AD0404042C8

Service Manual

Portable CD Player

COMPACT disc DIGITAL AUDIO

SL-J610VEB
SL-J610VEG
SL-J610VGC
SL-SK574VEB
SL-SK574VEG

Colour

(S).....Silver Type

Specifications

● CD section	
CD-DA	
Sampling frequency:	44.1 kHz
No. of channels:	2 channels (left and right, stereo)
Frequency response:	20 to 20,000 Hz (0 dB to -3.5 dB)
Headphones output level:	RMS max. 6 mW+6 mW/16 Ω (adjustable)
Speaker output level:	
For SL-J610VEB/EG/GC	RMS max. 450 mW+450 mW
MP3	
Supported bit-rates:	32 kbps to 320 kbps (128 kbps is recommended)
Supported sampling frequency:	48 kHz/44.1 kHz/32 kHz
Maximum number of items (total no. of albums and tracks):	999
Maximum album levels:	100
Pickup	
Light source:	Semiconductor laser
Wavelength:	780 nm
● RADIO section	
Frequency	
Radio frequency:	
For SL-J610VEB/EG, SL-SK574VEB/EG;	
FM;	87.5 - 108.0 MHz (0.05 MHz steps)
AM;	522 - 1629 kHz (9 kHz steps)
For SL-J610VGC;	
FM;	87.5 - 108.0 MHz (0.05 MHz steps)
AM;	522 - 1629 kHz (9 kHz steps) 520 - 1630 kHz (10 kHz steps)
IF:	
FM;	10.7 MHz
AM;	
For SL-J610VEB/EG, SL-SK574VEB/EG;	459 kHz
For SL-J610VGC;	450 kHz
Audio	
Selectivity:	
FM;	42 dB
AM;	7.4 kHz (6 dB) 21dB/9 kHz
Sensitivity:	
FM;	4.47 µV/0.5 mW output (-3dB limit/S)/ 7.08 µV/0.5 mW output (S/N30 dB)
AM;	707.95 µV/0.5 mW output (MAX/S)
● General	
Operational temperature range:	0 - 40 degree
Rechageable temperature range:	5 - 40 degree
Power supply:	
DC input (via included AC adaptor);	DC 4.5 V
AC adaptor input;	
For SL-J610VEB, SL-SK574VEB;	AC 230 - 240 V, 50/60 Hz
For SL-J610VEG, SL-SK574VEG;	AC 220 - 230 V, 50/60 Hz
For SL-J610VGC;	AC 110/127/220 - 240 V, 50/60 Hz
Power consumption:	MP3/CD-DA/RADIO
Using AC adaptor;	
For SL-J610VEB/EG/GC;	
Using earphones;	4.0 W/ 3.9 W/ 3.4 W
Using speakers;	7.3 W/ 7.3 W/ 6.3 W
For SL-SK574VEB/EG;	3.2 W/ 3.2 W/ 2.5 W
Recharging:	
For SL-J610VEB/EG/GC;	
Without speakers;	6.1 W
With speakers;	6.7 W
For SL-SK574VEB/EG;	5 W
Playing time:	
[Using on a flat stable surface at 25 degree, S-XBS is off, Hold is on, Anti-skip is on POS 1 (CD-DA), recommended bit rate (MP3:128 kbps), and Digital Re-master is off (MP3). Play times are in hours and approximate.]	
Battery used:	MP3/CD-DA/RADIO (FM BAND)
2 optional alkaline batteries;	Approx. 75 h/ 33 h/ 75 h
2 optional rechargeable batteries;	Approx. 34 h/ 16 h/ 30 h
● The play time may be less depending on the operating conditions.	
● Play time will be considerably reduced when playing CD-RW.	
Recharging time:	About 4 to 5 hours
Dimensions (WxHxD):	
For SL-J610VEB/EG/GC;	
CD player;	135x26x135 mm
Including components;	135.5x286x185 mm
For SL-SK574VEB/EG;	135x26x135 mm
Mass:	
For SL-J610VEB/EG/GC;	
CD player;	227 g (with batteries) 181 g (without batteries)
Including components;	402 g
For SL-SK574VEB/EG;	227 g (with batteries) 181 g (without batteries)

AC adaptor power consumed in standby mode:	2.3 W

Notes: Specifications are subject to change without notice.
Mass and dimensions are approximate.

Note on CD-R and CD-RW
This unit can play CD-R and CD-RW recorded with CD-DA or MP3. Use an audio recording disc for CD-DA and finalize* it when you finish recording. The unit may not be able to play some discs due to the condition of the recording.
* A process performed after recording that enables CD-R/CD-RW players to play audio CD-R and CD-RW.

Panasonic

⚠ 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.

CONTENTS

1 Accessories

<< SL-J610VEB, SL-J610VEG, SL-J610VGC >>

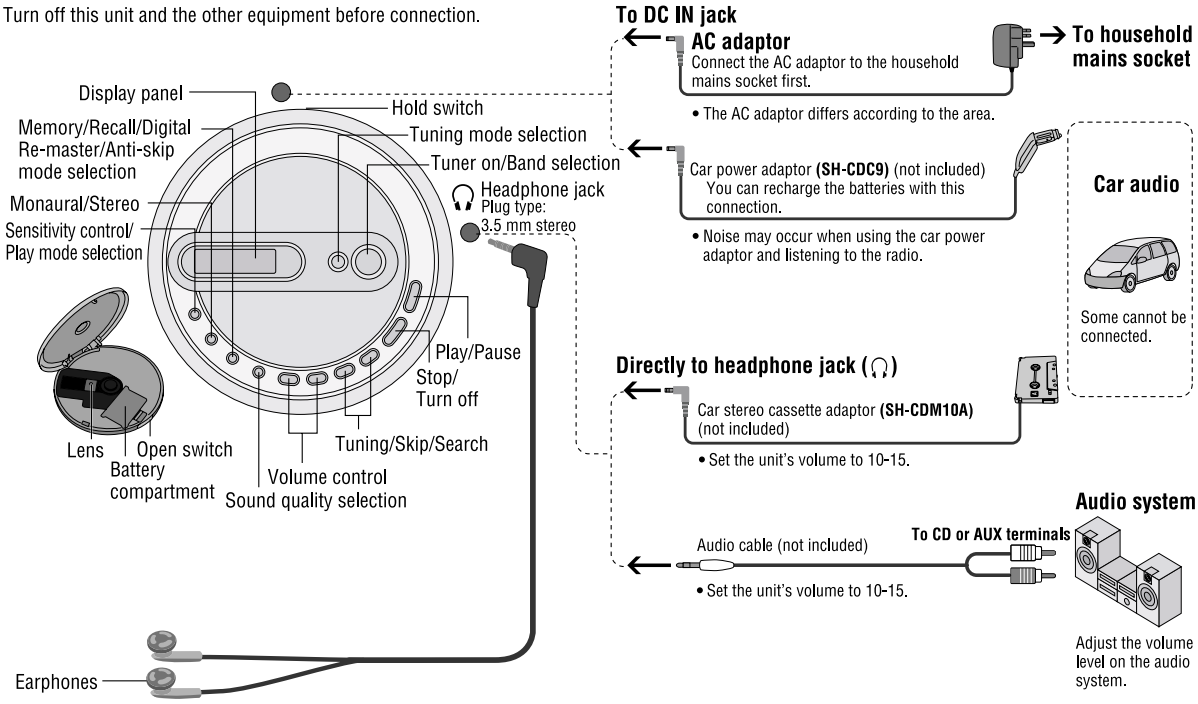
- AC adaptor for SL-J610VEB (RFEA403B-S).....1 pc.
- AC adaptor for SL-J610VEG (RFEA401E-4S).....1 pc.
- AC adaptor for SL-J610VGC (RFEA403Z-S).....1 pc.
- Active speaker (L) (RFKNLJ610VE2).....1 pc.
- Active speaker (R) (RFKNLJ610VE1).....1 pc.
- Stereo earphones (L0BAB0000182).....1 pc.
- Center tray (RFE0132).....1 pc.
- AC plug adaptor for SL-J610VGC only (K2DA42E00001).....1 pc.

<< SL-SK574VEB, SL-SK574VEG >>

- AC adaptor for SL-SK574VEB (N0JCCE000004).....1 pc.
- AC adaptor for SL-SK574VEG (RFEA419E-M).....1 pc.
- Splash pouch with speaker (RFC0080-X).....1 pc.

2 Location of Controls and Connection to Other Equipment

Turn off this unit and the other equipment before connection.



3 Precaution of Laser Diode

· For SL-J610VEB, SL-J610VEG, SL-SK574VEB, SL-SK574VEG

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.

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

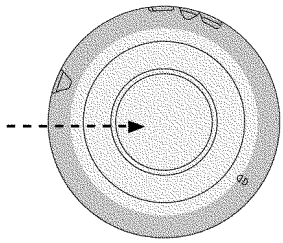
Laser radiation from the pick-up unit is safety level, but be sure the followings:

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

ACHTUNG: Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit adgestrahit.
Wellenlänge: 780 nm
Maximale Strahlungsleistung der Lasereinheit: 100 µW/VDE

Die strahlungan 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 werksseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.



(Bottom of product)

ADVARSEL-USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UNSÆTTELSE FOR STRÅLING.	VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VORSICHT-UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.	VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
DANGER-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.	ADVARSEL-USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
RQLS0244	A pleine puissance, l'écoute prolongée du baladeur peut endommager l'oreille de l'utilisateur.

(Inside of product)

· For SL-J610VGC

Caution:

This product utilizes a laser diode with the unit turned on, invisible laser radiation is emitted from the pick-up lens.

Wavelength: 780 nm

Maximum output radiation power from pick-up: 100 µW/VDE

Laser radiation from the pick-up lens is safety level, but be sure the followings:

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

4 Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pick-up) 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 pick-up).

4.1. Handling of traverse deck (optical pick-up)

1. Do not subject the optical pick-up to static electricity as it is extremely sensitive to electrical shock.
2. To protect the laser diode against electrostatic breakdown, be sure that the short land of the flexible board (FFC board) should be short-circuit by solder before pulling out the FFC. Then inserting a short pin or similar object into the tipof the flexible board.
   (Refer to Fig. 4-1.)
3. Take care not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted. (Refer to Fig. 4-1.)

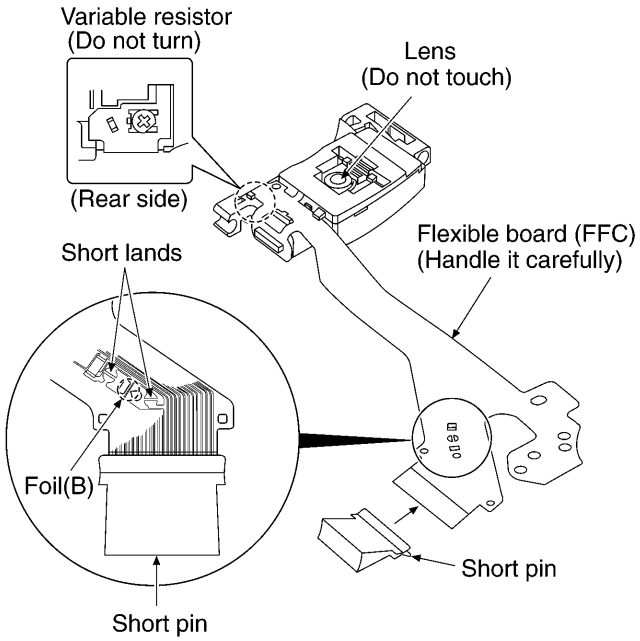


Fig. 4-1.

4.2. Caution when replacing traverse deck

The new traverse deck short-circuits by the short pin, the foil (B) and short lands to protect the laser diode against electrostatic breakdown. Be sure to replace to new one following procedures.

1. Remove the short pin from the FFC, and then connect it to the connector.
2. Cut the foil (B). (Refer to Fig. 4-1.) (Take care not to make contact with cutting point each other.)
3. Unsolder the short lands. (Refer to Fig. 4-1.)

4.3. Grounding for electrostatic breakdown prevention

4.3.1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body. (Refer to Fig. 4-2.)

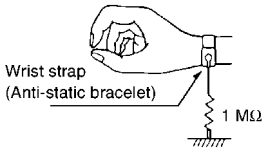


Fig. 4-2.

4.3.2. Work table grounding

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pick-up) is placed, and ground the sheet. (Refer to Fig. 4-3.)

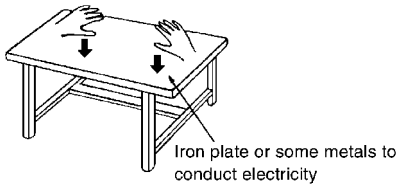


Fig. 4-3.

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 pick-up).

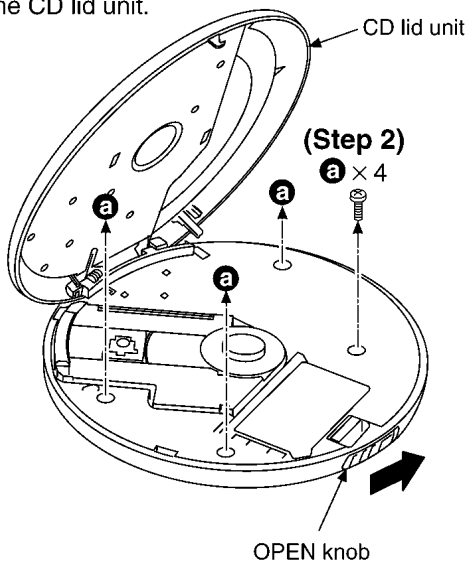
5 Operation Checks and Component Replacement Procedures

- **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
- **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**

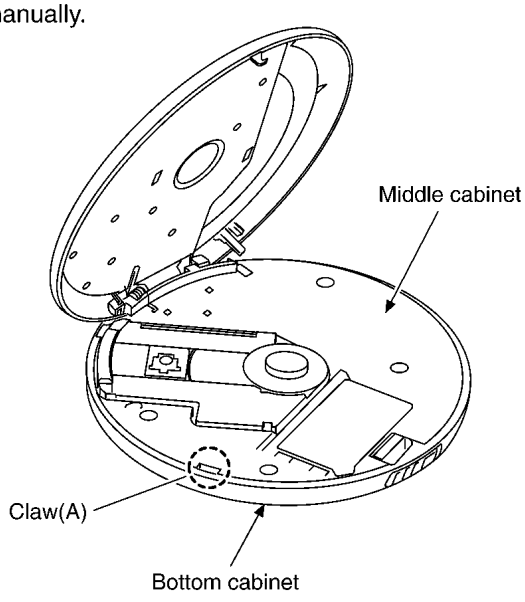
5.1. Checking for the main P.C.B.

5.1.1. Checking for the main P.C.B. (A side)

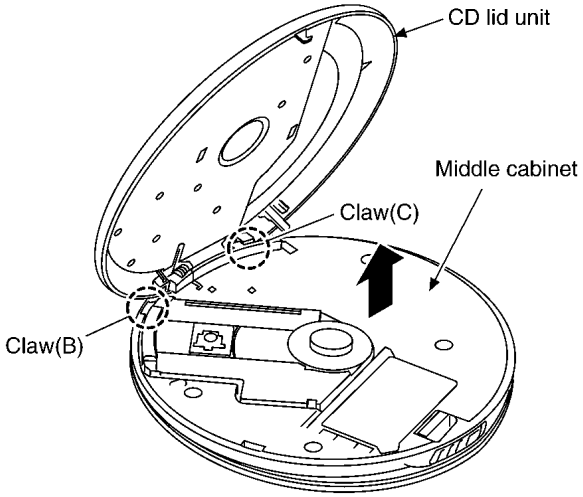
(Step 1)
Sliding the OPEN knob to right, open the CD lid unit.



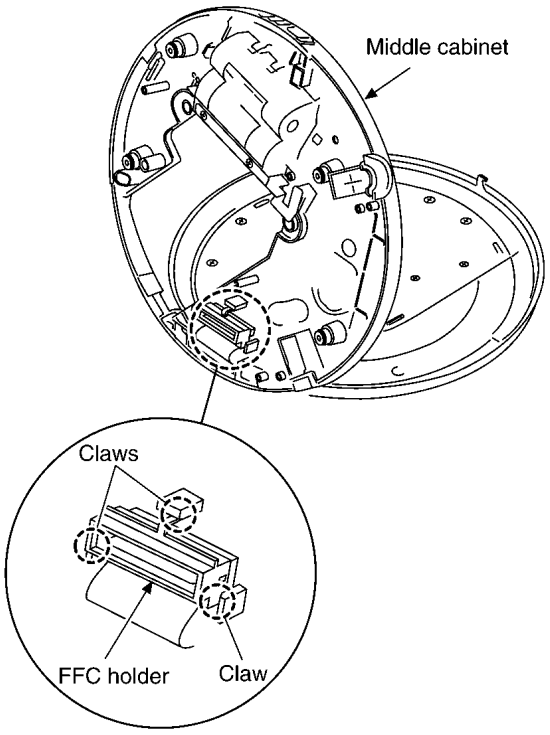
(Step 3)
Release the claw (A), and then spread the clearance between the bottom cabinet and middle cabinet manually.

