

Service Manual

COMPACT
disc
DIGITAL AUDIO

MASH*
multi-stage noise shaping

* MASH is a trademark of NTT.

Portable CD Player

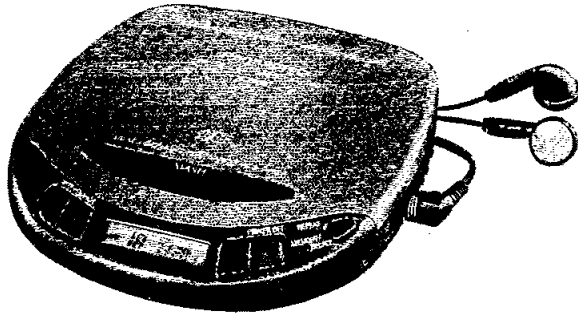
SL-S120

Colour (H) Gray Type

Colour (A) Blue Type

SL-S125

Colour (H) Gray Type



Areas for Every Model.

SL-S120 E, EG, GC, GN (H)
E, EG (A)

SL-S125 E, EG (H)

Areas

E Europe, Poland and Russia.
EG Germany and Italy.
GC Asia, Middle East and Africa,
Latin America.
GN Oceania.

Traversal Deck: RAE0142Z Mechanism Series Specifications

Audio

No. of channels: 2 channels (left and right, stereo)
Output voltage: 0.6 V (50 kohm) diameter 3.5 stereo mini jack
Frequency response: 20 ~ 20,000 Hz (+0.5 dB, -1.5 dB)
S/N: more than 94 dB
Wow and flutter: Below measurable limit
DA converter: 1 bit, MASH*
Headphone output level: max.9 mW+9 mW/16 ohm (variable)
stereo mini jack diameter 3.5

Digital filter: 8 times over sampling

Signal Format

Correction system: Technics New
Super Decoding Algorithm

Pickup

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

Playing time

(When used in hold mode, at 25 degree temperature and on flat and stable surface.)

Panasonic Alkaline dry cell batteries:(LR6, 2pcs.): Approx. 10h
Rechargeable batteries (When rechargeable 3 hours.): Approx. 3h
The play time may be less depending on the operating conditions.

General

Operation temperature range: 0 - 40 degree
Rechargeable temperature range: 5 - 40 degree
Power supply: DC 4.5 V
Power consumption:
AC adaptor; 5.5 W
Battery (DC 3V); 0.6 W
When recharging; 3.3 W
Dimensions: 128(Wide)/28.0(High)/144(Depth)mm
Weight: 220 g without batteries
265 g with batteries

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

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

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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: 100 µW/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 Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

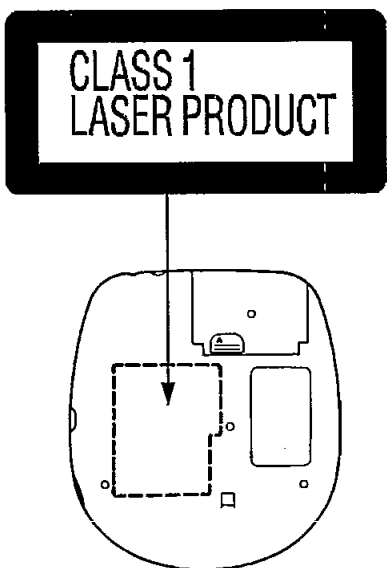
Wellenlänge: 780 nm

Maximale Strahlungsleistung der Lasereinheit: 100 µW/VDE

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

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

ADVARSEL: I dette a apparat anvendes laser.



CAUTION!

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

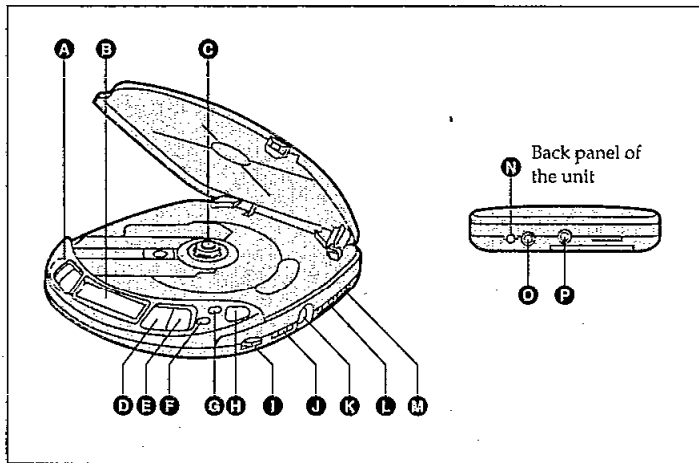
Marking sign is located on bottom of the unit.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPLIANCE TO RAIN, SPLASHING, DRIPPING OR MOISTURE.

DÄNGER	VÄRSÄL LASERSTRÅLNING VID ÖPPNING AV ÖFFNINGSLOCK/DEFLEATED FROM DIRECT EXPOSURE TO BEAM.	(Bottom of product)
ADVARSEL	UVISUHLIG LASERSTRÅLING VID ÅBNERING. KAN SKADE MENSKER VED UDSÆTTELSE FOR LASERSTRÅLING.	(Påsät under apparatet)
VARORI!	AVANTAESSA JA SIELOAVLUTITUS OIKETTAESSA GLET ALLITTUA HESVÄNÄÖHTÄ LASERSTRÄLLELE. ÄLÄ KATSO GÄTTESEEN.	(Tuotteen pohjassa)
VARNING	ÖSVIKIG LASERSTRÄLNING NÄR ÖPPNING AV ÖPPNINGSDÖRR OCH SPRÅKEN ÅR UTKÖR PÅ/D. SEERKÄRA EJ STRÄLEN.	(Apparatens undersida)
ADVARSEL	UVISUHLIG LASERSTRÅLING NÄR ÖPPNING AV ÖPPNINGSDÖRR OCH SPRÅKEN ÅR UTKÖR PÅ/D. SEERKÄRA EJ STRÄLEN.	(Produktets undersida)
VÖRSICHT	VORSICHT BEI LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSPERRELLUNG ÜBERSCHRIEDEN WIRD/DIE STRÄHLUNG AUSSETZT.	(Unterseite des Gerätes)

Locations of Controls



- | | |
|---|---|
| A Skip/search buttons
(◀▶) •SKIP —SEARCH) | I Headphones volume control
(VOLUME) |
| B Display | J XBS selector (XBS) |
| C Push button (PUSH) | K Headphones jack (⌀) |
| D Play/pause button (▶) | L Play mode selector
(RESUME, NORMAL, RANDOM) |
| E Stop/power off button
(■, POWER OFF) | M Hold switch (HOLD) |
| F Memory/recall button
(MEMORY/RECALL) | N Out jack (OUT) |
| G Repeat button (REPEAT) | O DC in jack (DC IN 4.5 V ⚡) |
| H Open button (OPEN) | P Hole for car insulator mounting
screw |

Accessories

- AC adaptor 1 pc.
(RFEA401E-3S) For (E, EG) areas only.
(RFEA403Z-S) For (GC) area only.
(RFEA403A-S) For (GN) area only.
- Stereo earphones 1 pc.
(RFEV317P-KS)
- Rechargeable battery 2 pcs.
(RP-BP60EYS)
- Battery case 1 pc.
(RFKNLS370-K)
- AC Plug adaptor 1 pc.
(SJP5213-2) For(GC)area only.

Power Supply Preparations

Refer to the specifications (front cover) for information on operating times when using rechargeable batteries or dry-cell batteries.

Using rechargeable batteries

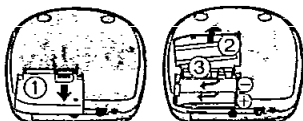
Obtain the optional rechargeable batteries for SL-S118 and SL-S120.

Make sure to recharge the batteries before using them. The unit cannot be used to charge rechargeable batteries other than those specifically designed for it.

- Supplied batteries (RP-BP60)
- Optional batteries
For Continental Europe
(P-3GAVE/2B, SH-CDB8D)
For others (P-3GAVT/2B, SH-CDB8D)

Recharging procedure

- 1 Insert the special rechargeable batteries into the unit.

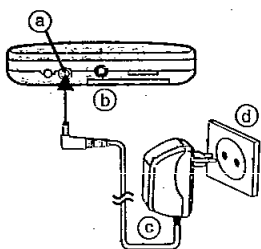


- 2 Connect the AC adaptor.

- Ⓐ DC IN jack (DC IN 4.5 V ⚡)
- Ⓑ Back panel of the unit
- Ⓒ AC adaptor
- Ⓓ AC power outlet

The configuration of the AC adaptor differs according to the area.

(For areas except Continental Europe.)
The AC voltage is different according to the area. Be sure to set the proper voltage in your area before use. (For details, please refer to front cover.)



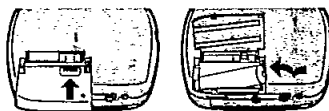
- 3 When recharging is complete, unplug the AC adaptor from the power outlet and the DC IN jack.

Notes

- It takes approximately 3 hours to fully recharge the supplied rechargeable batteries.
- Rechargeable batteries have a service life of approximately 300 charge-discharge cycles. If the operating time on one full charge becomes noticeably shorter than it used to be, the battery has reached the end of its service life and should be replaced.
- The AC adaptor and rechargeable batteries may become warm while recharging is in progress. This is not a malfunction.
- You can operate the unit with AC adaptor while recharging the batteries, but it will lengthen the recharging time.

If the battery lid compartment comes loose

Slide the lid back into place horizontally.



Removing batteries

Push up on the battery in the direction indicated by the arrow. Then lift it out.

Using dry-cell batteries (not included)

After disconnecting the AC adaptor, insert two LR6 (UM-3) alkaline batteries.

The procedure for inserting and removing dry-cell batteries is identical to that for rechargeable batteries.

Using the AC adaptor

Be sure to obtain the optional AC adaptor (RFEA401E-3S) for SL-S118.

Connect the AC adaptor supplied.

Refer to "Using rechargeable batteries" for connection instructions.

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.

Battery indicator

This indicator flashes on and off when the batteries are almost out of power. Power is cut off completely a short while later.

Rechargeable batteries:

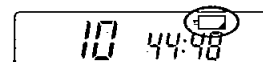
Recharge batteries.

Dry-cell batteries:

Replace batteries with new ones.

Notes

- The length of time the unit will continue to operate between when the battery indicator starts flashing and when the power is cut off differs depending on the type of batteries used.
- The battery indicator may not flash if rechargeable batteries, other than those designated by Panasonic, are used.



Using the car adaptor (not included)

Be sure to obtain the car adaptor (SH-CDC9), available as an optional accessory. The car adaptor can be used to recharge the unit's batteries while in the car.

For areas except Continental Europe:

AC adaptor

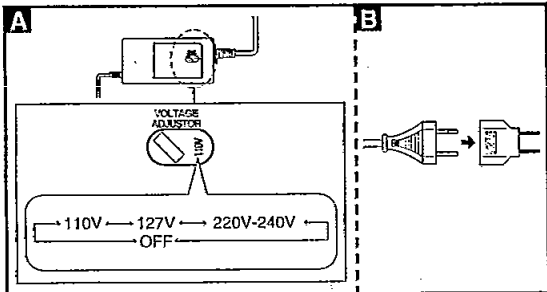
Before use

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 voltage adjuster is switched to OFF, the AC adaptor is effectively disconnected from the AC power outlet.)

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

How to use the AC adaptor

To connect the AC adaptor, refer to "Power Supply Preparations" (page 2).



Sequential Play

Following steps 1-6.

- Ⓐ Label side up
- Ⓑ Track number in play
- Ⓒ Elapsed playing time of each track

• Play stops automatically when all the tracks have been played.

• If the unit has been connected to the car audio system, adjust the volume level between 4 and 6 on the unit, then adjust the volume level on the system.

To pause play

Press during play

To stop play

Press during play **Stop mode**

- Ⓐ Total number of tracks
- Ⓑ Total playing time

To turn off the unit

Press during stop mode **Off mode**

Skip forward/backward

(skip function)

Press during play

Rapid forward/backward (search function)

Press and hold during play.

• During program play (see page 4), these buttons are used to skip forward or back through the programmed sequence of tracks.

• During random play (see page 4), the skip buttons cannot be used to skip back to tracks that were played previously in the random sequence.

• During program play, random play or 1 track repeat play (see page 4), search operation is limited to the current track only.

Removing discs

After the disc has stopped rotating, press the PUSH button to release the disc. (To protect the disc, never open the cover while it is playing.)

Note

Never insert foreign objects into the unit body.

For your reference:

"no disc" indication

This indication appears for about 30 seconds if the button is pressed when no disc is loaded in the unit or if the disc is not completely seated.

"OPEN" indication

This indication appears for about 10 minutes when the cover is opened. (However, the indication does not appear when the unit is powered off.)

Accidental Operation Prevention Function

This function causes the unit to ignore short, accidental button presses. (The disc lid can still be opened and closed.)

The misoperation prevention function prevents the following:

- Powering on the unit accidentally (which can cause the batteries to go dead).
- Play being cut off unexpectedly in the middle of a selection.

To use the accidental operation prevention function

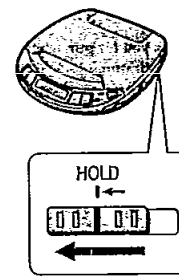
Set HOLD to the HOLD position.

"hold" indication

When the unit is in hold status, pressing any operation button (other than the OPEN button) causes the indication "hold" to appear on the display.

When the unit is powered off

The "hold" indication appears only when the button is pressed



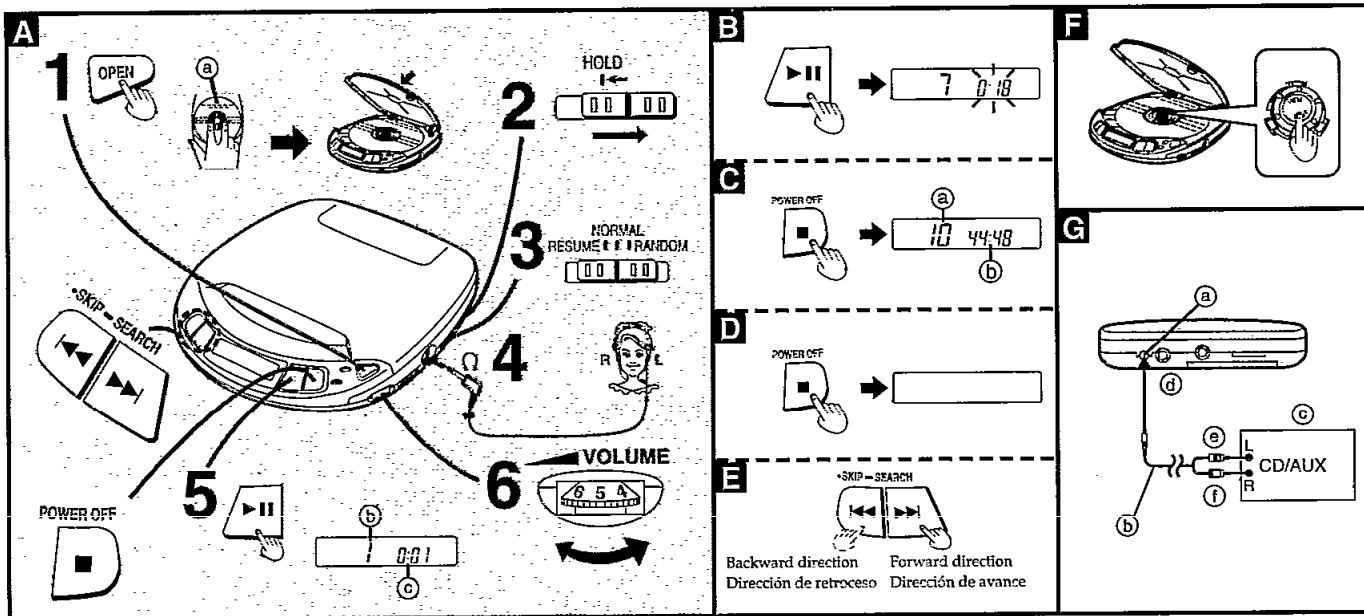
Troubleshooting Guide

First, consult the table below. If the problem persists, contact the dealer from whom you purchased the unit.

