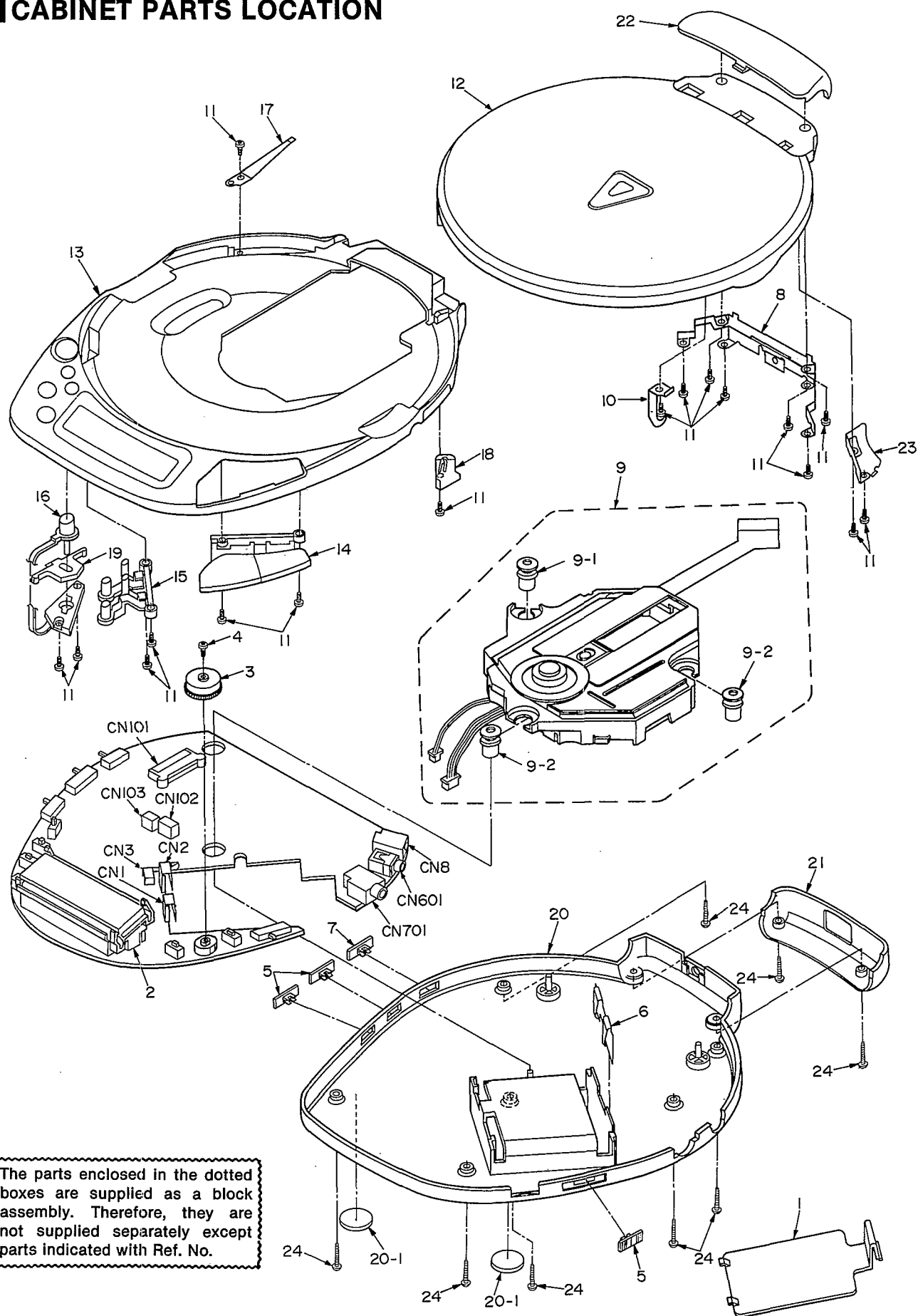
Ref. No.	Part No.	Part Name & Description	Remarks
22	RGK0585-K	GRIP (UPPER)	
23	RMA0743	STOPPER	
24	XTN17+6GFZ	SCREW	
		PACKING MATERIALS	
P1	RPK0440	PACKING CASE	(E)
P1	RPK0441	PACKING CASE	(EB, GC, GN)
P2	RPQF0108	ACCESSORIES BOX	
P3	RPQ0072	PAD	(E)
P3	RPQ0341	PAD	(EB)
P3	RPQ0069	PAD	(GC)
P3	RPQ0070	PAD	(GN)
P4	SQZD3	AREA LABEL	(E)
P4	SQZD7	AREA LABEL	(EB)
P4	RQLA0066	AREA LABEL	(GC)
P4	RQLA0067	AREA LABEL	(GN)
P5	RPF0046	PROTECTION BAG (F. B.)	