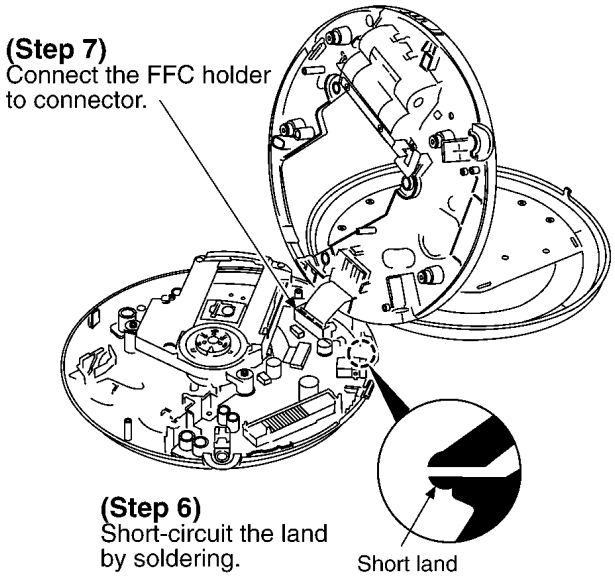


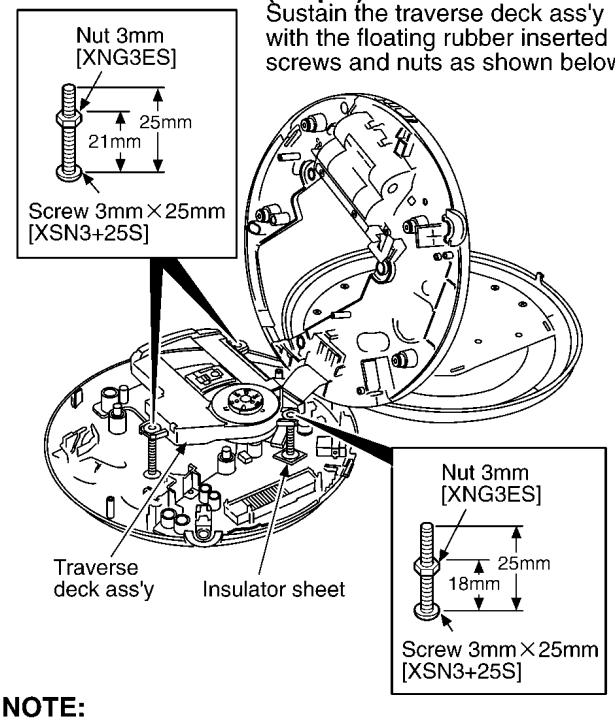
(Step 4)
Release the claw (B) and (C), and then remove the middle cabinet and CD lid unit.



(Step 5)
Release the 3 claws, and then remove the FFC holder.

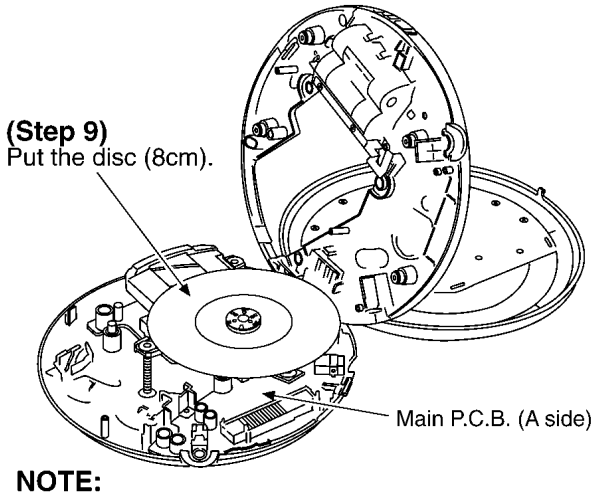






NOTE:
- The tip of screw must not protrude more than 4mm above the floating rubber.
- To keep insulation, place the insulator sheet (paper etc.) between the main P.C.B. and the head of screws.

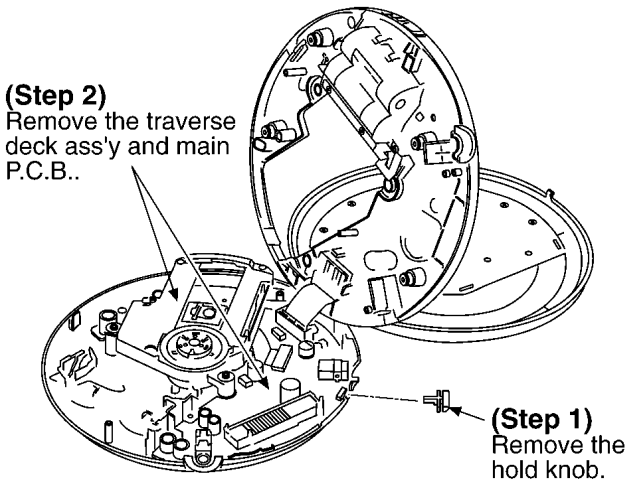
- **Check the main P.C.B. (A side) as shown below.**



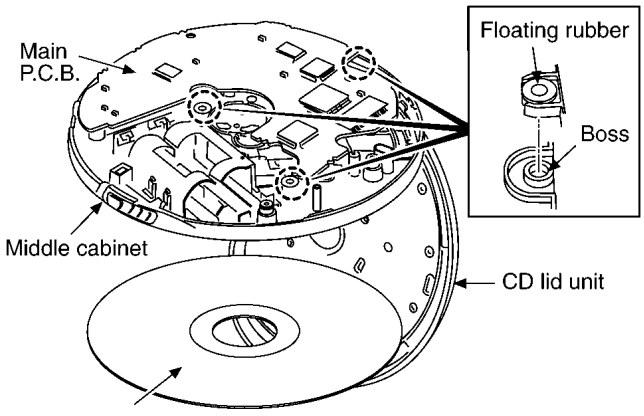
NOTE:
After checking, unsolder the short land to open circuit.

5.1.2. Checking for the main P.C.B. (B side)

- Follow the **(Step 1)** - **(Step 7)** of item 5.1.1.



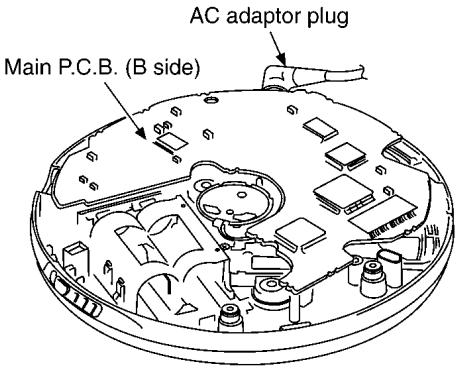
(Step 3)
Align the floating rubbers with bosses, and then locate the traverse deck ass'y and main P.C.B. on the middle cabinet .



(Step 4)
Put the test disc, and then close the CD lid unit.

· **Check the main P.C.B. (B side) as shown below.**

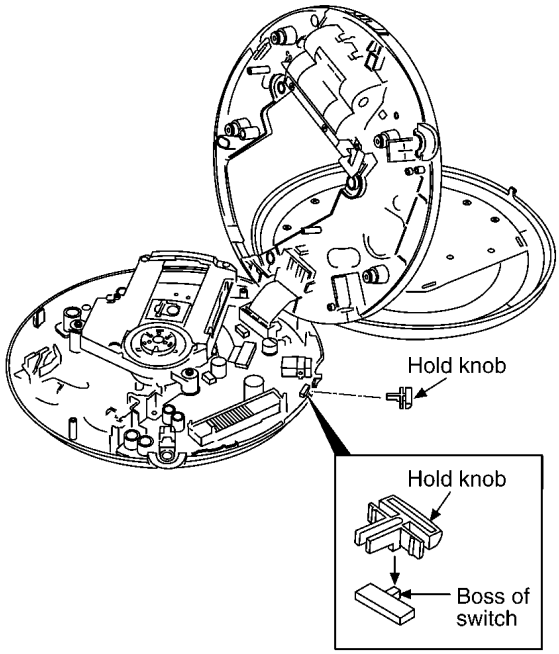
(Step 5)
Insert the AC adaptor plug into the DC IN jack, and then apply the power.



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

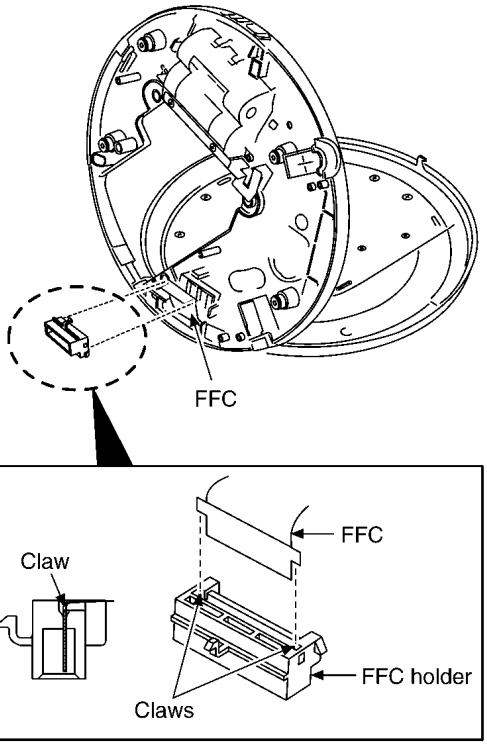
Notice for installation of hold knob

· Make sure the boss of switch is fit in the hold knob.

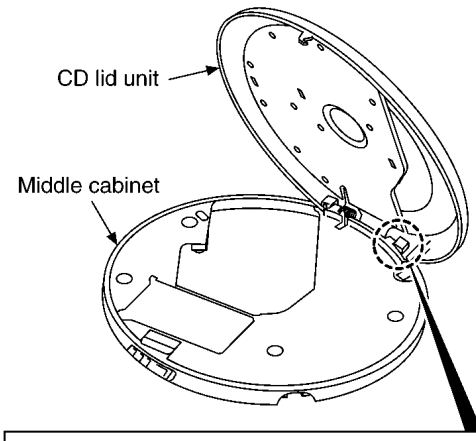


5.2. Replacement for the CD lid unit and open spring

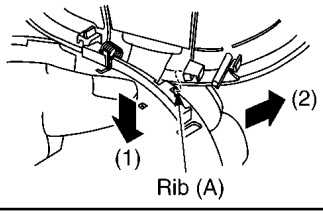
· Follow the **(Step 1)** - **(Step 5)** of item 5.1.1.



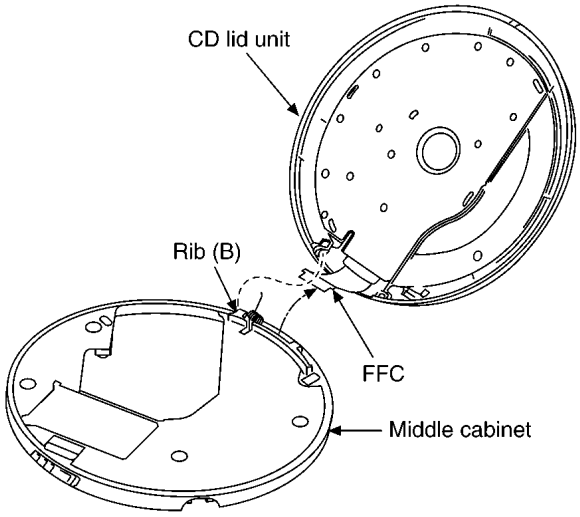
(Step 1)
Release the 2 claws, and then remove the FFC from FFC holder.

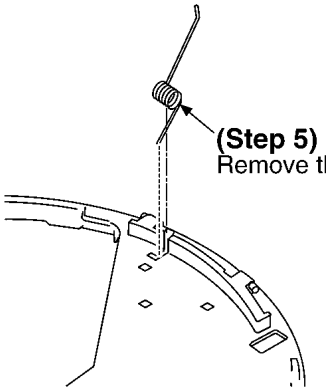


(Step 2)
Push the middle cabinet direction of arrow (1), and then remove the CD lid unit from rib (A).



(Step 3)
Remove the CD lid unit from rib (B).
(Step 4)
Draw the FFC from the middle cabinet.
(Take care not to damage the FFC.)

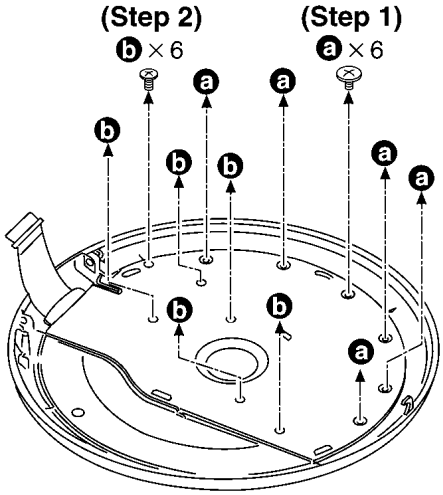




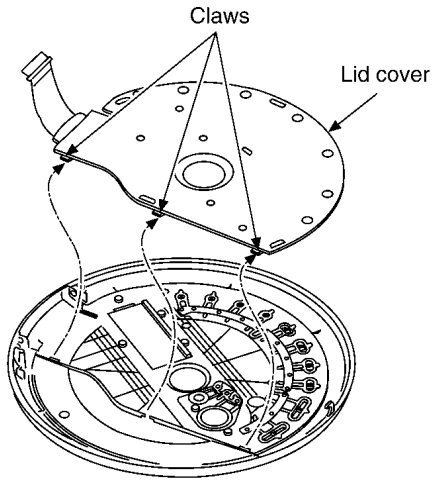
(Step 5)
Remove the open spring.

5.3. Replacement for LCD, Volume etc. button, RADIO / BAND etc. button, LCD panel, Lid ornament and Operation (S1-S12) SW

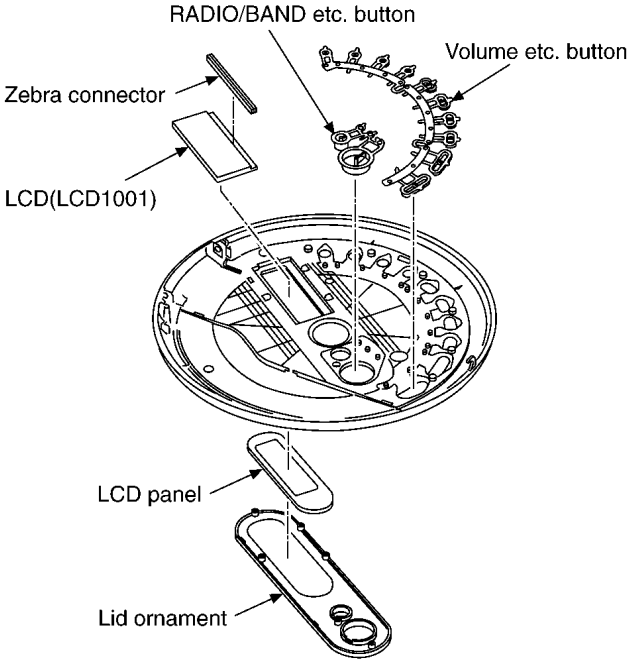
- Follow the **(Step 1)** - **(Step 5)** of item 5.1.1.
- Follow the **(Step 1)** - **(Step 4)** of item 5.2.



(Step 3)
Release the 3 claws, and then remove the lid cover.

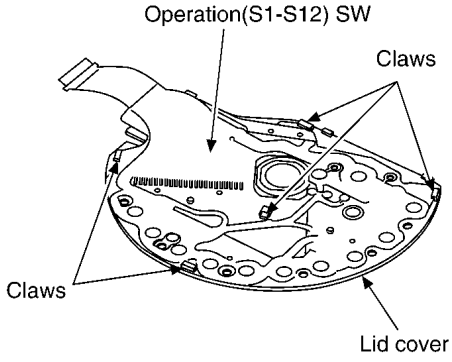


(Step 4)
The parts illustrated below will be free.



NOTE:
Be careful not to be applied the dust or smudge on the surface zebra connector.

(Step 5)
Release the 5 claws, and then remove the operation (S1-S12) SW.



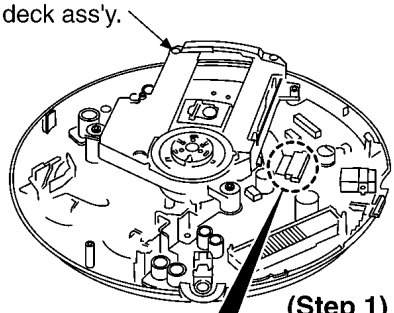
5.4. Replacement for the traverse motor

・Follow the **(Step 1)** - **(Step 4)** of item 5.1.1.

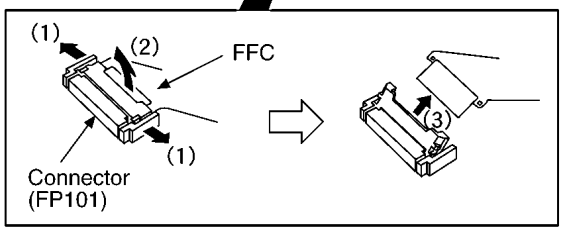
NOTE:

Be sure to confirm the item 4 “Handling Precautions for Traverse Deck” before removing the traverse deck ass’y.

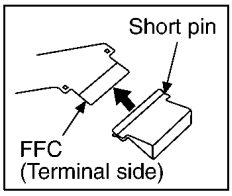
(Step 2)
Remove the traverse deck ass'y.



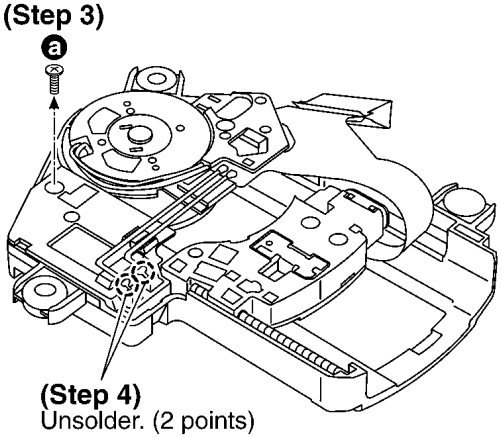
(Step 1)
Pull out the FFC from connector (FP101).