Problem	Check this
Cannot close cover.	Is the disc properly secured in place?
Cannot play discs.	<ul style="list-style-type: none"> • Is the unit in hold status? • Is the disc properly secured in place? • Is there moisture condensation on the lens? (Wait for about an hour and then try again.)
Cannot remove disc.	Did you press the PUSH button to release the disc?
Tracks on disc do not play in order, starting with the first track.	Is the RESUME, NORMAL, RANDOM (play mode switch) slider in the NORMAL position?
Cannot hear music—too noisy.	<ul style="list-style-type: none"> • Has earphones plug been inserted as far as it will go? • Is earphones plug dirty?
TV picture is distorted. Radio reception is noisy.	Are you using the unit body too near a TV or tuner? (If the TV or tuner is connected to a simple indoor antenna, connect it to an outdoor antenna.)

Auto power off function

If the unit is left in stop or paused status for approximately 10 minutes, the unit powers itself off automatically in order to prevent the battery from running down.



Using the Unit with Optional Accessories

Using the unit with an audio system

Using the stereo connection cable (not included), you can hear CDs on your audio system.

- Connect the cable to the amplifier after turning off its power.
- Do not connect the cable to the PHONO jacks on the amplifier.
- Obtain the optional connecting cable if the amplifier comes with mini-phone jacks.
- Adjust the volume level on the amplifier.

- Ⓐ OUT jack
- Ⓑ Stereo connection cable (not included)
- Ⓒ Amplifier
- Ⓓ Back panel of the unit
- Ⓔ (White)
- Ⓕ (Red)

Using the unit with a car audio system stereo

Items to be purchased

For connection to the car audio system:

- Car adaptor (SH-CDC9)
- Car stereo cassette adaptor (SH-CDM9A)

Connect the car stereo cassette adaptor to the unit's headphone jack. (When doing this, keep the unit's VOLUME control at a setting between 4 and 6.)

For securing the unit and connecting the power supply:

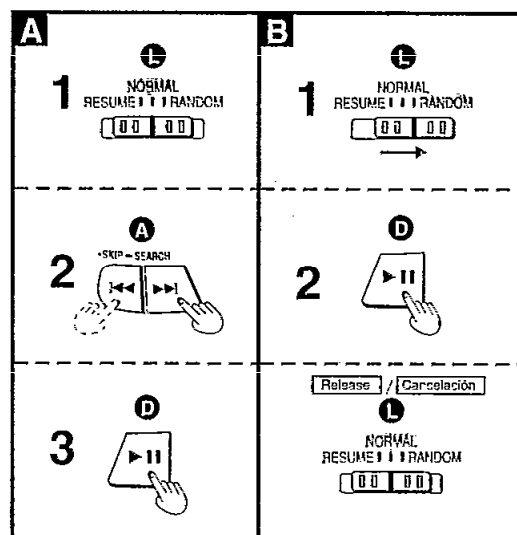
- Car mounting kit (SH-CDF7)

Note

It may not be possible to use the unit with some types of car stereo owing to restrictions imposed by the construction of the car stereo cassette adaptor.

For further details, refer to the instructions of the part concerned.

Other Play Methods



The letters such as Ⓐ in the various illustrations refer to the descriptions in the "Location of Controls" section (see page 2).

Skip play

The disc plays from the specific track through to the end, then play stops automatically.

Preparation: Put unit in stop mode. (See page 3.)

Following steps 1-3.

In step 2, select the desired track.

Random play

Following steps 1-2.

For your reference:

- It is also possible to press the ►► button while the unit is in stop status to change the first track to be played. (All tracks are played eventually, regardless of which is played first.)
- Program play is not possible in the random mode.

Program play

Up to 24 tracks can be entered in the programmed sequence.

Preparation: Put unit in stop mode. (See page 3.)

Following steps 1-5.

In step 2, select the desired track.

In step 3, register in sequence.

(The indication "M" and the programmed sequence appear on the display panel.)

In step 4, repeat steps 2 and 3 to program all the desired tracks.

To program the same track in the sequence more than once

After step 3, press MEMORY/RECALL the desired number of times.

If "F" is displayed

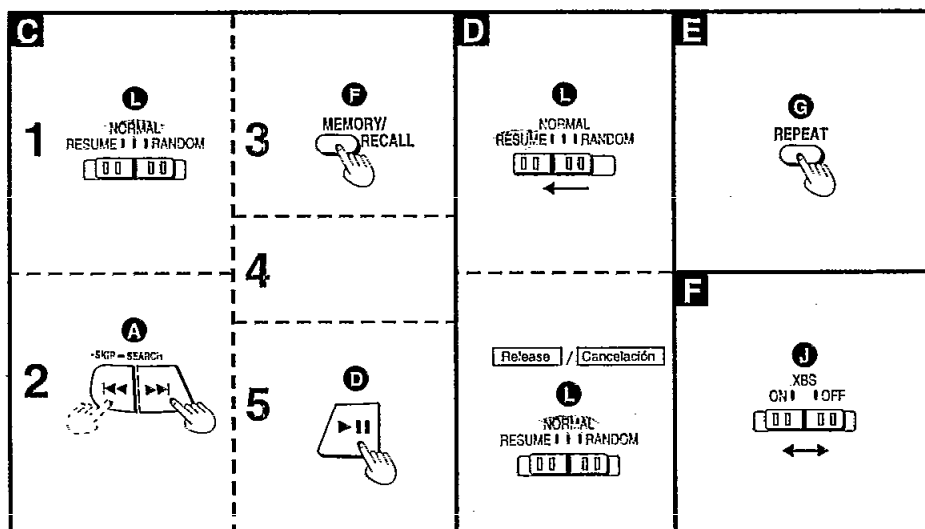
No more tracks may be added to the sequence.

To confirm the contents of the programmed sequence

Press MEMORY/RECALL while the disc is playing. (The number of the programmed tracks appear on the display panel in sequence.)

To delete the entire programmed sequence

Press ■, POWER OFF.



Resume play

This function allows you to listen from the beginning to the track where play stopped because the unit was powered off (or switched to stop status). It is useful when listening to CDs in the car, etc.

For your reference:

- If the RESUME, NORMAL, RANDOM (play mode selector) slider is put in the RESUME position, the all-repeat function will be activated automatically as soon as the unit is powered on.
- If power is cut off near the end of a track (power off status), playback may resume from the beginning of the next track in some cases.
- If the unit is powered off while a disc was playing and then a new disc is inserted, play will begin from the middle of the new disc because the unit remembers the position where play stopped on the previous disc.

For your reference:

If REPEAT is pressed during program play, only the tracks in the programmed sequence are repeated.

(The indication "ALL" is not displayed.)

The setting is switched in the sequence indicated below each time REPEAT is pressed.

1-track repeat (1 ◀)

One track is repeated.

All-track repeat (ALL ◀)

All the tracks on the disc are repeated.

Cancel

Changing the sound quality

XBS ON:

Select this setting to boost the low-range response.

OFF:

Select this setting to turn off the XBS function.

Note

The sound quality setting does not affect the output from the OUT (analog output) jack.

■ Cautions

Rechargeable batteries

- For Continental Europe: Only the RP-BF60, P-3GAVE/2B, SH-CDB8D batteries can be recharged.
- For others: Only the RP-BF60, P-3GAVT/2B, SH-CDB8D batteries can be recharged.
- If the power delivered by the batteries lasts for a very short time after recharging, it means that the batteries' service life is over. Do not use them any more.
- Recharging already charged batteries will shorten their service life.
- When recharging batteries for the first time or when they have not been used for a long period of time, the play time may be shorter than usual. In a case like this, repeatedly recharge and discharge the batteries. This will restore them to their regular state.
- Do not allow any metal objects to touch the terminals of rechargeable batteries since this may cause short-circuiting which is dangerous.

Dry cell batteries/rechargeable batteries

- To prevent damage to the batteries and electrolyte leakage, heed the following points.
- Align the ⊕ and ⊖ polarities properly when inserting the batteries.
 - Do not mix different types or makes of batteries or old and new batteries.
 - Remove the batteries if you do not plan to use the unit for a long period of time.
 - Do not throw batteries into a fire, and do not short-circuit, disassemble or subject them to excessive heat.
 - Do not attempt to recharge dry cell batteries.
 - Do not peel off the plastic covering on the rechargeable batteries. Short-circuiting may occur which is dangerous.

Carrying dry cell batteries/ rechargeable batteries around

When putting dry cell or rechargeable batteries in a pocket or bag, ensure that no other metal objects such as a necklace are placed together with them. Contact with metal may cause short-circuiting which, in turn, may cause a fire.

Be absolutely sure to carry the rechargeable batteries in the battery carrying case.

When driving a car

In the interest of traffic safety, do not operate the unit while driving.

When purchasing rechargeable batteries

As a safety precaution, the portable CD players made by Panasonic have a construction designed to make it impossible to recharge ordinary batteries.

To use rechargeable batteries, be absolutely sure to purchase the rechargeable Ni-Cd batteries designed especially for this unit.

Special rechargeable Ni-Cd batteries:

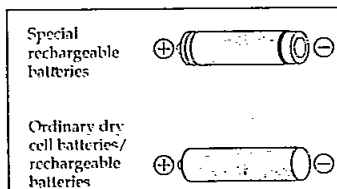
For Continental Europe:

P-3GAVE/2B, SH-CDB8D (set of 2)

For others:

P-3GAVT/2B, SH-CDB8D (set of 2)

For details, check with your dealer.



(For Continental Europe)

Notice about the rechargeable battery
The battery is designated recyclable.
Please follow your local recycling regulations.

AC adaptor

- Handle the AC adaptor carefully. Improper handling is dangerous.
 - Do not touch it with wet hands.
 - Do not place heavy objects on top of it.
 - Do not forcibly bend it.
- Be sure to connect only the AC adaptor provided with the unit.
- Disconnect the AC adaptor from the power outlet if the unit is not going to be used for a long time.

Unit

No altering or remodeling

This can cause malfunctioning.

No dropping or strong impacts

This may damage the unit.

Locations to be avoided

Avoid using the unit in the following locations since they can cause malfunctioning.

1. Bathrooms and other moisture-prone places.
2. Warehouses and other dusty places.
3. Very hot places near heating appliances, etc.

Do not leave the unit exposed to direct sunlight for long periods of time

This may deform or discolor the cabinet and may also cause malfunctioning.

Precautions for Listening with the Headphones or Earphones

- Do not play your headphones or earphones at a high volume. Hearing experts advise against continuous extended play.
- If you experience a ringing in your ears, reduce volume or discontinue use.
- Do not use while operating a motorized vehicle. It may create a traffic hazard and is illegal in many areas.
- You should use extreme caution or temporarily discontinue use in potentially hazardous situations.
- Even if your headphones or earphones is an open-air type designed to let you hear outside sounds, don't turn up the volume so high that you can't hear what's around you.

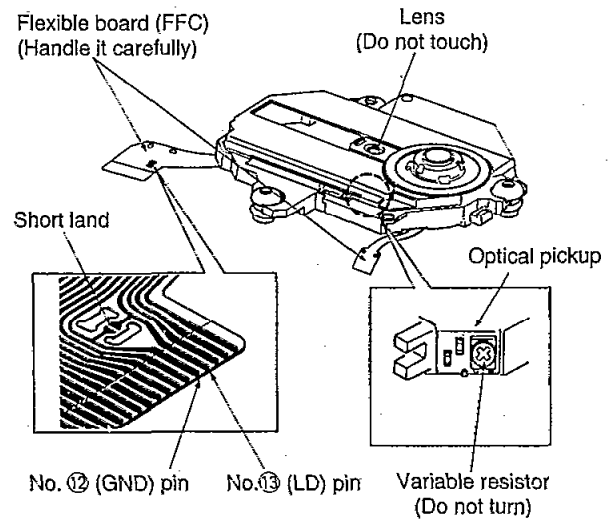
■ Handling Precautions for Traverse Deck

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. The short land between the No. ⑫ (GND) and No. ⑬ (LD) pins on the flexible board (FFC) is shorted with a solder build-up to prevent damage to the laser diode.
To connect to the PC board, be sure to open by removing the solder build-up, and finish the work quickly.
3. Take care not to apply excessive stress to the flexible board (FFC).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

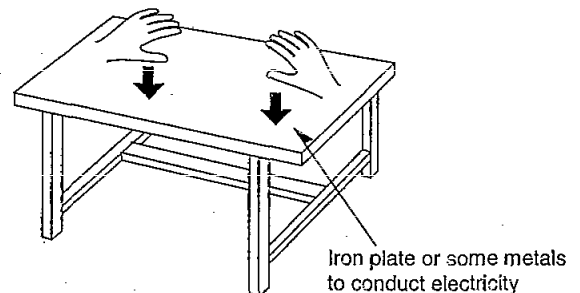
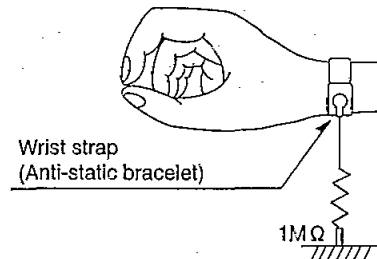


● Grounding for electrostatic breakdown prevention

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 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).

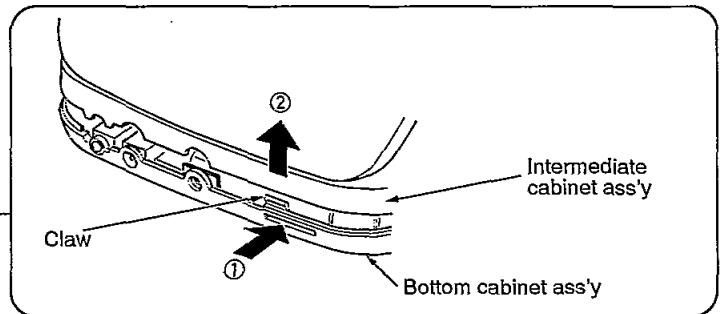
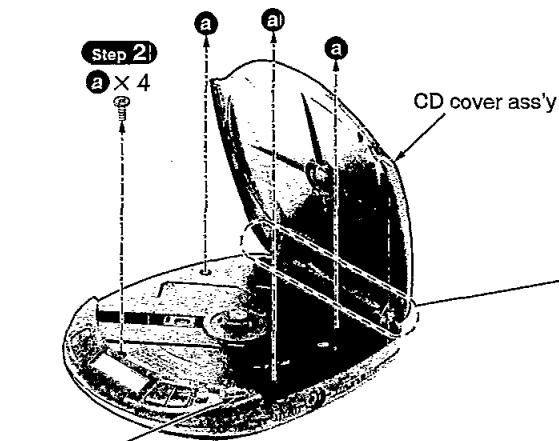


■ Operation Checks and Main Component Replacement Procedures

- NOTE**
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
 2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
 3. [] indicates parts No.

1. Checking for the P.C.B.

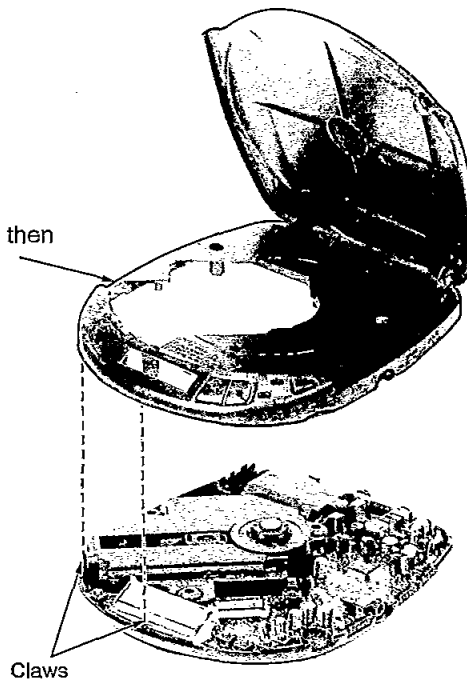
〈Checking for the P.C.B. (Component side)〉



Step 1
Pressing the OPEN button, open the CD cover ass'y.

