

Service Manual

Portable CD Player



SL-SV550EB
SL-SV550EG
SL-SV550GC
SL-SV550GN

Colour

(S).....Silver Type

Specifications

● CD section

CD-DA

No. of channels: 2 channels (left and right, stereo)
 Frequency response: 20 to 20,000 Hz (-10 dB to 0 dB)
 DA converter: 1 bit, MASH
 Headphones output level: RMS max. 8 mW+8 mW/16 Ω (adjustable)

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 (sum of albums and tracks): 999
 Maximum album levels: 100

Pickup

Light source: Semiconductor laser
 Wavelength: 780 nm

● RADIO section

Frequency

Radio frequency:

For SL-SV550EB, SL-SV550EG;

FM; 87.5 – 108.0 MHz (0.05 MHz steps)
 AM; 522 – 1629 kHz (9 kHz steps)

For SL-SV550GC, SL-SV550GN;

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-SV550EB, SL-SV550EG; 459 kHz

For SL-SV550GC, SL-SV550GN; 450 kHz

Audio

Selectivity:

FM; 42 dB
 AM; 7.4 kHz (6 dB) 21dB/9 kHz

Sensitivity:

FM; 7.9 μV/0.5 mW output (S/N30 dB)
 AM; 1000 μV/m/0.5 mW output (MAX)

● General

Operational temperature range: 0 – 40 degree

Rechargeable temperature range: 5 – 40 degree

Power supply:

DC input (via included AC adaptor); DC 4.5 V

AC adaptor input;

SL-SV550EB; AC 230 - 240 V, 50/60 Hz
 SL-SV550EG; AC 220 - 230 V, 50/60 Hz
 SL-SV550GC; AC 110 - 127/220 - 240 V, 50/60 Hz
 SL-SV550GN; AC 230 - 240 V, 50 Hz

Power consumption:

Using AC adaptor; MP3/CD-DA/RADIO
 Recharging; 3.2 W/ 3.2 W/ 2.5 W
 5 W

Playing time:

[Approximate operating time in hours (playing MP3 at the recommended bitrate of 128 kbps, with HOLD on and S-XBS canceled, at 25 degree on a flat, stable surface)]

Battery used: MP3/CD-DA/RADIO (FM BAND)

2 optional alkaline batteries (LR6);

Approx. 35 h/ 23 h/ 75 h

2 optional rechargeable batteries;

Approx. 14 h/ 10 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:

Approx. 4 to 5 h

Dimensions (W×H×D):

135×25.8×135 mm

Mass:

223 g (with batteries)
 177 g (without batteries)

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

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⚠ 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.

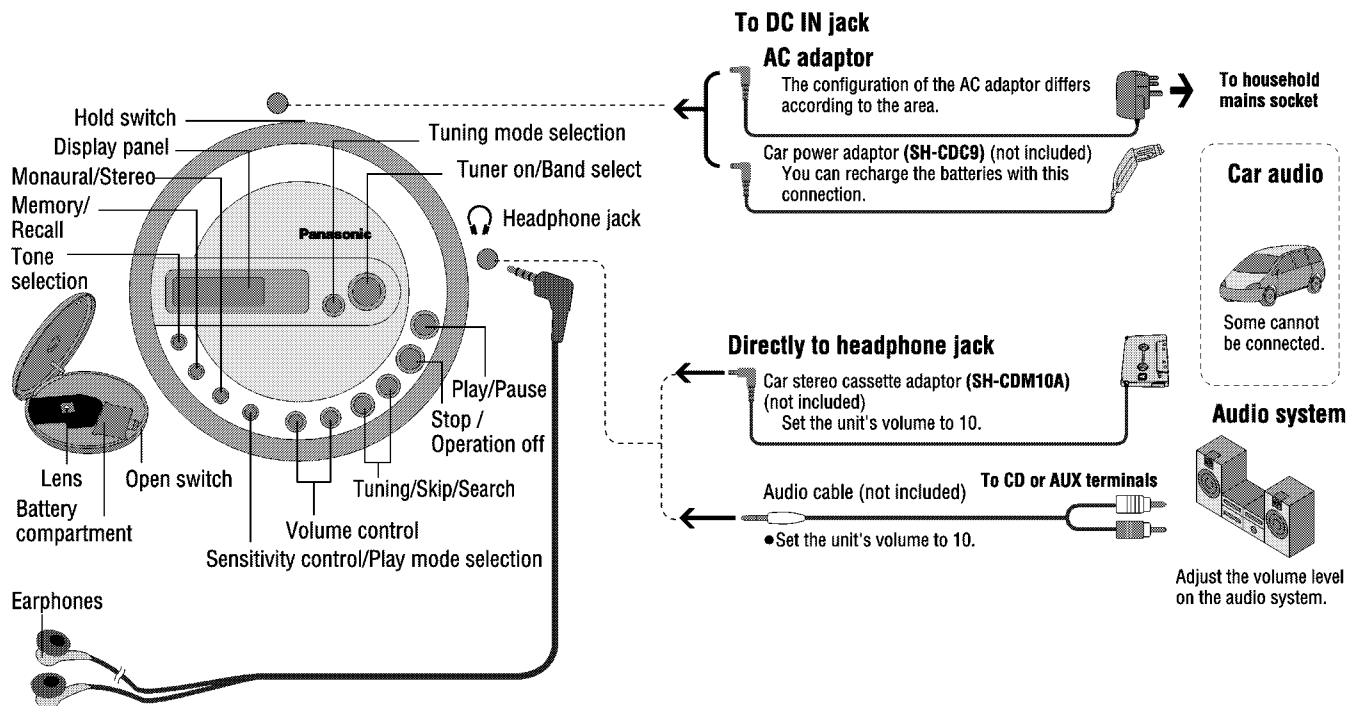
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1 Accessories