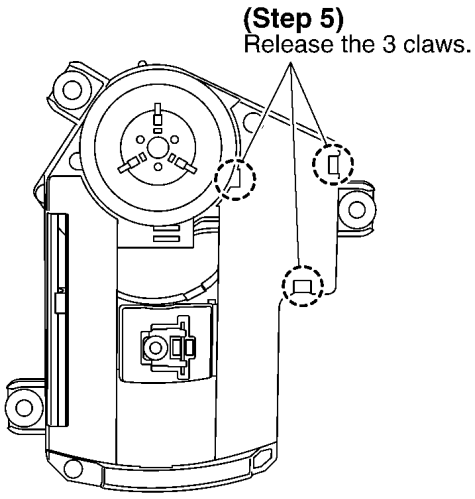
NOTE:
Insert a short pin into the traverse deck's FFC (Terminal side).
(Refer to “**Handling Precautions for Traverse Deck**”.)

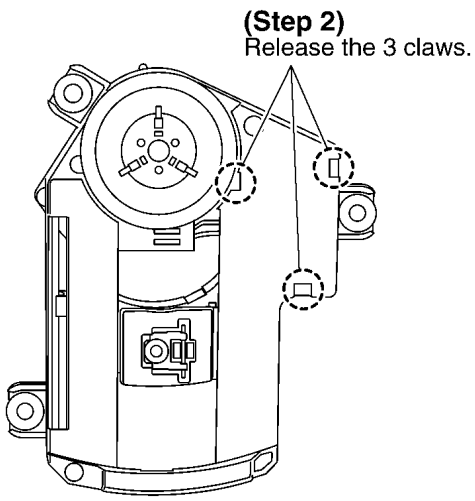


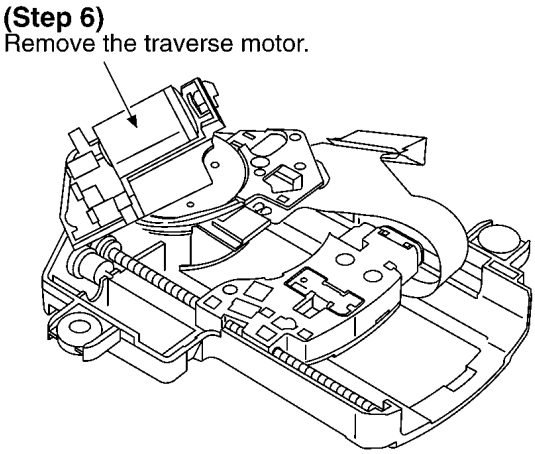
(Step 3)

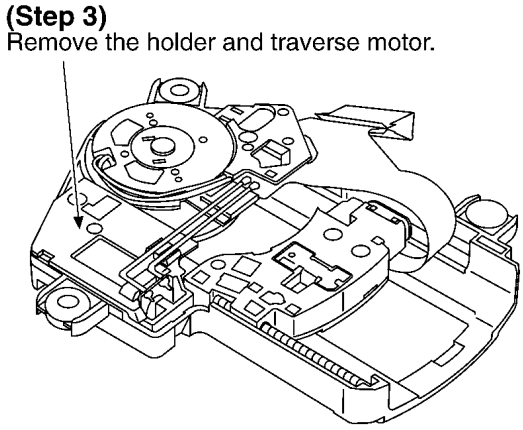


(Step 4)
Unsolder. (2 points)



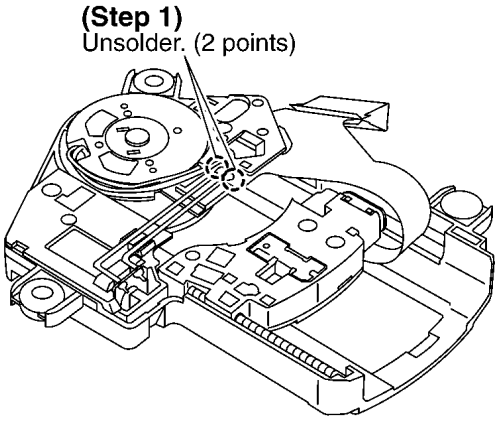


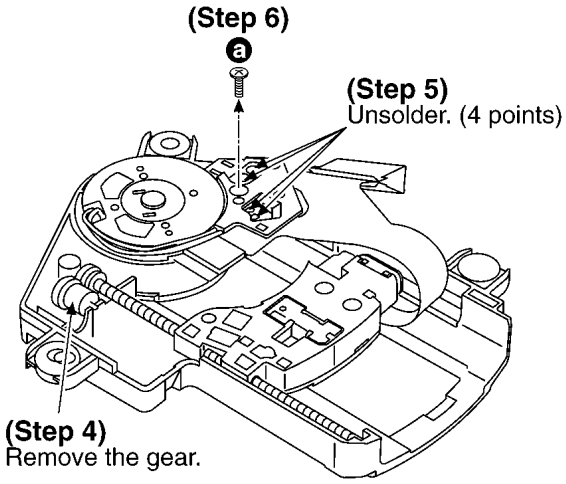




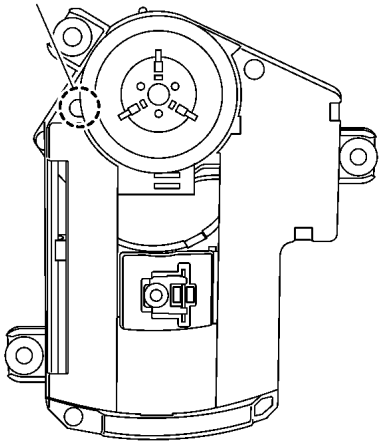
5.5. Replacement for the optical pick-up

- Follow the **(Step 1)** - **(Step 4)** of item 5.1.1.
- Follow the **(Step 1)** - **(Step 3)** of item 5.4.

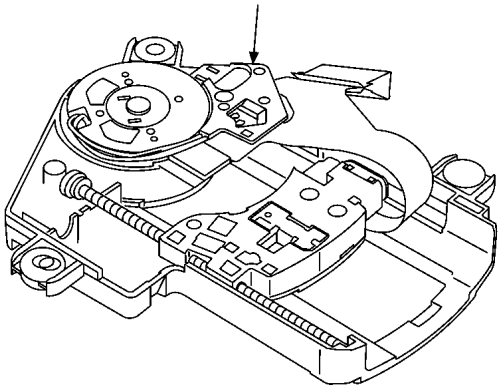




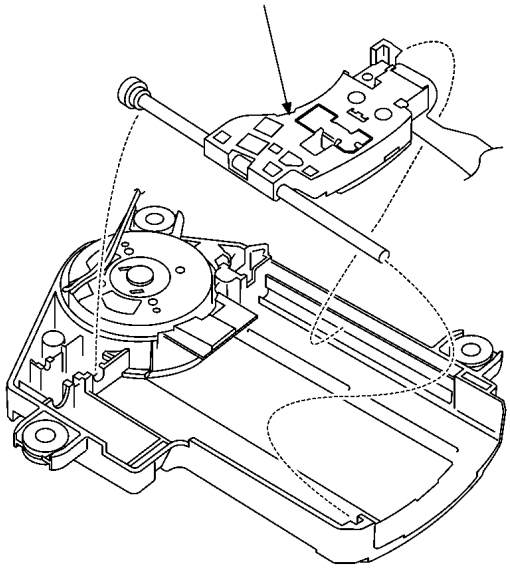
(Step 7)
Release the claw.



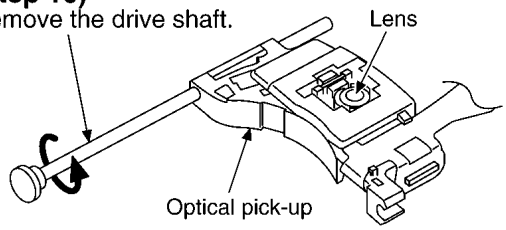
(Step 8)
Remove the FFC holder.



(Step 9)
Remove the optical pick-up ass'y.



(Step 10)
Remove the drive shaft.



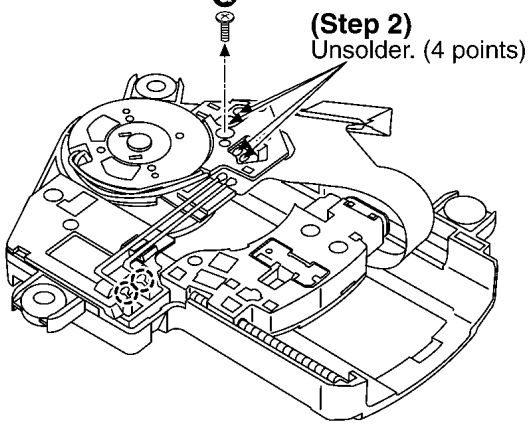
NOTE:
1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not apply the grease on the lens of optical pick-up.
3. Do not touch the lens of the optical pick-up.

5.6. Replacement for the rest switch

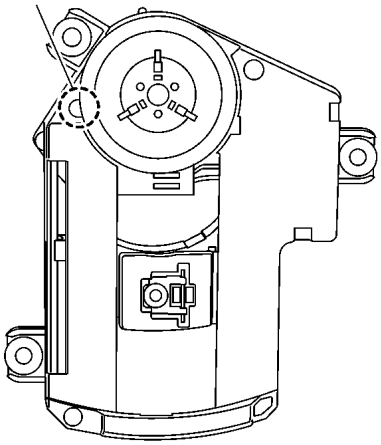
- Follow the **(Step 1)** - **(Step 4)** of item 5.1.1.
- Follow the **(Step 1)** , **(Step 2)** of item 5.4.

(Step 1)
ⓐ

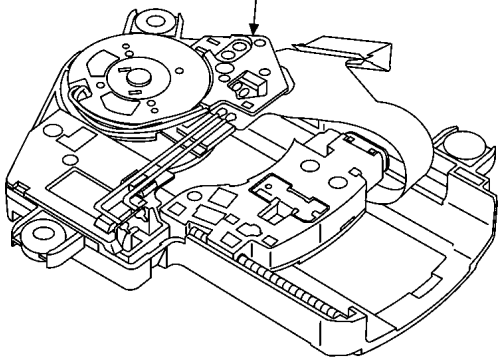
(Step 2)
Unsolder. (4 points)

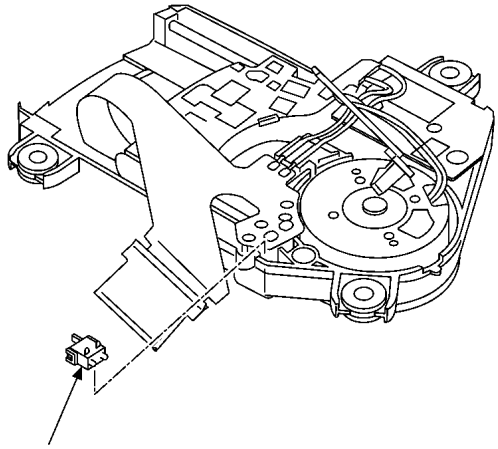


(Step 3)
Release the claw.



(Step 4)
Remove the FFC holder.



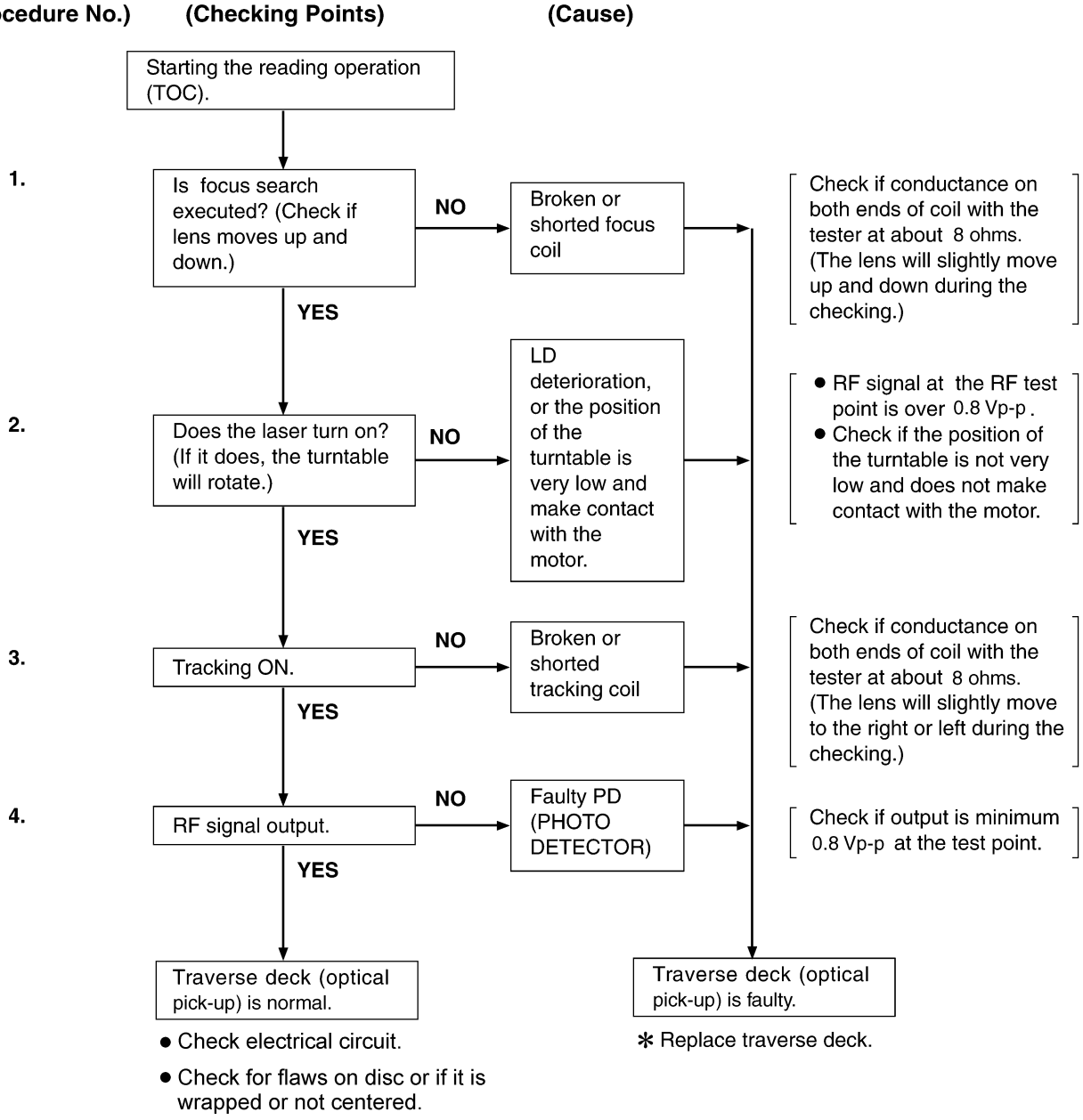


(Step 5)
Remove the rest switch.

6 Checking the Operation Problems on the Traverse Deck (Optical Pick-up)

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pick-up) before replacing it.

Replace the traverse deck only after the problem is identified.



6.1. Check the operations described below on the traverse deck after replacing

6.1.1. 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).

6.1.2. Checking manual search

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

6.1.3. 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.

7 Automatic Adjustment Results Display Function (Self-Check Function)

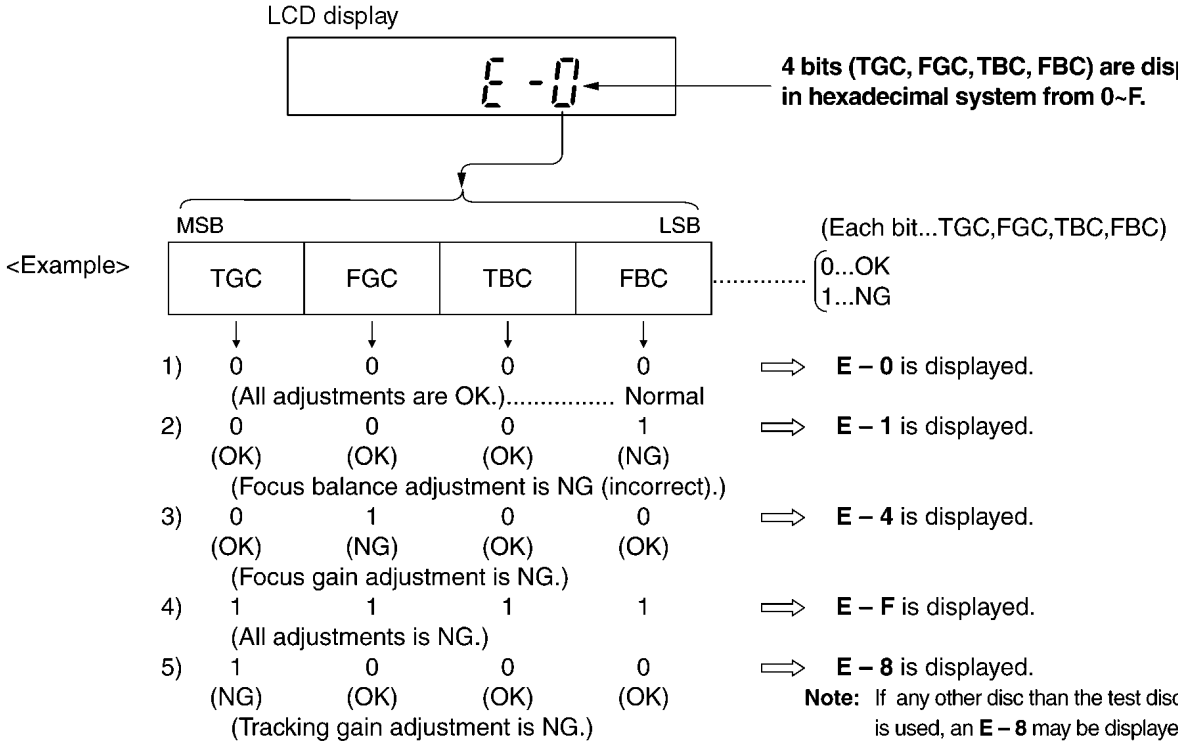
On the unit (SL-J610V, SL-SK574V), each automatic adjustment result are displayed on the LCD. This function is convenient to check or identify which automatic adjustment circuit is incorrect.