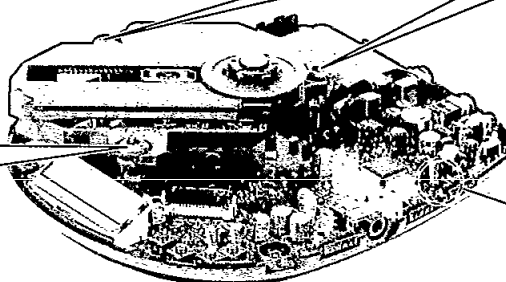
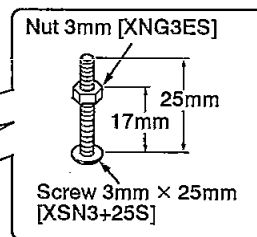
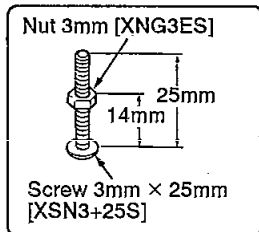
Step 3
Lift the intermediate cabinet ass'y with holding the rear part of bottom cabinet ass'y, and then release the claw.

Step 4
Release the 2 claws, and then remove the intermediate cabinet ass'y.



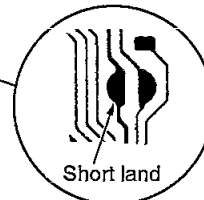
NOTE

- After checking, unsolder the short land to open circuit.
- The tip of screw must not protrude above the floating rubber.
- To keep insulation, place the insulator sheet (paper etc.) between the P.C.B. and the head of screws.



Step 5

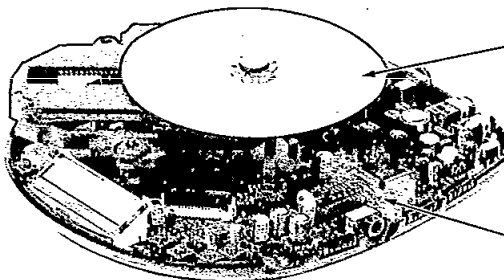
Short-circuit the land by soldering.



Step 6

Sustain the traverse deck with the floating-rubber inserted screws and nuts as shown above.

- Check the P.C.B. (Component side) as shown below.



Step 7

Put the disc (8cm).

P.C.B. (Component side)

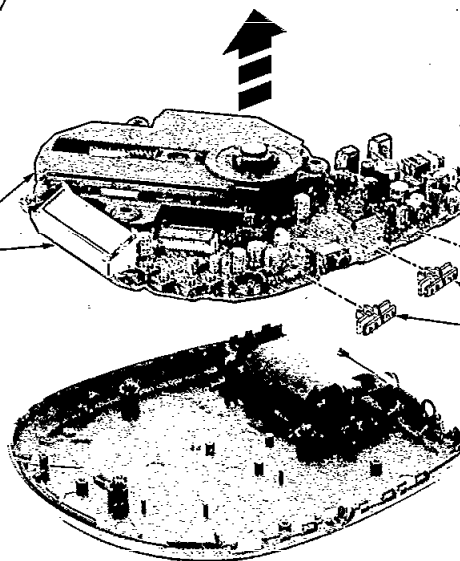
NOTE

After checking, unsolder the short land to open circuit.

⟨Checking for the P.C.B. (Solder side)⟩

Step 9

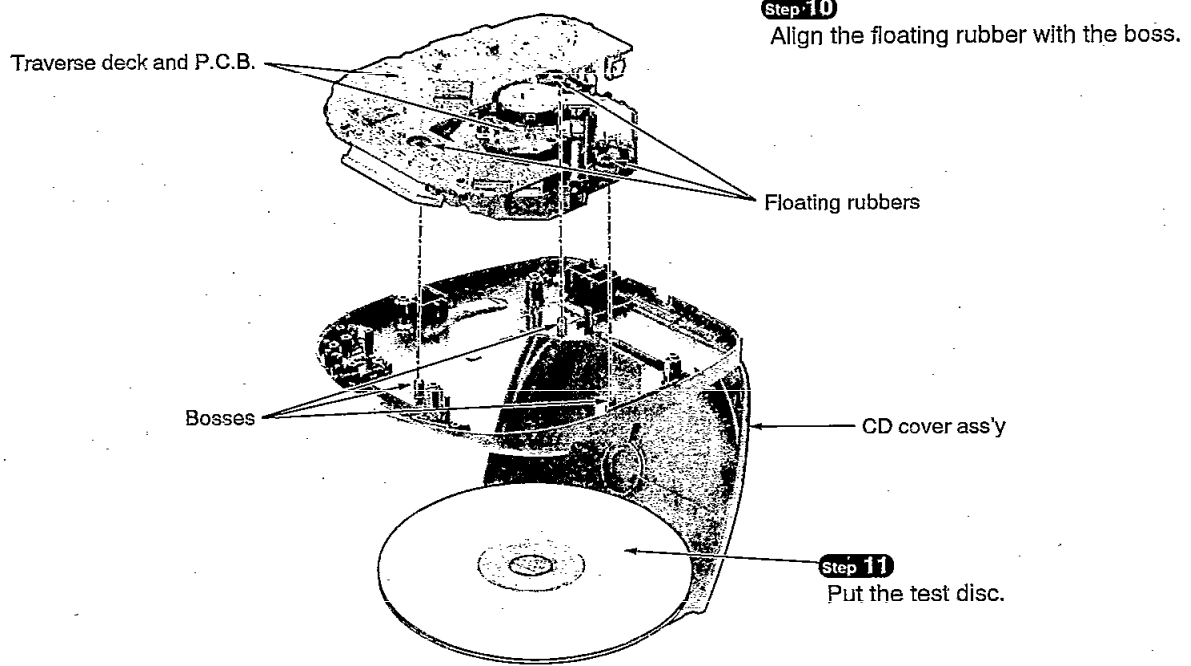
Remove the traverse deck and P.C.B.,



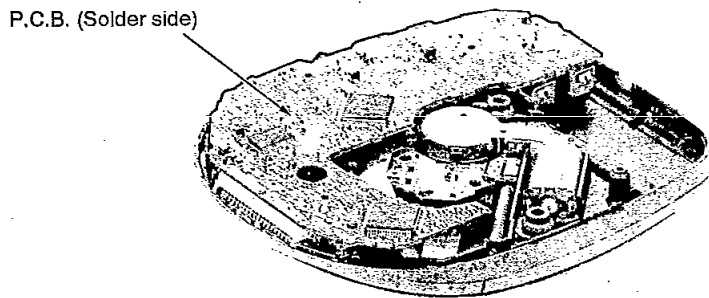
Switch knobs

Step 8

Remove the 3 switch knobs.

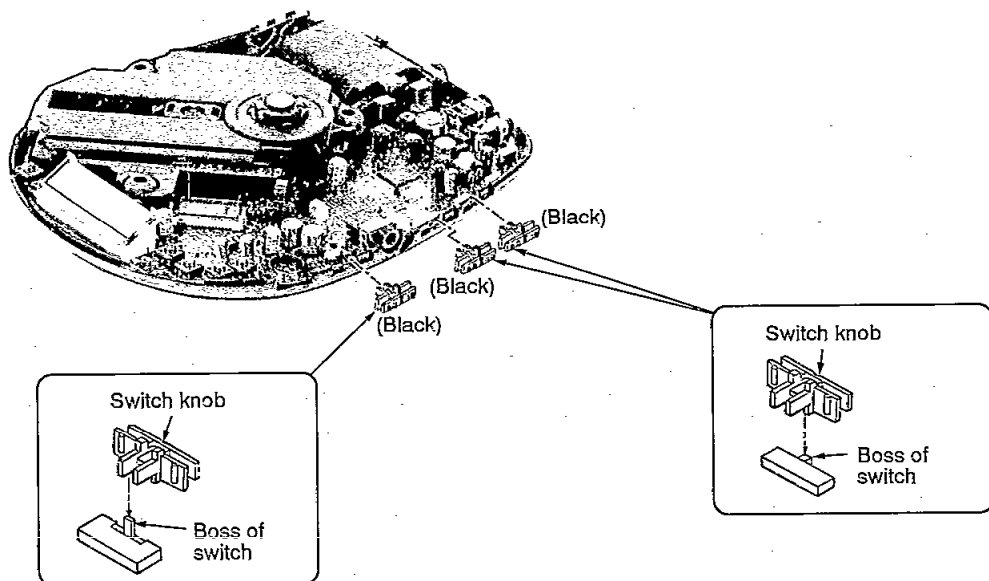


• Check the P.C.B. (Solder side) as shown below.



NOTE
After checking, unsolder the short land to open circuit.

Notice for Installation of switch knobs

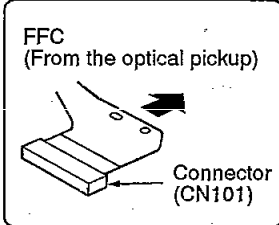


2. Replacement for the traverse deck

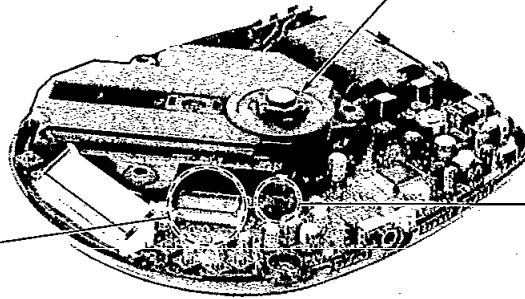
• Follow the **Step 1** ~ **Step 4** in item 1.

Step 1

Pull out the FFC from connector (CN101).

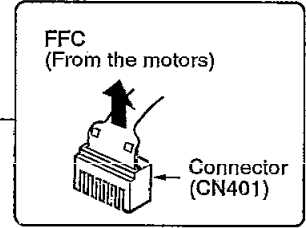


Traverse deck
[RAE0142Z]



Step 2

Pull out the FFC from connector (CN401).



NOTE

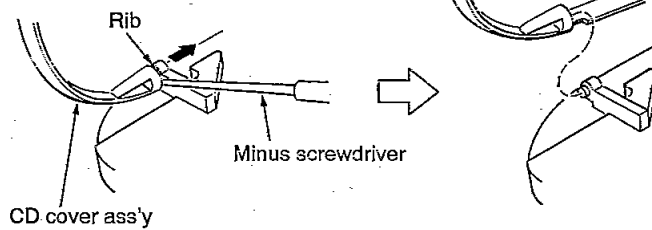
Solder the point between pin 13 (LD) and pin 12 (GND) of FFC board.
(Refer to "Handling Precautions for Traverse Deck" on page 7.)

3. Replacement for the CD cover ass'y

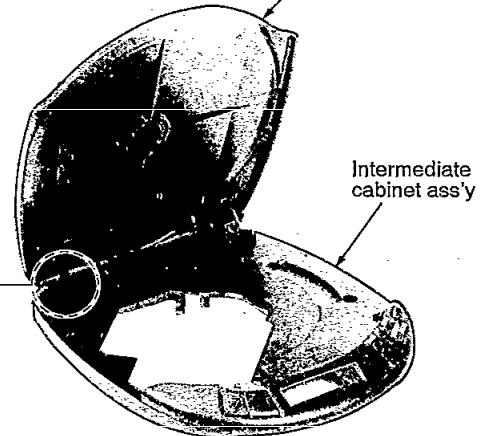
• Follow the **Step 1** ~ **Step 4** in item 1.

Step 1

Push the rib in the direction of arrow with thin tip of minus screwdriver, and then remove the CD cover ass'y.

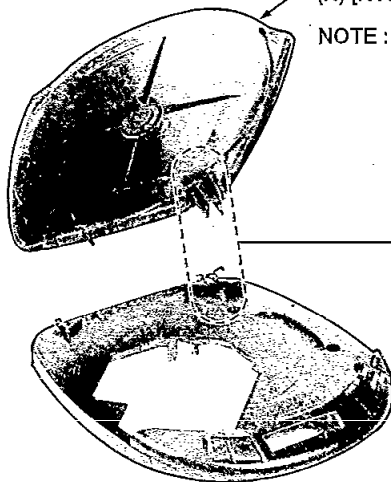


CD cover ass'y



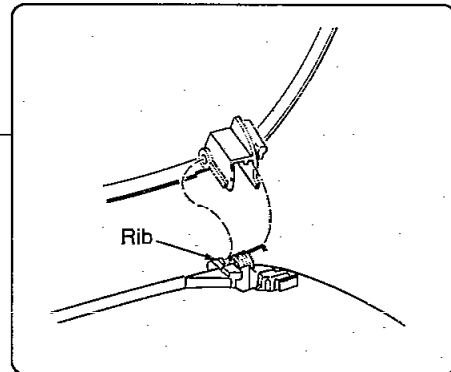
CD cover ass'y
(A) [RYF0441-A] } SL-S120
(H) [RYF0441-H] }
(H) [RYF0441B-H] } SL-S125

NOTE : (A) : Blue type
(H) : Gray type



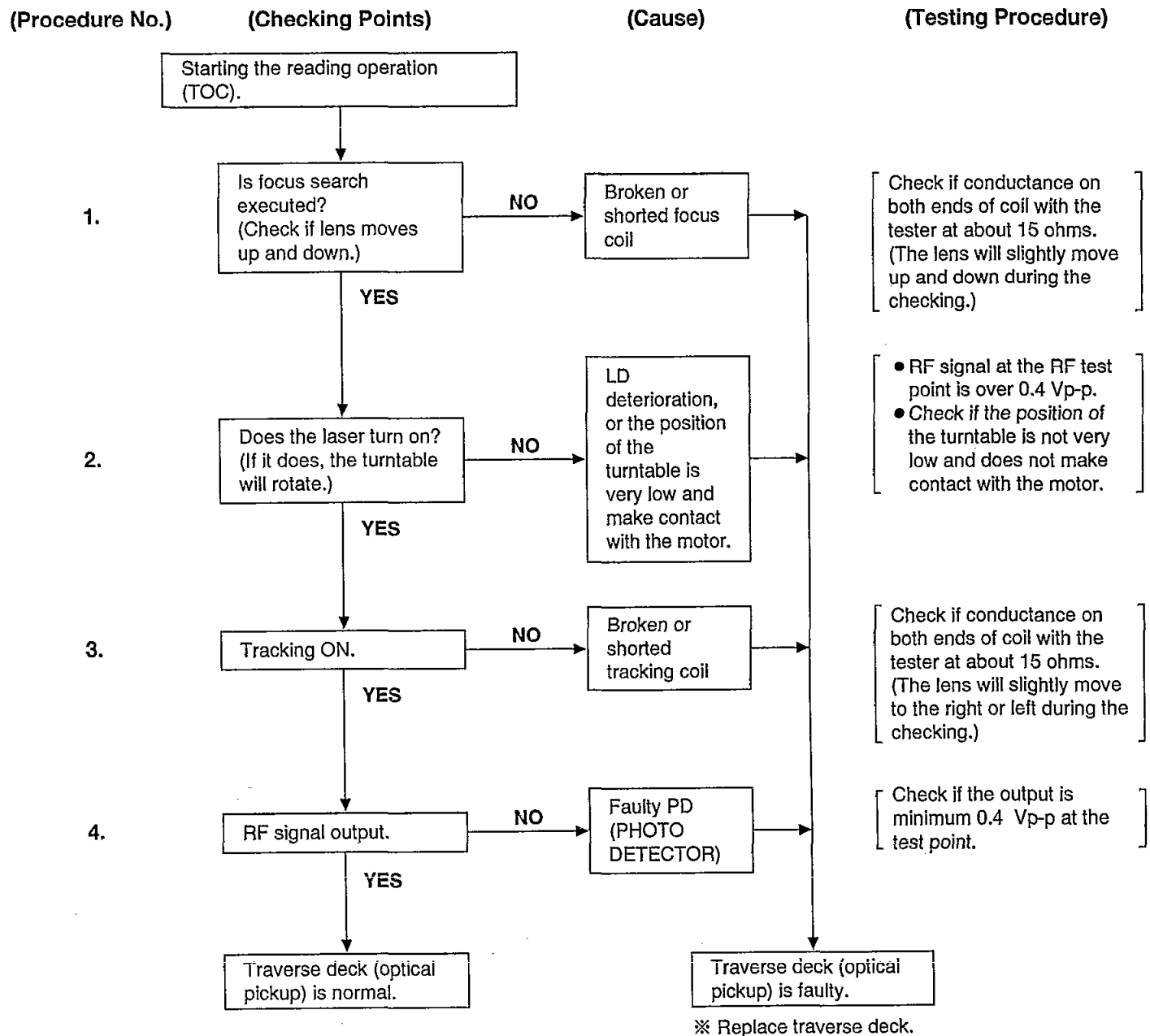
Step 2

Then release the other rib and remove the CD cover ass'y.