P6	RPN0727	CUSHION (UPPER)	
P7	RPN0740	CUSHION (LOWER)	
P8	RPQ0059	SPACER	
P9	RPF0111	PROTECTION BAG (UNIT)	
		ACCESSORIES	
A1	RFKSLXP570E	INSTRUCTION MANUAL ASS'Y	(E)
A1	RFKSLXP570GC	INSTRUCTION MANUAL ASS'Y	(GC)
A1	RQT2165-B	INSTRUCTION MANUAL	(EB, GN)
A2	RQA0013	WARRANTY CARD	(E, EB)
A2	RQX7433ZA	WARRANTY CARD	(GN)
A3	RQCB0169	SERVICENTER LIST	
A4	RFEA401E-1S	AC ADAPTOR	(E) △
A4	RFEA406B-W	AC ADAPTOR	(EB) △
A4	RFEA402Z-W	AC ADAPTOR	(GC) △
A4	RFEA404A-W	AC ADAPTOR	(GN) △
A5	RFEV116ACKA	STEREO EARPHONES WITH R. C.	
A6	RP-BP60EY	RECHARGEABLE BATTERIES	
A7	RJL2P001X10	STEREO CONNECTION CABLE	
A8	RQCA0276	SUPPLEMENTARY INST. MANUAL	
A9	RJP120ZDS-K	POWER PLUG ADAPTOR	(GC) △
A10 ※	RKB205ZA-0	EAR PADS	
		<PRINTED CIRCUIT BOARDS	
		ASS'Y>	
PCB1	REP1685A-M	MAIN P. C. B.	(RTL)

※ This parts is supplied only with replacement parts list.

Note:

The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

CABINET PARTS LOCATION



RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistance values are in ohms, unless specified otherwise, 1 K=1,000 (OHM), 1 M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R305	ERJ3GEYJ103V	1/16W 10K	R639, 640	ERJ3GEYOR00V	1/16W 0.00
			R306	ERJ3GEYJ224V	1/16W 220K	R700	ERJ3GEYJ471V	1/16W 470
			R308	ERJ3GEYJ102V	1/16W 1K	R701, 702	ERJ3GEYJ122V	1/16W 1.2K
R1	ERJ3GEYJ822V	1/16W 8.2K	R312	ERJ3GEYJ223V	1/16W 22K	R703, 704	ERJ3GEYJ102V	1/16W 1K
R2	ERJ3GEYJ224V	1/16W 220K	R315	ERJ3GEYJ152V	1/16W 1.5K	R705, 706	ERJ3GEYJ473V	1/16W 47K
R3	ERJ3GEYJ333V	1/16W 33K	R316	ERJ3GEYJ753V	1/16W 75K	R707, 708	ERJ3GEYJ105V	1/16W 1M
R5	ERJ3GEYJ472V	1/16W 4.7K	R317	ERJ3GEYJ183V	1/16W 18K	R709, 710	ERJ3GEYJ223V	1/16W 22K
R6	ERJ3GEYJ224V	1/16W 220K	R319, 320	ERJ3GEYJ224V	1/16W 220K	R711, 712	ERJ3GEYJ105V	1/16W 1M
R8	ERJ3GEYJ333V	1/16W 33K	R322	ERJ3GEYJ104V	1/16W 100K	R713, 714	ERJ3GEYJ123V	1/16W 12K
R10	ERJ3GEYJ472V	1/16W 4.7K	R326-331	ERJ3GEYJ473V	1/16W 47K	R715, 716	ERJ3GEYJ154V	1/16W 150K