The followings are the contents of the automatic adjustment result displays (Self-Check Function).

7.1. How to display automatic adjustment results

1. Set power source voltage to 4.5 V DC. (AC adaptor IN)
2. Load the test disc (SZZP1054C).
3. Press the VOL- and S-XBS buttons simultaneously and hold them, and additionally press the ▶/❚❚ (PLAY/PAUSE) button.
4. Press the ■ (STOP/OPR OFF) button once.
5. An automatic adjustment result is displayed on the LCD.

7.2. Display of automatic adjustment results (Self-Check Function)



<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 pick-up 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 pick-up is correct (around 8 ohms), and
3. the optical pick-up 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 pick-up returns to the normal state by exchanging the traverse deck, and
2. the waveform or voltage of the servo ICs 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.

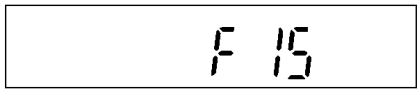
This is not a malfunction.

8 Display of Self-Diagnostic Function

This unit (SL-J610V, SL-SK574V) has self-diagnostic function. It may display below-mentioned on the LCD of this unit.

・The substance of self-diagnostic display.

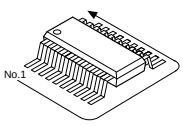
LCD display



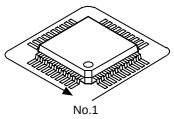
(Press PLAY and STOP button. After 15 seconds, it is displayed for 2 seconds.)

In case of this display, it may be causing for abnormally movements of traverse deck, touching failure of REST detect switch and coming off or cutting off the flexible P.C.B.. It is necessary for confirmation or repair and replacement each parts.

9 Type Illustration of ICs, Transistors and Diodes

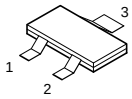


AN22003A-NF	32PIN
C1BB00000720	10PIN
C0ZBZ0000829	20PIN
C1BB00000562	30PIN
C3ABMG000197	50PIN
C3EBCG000096	8PIN

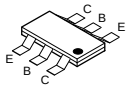


AN41507A-VB	48PIN
MN6627935CJ	100PIN
C2BBGE000773	80PIN
C2FBEB000003	64PIN

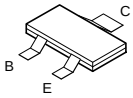
C0CBAAB00043
XC61CN2102MR



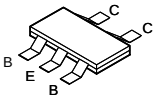
B1GFGCAA0001



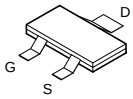
B1ADMB000003 UN5114TX
2SB709ATX UN5115TX
2SC4081STX UN5213TX
2SD1819ASTX UN5214TX
UNR521000L UN521LTX
UN511MTX UN5215TX
UN5113TX



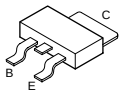
XP0121000L



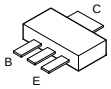
B1CFMC000005
XP152A12C0MR
2SK1067-4-TL



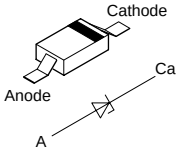
2SB1182TLPQR



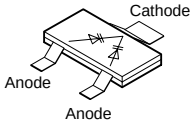
B1ABMD000004



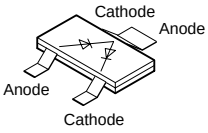
MAZ812000L



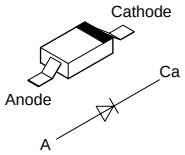
KV1450TL3-4
KV1610STL2-0



MA147TX



MA111TX



10 Schematic Diagram Notes

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

Notes:

S1:	Sound quality selection (S-XBS) switch
S2:	Tuning, R.skip/search (◀◀ / -) switch
S3:	Sensitivity control, play mode selection (FM RECEPT ⬬ CITY/NOR/PLAY MODE) switch
S4:	Monaural/stereo (FM MONO/ST) switch
S5:	Volume control switch (VOL+)
S6:	Stop/operation off (■ ,OPR OFF) switch
S7:	Tuning, F.skip/search (▶▶ / +) switch
S8:	Memory/Recall/Digital Re-master/Anti-skip mode selection (MEMORY/RECALL) switch
S9:	Volume control switch (VOL-)
S10:	Tuning mode selection (TUNING MODE) switch
S11:	Tuner on/band selection (RADIO/BAND) switch
S12:	Play/pause (▶/❚❚) switch
S201:	Laser ON/OFF switch in ON position (It turns ON with disc holder closed.)
S202:	Rest detector switch in OFF position (It turns ON when optical pick-up comes to innermost periphery.)
S310:	Hold (HOLD) switch in OFF position
VR1101:	FM RF adjustment VR

· Important safety notice:

Components identified by ⚠ 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 list.

· Voltage and signal line

: Positive voltage line

: Main (CD, FM) signal line

: FM signal line

: CD Playback signal line

· The voltage values and waveforms are the reference voltage of this measured by the 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 valuesand waveforms depending upon the internal impedance of the tester or measuring unit.

Measurement conditions:

– AC adaptor is used for power supply.

– Set the hold switch to ON.

No mark	: CD stop mode
( )	: CD playback mode (Test disc 1kHz, L+R, 0dB)
〈 〉	: FM mode
「 」	: AM mode

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.

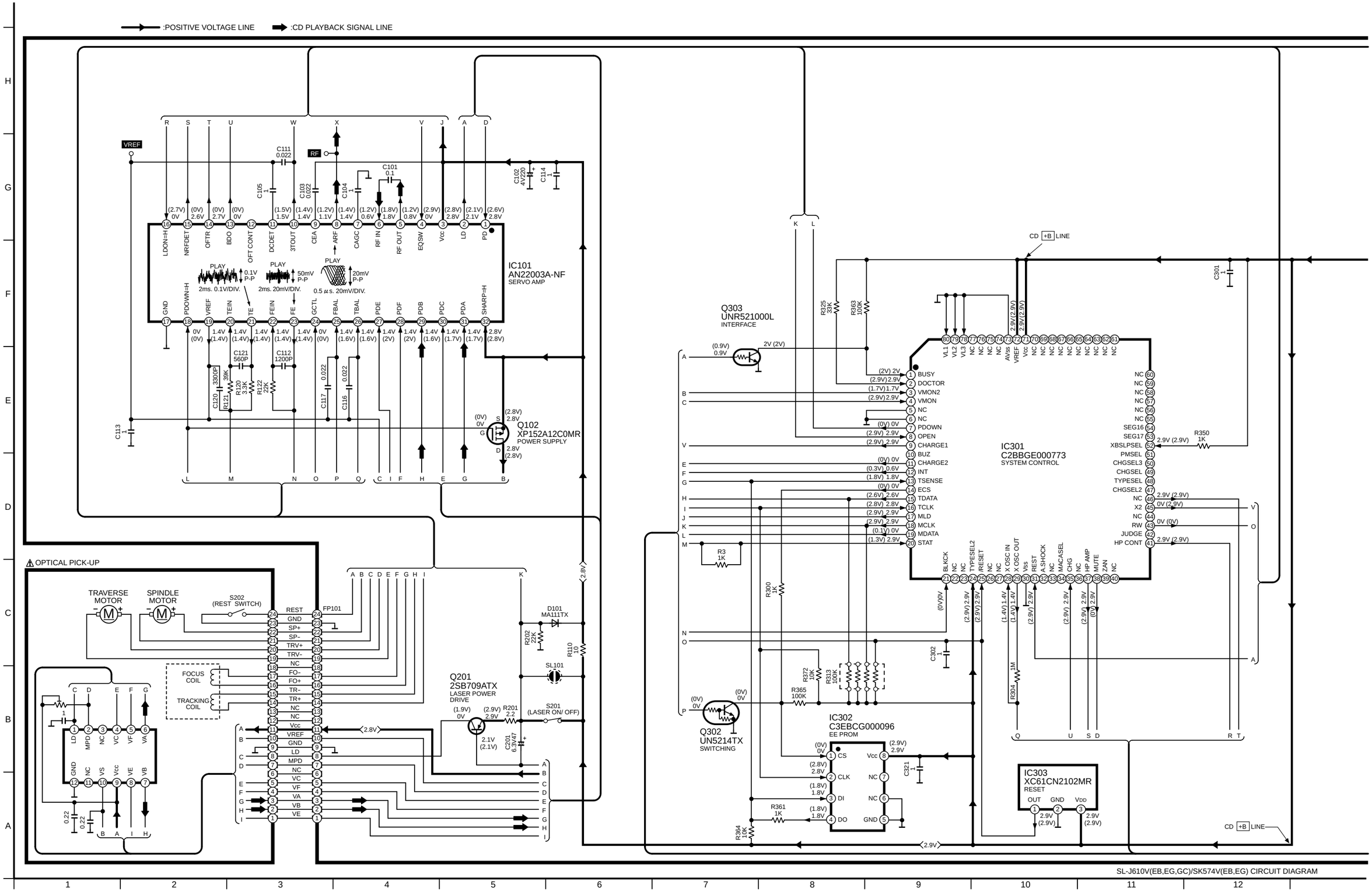
Do not touch the legs of IC or LSI with the fingers directly.

10.1. Cautions in Repair exchange of the Diode (D1101, D1102)

· When it is repaired, exchange the parts of D1101, D1102 together.

· The service parts of Number (KV1450TL3-4) are supplied only.

11 Schematic Diagram



:POSITIVE VOLTAGE LINE :CD PLAYBACK SIGNAL LINE :FM SIGNAL LINE :MAIN(CD,FM) SIGNAL LINE

IC503
C3ABMG000197
DRAM

IC501
MN6627935CJ
SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER &
D/A CONVERTER

Q502
B1ADMB000003
POWER SUPPLY

Q501
UN5213TX
POWER SUPPLY CONT.

IC11
AN41507A-VB
POWER SUPPLY/
MOTOR DRIVE

Q19
UN5213TX
RESET

Q18
UN5113TX
RESET

Q301
UN5213TX
RESET

Q731
2SC4081STX
SWITCHING

Q701
B1ADMB000003
POWER SUPPLY

Q905
UNR521000L
MUTING CONT.

Q902
XP0121000L
MUTING CONT.

Q704
UN5114TX
MUTING CONT.

Q710
UN5213TX
SWITCHING

Q708
B1CFMC000005
SIGNAL SELECT(CD)

Q709
B1CFMC000005
SIGNAL SELECT(CD)

Q706
B1CFMC000005
SIGNAL SELECT(TUNER)

Q707
B1CFMC000005
SIGNAL SELECT(TUNER)

Q705
B1GFGCAA0001
MUTING

IC701
C1BB00000720
HEADPHONE AMP

X502 (16.9344MHz)

MOUNT: [GC] area.

SL-J610V(EB,EG,GC)/SK574V(EB,EG) CIRCUIT DIAGRAM

:POSITIVE VOLTAGE LINE :FM SIGNAL LINE

Q1210 2SK1067-4-TL AM RF AMP

Q1151 2SK1067-4-TL STABILIZER

Q1208 UN5115TX SWITCHING(AM:ON)

Q1012 2SC4081STX DC-DC CONV.

Q1013 2SC4081STX DC-DC CONV.

Q1152,1153 2SD1819ASTX FM/ AM LOOP FILTER

Q1201 B1ADMB000003 POWER SUPPLY

IC1008 C0CBAAB00043 REGULATOR

Q1206 UN5115TX SWITCHING (AM:ON)

Q1501 UN511MTX POWER SUPPLY

Q1502 UN5214TX POWER SUPPLY CONT.

IC1500 C0ZBZ0000829 TONE CONTROL

IC1001 C1BB00000562 FM/AM RF AMP IF,DET

Q1202 2SC4081STX SWITCHING(CITY)

Q1203 UN5115TX SWITCHING(CITY)

Q1204 UNR521000L SWITCHING(MONO)

Q1207 2SC4081STX FILTER AMP

FM RF ADJ.

SL-J610V(EB,EG,GC)/SK574V(EB,EG) CIRCUIT DIAGRAM

:POSITIVE VOLTAGE LINE :FM SIGNAL LINE :MAIN(CD,FM) SIGNAL LINE

OPERATION & LCD UNIT

LCD1001(L5AAAEB00048)
LCD DISPLAY
A B C D E F G H I J K L M N O P Q R S T U V

CN301
1 GND
2 CD PLAY KEY
3 RADIO KEY
4 KEY2
5 VDD
6 S17
7 S16
8 S15
9 S14
10 S13
11 S12
12 S11
13 S10
14 S9
15 S8
16 S7
17 S6
18 S5
19 S4
20 S3
21 S2
22 S1
23 S0
24 COM3
25 COM2
26 COM1
27 COM0
28 HOLD
29 KEY1
30 VDD

S12 (▶/❚❚)
S11 (RADIO/ BAND)
S6 (■ OPR OFF)
S10 (TUNING MODE)
S9 (VOLUME –)
S8 (MEMORY/ RECALL)
S7 (▶▶| , +)
S5 (VOLUME +)
S4 (FM MONO/ ST)
S3 (FM RECEPT, CITY/ NOR/PLAY MODE)
S2 (|◀◀ , –)
S1 (S-XBS)

5.6K, 16.5K, 8.4K, 4.4K, 2K, 39.7K, 16.5K, 5.6K, 8.4K, 4.4K, 2K

S310 (HOLD) OFF ⟷ ON

JK11 DC IN ⎓ 4.5V

2 R6/LR6(UM-3) BATTERIES ⎓ 3V

JK701 HEADPHONE

IC1301 C2FBEB000003 SYSTEM CONTROL/ LCD DRIVE

Q1307 UN5214TX INTERFACE
Q1308 UN5214TX INTERFACE
Q1301 UN5214TX INTERFACE
Q1304 UN5213TX DC IN DET. (AC ADAPTOR)
Q14 UN5114TX CHARGE CONT.
Q13 UN521LTX CHARGE CONT.
Q11 2SB1182TLPQR REGULATOR
Q12 B1ABMD000004 CHARGE CONT.
Q16 UN5215TX DC IN DET. (BATTERIES)

MOUNT: [GC] area.
MOUNT: [EB,EG] areas.
0V ··· [GC] area.
1.5V ··· [EB,EG] areas.

ICP11 ERBFE1R50U
D22 MA111TX

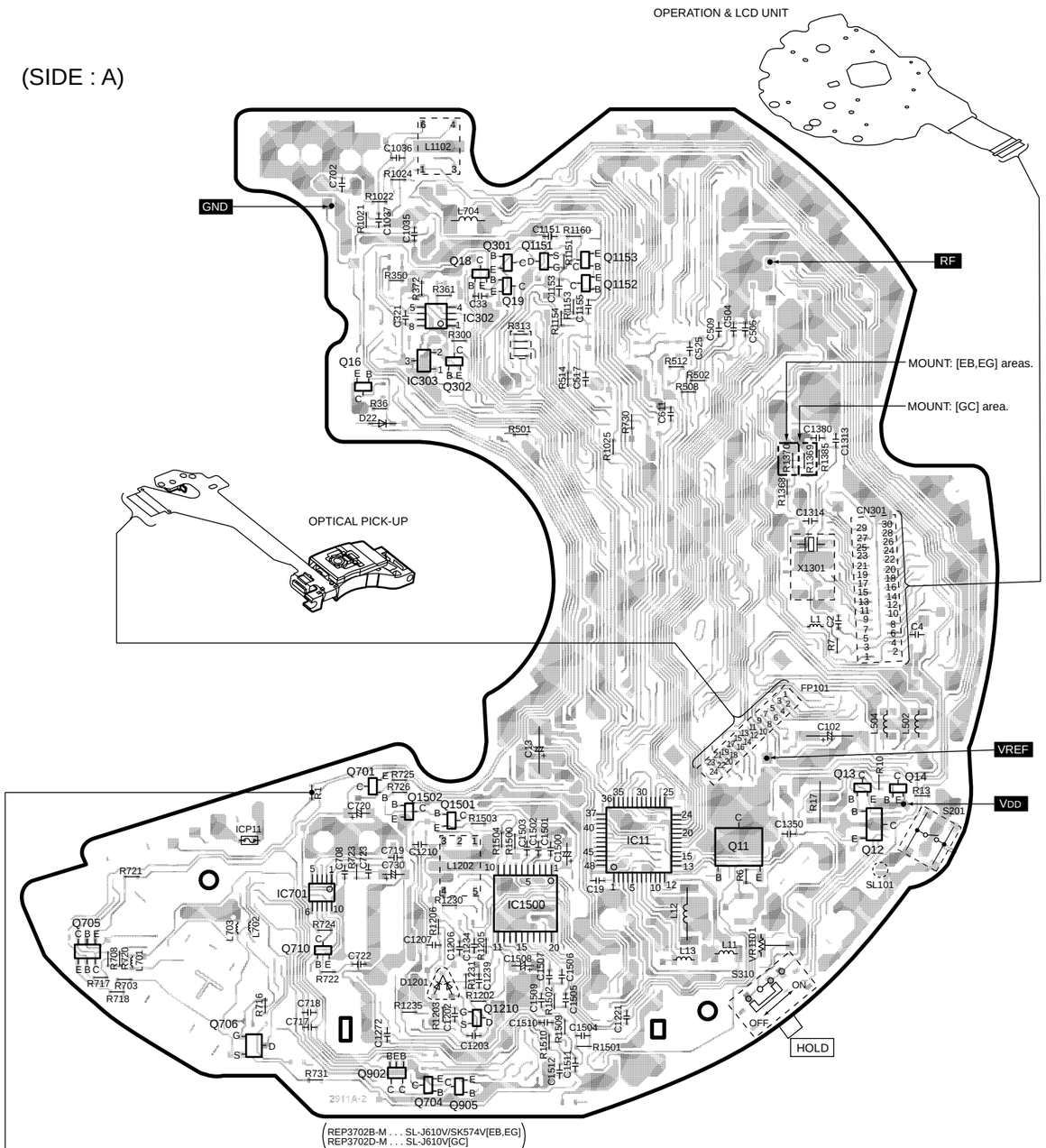
X1301 (75kHz)