■ 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.



- 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 0.7 mm black dot and the 0.7 mm 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.

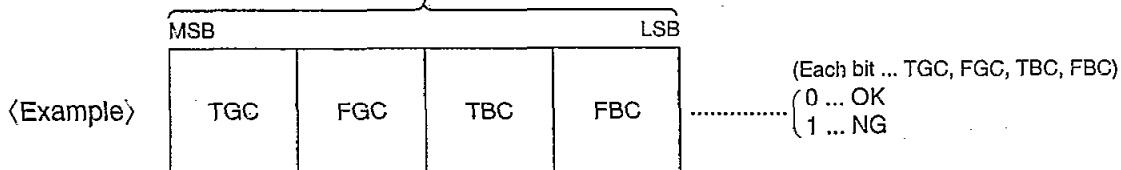
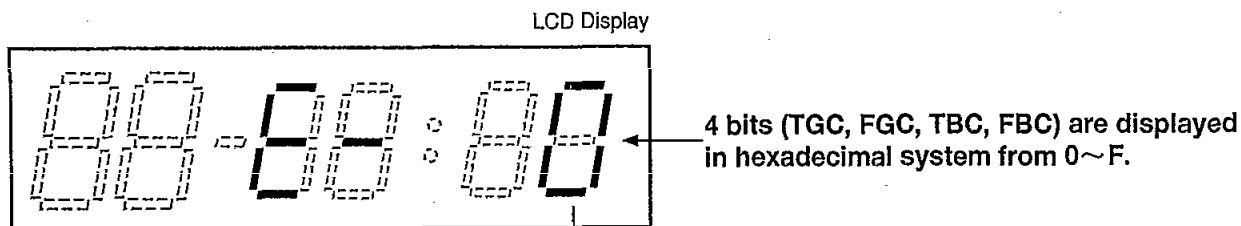
■ Automatic Adjustment Results Display Function (Self-check Function)

On this unit (SL-S120/S125), each automatic adjustment 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 automatic adjustment result displays (self-check function.)

● How to display automatic adjustment results

1. Load the test disc (SZZP1054C).
2. Press the ◀◀ (SKIP/SEARCH) and ▶▶ (SKIP/SEARCH) Buttons simultaneously and hold them, and additionally press the ▶/|| (PLAY/PAUSE) Button.
3. Press the ■ (STOP/POWER OFF) Button once.
4. An automatic adjustment result is displayed on the LCD.

● Display of automatic adjustment results (self-check function)



<Example>

- | | | | | | |
|----|---------------------------|------|------|------|---|
| | ↓ | ↓ | ↓ | ↓ | |
| 1) | 0 | 0 | 0 | 0 | ⇒ "E-0" is displayed. |
| | (All adjustments are OK.) | | | | Normal |
| 2) | 0 | 0 | 0 | 1 | ⇒ "E-1" is displayed. |
| | (OK) | (OK) | (OK) | (NG) | (Focus balance adjustment is NG (incorrect.)) |
| 3) | 0 | 1 | 0 | 0 | ⇒ "E-4" is displayed. |
| | (OK) | (NG) | (OK) | (OK) | (Focus gain adjustment is NG.) |
| 4) | 1 | 1 | 1 | 1 | ⇒ "E-F" is displayed. |
| | (All adjustments are NG.) | | | | |
| 5) | 1 | 0 | 0 | 0 | ⇒ "E-8" is displayed. |
| | (NG) | (OK) | (OK) | (OK) | (Tracking gain adjustment is NG.) |

Note: If any other disc than the test disc (SZZP1054C) is used, an "E-8" may be displayed.

〈Example〉 Follow the below steps when "E-1" is displayed.

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

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

Follow the below steps when "E-4" is displayed.

(Cause: Focus gain (FGC) 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 15 ohms), and
 - (3) the optical pickup returns to the normal state by exchanging the traverse deck.

Follow the below steps when "E-F" is displayed.

(Cause : All adjustments (TGC, FGC, TBC, FBC) are set beyond the limit.)

- Check if
 - (1) the optical pickup returns to the normal state by exchanging the traverse deck, and
 - (2) the waveform or voltage of the servo IC's (IC101, 501) are correct.

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.

■ Measurements and Adjustments

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

ACHTUNG: ● Die lasereinheit nicht zerlegen.

- Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

● Measuring Instruments and special tools

● Test discs

1. Playability test disc (SZZP1054C)
2. Uneven test disc (SZZP1056C)

● Musical program disc (ordinary)

- 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 Fig. 1 or printed circuit board and wiring connection diagram for short land location on page 24.)

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 (as shown in Fig.1).

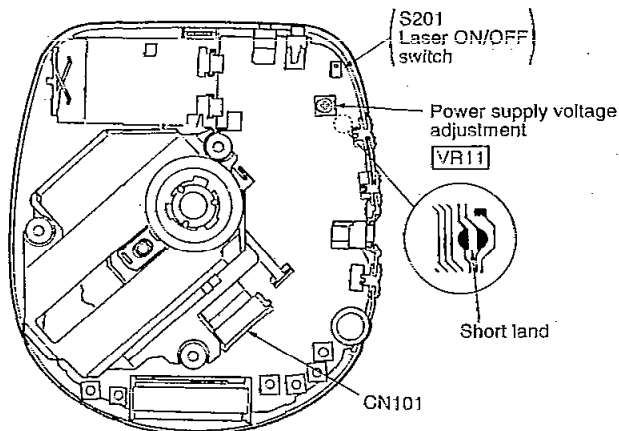


Fig. 1

● Adjustment procedure

(1) POWER SUPPLY VOLTAGE ADJUSTMENT

1. Connect the DC voltmeter to **TP103** (VCC) (+) and **TP104** (GND) on the P.C.B.
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.)
3. Insert the test disc, and switch the player power ON.
4. Adjust **VR11** on the P.C.B. at **3.10 – 3.14 V**, as shown in Fig.1.

(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 0.7 mm black dot and the 0.7 mm 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-S120/S125 servo circuit is equipped with an automatic adjusting circuit, these controls are removed from SL-S120/S125.

On conventional portable CD player

Use for Old Servo IC (AN8373SE2, AN8374SE2)

1. Tracking Offset Adjustment VR (TOC)
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-S120/S125

Use for New Servo IC (AN8837SBE1, MN662746RPKI)

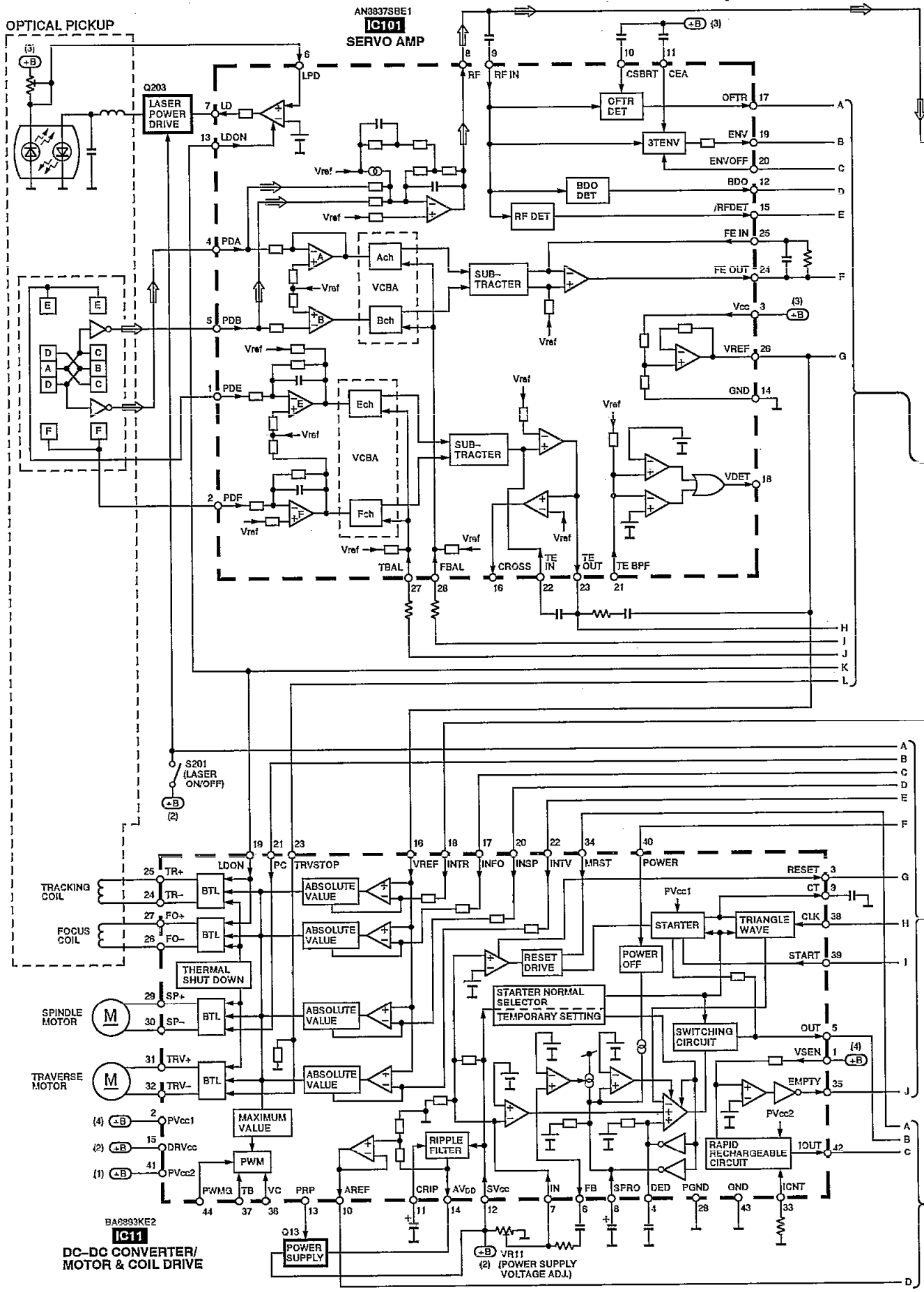
- ➔ Non Adjustment
- ➔ Automatic Adjusting Circuit

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-S120/S125 automatically controls the servo circuit to obtain optimum performance according to any disc's characteristics. Therefore, no malfunction occurs because of mis-adjustment.