R11	ERJ3GEYJ152V	1/16W 1.5K	R333, 334	ERJ3GEYJ104V	1/16W 100K	R717, 718	ERJ3GEYJ103V	1/16W 10K
R12	ERJ3GEYJ101V	1/16W 100	R401-404	ERJ3GEYJ151V	1/16W 150	R719, 720	ERJ3GEYJ392V	1/16W 3.9K
R14	ERJ3GEYJ222V	1/16W 2.2K	R408	ERJ3GEYJ104V	1/16W 100K	R721, 722	ERJ3GEYJ682V	1/16W 6.8K
R15, 16	ERJ3GEYJ220V	1/16W 22	R501	ERJ3GEYJ102V	1/16W 1K	R723, 724	ERJ3GEYJ333V	1/16W 33K
R17	ERJ3GEYJ100V	1/16W 10	R502	ERJ3GEYJ333V	1/16W 33K	R725, 726	ERJ3GEYJ150V	1/16W 15
R19	ERJ1WYK3R9H	1W 3.9	L502	MCR03PZHJ561	1/16W 560	R727, 728	ERJ3GEYJ4R7V	1/16W 4.7
R20	ERJ1WYK4R7H	1W 4.7	R503, 504	ERJ3GEYJ683V	1/16W 68K	R729, 730	ERJ6GEYJ2R2V	1/10W 2.2
R101	ERJ3GEYJ221V	1/16W 220	R505	ERJ3GEYJ563V	1/16W 56K	R731, 732	ERJ3GEYJ122V	1/16W 1.2K
R102	ERJ3GEYJ330V	1/16W 33	R507	ERJ3GEYJ822V	1/16W 8.2K	R733, 734	ERJ3GEYJ104V	1/16W 100K
R107	ERJ3GEYJ102V	1/16W 1K	R508	ERJ3GEYJ823V	1/16W 82K	R735, 736	ERJ3GEYJ122V	1/16W 1.2K
R108	ERJ3GEYJ332V	1/16W 3.3K	R509	ERJ3GEYJ102V	1/16W 1K	R801	ERJ3GEYJ474V	1/16W 470K
R109	ERJ3GEYJ125V	1/16W 1.2M	R510	ERJ3GEYJ222V	1/16W 2.2K	R802	ERJ3GEYJ333V	1/16W 33K
R110	ERJ3GEYJ102V	1/16W 1K	R511	ERJ3GEYJ103V	1/16W 10K	R803	ERJ3GEYJ182V	1/16W 1.8K
R111	ERJ3GEYJ223V	1/16W 22K	R512	ERJ3GEYJ222V	1/16W 2.2K	R804	ERJ3GEYJ274V	1/16W 270K
R112	ERJ3GEYJ124V	1/16W 120K	R513	ERJ3GEYJ223V	1/16W 22K	R805	ERJ3GEYJ223V	1/16W 22K
R113	ERJ3GEYJ334V	1/16W 330K	R514	ERJ3GEYJ222V	1/16W 2.2K	R806	ERJ3GEYJ102V	1/16W 1K
R114	ERJ3GEYJ105V	1/16W 1M	R515, 516	ERJ6GEYJ2R2V	1/10W 2.2	R807	ERJ3GEYJ683V	1/16W 68K
R115	ERJ3GEYJ333V	1/16W 33K	R517	ERJ3GEYJ105V	1/16W 1M	R808	ERJ3GEYJ104V	1/16W 100K
R116	ERJ6GEYJ100	1/10W 10	R518, 519	ERJ3GEYJ102V	1/16W 1K	R809	ERJ3GEYJ473V	1/16W 47K
R117	ERJ3GEYJ124V	1/16W 120K	R520	MCR03PZHJ561	1/16W 560	R810	ERJ3GEYJ223V	1/16W 22K
R118	ERJ3GEYJ822V	1/16W 8.2K	R521	ERJ3GEYJ682V	1/16W 6.8K	R811, 812	ERJ3GEYJ221V	1/16W 220
R119	ERJ3GEYJ102V	1/16W 1K	R522	ERJ3GEYJ104V	1/16W 100K	R813	ERJ3GEYJ154V	1/16W 150K