SL-J610V(EB,EG,GC)/SK574V(EB,EG) CIRCUIT DIAGRAM

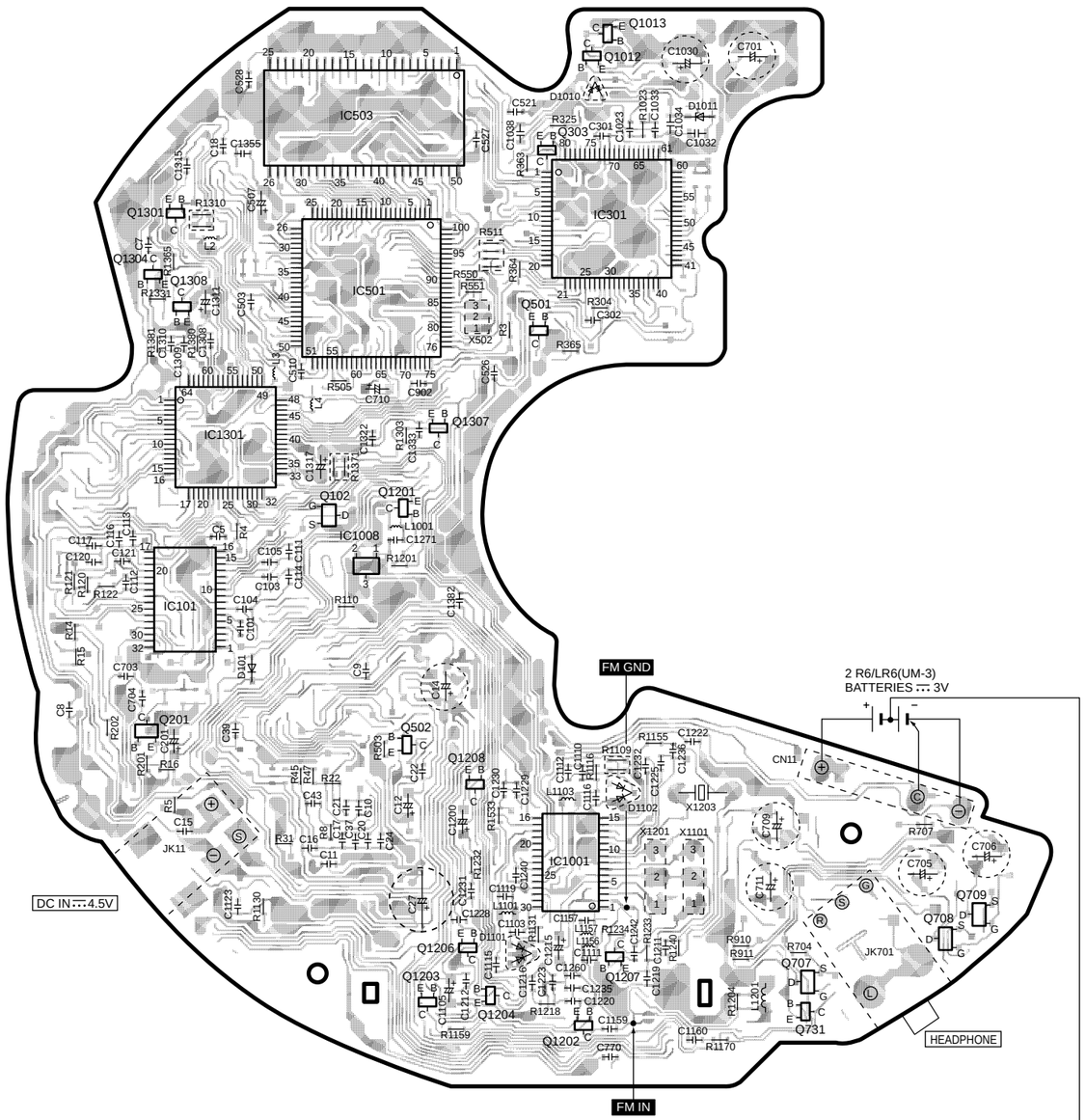
12 Printed Circuit Board and Wiring Connection Diagram

Note: This printed circuit board diagram may be modified at any time with the development of new technology.

(SIDE : A)

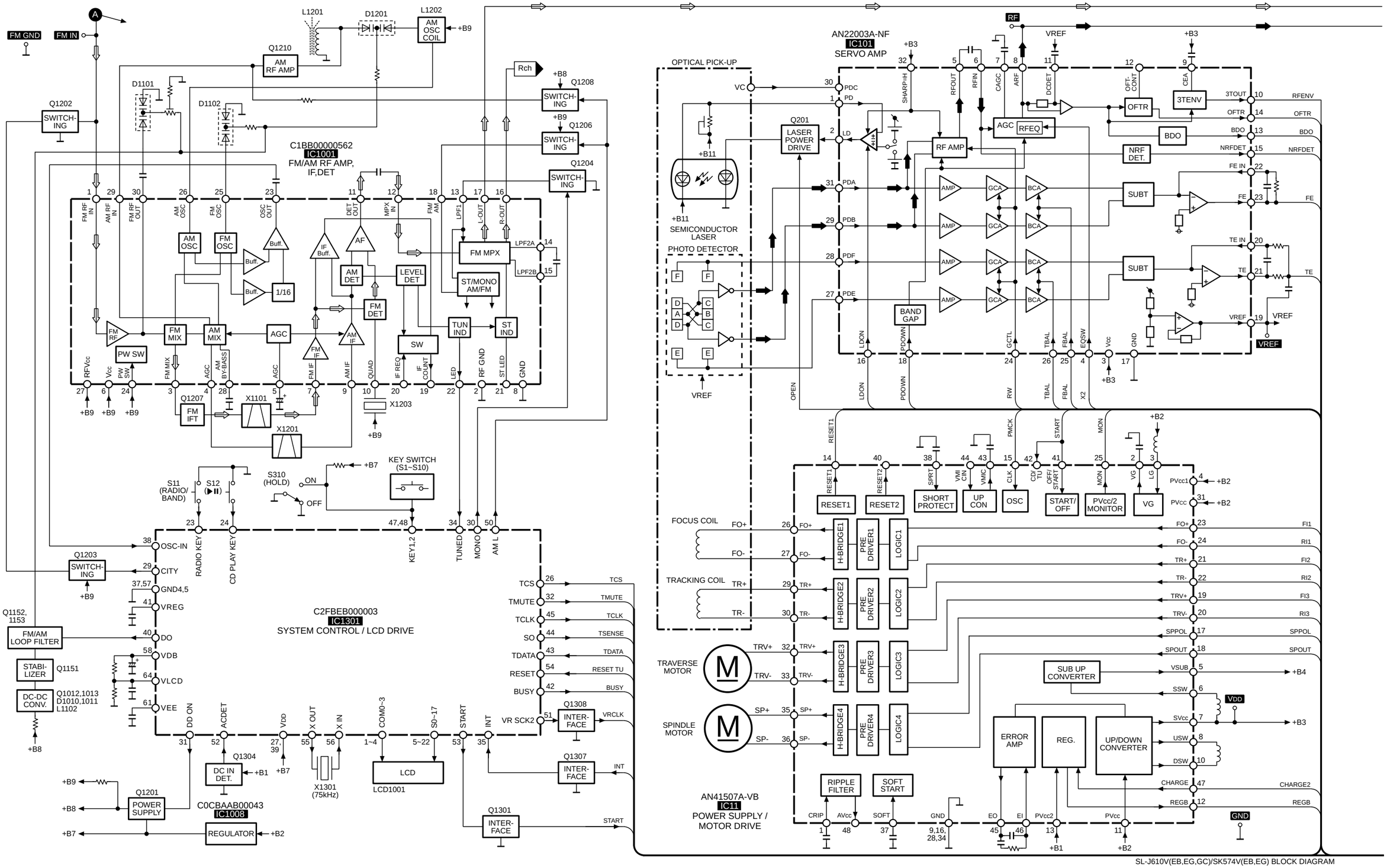


(SIDE : B)

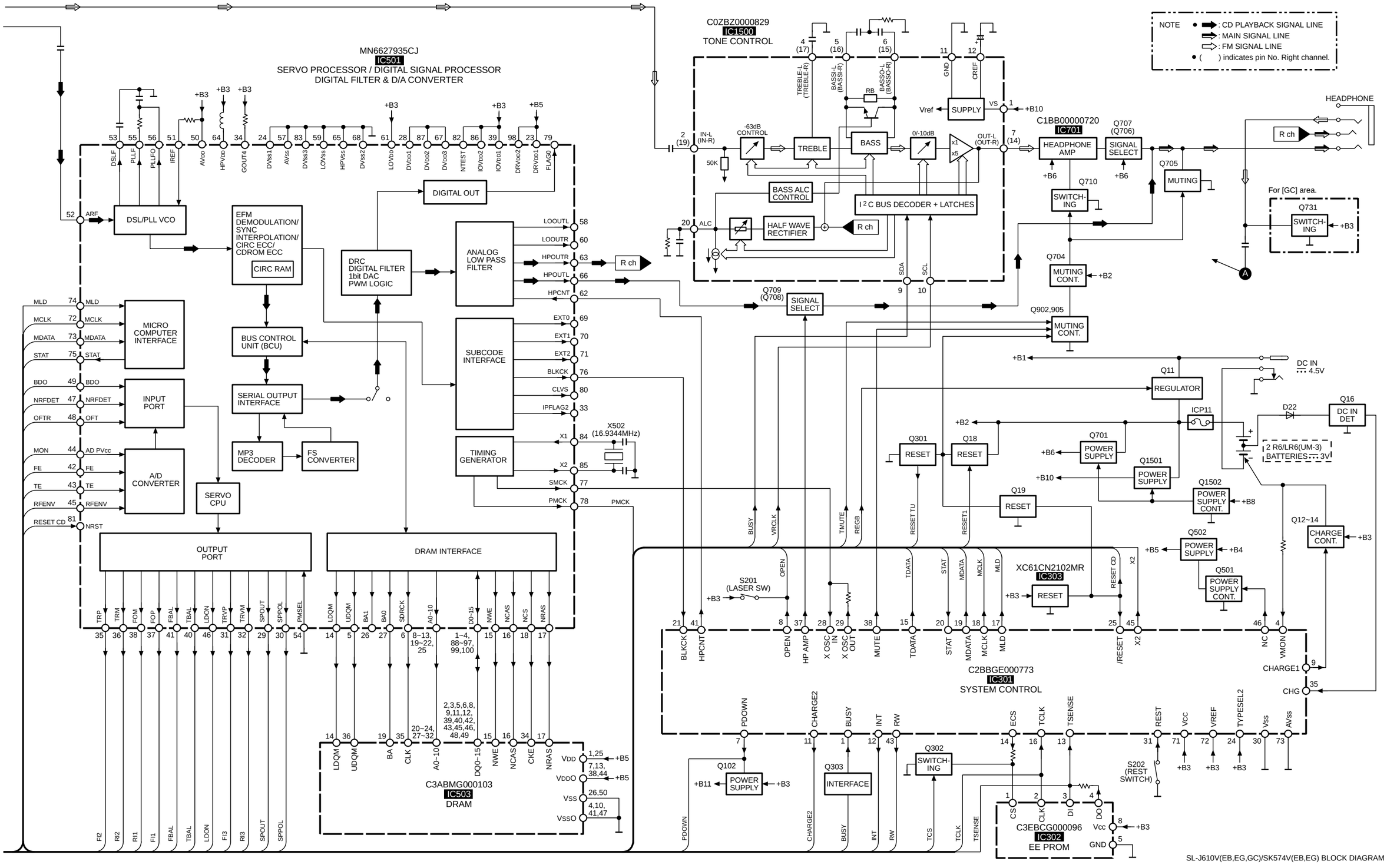


SL-J610V(EB,EG,GC)/SK574V(EB,EG) P.C.B.

13 Block Diagram



SL-J610V(EB,EG,GC)/SK574V(EB,EG) BLOCK DIAGRAM


MN6627935CJ
IC501
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR
DIGITAL FILTER & D/A CONVERTER
C0ZBZ0000829
IC1500
TONE CONTROL
NOTE
: CD PLAYBACK SIGNAL LINE
: MAIN SIGNAL LINE
: FM SIGNAL LINE
( ) indicates pin No. Right channel.
DSL/PLL VCO
EFM DEMODULATION/ SYNC INTERPOLATION/ CIRC ECC/ CDROM ECC
CIRC RAM
DRC DIGITAL FILTER 1bit DAC PWM LOGIC
DIGITAL OUT
ANALOG LOW PASS FILTER
SUBCODE INTERFACE
TIMING GENERATOR
X502 (16.9344MHz)
MICRO COMPUTER INTERFACE
INPUT PORT
A/D CONVERTER
SERVO CPU
BUS CONTROL UNIT (BCU)
SERIAL OUTPUT INTERFACE
MP3 DECODER
FS CONVERTER
OUTPUT PORT
DRAM INTERFACE
C3ABMG000103
IC503
DRAM
TREBLE
BASS
-63dB CONTROL
0/-10dB
BASS ALC CONTROL
I 2 C BUS DECODER + LATCHES
HALF WAVE RECTIFIER
SUPPLY
SIGNAL SELECT
C1BB00000720
IC701
HEADPHONE AMP
SIGNAL SELECT
MUTING
SWITCH-ING
MUTING CONT.
HEADPHONE
R ch
For [GC] area.
Q731
SWITCH-ING
+B3
Q709 (Q708)
Q902,905
MUTING CONT.
+B1
DC IN 4.5V
Q11
REGULATOR
D22
Q16
DC IN DET
ICP11
2 R6/LR6(UM-3) BATTERIES 3V
Q301
RESET
Q18
RESET
Q19
RESET
Q701
POWER SUPPLY
Q1501
POWER SUPPLY
Q1502
POWER SUPPLY CONT.
Q502
POWER SUPPLY
Q501
POWER SUPPLY CONT.
Q12~14
CHARGE CONT.
XC61CN2102MR
IC303
RESET
S201 (LASER SW)
C2BBGE000773
IC301
SYSTEM CONTROL
Q102
POWER SUPPLY
Q303
INTERFACE
Q302
SWITCH-ING
S202 (REST SWITCH)
C3EBCG000096
IC302
EE PROM
SL-J610V(EB,EG,GC)/SK574V(EB,EG) BLOCK DIAGRAM

14 Terminal Function of ICs

14.1. IC101(AN22003A-NF): Servo Amplifier

Pin No.	Terminal Name	I/O	Function
1	PD	I	APC amplifier input terminal
2	LD	O	APC amplifier output terminal
3	V_{CC}	I	Power supply terminal
4	EQSW	I	EQ characteristic drive signal input
5	RF OUT	O	RF addition amp output
6	RF IN	I	AGC signal input
7	CAGC	-	AGC loop filter capacitance connect terminal
8	ARF	O	RF signal output
9	CEA	-	Capacitor for H.P.F. connected terminal
10	3TOUT	O	RF envelope signal output
11	DC DET	-	Capacitor for H.P.F. connected terminal
12	OFTCONT	-	Not used, open
13	BDO	O	Dropout signal output
14	OFTR	O	Off-track signal output
15	NRFDET	O	RF detection signal output
16	LDON=H	I	Laser ON signal input
17	GND	-	GND
18	PDOWN =H	I	Headamp power OFF signal input
19	VREF	O	Reference voltage output terminal
20	TE IN	I	Tracking error amplifier input terminal
21	TE	O	Tracking error amplifier output terminal
22	FE IN	I	Focus error amplifier input terminal
23	FE	O	Focus error amplifier output terminal
24	GCTL	I	Input for CD-RW
25	FBAL	I	Focus balance signal input terminal
26	TBAL	I	Tracking balance signal input terminal
27	PDE	I	Tracking signal input terminal
28	PDF	I	Tracking signal input terminal
29	PDB	I	Focus signal input terminal
30	PDC	I	RF addition input terminal
31	PDA	I	Focus signal input terminal
32	SHARP =H	I	Connected to V_{CC}