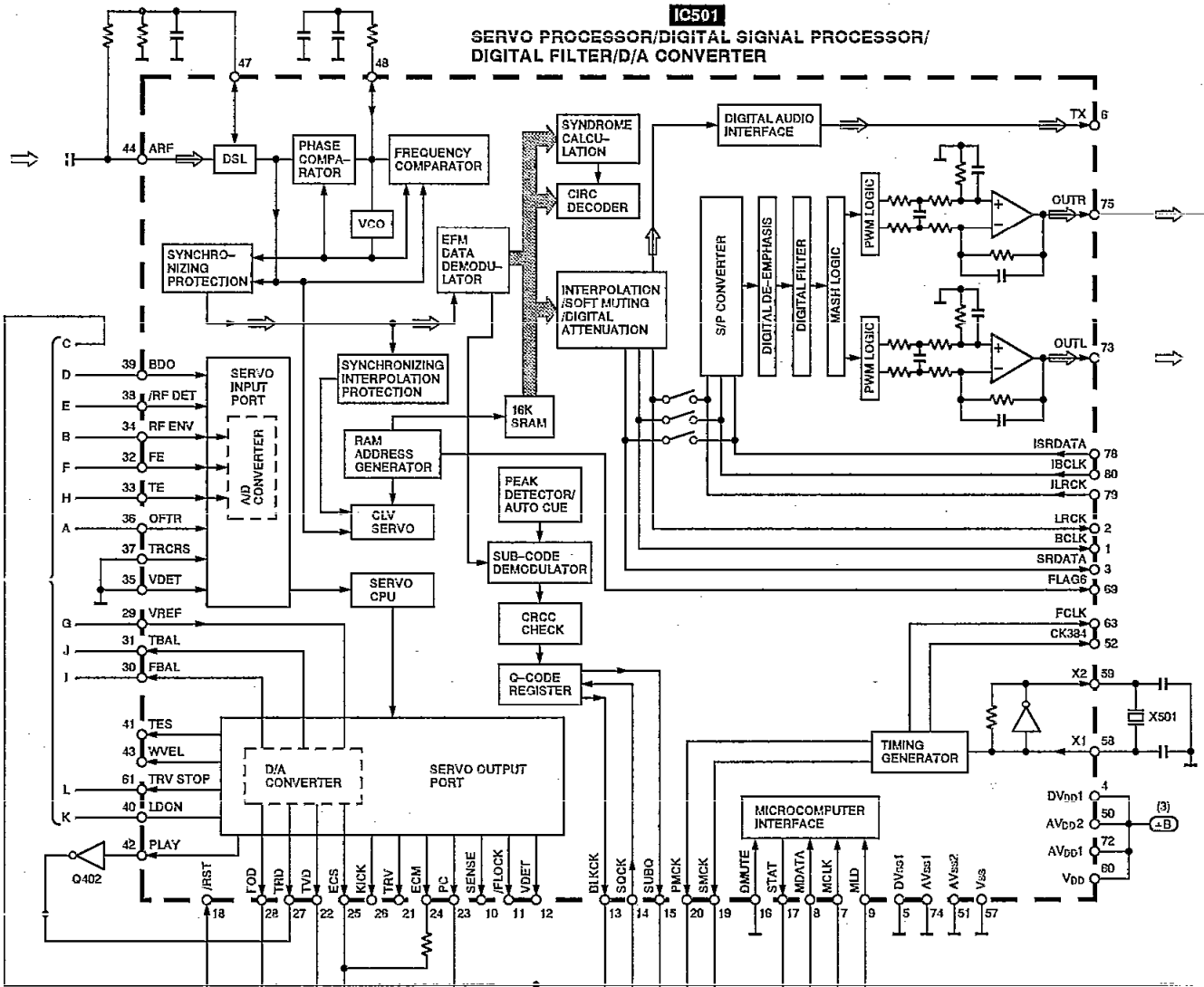
Block Diagram



MN662746RPK1

IC501

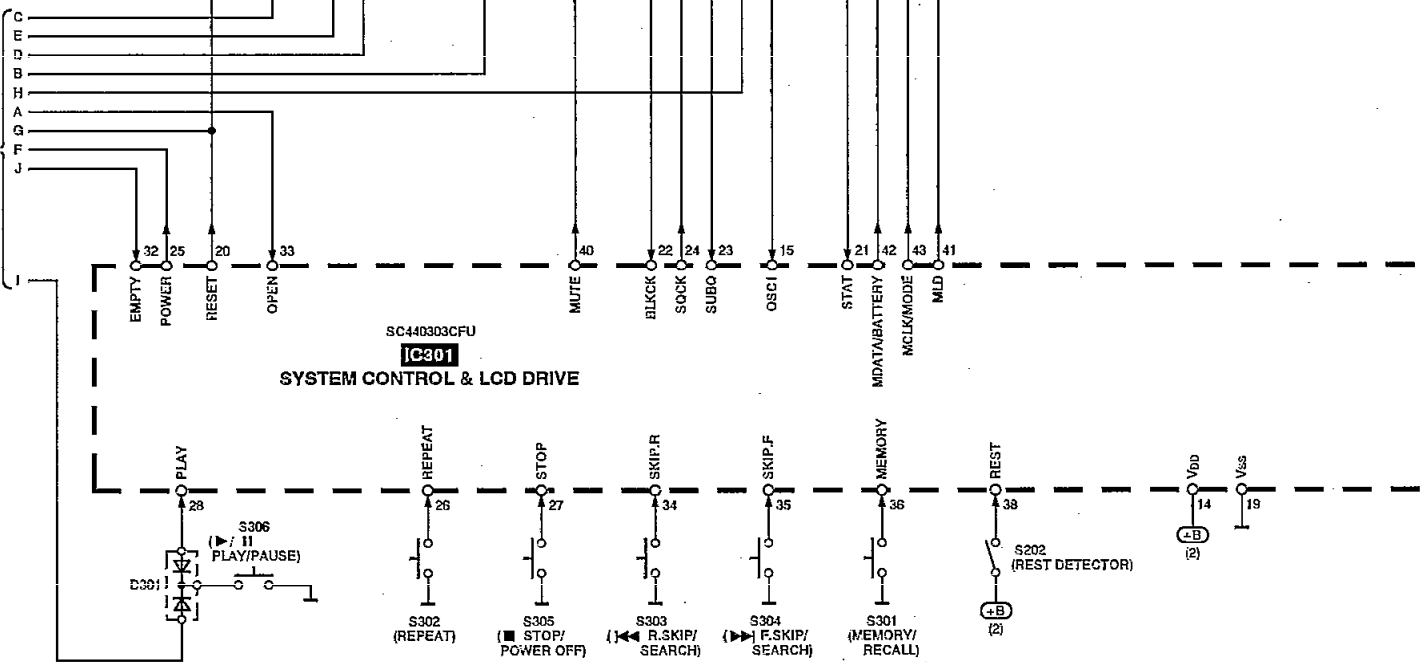
**SERVO PROCESSOR/DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/D/A CONVERTER**

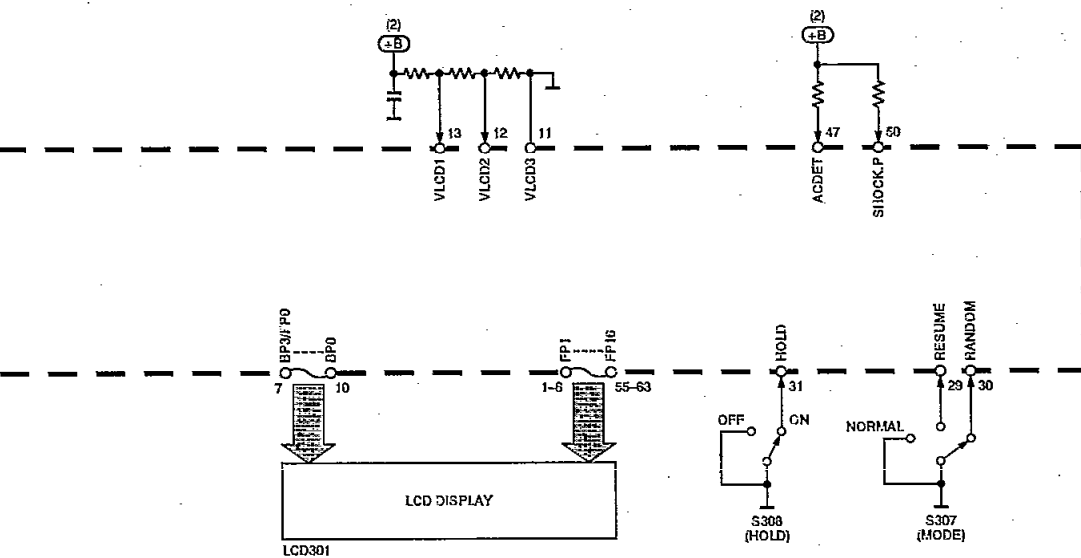
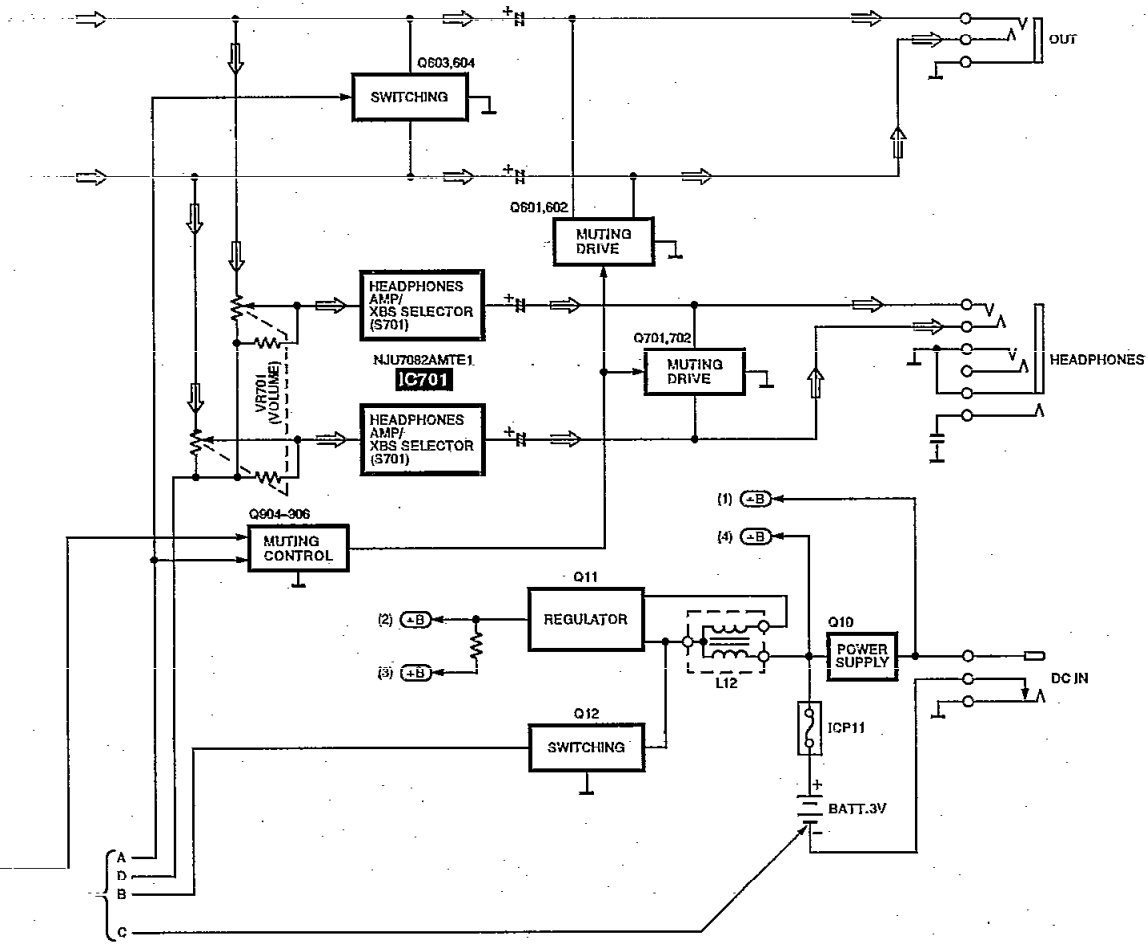


SC440303CFU

IC301

SYSTEM CONTROL & LCD DRIVE







■ Schematic Diagram (See parts list on pages 31, 32.)

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

Notes:

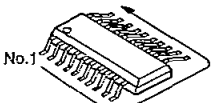
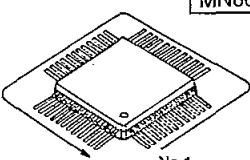
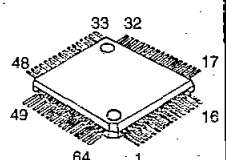
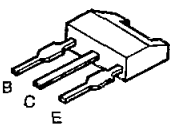
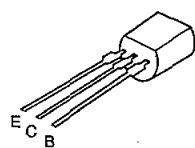

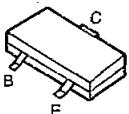
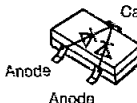
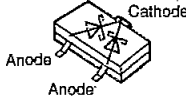
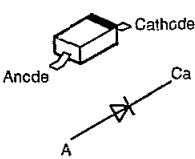
- **S201:** Laser ON/OFF switch in "OFF" position.
(It turns "ON" with disc holder closed.)
- **S202:** Rest detector in "OFF" position.
(It turns "ON" when optical pickup comes to innermost periphery.)
- **S301:** Memory/recall (MEMORY/RECALL) switch.
- **S302:** Repeat (REPEAT) switch.
- **S303, 304:** Skip/search (I◀◀-SKIP/--SEARCH▶▶I) switches.
(S303: I◀◀, S304: ▶▶I)
- **S305:** Stop/power off (■ POWER OFF) switch.
- **S306:** Play/pause (▶ ||) switch.
- **S307:** Play mode selector (MODE) in "RANDOM" position.
(RANDOM↔NORMAL↔RESUME)
- **S308:** Hold (HOLD) switch in "ON" position.
- **S701:** MODE (XBS ON/OFF) switch "ON" position.

- 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.
- * The parenthesized is the voltage for test disc (1 kHz, L+R, 0 dB) 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 manufacture's specified parts shown in the parts list.

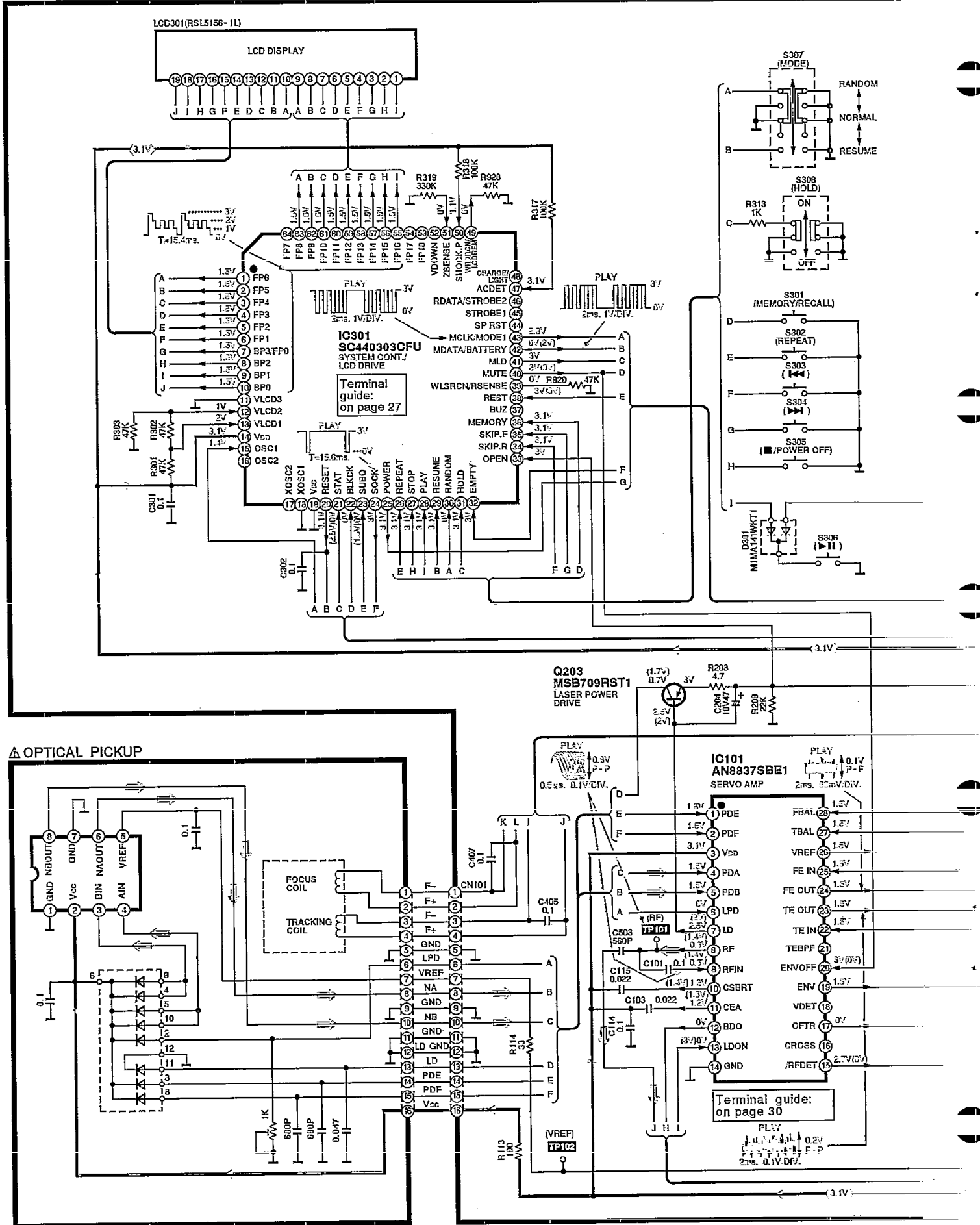
Caution!



- 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.