R121	ERJ3GEYJ563V	1/16W 56K	R523	ERJ3GEYJ474V	1/16W 470K			
R122	ERJ3GEYJ103V	1/16W 10K	R524	ERJ3GEYJ102V	1/16W 1K			CHIP JUMPERS
R123	ERJ3GEYJ104V	1/16W 100K	R525	ERJ3GEYJ472V	1/16W 4.7K			
R125	ERJ3GEYJ474V	1/16W 470K	R526	ERJ3GEYJ103V	1/16W 10K	RJ101	ERJ6GEYOR00V	CHIP JUMPER
R126	ERJ3GEYJ331V	1/16W 330	R527	ERJ3GEYJ472V	1/16W 4.7K	RJ302	ERJ3GEYOR00V	CHIP JUMPER
R127	EXBV8V223J	1/16W 22K	R601	ERJ3GEYJ220V	1/16W 22	RJ304	ERJ3GEYOR00V	CHIP JUMPER
R128	ERJ3GEYJ472V	1/16W 4.7K	R603, 604	ERJ3GEYJ102V	1/16W 1K	RJ307	ERJ3GEYOR00V	CHIP JUMPER
R129	ERJ3GEYJ102V	1/16W 1K	R605	ERJ3GEYJ682V	1/16W 6.8K	RJ402	ERJ3GEYOR00V	CHIP JUMPER
R131	ERJ3GEYJ392V	1/16W 3.9K	R606	ERJ3GEYJ104V	1/16W 100K	RJ601, 602	ERJ3GEYOR00V	CHIP JUMPER
R132	ERJ3GEYJ272V	1/16W 2.7K	R607	ERJ3GEYJ222V	1/16W 2.2K	C304	ERJ3GEYOR00V	CHIP JUMPER
R133	ERJ3GEYJ124V	1/16W 120K	R608	ERJ3GEYJ392V	1/16W 3.9K	L701-703	ERJ3GEYOR00V	CHIP JUMPER
R134	ERJ3GEYJ473V	1/16W 47K	R617, 618	ERJ3GEYJ221V	1/16W 220			
R135	ERJ3GEYJ223V	1/16W 22K	R621, 622	ERJ3GEYJ473V	1/16W 47K			CAPACITORS
R201	ERJ3GEYJ223V	1/16W 22K	R623, 624	ERJ3GEYJ102V	1/16W 1K			
R202	ERJ3GEYJ100V	1/16W 10	R625, 626	ERJ3GEYJ222V	1/16W 2.2K	C1	ECEA1EKA4R7I	25V 4.7U
R203	ERJ3GEYJ223V	1/16W 22K	R631, 632	ERJ3GEYOR00V	1/16W 0.00	C2	ECUV1C104KBN	16V 0.1U
R301, 302	ERJ3GEYJ472V	1/16W 4.7K	R635, 636	ERJ3GEYOR00V	1/16W 0.00	C3	ECUV1H331KBV	50V 330P

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks			
C5	ECUV1E822KBV	25V 8200P	C518-520	ECUV1C104ZFV	16V 0.1U			
C6	ECEA1VSN2R2	35V 2.2U	C601	ECUV1C104ZFV	16V 0.1U			
C8	ECUV1E103KBV	25V 0.01U	C602	ECEA1CKS100I	16V 10U			
C9	RCE1ASC470IX	10V 47U	C603, 604	ECUV1H681KBV	50V 680P			
C10	ECEA0JKA101I	6.3V 100U	C605	ECUV1C104ZFV	16V 0.1U			
C11	ECUV1H470KCV	50V 47P	C606	ECEA0JKA220	6.3V 22U			
C12	ECUVNC105ZFN	16V 1U	C607	ECEA0JKS470	6.3V 47U			
C13, 14	ECEA1AKA470I	10V 47U	C609, 610	ECEA1CPK100I	16V 10U			