14.2. IC301(C2BBGE000773): System Control

Pin No.	Terminal Name	I/O	Function
1	BUSY	I	Busy signal input
2	DOCTOR	I	Connected to VREF though resistor
3	VMON2	I	Battery remaining measurement signal
4	VMON	I	Rechargeable battery voltage signal input
5	NC	-	Not used, connected to GND
6	NC	-	Not used, connected to GND
7	PDOWN	O	Headamp power OFF signal output
8	OPEN	I	CD cover open detect signal input
9	CHARGE1	O	Charge control signal output
10	BUZ	-	Not used, open
11	CHARGE2	O	PVCC voltage up output
12	INT	O	Serial communication starting signal output
13	TSENSE	I	Serial communication data signal input/EEPROM data signal input
14	ECS	O	EEPROM communication select signal
15	TDATA	O	Serial communication data signal output
16	TCLK	I	Serial communication clock signal input
17	MLD	O	Serial command latch output
18	MCLK	O	Serial command clock output
19	MDATA	O	Serial command data output
20	STAT	I	Status signal input
21	BLKCK	I	Sub-code block clock signal input
22	NC	-	Not used, open
23	NC	-	Not used, open
24	TYPESEL2	I	Connected to V_{CC}
25	/RESET	I	Reset detect signal input
26	NC	-	Not used, open
27	NC	-	
28	XOSCIN	I	System clock signal
29	XOSC OUT	O	
30	V_{SS}	-	GND
31	REST	I	Rest detect switch signal input
32	A.SHOCK	-	Not used, open
33	NC	-	Not used, open
34	MACASEL	-	Not used, open
35	CHG	I	Not used, connected to GND via resistor
36	NC	-	Not used, open
37	HP AMP	O	Voice ON output of CD
38	MUTE	O	Headphone amp muting signal output
39	ZAN	-	Not used, open
40	NC	-	Not used, open
41	HP CONT	O	Headphone terminal L output control output
42	JUDGE	-	Not used, open
43	RW	O	Output for CD-RW
44	NC	-	Not used, open
45	X2	O	RF equalizer more than twice speed signal output
46	NC	-	Not used, open
47	CHGSEL2	-	Not used, open
48	TYPESEL	-	Not used, open
49	CHGSEL	-	Not used, open
50	CHGSEL3	-	Not used, open
51	PMSEL	-	Not used, open
52	XBSLPSEL	I	Setting selection input of LPF of XSB
53 | 54	SEG17 | SEG16	-	Not used, open
55 | 70	NC	-	Not used, open
71	V_{CC}	I	Power supply terminal
72	VREF	I	Reference voltage input terminal
73	AV_{SS}	-	GND
74 | 77	NC	-	Not used, open
78	VL3	I	Not used, connected to GND
79	VL2	I	Not used, connected to GND
80	VL1	I	Not used, connected to GND

14.3. IC501(MN6627935CJ): Servo Processor, Digital Signal Processor, Digital Filter & D / A Converter

Pin No.	Terminal Name	I/O	Function
1 | 4	D11 | D8	I/O	DRAM data input/output signal
5	UDQM	O	High byte data mask signal output

Pin No.	Terminal Name	I/O	Function
6	SDRCK	O	Clock signal output
7	A11	-	Not used, open
8 | 13	A9 | A4	O	DRAM address signal output
14	LDQM	O	Low byte data mask signal output
15	NWE	O	Write enable signal output
16	NCAS	O	CAS control signal output
17	NRAS	O	RAS control signal output
18	NCS	O	Chip select signal output
19 | 22	A3 | A0	O	DRAM address signal output
23	$DRV_{DD}1$	I	Power supply terminal
24	$DV_{SS}1$	-	GND
25	A10	O	DRAM address signal output
26	BA1	-	Not used, open
27	BA0	O	Bank select signal output
28	$DV_{DD}1$	I	Power supply terminal
29	SPOUT	O	Spindle motor drive output terminal
30	SPPOL	O	Spindle motor drive output terminal
31	TRVP	O	Traverse drive (+) output terminal
32	TRVM	O	Traverse drive (-) output terminal
33	IPFLAG2	-	Not used, open
34	GOUT4	I	Connected to VDD
35	TRP	O	Tracking coil drive (+) output terminal
36	TRM	O	Tracking coil drive (-) output terminal
37	FOP	O	Focus coil drive (+) output terminal
38	FOM	O	Focus coil drive (-) output terminal
39	$IOV_{DD}1$	I	Power supply terminal
40	TBAL	O	Tracking balance adjustment signal output
41	FBAL	O	Focus balance adjustment signal output
42	FE	I	Focus error signal input terminal
43	TE	I	Tracking error signal input terminal
44	$ADPV_{CC}$	I	A/D convertor reference voltage input
45	RFENV	I	RF envelope signal input terminal
46	LDON	O	Laser ON signal output
47	NRFDET	I	RF detection signal input terminal
48	OFT	I	Off-track signal input terminal
49	BDO	I	Dropout signal input terminal
50	AV_{DD}	I	Power supply terminal
51	IREF	I	Reference current input terminal
52	ARF	I	RF signal input terminal
53	DSLF	O	DSL loop filter
54	PMSEL	-	GND
55	PLLF	O	PLL loop filter
56	PLLFO	O	PLL loop filter
57	AV_{SS}	-	GND
58	LOOUTL	-	Not used, open
59	LOV_{SS}	-	GND
60	LOOUTR	-	Not used, open
61	LOV_{DD}	I	Power supply terminal
62	HPCNT	I	Headphone input control signal
63	HPOUTR	O	R ch for headphone signal output
64	HPV_{DD}	I	Power supply terminal
65	HPV_{SS}	-	GND
66	HPOUTL	O	L ch for headphone signal output
67	$DV_{DD}3$	I	Power supply terminal
68	$DV_{SS}2$	-	GND
69	EXT0	-	Not used, open
70	EXT1	-	Not used, open
71	EXT2	-	Not used, open
72	MCLK	I	Serial command clock input
73	MDATA	I	Serial command data input
74	MLD	I	Serial command latch input

Pin No.	Terminal Name	I/O	Function
75	STAT	O	Status signal output terminal
76	BLKCK	O	Sub-code block clock signal output
77	SMCK	O	System clock signal output
78	PMCK	O	System clock signal output
79	FLAGO	-	Not used, open
80	CLVS	-	Not used, open
81	NRST	I	Reset signal input
82	NTEST	I	Test signal
83	$DV_{SS}3$	-	GND
84	X1	I	Oscillator connected (F=16.9 MHz)
85	X2	O	
86	$IOV_{DD}2$	I	Power supply terminal
87	$DV_{DD}2$	I	Power supply terminal
88	D2	I/O	DRAM data signal input/output
89	D1	I/O	DRAM data signal input/output
90	D0	I/O	DRAM data signal input/output
91 | 95	D3 | D7	I/O	DRAM data signal input/output
96	D15	I/O	DRAM data signal input/output
97	D14	I/O	DRAM data signal input/output
98	$DRV_{DD}2$	I	Power supply terminal
99	D13	I/O	DRAM data signal input/output
100	D12	I/O	DRAM data signal input/output

14.4. IC1301(C2FBEB000003): System Control / LCD Drive

Pin No.	Terminal Name	I/O	Function
1 | 4	COM0 | COM3	O	LCD common signal output
5 | 22	S0 | S17	O	LCD segment signal output
23	RADIO KEY	I	Radio key signal input
24	CDPLAY KEY	I	Play key signal input
25	SELECT2	I	Connected to GND via resistor
26	TCS	O	EEPROM chip select signal output
27	V_{DD}	I	Power supply terminal
28	BUZ	-	Not used, open
29	CITY	O	City/normal select signal output
30	MONO	O	Forced monaural signal output
31	DDON	O	Power supply for varicap ON output
32	TMUTE	O	Mute ON signal output
33	NC	-	Not used, open
34	TUNED	I	Tuned condition signal input
35	INT	I	Serial communication starting signal input
36	SELECT1	I	Area select signal input
37	GND4	-	GND
38	OSC IN	I	FM/AM OSC signal input
39	V_{DD}	I	Power supply terminal
40	DO	O	A phase comparator signal output
41	VREG	-	Not used, connected to GND via capacitor
42	BUSY	O	Busy signal output for IC301/data signal output for IC1500
43	TDATA	I	Serial communication data signal input
44	SO	O	Serial communication data signal output
45	TCLK	O	Serial communication clock signal output
46	6KEY	I	Not used, connected to V_{DD} via resistor
47	KEY1	I	Operation key signal input
48	KEY2	I	Operation key signal input
49	EMPTY	I	Battery remaining detect signal input
50	AM L	O	FM/AM select signal output

Pin No.	Terminal Name	I/O	Function
51	VR SCK2	O	Clock signal output for IC1500
52	ACDET	I	Power failure detect signal input
53	START	O	Power ON signal output
54	RESET	I	Reset signal input
55	XOUT	O	Oscillator connected terminal (F=75 kHz)
56	XIN	I	
57	GND5	-	GND
58	VDB	-	Connected to GND via capacitor
59	C1	-	Connected to C2 via capacitor
60	C2	-	Connected to C1 via capacitor
61	V_{EE}	-	Connected to GND via capacitor
62	C3	-	Not used, open
63	C4	-	Not used, open
64	VLCD	-	Connected to GND via capacitor

15 Measurements and Adjustments

15.1. Tuner section

Connect lead wire for test points FM IN and FM GND.
Refer to Fig. 15-1.

(Refer to “Printed Circuit Board and Wiring Connection Diagram” about FM IN and FM GND.)

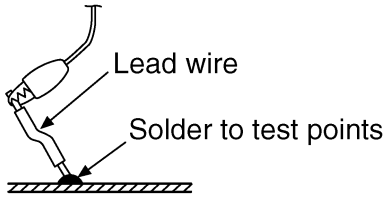


Fig. 15-1.

15.1.1. Measurement condition

1. Set volume control to maximum.
2. Release the hold state.
3. Set power source voltage to 4.5V DC. (AC adaptor IN)

15.1.2. Control positions and equipment used

1. Signal generator (FM/AM)
2. Oscilloscope
3. Headphones jig

15.1.3. FM RF adjustment

1. Connect the FM signal generator to **FM IN(+)** and **FM GND(-)**.
2. Connect the oscilloscope to headphones jack.
   Refer to Fig. 15-2.
3. Set the unit to FM mode.
4. Set FM-SG to 90 MHz.
5. Receive 90 MHz in the unit.
6. Adjust **VR1101** for maximum output. Refer to Fig. 15-3.

15.1.4. AM RF adjustment

1. Fashion a loop of several turns of wire and radiate a signal into the loop antenna of receiver.
2. Connect the oscilloscope to headphones jack.
   Refer to Fig. 15-2.
3. Set the unit to AM mode.
4. Set AM-SG to 594 kHz.
5. Receive 594 kHz in the unit.
6. Adjust **L1202** for maximum output. Refer to Fig. 15-3.

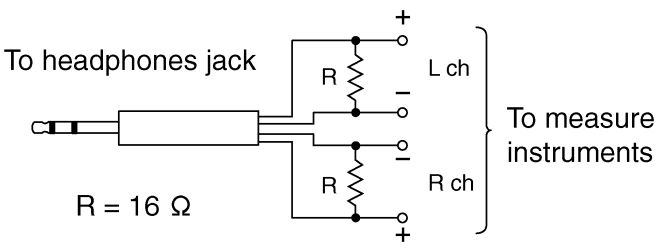


Fig. 15-2.

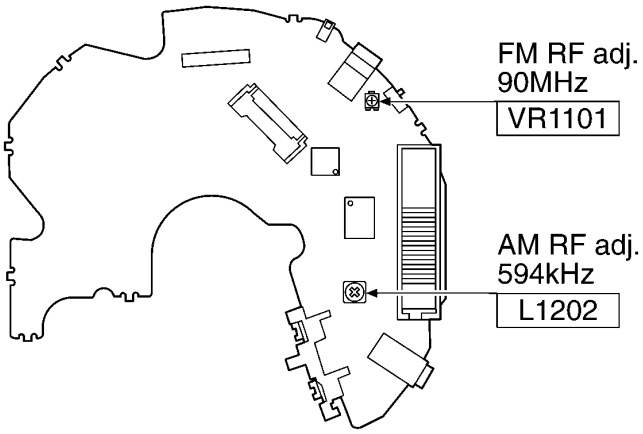


Fig. 15-3.

16 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ 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 manufactures specified parts shown in the parts list.

- The parenthesized indications in Remarks columns specify the areas.

  (J610VEB): SL-J610VEB

  (J610VEG): SL-J610VEG

  (J610VGC): SL-J610VGC

  (SK574VEB): SL-SK574VEB

  (SK574VEG): SL-SK574VEG

- The marking [RTL] indicates that retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