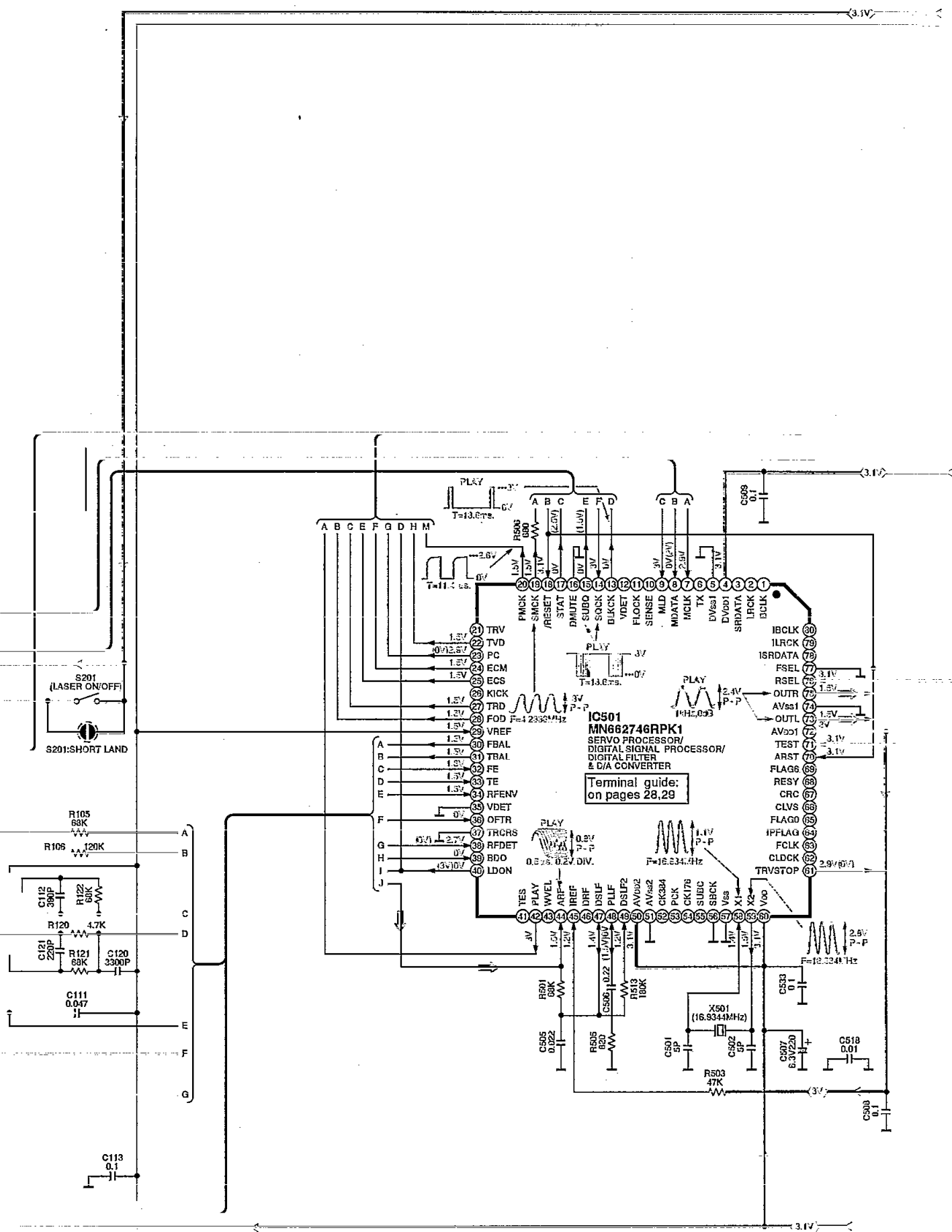
■ Type Illustration of IC's, Transistors and Diodes

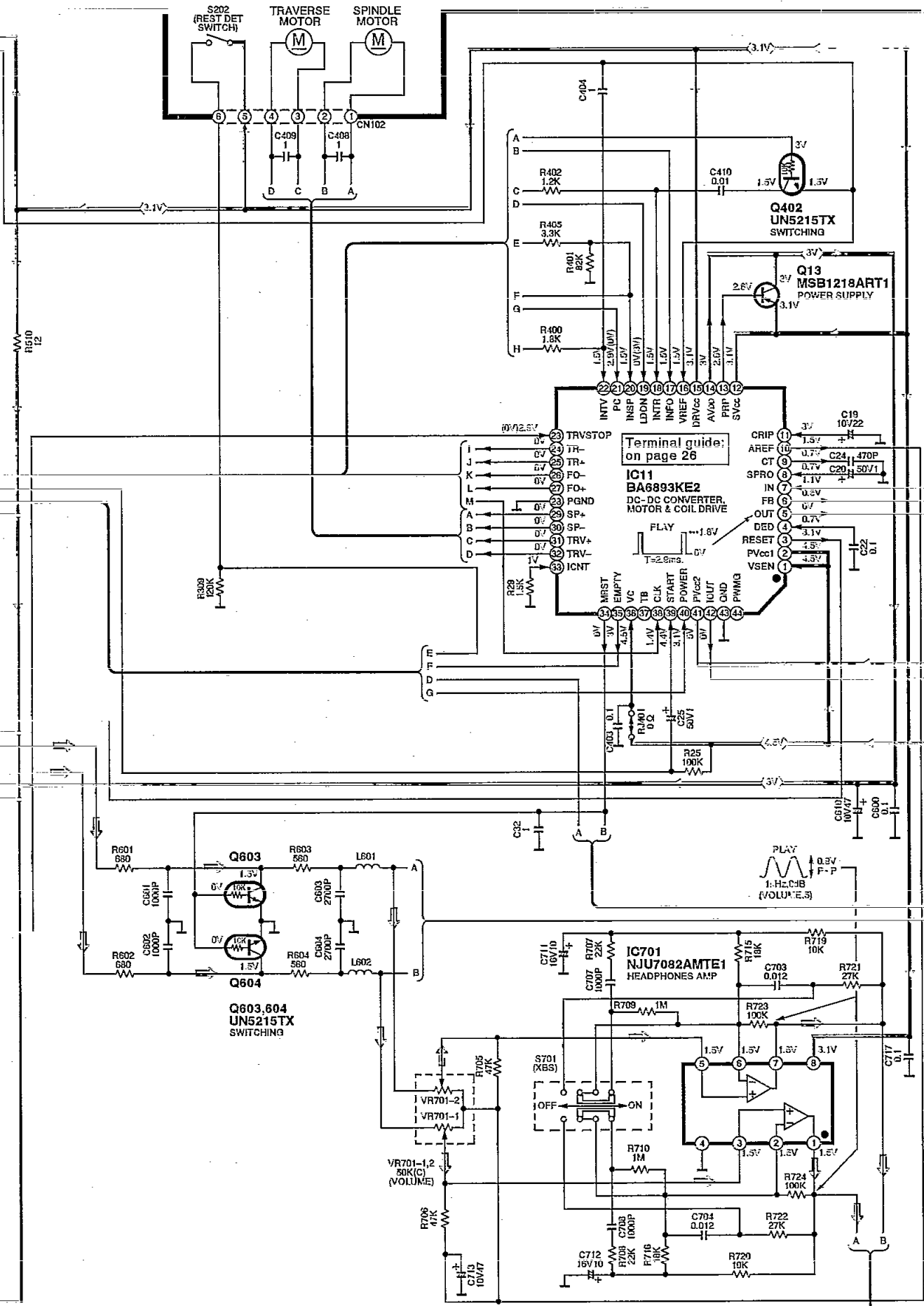
<table border="1"> <tr> <td>NJU7082AMTE1</td> <td>8PIN</td> </tr> <tr> <td>AN8837SBE1</td> <td>28PIN</td> </tr> </table>  <p>No.1</p>		NJU7082AMTE1	8PIN	AN8837SBE1	28PIN	<table border="1"> <tr> <td>BA6893KE2</td> <td>44PIN</td> </tr> <tr> <td>MN662746RPK1</td> <td>80PIN</td> </tr> </table>  <p>No.1</p>		BA6893KE2	44PIN	MN662746RPK1	80PIN	<p>SC440303CFU</p> 	<p>2SD2074HWRST</p> 
NJU7082AMTE1	8PIN												
AN8837SBE1	28PIN												
BA6893KE2	44PIN												
MN662746RPK1	80PIN												
<p>2SD1302STTA</p> 	<p>2SD1450STTA</p> 	<p>2SD1328RSTTX DTA114YUA106 MSB1218ART1 MSB709RST1 UN5210TX UN5215TX</p> 	<p>M1MA141WKT1</p> 	<p>RB411DT146</p> 									
<p>MA110TX</p> 													

(P.C.Board: on pages 24,25)

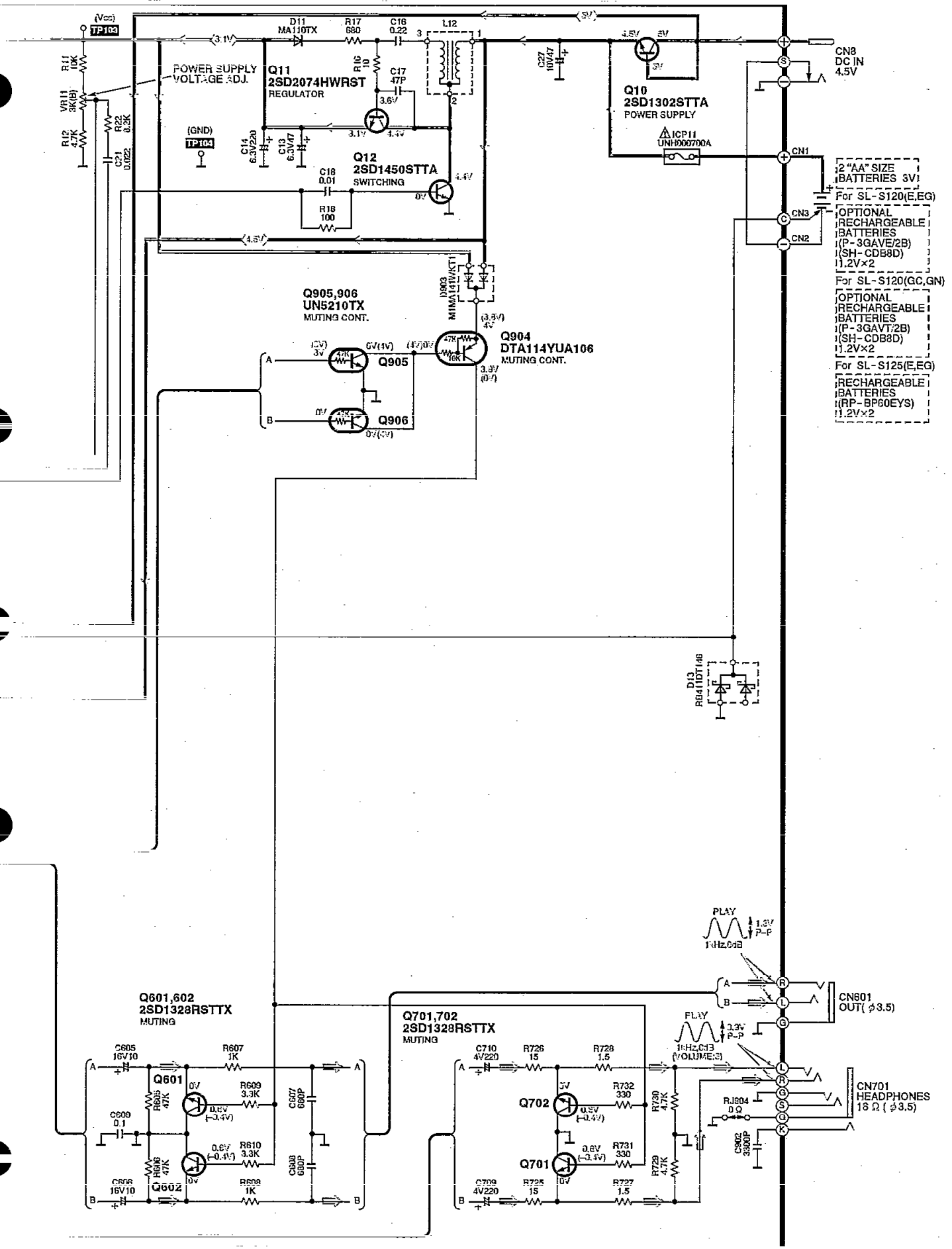


 : Positive voltage lines
 : Audio signal lines

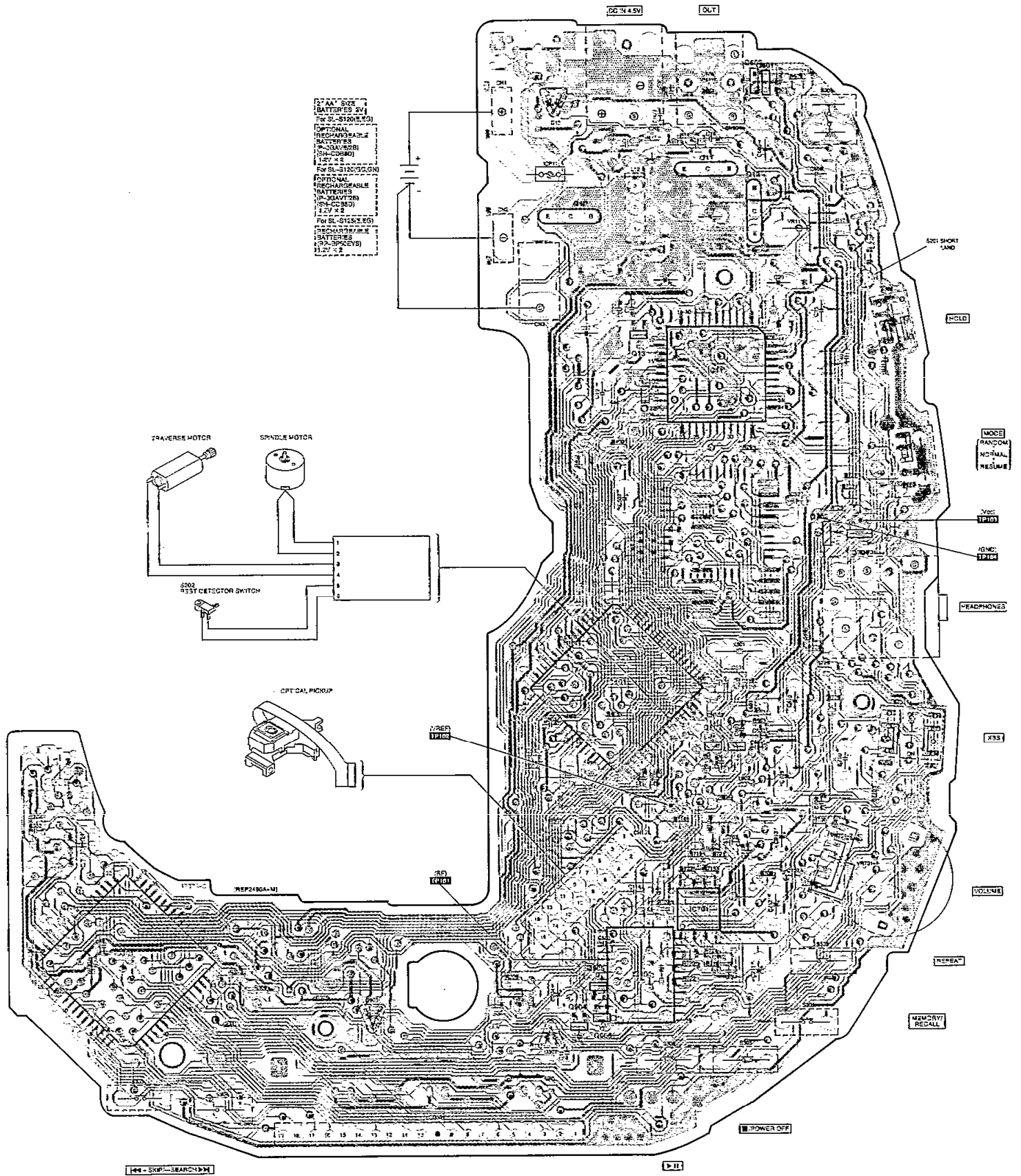




⚡ : Positive voltage lines
 ⇨ : Audio signal lines



Printed Circuit Board and Wiring Connection Diagram





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.
- The printed circuit board diagram may be modified at any time with the development of new technology.