C15	ECUV1C104ZFV	16V 0.1U	C611, 612	ECUV1H272MBV	50V 2700P			
C16	ECA1AM102B	10V 1000U	C613, 614	ECUV1H681KBV	50V 680P			
C17, 18	ECA05M601I	5V 600U	C615	ECUV1H102KBV	50V 1000P			
C101	ECUV1C104ZFV	16V 0.1U	C616, 617	ECUV1C104ZFV	16V 0.1U			
C102, 103	ECUV1C104KBN	16V 0.1U	C700	ECEA0JPD101I	6.3V 100U			
C104, 105	ECUV1C333KBV	16V 0.033U	C703, 704	ECUV1H102KBV	50V 1000P			
C106	ECUV1C104ZFV	16V 0.1U	C705, 706	ECEA1CPD100I	16V 10U			
C108	ECUV1C473KBN	16V 0.047U	C707, 708	ECUV1H332KBV	50V 3300P			
C109	ECEA1EKA4R7I	25V 4.7U	C709, 710	ECUV1C123MBV	16V 0.012U			
C110	ECUV1C104KBN	16V 0.1U	C711, 712	ECUV1C333KBV	16V 0.033U			
C111, 112	ECUV1H472MBV	50V 4700P	C713, 714	ECEA0GPK221I	4V 220U			
C113	ECUV1C473KBN	16V 0.047U	C801	ECUVNC105ZFN	16V 1U			
C114	ECUV1C104KBN	16V 0.1U	C802	ECUV1H332ZFV	50V 3300P			
C115	ECUV1C473KBN	16V 0.047U	C803	ECUV1C104ZFV	16V 0.1U			
C116	ECUV1C104KBN	16V 0.1U						
C117	ECUV1E103KBV	25V 0.01U						
C118	ECUV1C333KBV	16V 0.033U						
C120	ECEA1VKN2R2I	35V 2.2U						
C121	ECUV1E103KBV	25V 0.01U						
C122	ECUV1C333KBV	16V 0.033U						
C123	ECUV1C104ZFV	16V 0.1U						
C124	ECEA0JKA470I	6.3V 47U						
C125	ECUV1C104ZFV	16V 0.1U						
C126	RCST1EY474LE	25V 0.47U						
C127	ECUV1C104ZFV	16V 0.1U						
C128	ECUVNC105ZFN	16V 1U						
C131	ECUV1C104ZFV	16V 0.1U						
C132, 133	ECUV1E103KBV	25V 0.01U						
C134	ECEA1CSN4R7I	16V 4.7U						
C201	ECEA0JSN220I	6.3V 22U						
C202	ECEA1CKA100I	16V 10U						
C301, 302	ECUV1C104ZFV	16V 0.1U						
C312	ECUV1C104ZFV	16V 0.1U						
C502	ECUV1C474KBM	16V 0.47U						
C504	ECUV1C104KBN	16V 0.1U						
C505	ECUV1E223KBV	25V 0.022U						
C506	ECUV1H561KBV	50V 560P						
C507	ECUV1C104KBN	16V 0.1U						
C508	ECEA0JKA470I	6.3V 47U						
C509	ECUV1C104ZFV	16V 0.1U						
C510	ECUV1H102KBV	50V 1000P						
C512	RCE1ASL330IX	10V 33U						
C513, 514	ECUV1C104ZFV	16V 0.1U						
C515-517	ECUV1H050CCV	50V 5P						

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