- All parts are supplied by SPC.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RAE0240Z-M	TRAVERSE DECK ASS´Y	1	⚠
1-1	RMG0605-K1	FLOATING RUBBER	3	
1-2	RAF0240A	OPTICAL PICK-UP	1	⚠
1-3	RDG0554	GEAR 1	1	
1-4	RDG0555	GEAR 2	1	
1-5	RMQ1125-1	MOTOR HOLDER	1	
1-6	RMS0782	DRIVE SHAFT	1	
1-7	XQN17+BG45	SCREW	1	
1-8	RXQ0971-3	TRAVERSE MOTOR ASS´Y	1	
2	RGV0317-H1	KNOB,HOLD	1	
3	RJC93038-3	BATTERY TERMINAL	1	
4	RKS0376-A	BOTTOM CABINET	1	
5	XTN17+6GFZ	SCREW	4	
6	RMB0788	SPRING	1	
7	RMR1514-K	FFC HOLDER	1	
8	L5AAAEB00048	LCD(LCD1001)	1	
9	RGK1778-S	LID ORNAMENT	1	
10	RGP1268-X	LCD PANEL	1	
11	RGU2292-1S	BUTTON,TUNING MODE	1	(J610VEG, J610VEB, SK574VEG, SK574VEB)
11	RGU2292-S	BUTTON,TUNING MODE	1	(J610VGC)
12	RGU2293-S	BUTTON,PLAY/PAUSE ETC	1	
13	RHQ0088-S	SCREW	8	
14	RSQ0094	ZEBRA CONNECTOR	1	
15	XQN14+BG3FC	SCREW	6	
16	K0RE01200007	SW,OPERATION	1	
17	RMR1614-H	LID COVER	1	
18	RYF0712B-S	CD LID ORNAMENT	1	(J610VEG, J610VEB, J610VGC)
18	RYF0712C-S	CD LID ORNAMENT	1	(SK574VEG, SK574VEB)
19	RGV0318-H4	KNOB,OPEN	1	
20	RKK0171-A	BATTERY LID	1	
21	RKM0482A-A	MIDDLE CABINET	1	
22	RMR1412-K2	LOCK PLATE	1	
23	RGN2686-H	NAME PLATE	1	⚠ (J610VEG)
23	RGN2687-H	NAME PLATE	1	⚠ (J610VEB)
23	RGN2688-H	NAME PLATE	1	⚠ (J610VGC)
23	RGN2714-H	NAME PLATE	1	⚠ (SK574VEG)
23	RGN2715-H	NAME PLATE	1	⚠ (SK574VEB)
24	RMC0537	DETECTION TERMINAL	1	
25	RQLS0244	LASER LABEL	1	
A1	L0BAB0000182	STEREO EARPHONES	1	(J610VEG, J610VEB, J610VGC)
A2	RFEA401E-4S	AC ADAPTOR	1	⚠ (J610VEG)
A2	RFEA403B-S	AC ADAPTOR	1	⚠ (J610VEB)
A2	RFEA403Z-S	AC ADAPTOR	1	⚠ (J610VGC)
A3	RQT7211-B	OPERATING ISNTRUCTIONS	1	(J610VEG, J610VEB, J610VGC) ENGLISH
A3	RQT7210-E	OPERATING ISNTRUCTIONS	1	(J610VEG) FRENCH, GERMANY, SPANISH, NETHERLANDS, SWEDISH, DANISH, ITALIAN, PORTUGUESE, RUSSIAN, POLISH, CZECH
A3	RQT7212-K	OPERATING ISNTRUCTIONS	1	(J610VGC) CHAINESE
A3	RQT7213-A	OPERATING ISNTRUCTIONS	1	(J610VGC) ARABIC
A4	RFKNLJ610VE2	ACTIVE SPEAKER(L)	1	(J610VEG, J610VEB, J610VGC)
A5	RFKNLJ610VE1	ACTIVE SPEAKER(R)	1	(J610VEG, J610VEB, J610VGC)
A6	RFE0132	CENTER TRAY	1	(J610VEG, J610VEB, J610VGC)
A7	K2DA42E00001	AC PLUG ADAPTOR	1	⚠ (J610VGC)
A21	L0BAB0000182	STEREO EARPHONES	1	(SK574VEG, SK574VEB)
A22	RFEA419E-M	AC ADAPTOR	1	⚠ (SK574VEG)
A22	N0JCCE000004	AC ADAPTOR	1	⚠ (SK574VEB)
A23	RQT7661-E	OPERATING INSTRUCTIONS	1	(SK574VEG) FRENCH, GERMANY, SPANISH, NETHERLANDS, SWEDISH, DANISH, ITALIAN, PORTUGUESE, RUSSIAN, POLISH, CZECH
A23	RQT7660-B	OPERATING INSTRUCTIONS	1	(SK574VEG, SK574VEB) ENGLISH
A24	RFC0080-X	SPLASH POUCH WITH SPEAKER	1	(SK574VEG, SK574VEB)
C2	ECJ1XB1C104K	16V 0.1U	1	
C4,C5	ECJ1VB1H103K	50V 0.01U	2	F1H1H103A748
C7	ECJ1VB1A105K	10V 1U	1	
C8	ECJ1XB1C104K	16V 0.1U	1	
C9	ECJ1VB1A105K	10V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C10	ECJ1XC1H121J	50V 120P	1	
C11	ECJ1VB1A105K	10V 1U	1	
C12	F3F0J226A004	6.3V 22U	1	
C13	F3H1A476A001	10V 47U	1	
C14	ECEA0JKA221	6.3V 220U	1	F2A0J2210012
C15,16	ECJ1VB1A105K	10V 1U	2	
C17	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C18	ECJ1XB1C104K	16V 0.1U	1	
C19	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C20	ECJ1VB1A105K	10V 1U	1	
C21	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C22	ECJ1VF1C104Z	16V 0.1U	1	
C24	ECJ1VB1H391K	50V 390P	1	
C27	F2A0J102A130	6.3V 1000U	1	
C33	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C37	ECJ1VF1C104Z	16V 0.1U	1	
C39	ECJ1XB1C104K	16V 0.1U	1	
C43	ECJ1VF1C104Z	16V 0.1U	1	
C101	ECJ1XB1C104K	16V 0.1U	1	
C102	EEE0GA221SP	4V 220U	1	
C103	ECJ1VB1E223K	25V 0.022U	1	
C104,05	ECJ1VB1A105K	10V 1U	2	
C111	ECJ1VB1E223K	25V 0.022U	1	
C112	ECJ1VB1H122K	50V 1200P	1	
C113	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C114	ECJ1VB1A105K	10V 1U	1	
C116,17	ECJ1VB1E223K	25V 0.022U	2	
C120	ECUX1H332KBV	50V 3300P	1	
C121	ECJ1VB1H561K	50V 560P	1	
C201	F3F0J4760003	6.3V 47U	1	
C301	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C302	ECJ1VB1A105K	10V 1U	1	
C321	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C503	ECJ1VC1H391J	50V 390P	1	
C504	ECJ1VF1C104Z	16V 0.1U	1	
C505	ECJ1VB1E223K	25V 0.022U	1	
C507	RCST0GY476RG	4V 47U	1	F3F0G4760001
C509	ECJ1XB1C104K	16V 0.1U	1	
C510	ECJ1VF1C104Z	16V 0.1U	1	
C517	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C521	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C525	ECJ1VB1A105K	10V 1U	1	
C526	ECJ1XB1C104K	16V 0.1U	1	
C527	ECJ1VF1C104Z	16V 0.1U	1	
C528	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C611	ECJ1XB1C104K	16V 0.1U	1	
C701	ECEA0GKS471	4V 470U	1	
C702	ECJ1VB1A105K	10V 1U	1	
C703,04	ECJ1XB1C104K	16V 0.1U	2	
C705,06	ECA0GAD221XI	4V 220U	2	
C708	ECJ1VB1A105K	10V 1U	1	
C709	ECEA0JKS101	6.3V 100U	1	
C710	F3F0J4760003	6.3V 47U	1	
C711	ECEA0JKS101	6.3V 100U	1	
C717,18	ECJ1VB1H102K	50V 1000P	2	
C719	ECJ1VB1A105K	10V 1U	1	
C720	F3F0J226A004	6.3V 22U	1	
C722,23	ECJ1XB1C104K	16V 0.1U	2	
C730	F3F0J106A007	6.3V 10U	1	
C770	ECJ1VB1H102K	50V 1000P	1	
C902	ECJ1VB1E223K	25V 0.022U	1	
C1023	ECJ1VC1H220J	50V 22P	1	
C1030	ECEA0JKS470	6.3V 47U	1	
C1032	ECUVNJ475MBN	6.3V 4.7U	1	F1J0J4750002
C1033	ECJ1VC1H101J	50V 100P	1	
C1034	ECJ2XF1C225Z	16V 2.2U	1	F1J1C225A083
C1035	ECJ1VB1E223K	25V 0.022U	1	
C1036	ECJ1VC1H390J	50V 39P	1	
C1037	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C1038	F1J1C1050011	16V 1U	1	
C1103	ECUV1H181GCV	50V 180P	1	ECJ1VC1H181G
C1105	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C1110	ECJ1VC1H050C	50V 5P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1111	ECJ1VC1H470J	50V 47P	1	
C1112	ECJ1VC1H470G	50V 47P	1	F1H1H470A002
C1115,16	ECJ1VB1H102K	50V 1000P	2	
C1119	ECJ1VC1H010C	50V 1P	1	
C1123	ECJ1VB1H102K	50V 1000P	1	
C1151	ECJ1XB1C473K	16V 0.047U	1	F1H1C473A071
C1153	F1J1C1050011	16V 1U	1	
C1155	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C1157	ECJ1VC1H120J	50V 12P	1	
C1159	ECUX1H221KBV	50V 220P	1	F1H1H2210001
C1160	ECJ1VC1H470J	50V 47P	1	
C1200	RCST0GY476RG	4V 47U	1	F3F0G4760001
C1202,03	ECJ1VF1C104Z	16V 0.1U	2	
C1206	ECJ1VB1C333K	16V 0.033U	1	F1H1C333A071
C1207	ECUV1H471GCV	50V 470P	1	
C1210	ECJ1XC1H100D	50V 10P	1	
C1211	ECUX1H221KBV	50V 220P	1	F1H1H2210001
C1212	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C1215	RCST1AY475RE	10V 4.7U	1	F3F1A475A001
C1216	F1H0J474A002	6.3V 0.47U	1	
C1219,20	ECJ1VB1H102K	50V 1000P	2	
C1221	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C1222	ECJ1XB1C104K	16V 0.1U	1	
C1223	ECJ1XB1C473K	16V 0.047U	1	F1H1C473A071
C1225	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C1228,29	ECJ1VB1H822K	50V 8200P	2	
C1230-32	ECJ1XB1C104K	16V 0.1U	3	
C1234	ECJ1XB1C104K	16V 0.1U	1	
C1235	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C1236	ECJ1VB1H102K	50V 1000P	1	
C1239	ECJ1VF1C104Z	16V 0.1U	1	
C1240	ECJ1XB1C104K	16V 0.1U	1	
C1242	ECJ1VB1H102K	50V 1000P	1	
C1260	ECJ1VB1A105K	10V 1U	1	
C1271	ECJ1VB1A105K	10V 1U	1	
C1272	ECUX1H221KBV	50V 220P	1	F1H1H2210001
C1308	ECJ1XB1C104K	16V 0.1U	1	
C1309	ECJ1VF1C104Z	16V 0.1U	1	
C1310	ECJ1XB1C104K	16V 0.1U	1	
C1311	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C1313,14	ECJ1VC1H150J	50V 15P	2	
C1315	ECJ1VF1C104Z	16V 0.1U	1	
C1317	RCST0GY476RG	4V 47U	1	F3F0G4760001
C1322	F1H0J474A002	6.3V 0.47U	1	
C1333	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C1350	ECJ1XB1C104K	16V 0.1U	1	
C1355	ECJ1VB1H103K	50V 0.01U	1	F1H1H103A748
C1380	ECJ1XB1C104K	16V 0.1U	1	
C1382	ECJ1XB1C104K	16V 0.1U	1	
C1500	F3F0J106A007	6.3V 10U	1	
C1501	ECJ1VB1H562K	50V 5600P	1	
C1502,03	ECJ1VF1C104Z	16V 0.1U	2	
C1504	ECJ1VF1C474Z	16V 0.47U	1	
C1505	ECJ1VB1H562K	50V 5600P	1	
C1506,07	ECJ1VF1C104Z	16V 0.1U	2	
C1508	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C1509,10	ECJ1VF1A105Z	10V 1U	2	F1H1A1050002
C1511,12	ECJ1VB1H102K	50V 1000P	2	
CN11	K4BC03B00014	BATTERY TERMINAL	1	
CN301	K1MN30A00061	CONNECTOR(30P)	1	
D22	MA2J11100L	DIODE	1	
D101	MA2J11100L	DIODE	1	
D1010	MA147TX	DIODE	1	MA3J14700L
D1011	MA81200-L	DIODE	1	
D1101,02	KV1450TL3-4	DIODE	2	B0CDBB000006
D1201	KV1610STL2-0	DIODE	1	B0CDBB000004
FP101	K1MN24B00108	CONNECTOR(24P)	1	
IC11	AN41507A-VB	IC	1	
IC101	AN22003A-NF	IC	1	

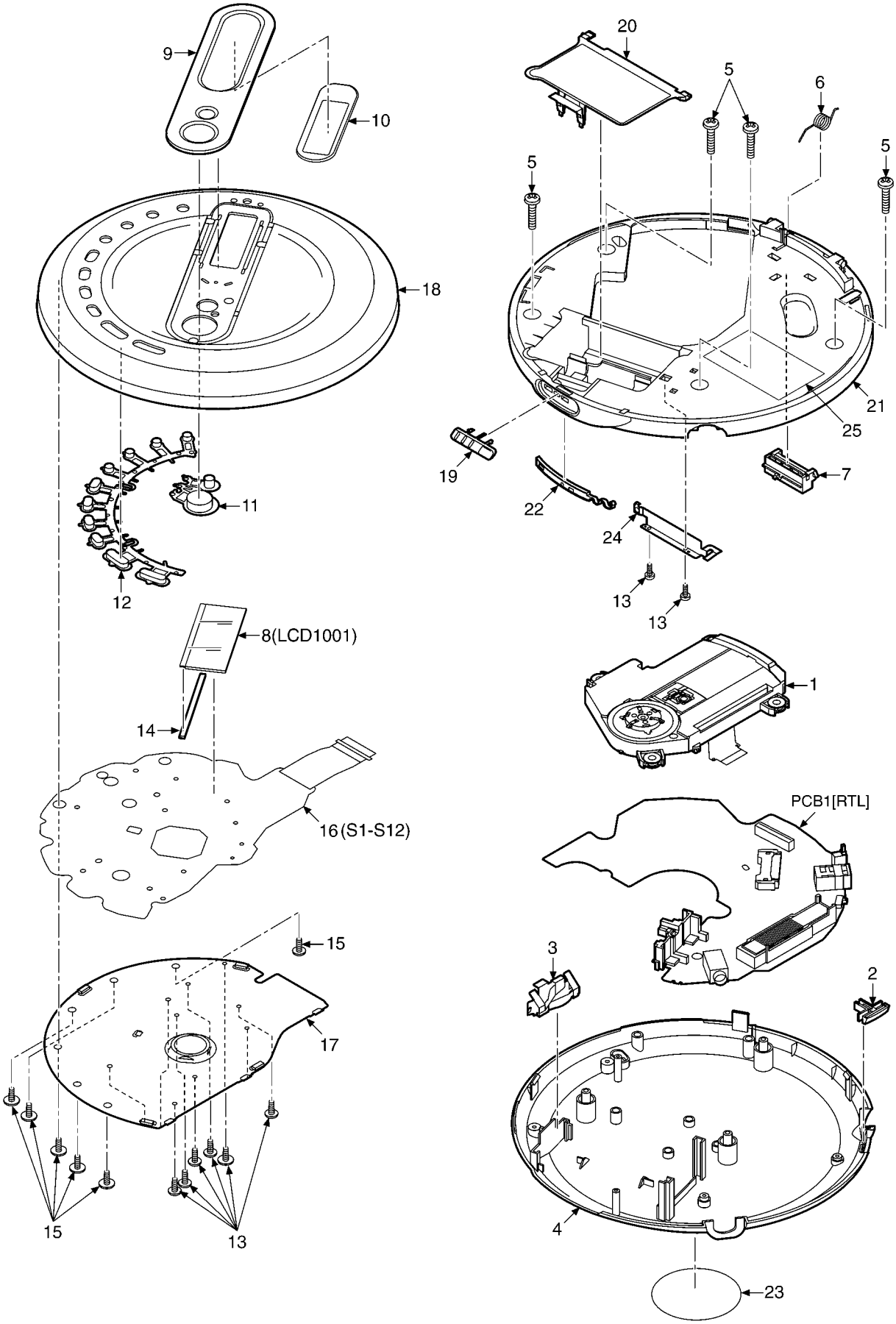
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC301	C2BBGE000773	IC	1	
IC302	C3EBCG000096	IC	1	
IC303	C0EBD0000066	IC	1	
IC501	MN6627935CJ	IC	1	
IC503	C3ABMG000197	IC	1	
IC701	C1BB00000720	IC	1	
IC1001	C1BB00000562	IC	1	
IC1008	C0CBAAB00043	IC	1	
IC1301	C2FBEB000003	IC	1	
IC1500	C0ZBZ0000829	IC	1	
ICP11	ERBFE1R50U	IC PROTECTOR	1	⚠
JK11	RJJ43K09-C	JK,DC IN	1	K2EB2B000006
JK701	K2HC104B0013	JACK,HEADPHONE	1	
L1-L4	RLBV252AV-Y	COIL	4	J0JBC0000019
L11	G1C331K00008	COIL	1	
L12	G1C101MA0035	COIL	1	
L13	G1C101K00021	COIL	1	
L502	G1C101K00033	COIL	1	
L504	G1C101K00033	COIL	1	
L701-03	RLBV252AV-Y	COIL	3	J0JBC0000019
L704	G1C471K00007	COIL	1	
L1001	J0JCC0000077	COIL	1	
L1101	RLQM101NJT-W	COIL	1	G1CR10J00015
L1102	G5ZZ00000047	COIL	1	
L1103	RLQM101NJT-W	COIL	1	G1CR10J00015
L1156	RLQP68NMT2-Y	COIL	1	G1C68NM00003
L1157	RLQPR22KT2-Y	COIL	1	G1CR22KA0009
L1201	G2CBCB000018	COIL	1	
L1202	G3A124C00002	COIL	1	
P1	RPF0111-2	PROTECTION BAG	1	(J610VEG, J610VEB, J610VGC)
P2	RPK2128	GIFT BOX	1	(J610VEG, J610VEB, J610VGC)
P3	RPQ1613	PAD 1	1	(J610VEG)
P3	RPQ1549	PAD 1	1	(J610VEB)
P3	RPQ1550	PAD 1	1	(J610VGC)
P4	RPQ1612	PAD 2	1	(J610VEG, J610VEB, J610VGC)
P5	RPQ1551	PAD 3	1	(J610VEG, J610VEB, J610VGC)
P21	RPF0111-2	PROTECTION BAG	1	(SK574VEG, SK574VEB)
P22	RPK2159	GIFT BOX	1	(SK574VEG, SK574VEB)
P23	RPQ1768	PAD 1	1	(SK574VEG, SK574VEB)
P24	RPQ1779	PAD 2	1	(SK574VEG, SK574VEB)
P25	RPQ1780	PAD 3	1	(SK574VEG, SK574VEB)
PCB1	REP3702B-M	P.C.B. ASS´Y	1	[RTL] (J610VEG, J610VEB) [RTL] (SK574VEG, SK574VEB)
PCB1	REP3702D-M	P.C.B. ASS´Y	1	[RTL] (J610VGC)
Q11	2SB1182TLPQR	TRANSISTOR	1	B1BDND000001
Q12	B1ABMD000004	TRANSISTOR	1	
Q13	UNR521L00L	TRANSISTOR	1	
Q14	UNR511400L	TRANSISTOR	1	
Q16	UN5215TX	TRANSISTOR	1	UNR521500L
Q18	UN5113TW	TRANSISTOR	1	
Q19	UN5213TX	TRANSISTOR	1	UNR521300L
Q102	B1DHAC000002	TRANSISTOR	1	
Q201	2SB0709ARL	TRANSISTOR	1	
Q301	UN5213TX	TRANSISTOR	1	UNR521300L

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q302	UN5214TX	TRANSISTOR	1	UNR521400L
Q303	UN5210TX	TRANSISTOR	1	UNR52100RL
Q501	UN5213TX	TRANSISTOR	1	UNR521300L
Q502	B1ADMB000003	TRANSISTOR	1	
Q701	B1ADMB000003	TRANSISTOR	1	
Q704	UNR511400L	TRANSISTOR	1	
Q705	B1GFGCAA0001	TRANSISTOR	1	
Q706-09	XP151A13A0MR	TRANSISTOR	4	B1DFBC000003
Q710	UN5213TX	TRANSISTOR	1	UNR521300L
Q731	2SC4081106S	TRANSISTOR	1	B1ABCF000021
Q902	XP0121000L	TRANSISTOR	1	
Q905	UN5210TX	TRANSISTOR	1	UNR52100RL
Q1012,13	2SC4081106S	TRANSISTOR	2	B1ABCF000021
Q1151	2SK1067-4-TL	TRANSISTOR	1	B1CFCB000008
Q1152,53	2SD1819ASTX	TRANSISTOR	2	2SD1819ASL
Q1201	B1ADMB000003	TRANSISTOR	1	
Q1202	2SC4081106S	TRANSISTOR	1	B1ABCF000021
Q1203	UN5115TX	TRANSISTOR	1	UNR511500L
Q1204	UN5210TX	TRANSISTOR	1	UNR52100RL
Q1206	UN5115TX	TRANSISTOR	1	UNR511500L
Q1207	2SC4081106S	TRANSISTOR	1	B1ABCF000021
Q1208	UN5115TX	TRANSISTOR	1	UNR511500L
Q1210	2SK1067-4-TL	TRANSISTOR	1	B1CFCB000008
Q1301	UN5214TX	TRANSISTOR	1	UNR521400L
Q1304	UN5213TX	TRANSISTOR	1	UNR521300L
Q1307,08	UN5214TX	TRANSISTOR	2	UNR521400L
Q1501	UNR511M00L	TRANSISTOR	1	
Q1502	UN5214TX	TRANSISTOR	1	UNR521400L
R1	D0YBR0000010	CHIP RING	1	
R3,R4	ERJ3GEYJ102V	1/10W 1K	2	
R5	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R6	ERJ3GEY0R00V	1/10W 0	1	
R7	ERJ3GEYJ102V	1/10W 1K	1	
R8	ERJ3GEYJ100	1/10W 10	1	
R10	ERJ3GEYJ271V	1/10W 270	1	
R13	ERJ3GEYJ102V	1/10W 1K	1	
R14	ERJ3RBD473	1/16W 47K	1	
R15	ERJ3RBD683V	1/16W 68K	1	
R16	ERJ3GEYJ104	1/10W 100K	1	
R17	ERJ12YJ1R8U	1/2W 1.8	1	
R22	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R31	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R36	ERJ3GEYJ474V	1/10W 470K	1	
R45	ERJ3RBD393	1/16W 39K	1	
R47	ERJ3GEYJ562V	1/10W 5.6K	1	D0GB562JA002
R110	ERJ3GEYJ100	1/10W 10	1	
R120	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R121	ERJ3GEYJ393V	1/10W 39K	1	D0GB393JA002
R122	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R201	ERJ3GEYJ2R2V	1/10W 2.2	1	D0GB2R2JA002
R202	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R300	ERJ3GEYJ102V	1/10W 1K	1	
R304	ERJ3GEYJ105V	1/10W 1M	1	
R313	EXBV8V104JV	1/16W 100K	1	
R325	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R350	ERJ3GEYJ102V	1/10W 1K	1	
R361	ERJ3GEYJ102V	1/10W 1K	1	
R363	ERJ3GEYJ104	1/10W 100K	1	
R364	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R365	ERJ3GEYJ104	1/10W 100K	1	
R372	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R501	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R502	ERJ3GEYJ683V	1/10W 68K	1	D0GB683JA002
R503	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R505	MCR03PZHJ561	1/16W 560	1	
R508	ERJ3GEYJ470V	1/10W 47	1	
R511	EXBV8V222J	1/16W 2.2K	1	
R512	ERJ3GEYJ102V	1/10W 1K	1	
R514	ERJ3GEYJ331V	1/10W 330	1	
R550	ERJ3GEYJ471V	1/10W 470	1	
R551	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R703,04	ERJ3GEYJ4R7V	1/10W 4.7	2	