Terminal Function of IC's

● IC11 (BA6893KE2): DC-DC converter & motor drive

Pin No.	Mark	I/O Division	Function
1	VSEN	I	Empty det. input terminal
2	PVCC1	I	Dead time input terminal
3	RESET	O	Reset signal output terminal
4	DED	I	Dead time input terminal
5	OUT	O	DC-DC converter output terminal
6	FB	O	Error amp output terminal
7	IN	I	Error amp input terminal
8	SPRO	I	Short protection input terminal
9	CT	O	Triangular wave oscillator terminal
10	AREF	O	1/2 AVDD output terminal
11	CRIP	I	Capacitor connection terminal for ripple filter
12	SVCC	I	Power supply terminal
13	PRP	O	Ripple transistor control output terminal
14	AVDD	O	Ripple filter output terminal
15	DRVCC	I	Power supply terminal
16	VREF	I	1/2 VCC input terminal
17	INFO	I	Focus coil driver input terminal
18	INTR	I	Tracking coil driver input terminal
19	LDON	I	Laser ON/OFF driver control terminal
20	INSP	I	Spindle motor driver input terminal
21	PC	I	Spindle motor driver ON/OFF control terminal
22	INTV	I	Traverse motor driver ON/OFF control terminal

Pin No.	Mark	I/O Division	Function
23	TRVSTOP	I	Traverse motor driver ON/OFF control terminal
24	TR-	O	Tracking coil driver output terminal
25	TR+		
26	FO-	O	Focus coil driver output terminal
27	FO+		
28	PGND	—	GND terminal
29	SP+	O	Spindle motor driver output terminal
30	SP-		
31	TRV+	O	Traverse motor driver output terminal
32	TRV-		
33	ICNT	I	Rechargeable current setting terminal
34	MRST	O	Muting reset output terminal
35	EMPTY	O	Empty det. output terminal
36	VC	I	Power supply voltage input terminal
37	TB	O	PWM circuit output terminal
38	CLK	I	External synch. clock input terminal
39	START	I	Start oscillator input terminal
40	POWER	I	Power ON/OFF input terminal
41	PVCC2	I	Power supply terminal
42	I OUT	O	Rechargeable and battery det. terminal
43	GND	—	GND terminal
44	PWMG	I	Roop gain adj. input terminal

● IC301 (SC440303CFU) : System control & LCD drive

Pin No.	Mark	I/O Division	Function
1 5 6	FP6 } FP1		
7	BP3/FP0	O	LCD segment signal output terminal
8 9 10	BP2 } BP0		
11 12 13	VLCD3 } VLCD1	I	Voltage control input terminal
14	V _{DD}	I	Power supply terminal
15	OSC1	I	Main system clock input terminal
16	OSC2	—	Not used, open
17	XOSC2	—	Not used, open
18	XOSC1	—	Not used, connected to GND
19	V _{SS}	—	GND terminal
20	RESET	O	Reset signal output terminal
21	STAT	I	Status signal input (CRC, CUE, CLVS, TT STOP, FCLV, SQOK)
22	BLKCK	I	Sub-code block clock (F=75Hz with normal play)
23	SUBQ	I	Sub-code Q data input terminal
24	SQCK	O	Sub-code Q register clock signal output terminal
25	POWER	O	Power ON/OFF signal output terminal
26	REPEAT	I	Key switch input terminal (REPEAT)
27	STOP	I	Key switch input terminal (STOP)
28	PLAY	I	Key switch input terminal (PLAY/PAUSE)
29	RESUME	I	Key switch input terminal (RESUME)
30	RANDOM	I	Key switch input terminal (RANDOM)
31	HOLD	I	Key switch input terminal (HOLD)
32	EMPTY	I	Empty det. input terminal

Pin No.	Mark	I/O Division	Function
33	OPEN	I	Disc holder open det. terminal ("L" with open)
34	SKIP. R	I	Key switch input terminal (SKIP/SEARCH. R)
35	SKIP. F	I	Key switch input terminal (SKIP/SEARCH. F)
36	MEMORY	I	Key switch input terminal (MEMORY)
37	BUZ	O	Beep control signal output terminal
38	REST	I	Rest det. input terminal
39	WLSRCN/ RSENSE	I	Remote control signal input terminal
40	MUTE	O	Muting signal output terminal ("H" : mute)
41	MLD	O	Command load signal output terminal ("L" : load)
42	MDATA/ BATTERY	O	Command data signal output terminal
43	MCLK/ MODE1	O	Command clock signal output terminal
44	SPRST	O	Rest det. output terminal
45	STROBE1	O	Remote control clock signal output terminal
46	RDATA/ STROBE2	I/O	Remote control data signal terminal
47	ACDET	I	Power det. input terminal
48	CHARGE/ LIGHT	—	Not used, open
49	WRDRCN/ LCDREM	I	Not used, open
50	SHOCK. P	I	Key switch input terminal (not used connected to power supply)
51	ZSENSE	I	Sense signal input terminal
52	VDOWN	O	Reference current control output terminal
53	FP18	—	Not used, open
54	FP17	—	Not used, open
55 62 63	FP16 } FP8	O	LCD segment signal output terminal
64	FP7	—	Not used, open

• IC501 (MN662746RPK1): Servo processor / Digital signal processor / Digital filter / D/A converter

Pin No.	Mark	I/O Division	Function
1	BCLK	O	Serial bit clock output
2	LRCK	O	L/R discriminating signal output
3	SRDATA	O	Serial data signal output
4	DVDD1	I	Power supply (digital circuit) terminal
5	DVSS1	I	GND (digital circuit) terminal
6	TX	—	Digital audio interface signal (Not used, open)
7	MCLK	I	Command clock signal
8	MDATA	I	Command data signal
9	MLD	I	Command load signal ("L" : LOAD)
10	SENSE	—	Sense signal (OFT, FESL, NACEND, NAJEND, POSAD, SFG) (Not used, open)
11	FLOCK	—	Optical servo condition (focus) ("L" : lead-in) (Not used, open)
12	VDET	—	Vibration det. signal terminal ("H" : DET)
13	BLKCK	O	Sub-code block clock (f=75 Hz)
14	SQCK	I	Sub-code Q register clock
15	SUBQ	O	Sub-code Q data
16	DMUTE	I	Muting input ("H" : MUTE) (Not used, connected to GND)
17	STAT	O	Status signal (CRC, CUE, CLVS, TTSTOP, FCLV, SQCK)
18	RESET	I	Reset signal ("L" : reset)
19	SMCK	O	System clock (f=4.2336 MHz)
20	PMCK	O	Frequency division clock signal ($f = \frac{1}{1.92} \times ck = 88.2 \text{ kHz}$)
21	TRV	O	Traverse servo control (Not used, open)

Pin No.	Mark	I/O Division	Function
22	TVD	O	Traverse drive signal
23	PC	O	Turntable motor drive signal ("L" : ON)
24	ECM	O	Turntable motor drive signal (Forced mcde)
25	ECS	O	Turntable motor drive signal (Servo error signal)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	I	D/A drive output (TVD, ECS, TRD, FOD, FBAL, TBAL) normal voltage input terminal
30	FBAL	O	Focus balance adj. output (Not used, open)
31	TBAL	O	Tracking balance adj. output
32	FE	I	Focus error signal (analog input)
33	TE	I	Tracking error signal (analog input)
34	RFENV	I	RF envelope signal
35	VDET	I	TEST terminal
36	OFTR	I	Off track signal ("H" : Off track)
37	TRCRS	I	Track cross signal input (TEST terminal)
38	RFDET	I	RF detection signal ("L" : detection)
39	BDO	I	Dropout detection signal ("H" : dropout)
40	LDON	O	Laser power control ("H" : ON)
41	TES	—	Tracking error shunt output ("H" : dropout) (Not used, open)
42	PLAY	O	Play signal ("H" : play)

Pin No.	Mark	I/O Division	Function
43	WVEL	—	Double velocity status signal ("H" : double) (Not used, open)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	—	DSL bias terminal (Not used, connected to GND)
47	DSL F	I/O	DSL loop filter terminal
48	PLL F	I/O	PLL loop filter terminal
49	DSL F2	O	DSL loop filter terminal
50	AVDD2	I	Power supply (analog circuit) terminal (2)
51	AVSS2	—	GND (analog circuit) terminal
52	CK384	O	384 CK (16.9344 MHz) output (Not used, open)
53	PCK	—	PLL extract clock (f=4.3218 MHz) (Not used, open)
54	CK176	O	176 CK (176.4 KHz) output (Not used, open)
55	SUBC	O	Sub-code serial output data (Not used, open)
56	SBCK	—	Sub-code serial input clock (Not used, connected to GND)
57	VSS	—	GND terminal
58	X1	I	Crystal oscillator terminal (f=16.9344 MHz)
59	X2	O	
60	VDD	I	Power supply terminal
61	TRVSTOP	O	Traverse motor stop control terminal
62	CLDCK	—	Sub-code frame clock signal (f CLDCK=7.35 kHz: Normal) (Not used, open)

Pin No.	Mark	I/O Division	Function
63	FCLK	—	Crystal frame clock (Not used, open)
64	IPFLAG	—	Interpolation flag terminal
65	FLAGO	—	Flag terminal
66	CLVS	—	Turntable servo phase synchro signal ("H" : CLV, "L" : Rough servo) (Not used, open)
67	CRC	—	Sub-code CRC check terminal ("H" : OK, "L" : NG) (Not used, open)
68	RESY	O	Flam synchro signal output
69	FLAG6	—	Flag terminal
70	ARST	I	A reset input terminal
71	TEST	I	Test terminal (Normal: "H")
72	AVDD1	I	Power supply (analog circuit) terminal (1)
73	OUTL	O	Lch audio signal
74	AVSS1	—	GND (analog circuit) terminal (1)
75	OUTR	O	Rch audio signal
76	RSEL	I	Polarity direction control terminal of RF signal (Not used, connected to power supply)
77	FSEL	I	Noise filter ON/OFF terminal (Not used, connected to GND)
78	ISRDATA	I	Serial data signal input
79	ILRCK	I	L/R discriminating signal input
80	IBCLK	I	Serial bit clock input

● IC101 (AN8837SBE1): Servo amp.

Pin No.	Mark	I/O Division	Function
1	PDE	I	Tracking signal input terminal (1)
2	PDF	I	Tracking signal input terminal (2)
3	VDD	I	Power supply terminal
4	PDA	I	Focus signal input terminal (1)
5	PDB	I	Focus signal input terminal (2)
6	LPD	I	APC amp input terminal
7	LD	O	APC amp output terminal
8	RF	O	RF summing output terminal
9	RF IN	I	RF signal input terminal
10	CSBRT	O	Capacitor connection terminal for OFTR
11	GEA	O	Capacitor connection terminal for H.P.F. amp
12	BDO	O	Dropout signal output terminal ("H" : Dropout)
13	LDON	I	APC control input terminal
14	GND	—	GND terminal

Pin No.	Mark	I/O Division	Function
15	/RFDET	O	RF det. signal output terminal ("L" : Det.)
16	CROSS	O	Track cross signal output terminal
17	OFTR	O	Off track signal output terminal ("H" : Off track)
18	VDET	O	Vibration det. signal output terminal ("H" : Det.)
19	ENV	O	RF envelope signal output terminal
20	ENV OFF	I	ENV control input terminal
21	TEBPF	I	VDET input terminal
22	TE IN	I	Tracking error amp input terminal
23	TE OUT	O	Tracking error amp output terminal
24	FE OUT	O	Focus error amp output terminal
25	FE IN	I	Focus error amp input terminal
26	VREF	O	Reference voltage output terminal
27	TBAL	I	Tracking balance signal input terminal
28	FBAL	I	Focus balance signal input terminal

■ Replacement Parts List (Electrical)

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.

*[M] Indicates in Remarks column parts that are supplied by MESA.

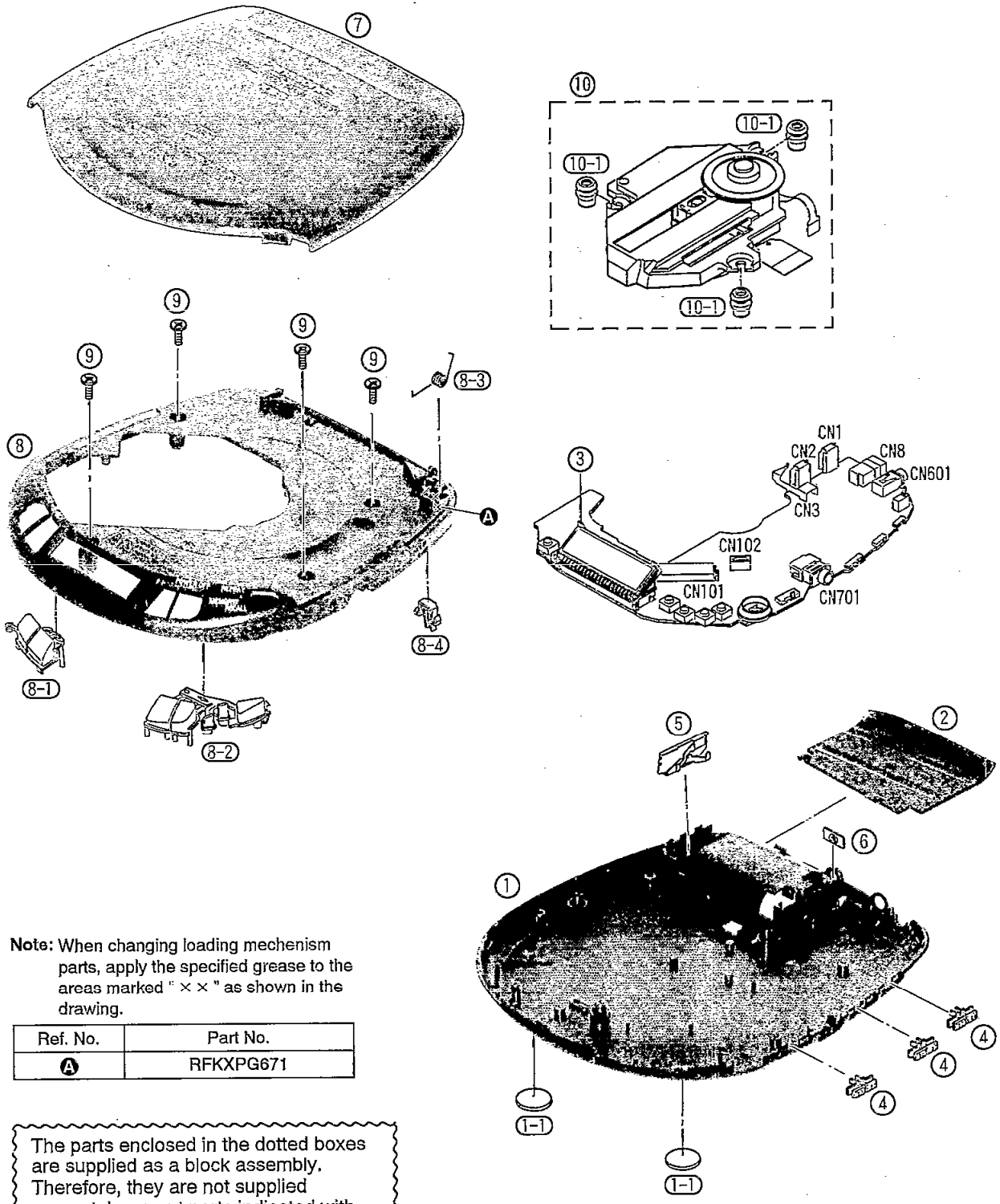
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		X501	RSXZ16M9M01T	OSCILLATOR	[M]
						CONNECTOR(S)/JACK(S)	
IG11	BA6893KE2	IC	[M]	CN1, 2	RJC93015-1	BATTERY TERMINAL	[M]
IC101	AN8837SBE1	IC	[M]	CN3	RJH5104	RECHARGEABLE TERMINAL	[M]
IC301	SG440303CFU	IC	[M]	CN8	RJJ43K09-C	DC IN JACK	[M]
IC501	MN662746RPK1	IC	[M]	CN101	RJS2A4716M1	CONNECTOR(16P)	[M]
IC701	NJU7082AMTE1	IC	[M]	CN102	RJS2A5106T1	CONNECTOR(6P)	[M]
		TRANSISTOR(S)		CN601	RJJD3S5ZB-C	LINE OUT JACK	[M]
				CN701	RJJ33TK07-C	HEADPHONES JACK	[M]
Q10	2SD1302STTA	TRANSISTOR	[M]			DISPLAY	
Q11	2SD2074HWRST	TRANSISTOR	[M]	LCD301	RSL5156-1L	LCD	[M]
Q12	2SD1450STTA	TRANSISTOR	[M]			SWITCH(ES)	
Q13	MSB1218ART1	TRANSISTOR	[M]				
Q203	MSB709RST1	TRANSISTOR	[M]	S201	ESE11SV6	SW	[M]
Q402	UN5215TX	TRANSISTOR	[M]	S301-306	EVQ21405R	SW	[M]
Q601, 602	2SD1328QRSTX	TRANSISTOR	[M]	S307	RSS3A007-1A	SW	[M]
Q603, 604	UN5215TX	TRANSISTOR	[M]	S308	RSS2A010-1A	SW	[M]
Q701, 702	2SD1328QRSTX	TRANSISTOR	[M]	S701	RSS2B028-A	SW	[M]
Q904	DTA114YUA106	TRANSISTOR	[M]				
Q905, 906	UN5210TX	TRANSISTOR	[M]				
		DIODE(S)					
D11	MA110TX	DIODE	[M]				
D13	RB411DT146	DIODE	[M]				
D301	M1MA141WKT1	DIODE	[M]				
D903	M1MA141WKT1	DIODE	[M]				
		IC PROTECTOR(S)					
ICP11 Δ	UNHD00700A	IC PROTECTOR	[M]				
		VARIABLE RESISTOR(S)					
VR11	EVNDXAA00B33	V. R	[M]				
VR701	EVUTUFB11C54	V. R	[M]				
		COIL(S)					
L12	RLZ0028T-0	COIL	[M]				
L601, 602	RLBV102V-Y	COIL	[M]				
		OSCILLATOR(S)					