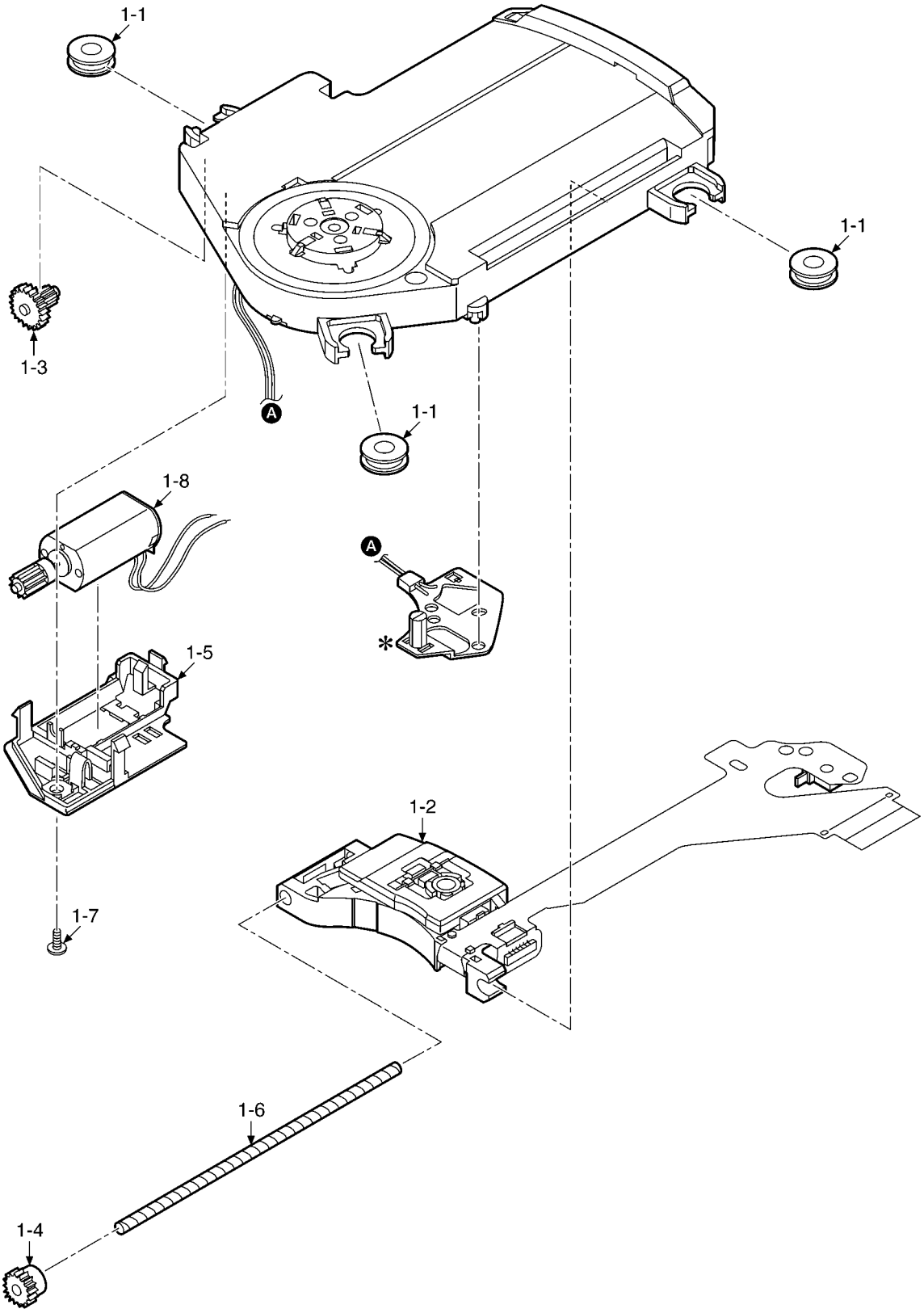
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R707,08	ERJ3GEYJ102V	1/10W 1K	2	
R716	ERJ3GEYJ105V	1/10W 1M	1	
R717,18	ERJ3GEYJ4R7V	1/10W 4.7	2	
R720,21	ERJ3GEYJ2R2V	1/10W 2.2	2	D0GB2R2JA002
R722,23	ERJ3GEYJ100	1/10W 10	2	
R724	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R725	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R726	ERJ3GEYJ222V	1/10W 2.2K	1	
R730	ERJ3GEYJ5R6	1/10W 5.6	1	
R731	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002 (J610VGC)
R910,11	ERJ3GEYJ102V	1/10W 1K	2	
R1021	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R1022	ERJ3GEYJ104	1/10W 100K	1	
R1023,24	ERJ3GEYJ221V	1/10W 220	2	
R1025	ERJ3GEYJ4R7V	1/10W 4.7	1	
R1109	EXBV4V474JV	1/32W 470K	1	
R1116	ERJ3GEYJ472V	1/10W 4.7K	1	
R1130	ERJ3GEYD274V	1/10W 270K	1	ERA3YKD274V
R1131	ERJ3GEYJ104	1/10W 100K	1	
R1151	ERJ3GEYJ183V	1/10W 18K	1	D0GB183JA002
R1153	ERJ3GEYJ682V	1/10W 6.8K	1	D0GB682JA002
R1154	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R1155	ERJ3GEYJ4R7V	1/10W 4.7	1	
R1159	ERJ3GEYJ471V	1/10W 470	1	
R1160	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R1170	ERJ3GEY0R00V	1/10W 0	1	
R1201	ERJ3GEYJ472V	1/10W 4.7K	1	
R1202	MCR03PZHJ561	1/16W 560	1	
R1203	ERJ3GEYJ221V	1/10W 220	1	
R1204	ERJ3GEYJ474V	1/10W 470K	1	
R1205	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R1206	ERJ3GEYJ224V	1/10W 220K	1	D0GB224JA002
R1218	ERJ3GEYJ102V	1/10W 1K	1	
R1230	ERJ3GEYJ272V	1/10W 2.7K	1	
R1231	ERJ3GEY0R00V	1/10W 0	1	
R1232	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R1233	ERJ3GEYJ331V	1/10W 330	1	
R1234	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R1235	ERJ3GEYJ181V	1/10W 180	1	
R1240	ERJ3GEYJ471V	1/10W 470	1	
R1303	ERJ3GEYJ393V	1/10W 39K	1	D0GB393JA002
R1310	EXBV4V104JV	1/32W 100K	1	
R1331	ERJ3RBD333V	1/16W 33K	1	
R1365	ERJ3RBD563	1/16W 56K	1	ERJ3RBD563V
R1368	ERJ3GEYJ102V	1/10W 1K	1	
R1369	ERJ3GEYJ102V	1/10W 1K	1	(J610VGC)
R1370	ERJ3GEYJ102V	1/10W 1K	1	(J610VEG, J610VEB, SK574VEG, SK574VEB)
R1371	EXBV4V104JV	1/32W 100K	1	
R1380	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R1381	ERJ3GEYJ474V	1/10W 470K	1	
R1385	ERJ3GEY0R00V	1/10W 0	1	
R1500	ERJ3GEYJ562V	1/10W 5.6K	1	D0GB562JA002
R1501	ERJ3GEYJ105V	1/10W 1M	1	
R1502	ERJ3GEYJ562V	1/10W 5.6K	1	D0GB562JA002
R1503	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R1504	ERJ3GEYJ104	1/10W 100K	1	
R1509,10	ERJ3GEYJ332V	1/10W 3.3K	2	D0GB332JA002
R1533	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
S201	ESE11MV9T	SW,LASER ON/OFF	1	
S202	K0L1BB000025	SW,REST DET.	1	
S310	RSS2A010-1A	SW,HOLD	1	K0D112B00071
VR1101	D3DA3304A002	VR,FM RF ADJ.	1	
X502	H2D169500027	OSCILLATOR	1	
X1101	RLFFETNL02AL	CERAMIC FILTER	1	J0B1075A0081
X1201	J0B4503A0061	CERAMIC FILTER	1	(J610VGC)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
X1201	J0B4593A0003	CERAMIC FILTER	1	(J610VEG, J610VEB, SK574VEG, SK574VEB)
X1203	J0B1075A0104	CERAMIC FILTER	1	
X1301	H0J750200009	OSCILLATOR	1	

17 Cabinet Parts Location



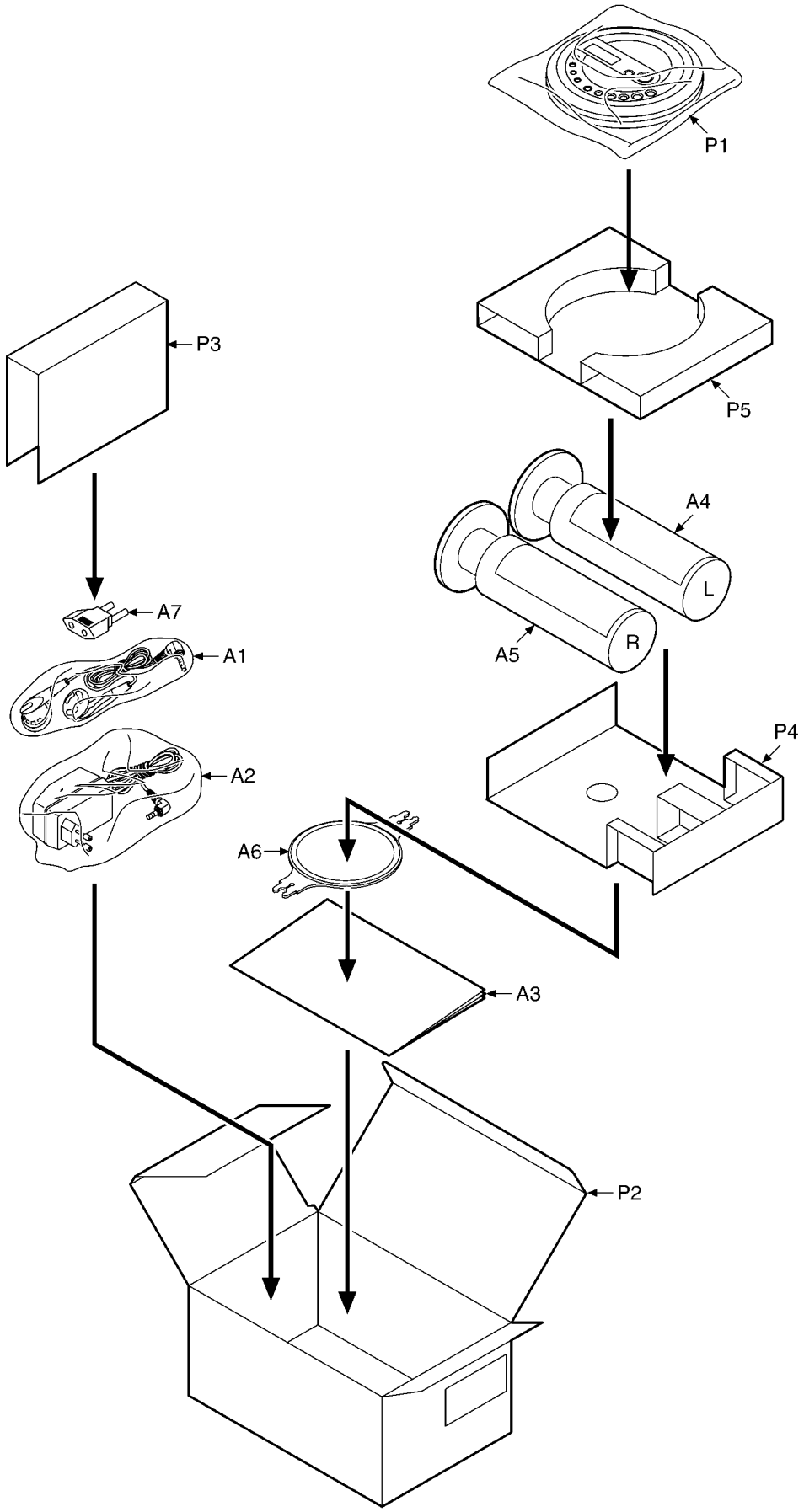
18 Traverse Unit Parts Location



Note : We do not supply those items of parts marked ✻.

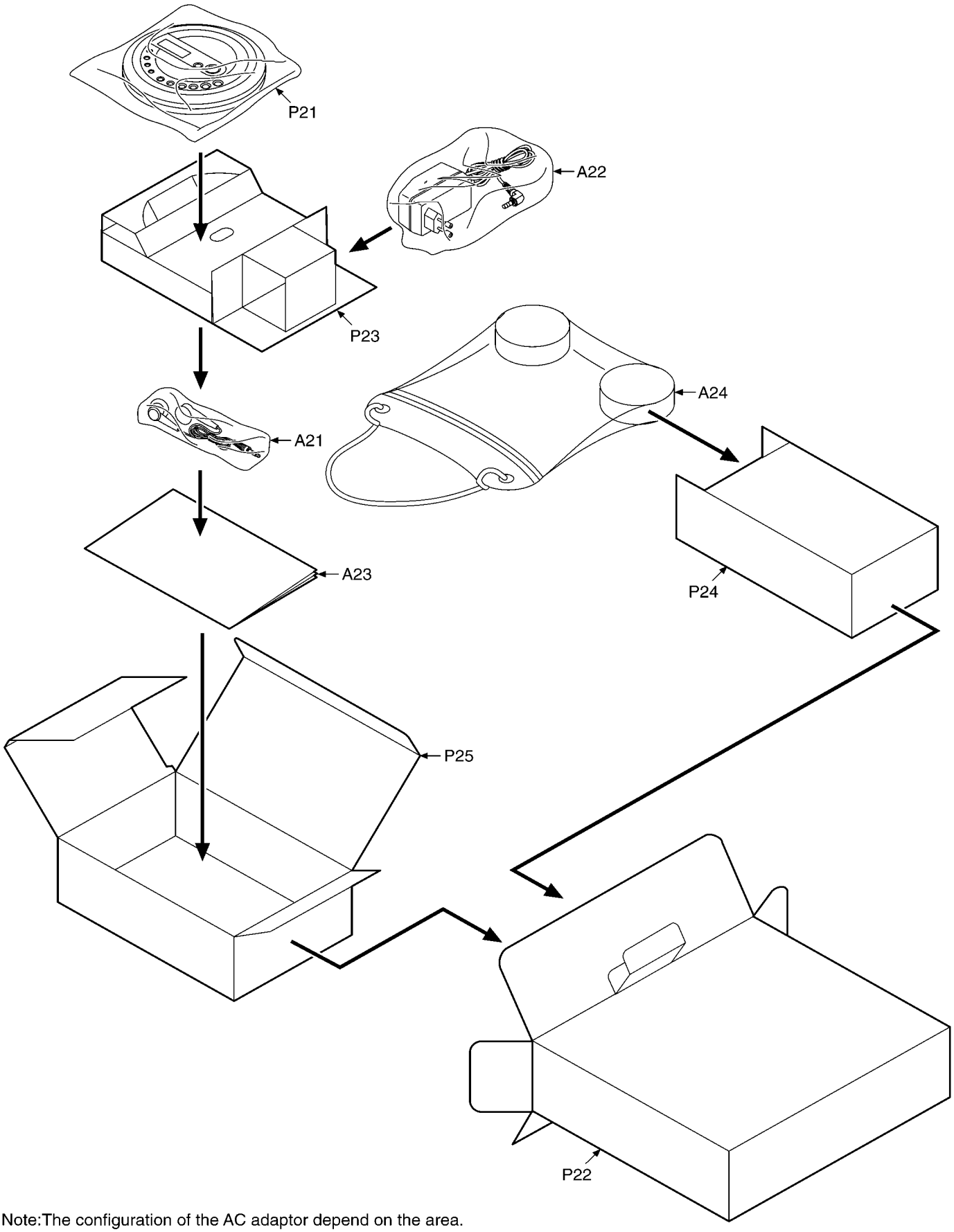
19 Packaging

19.1. For SL-J610VEB, SL-J610VEG, SL-J610VGC



Note: The configuration of the AC adaptor depend on the area.

19.2. For SL-SK574VEB, SL-SK574VEG



Note:The configuration of the AC adaptor depend on the area.