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, 1K = 1,000 (OHM), 1M = 1,000 k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R731, 732	ERJ3GEYJ331V	1/16W 330 [M]	C600	ECUZNC104ZFY	6.3V 0.1U [M]
			R920	ERJ3GEYJ473V	1/16W 47K [M]	C601, 602	ECUV1H102KBV	50V 1000P [M]
			R928	ERJ3GEYJ473V	1/16W 47K [M]	C603, 604	ECUV1H272KBV	50V 2700P [M]
R11	ERJ3GEYJ103Z	1/16W 10K [M]			CHIP JUMPER(S)	C605, 606	ECEA1CKA100I	16V 10U [M]
R12	ERJ3GEYJ472V	1/16W 4.7K [M]				C607, 608	ECUV1H681KBV	50V 680P [M]
R16	ERJ3GEYJ100V	1/16W 10 [M]	RJ401	ERJ3GEYOR00V	CHIP JUMPER [M]	C609	ECUZNC104ZFY	16V 0.1U [M]
R17	ERJ3GEYJ681V	1/16W 680 [M]	RJ904	ERJ3GEYOR00V	CHIP JUMPER [M]	C610	RCE1AKA470IG	10V 47U [M]
R18	ERJ3GEYJ101V	1/16W 100 [M]				C703, 704	ECUV1E123KBV	25V 0.012U [M]
R22	ERJ3GEYJ822V	1/16W 8.2K [M]			CAPACITORS	C707	ECUV1H102KBN	50V 1000P [M]
R25	ERJ3GEYJ104Z	1/16W 100K [M]				C708	ECUV1H102KBV	50V 1000P [M]
R29	ERJ3GEYJ152V	1/16W 1.5K [M]	C13	RCE0JSCA701X	6.3V 47U [M]	C709, 710	ECEA0GPK221I	4V 220U [M]
R105	ERJ3GEYJ683V	1/16W 68K [M]	C14	RCE0JKA2211G	6.3V 220U [M]	C711, 712	ECEA1CPK100I	16V 10U [M]
R106	ERJ3GEYJ124V	1/16W 120K [M]	C16	ECUVNC224KBN	16V 0.22U [M]	C713	RCE1AKA470IG	10V 47U [M]
R113	ERJ3GEYJ101V	1/16W 100 [M]	C17	ECUV1H470KCV	50V 47P [M]	C717	ECUZNC104ZFY	16V 0.1U [M]
R114	ERJ3GEYJ330V	1/16W 33 [M]	C18	ECUV1E103KBV	25V 0.01U [M]	G902	ECUV1H332KBV	50V 3300P [M]
R120	ERJ3GEYJ472V	1/16W 4.7K [M]	C19	ECEA1AKA220I	10V 22U [M]			
R121, 122	ERJ3GEYJ683V	1/16W 68K [M]	C20	ECEA1HKA010I	50V 1U [M]			
R208	ERJ3GEYJ4R7V	1/16W 4.7 [M]	C21	ECUV1C223KBV	16V 0.022U [M]			
R209	ERJ3GEYJ223V	1/16W 22K [M]	C22	ECUZNC104ZFY	16V 0.1U [M]			
R301-303	ERJ3GEYJ473V	1/16W 47K [M]	C24	ECUV1H471KBV	50V 470P [M]			
R309	ERJ3GEYJ124V	1/16W 120K [M]	C25	ECEA1HKA010I	50V 1U [M]			
R313	ERJ3GEYJ102Z	1/16W 1K [M]	C27	RCE1AKA470IG	10V 47U [M]			
R317, 318	ERJ3GEYJ104Z	1/16W 100K [M]	C32	ECUVNC105ZFN	16V 1U [M]			
R319	ERJ3GEYJ334V	1/16W 330K [M]	C101	ECUV1C104KBV	16V 0.1U [M]			
R400	ERJ3GEYJ182V	1/16W 1.8K [M]	C103	ECUV1C223KBV	16V 0.022U [M]			
R401	ERJ3GEYJ823V	1/16W 82K [M]	C111	ECUVNC473KBV	16V 0.047U [M]			
R402	ERJ3GEYJ122V	1/16W 1.2K [M]	C112	ECUV1H991KBV	50V 390P [M]			
R405	ERJ3GEYJ332V	1/16W 3.3K [M]	C113	ECUVNE104ZFN	25V 0.1U [M]			
R501	ERJ3GEYJ683V	1/16W 68K [M]	C114	ECUZNC104ZFY	16V 0.1U [M]			
R503	ERJ3GEYJ473V	1/16W 47K [M]	C115	ECUV1C223KBV	16V 0.022U [M]			
R505	ERJ3GEYJ821V	1/16W 820 [M]	C120	ECUV1H332KBV	50V 3300P [M]			
R506	ERJ3GEYJ681V	1/16W 680 [M]	C121	ECUV1H221KBV	50V 220P [M]			
R510	ERJ3GEYJ120V	1/16W 12 [M]	C204	RCE1AKA470IG	10V 47U [M]			
R513	ERJ3GEYJ184V	1/16W 180K [M]	C301, 302	ECUZNC104ZFY	16V 0.1U [M]			
R601, 602	ERJ3GEYJ681V	1/16W 680 [M]	C403	ECUZNC104ZFY	16V 0.1U [M]			
R603, 604	MCR03P2HJ561	1/16W 560 [M]	C404	ECUVNC105ZFN	16V 1U [M]			
R605, 606	ERJ3GEYJ473V	1/16W 47K [M]	C405	ECUV1C104KBV	16V 0.1U [M]			
R607, 608	ERJ3GEYJ102Z	1/16W 1K [M]	C407	ECUZNC104ZFY	16V 0.1U [M]			
R609, 610	ERJ3GEYJ332V	1/16W 3.3K [M]	C408, 409	ECUVNC105ZFN	16V 1U [M]			
R705, 706	ERJ3GEYJ473V	1/16W 47K [M]	C410	ECUV1E103KBV	25V 0.01U [M]			
R707, 708	ERJ3GEYJ223V	1/16W 22K [M]	C501, 502	ECUV1H50CCV	50V 5P [M]			
R709, 710	ERJ3GEYJ105V	1/16W 1M [M]	C503	ECUV1H561KBV	50V 560P [M]			
R715, 716	ERJ3GEYJ183V	1/16W 18K [M]	C505	ECUV1C223KBV	16V 0.022U [M]			
R719, 720	ERJ3GEYJ103Z	1/16W 10K [M]	C506	ECUVNC224KBN	16V 0.22U [M]			
R721, 722	ERJ3GEYJ273V	1/16W 27K [M]	C507	RCE0JKA2211G	6.3V 220U [M]			
R723, 724	ERJ3GEYJ104Z	1/16W 100K [M]	C508, 509	ECUZNC104ZFY	16V 0.1U [M]			
R725, 726	ERJ3GEYJ150V	1/16W 15 [M]	C518	ECUV1E103KBV	25V 0.01U [M]			
R727, 728	ERJ3GEYJ1R5V	1/16W 1.5 [M]	C533	ECUZNC104ZFY	6.3V 0.1U [M]			
R729, 730	ERJ3GEYJ472V	1/16W 4.7K [M]						

■ Cabinet Parts Location



Note: When changing loading mechanism parts, apply the specified grease to the areas marked "××" as shown in the drawing.

Ref. No.	Part No.
A	RFKXPG671

The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately except parts indicated with Ref. No.

Replacement Parts List

(Cabinet, Packing, Accessories and Grease or Jig / Tool)

• cabinet colour (A) Blue Type (H) .. Gray Type

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RFKJLS120E-H	BOTTOM CABINET ASS'Y	[M] (E, EG) FOR SL-S120
1	RFKJLS120GCH	BOTTOM CABINET ASS'Y	[M] (GC) FOR SL-S120
1	RFKJLS120GNH	BOTTOM CABINET ASS'Y	[M] (GN) FOR SL-S120
1	RFKJLS125E-H	BOTTOM CABINET ASS'Y	[M] FOR SL-S125
1-1	RKA0063-K	FOOT	[M]
2	RKK0102-K	BATTERY COVER	[M]
3	RJF0029	LCD HOLDER	[M]
4	RGV0200-K	KNOB, XBS/PLAY MODE/HOLD	[M]
5	RJC93020	BATTERY TERMINAL	[M]
6	RMA0677	FIXER	[M]
7	RYF0441-A	CD COVER ASS'Y	[M] (A) FOR SL-S120
7	RYF0441-H	CD COVER ASS'Y	[M] (H) FOR SL-S120
7	RYF0441B-H	CD COVER ASS'Y	[M] FOR SL-S125
8	RYK0718-K	MIDDLE CABINET	[M]
8-1	RGU1494-K	BUTTON, PLAY/PAUSE/OPEN etc.	[M]
8-2	RGU1495-K	BUTTON, SKIP/SEARCH	[M]
8-3	RME0241	SPRING	[M]
8-4	RML0472	STOPPER	[M]
9	XTN17+6GFZ	SCREW	[M]
10	RAE0142Z	TRAVERSE DECK	[M]
10-1	RMG0449-H	FLOATING RUBBER	[M]
		PACKING MATERIALS	
P1	RPK0834	GIFT BOX	[M] (A) FOR SL-S120
P1	RPK0896	GIFT BOX	[M] (H) FOR SL-S120
P1	RPK0835	GIFT BOX	[M] FOR SL-S125
P2	RPQ0753	SPACER	[M] (E, EG, GN)
P2	RPQ0683	SPACER	[M] (GC)
P3	RPF0046	PROTECTION BAG (F. B.)	[M]
P4	RPF0111	PROTECTION BAG (UNIT)	[M]
		ACCESSORIES	
A1△	RFEA401E-3S	AC ADAPTOR	[M] (E, EG)
A1△	RFEA403Z-S	AC ADAPTOR	[M] (GC)
A1△	RFEA403A-S	AC ADAPTOR	[M] (GN)
A2	RFEV317P-KS	STEREO EARPHONES	[M]
A2-1	RKB205ZA-0	EAR PADS	[M]
A3	RQA0117	WARRANTY CARD	[M] (E, EG)
A3	RQX7433ZA	WARRANTY CARD	[M] (GN)
A4	RQC00169	SERVICENTER LIST	[M]
A5	RQT3741-E	INSTRUCTION MANUAL	[M] (E, GC)<IA>
A5	RQT3742-R	INSTRUCTION MANUAL	[M] (E)<IB>
A5	RQT3439-B	INSTRUCTION MANUAL	[M] (GN)<IC>
A5	RQT3743-D	INSTRUCTION MANUAL	[M] (EG)<ID>
A5	RQT3744-H	INSTRUCTION MANUAL	[M] (EG)<IE>
A5	RQT3985-J	INSTRUCTION MANUAL	[M] (EG)<IF>
A5	RQT3740-K	INSTRUCTION MANUAL	[M] (GC)<IG>

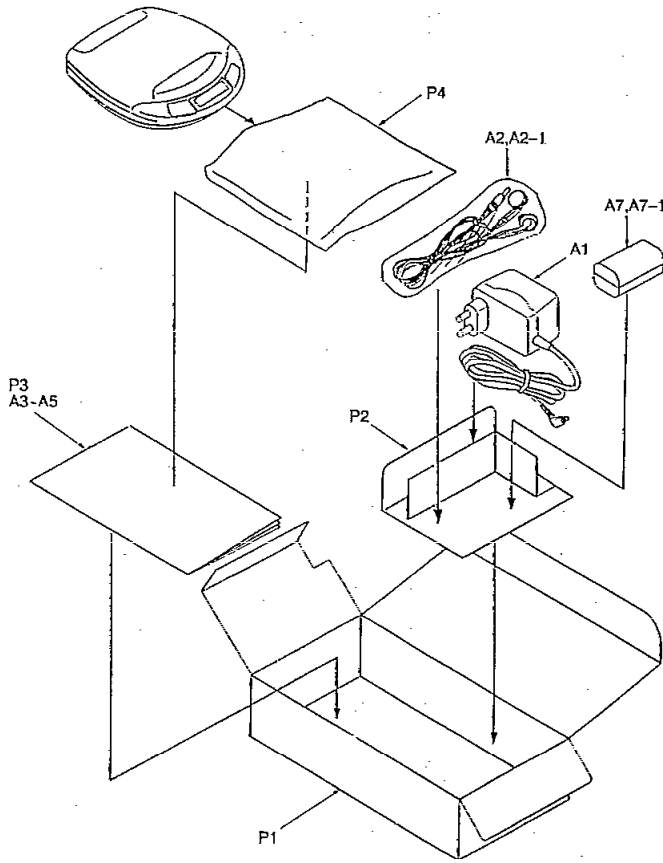
Ref. No.	Part No.	Part Name & Description	Remarks
A6△	SJP5213-2	AC PLUG ADAPTOR	[M] (GC)
A7	RP-BP60EYS	RECHARGEABLE BATTERY	[M]
A7-1	RFKJLS370-K	BATTERY CASE	[M]
		GREASE OR JIG/TOOL	
		TEST DISC	
SA1	SZZP1054C	PLAYABILITY TEST DISC	[M]
SA2	SZZP1056C	UNEVEN TEST DISC	[M]
		GREASE	
SA3	RFKXPG671	MOLYCOAT GREASE PG671	[M]

Note:

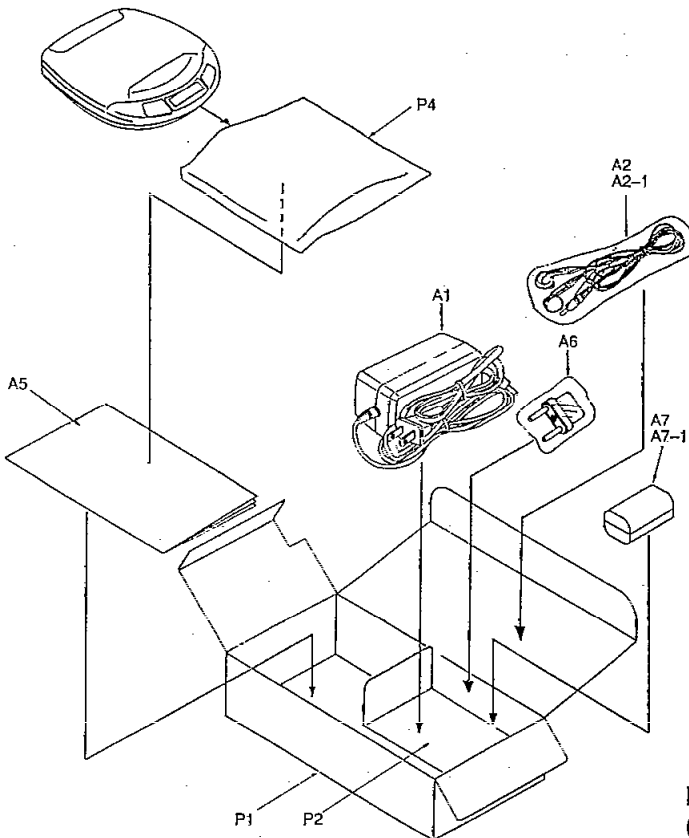
The "< IA >, < IB >, < IC >, < ID >, < IE >, < IF > and < IG >" mark in Remarks indicate language of instruction manual.

- < IA > : English, Spanish
- < IB > : Russian, Swedish
- < IC > : English
- < ID > : German, Italian
- < IE > : French, Dutch
- < IF > : Danish
- < IG > : Chinese

■ Packaging



For
(E, EG, GN) Areas



For
(GC) Area

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