- AC adaptor for SL-SV550EB (N0JCCE000004) 1 pc.
- AC adaptor for SL-SV550EG (RFEA418E-S) 1 pc.
- AC adaptor for SL-SV550GC (N0JDCE000001) 1 pc.
- AC adaptor for SL-SV550GN (N0JCCE000003) 1 pc.
- Stereo earphones (L0BAB0000123) 1 pc.
- Power plug adaptor for SL-SV550GC only (RJP16ZAS) 1 pc.

2 Location of Controls



3 Precaution of Laser Diode

• For SL-SV550EB, SL-SV550EG

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 μ W/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.

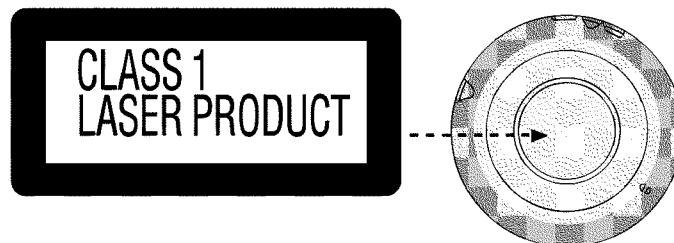
ACHTUNG: Dieses Produkt enthält eine Lasereinheit. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge: 780 nm

Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE

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

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



(Bottom of product)

ADVARSEL-UVSYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSÅF- BRYDERE ER UDE AF FUNKTION. UNDGA UDSÆTTELSE FOR STRÅLING. VORSIGT-UNSYNLIG LASERSTRÅ- LING. VENN ÅBENING GEFØR- ET UND SIKKERHEDSÅF BRYTES, UNNGÅ ØVERBRØKK. NICHT DEM STRÅL- AUSSETZEN.	VARO! AVATTAESSA JA SUOMAL- KITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNÄ LASERSÄTEILYLLE. JÄÄ KATSO SÄTESEEN. VARNING-OSYNLIG LASERSTRÅL- NING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÅREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.
DANGER-INVISIBLE LASER RADI- ATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.	ADVARSEL-UVSYNLIG LASERSTRÅL- NING NÅR BEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
RQLS0244	A pleine puissance, l'exposition prolongée du baladeur peut endommager l'oreille de l'utilisateur.

(Inside of product)

• For SL-SV550GC, SL-SV550GN

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 μ W/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 tip of 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.)

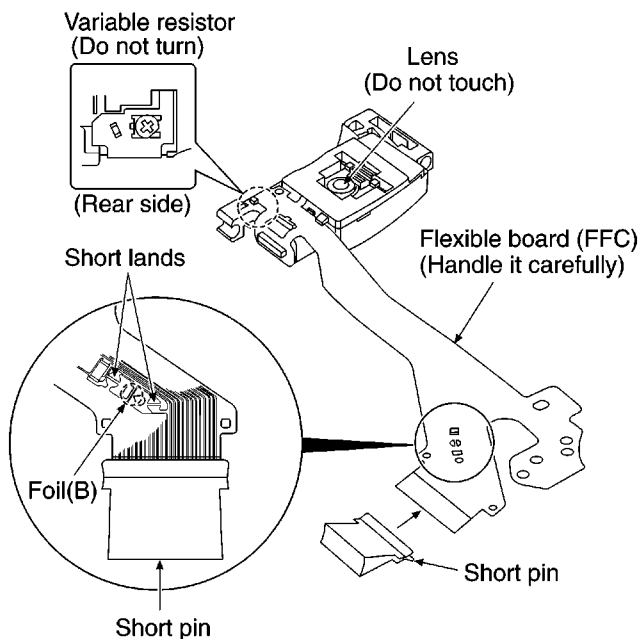


Fig. 4-1.

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.)

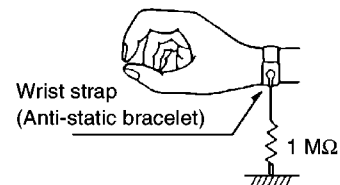


Fig. 4-2.

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.)

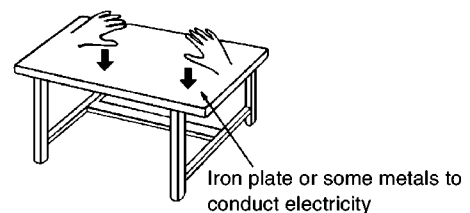


Fig. 4-3.

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

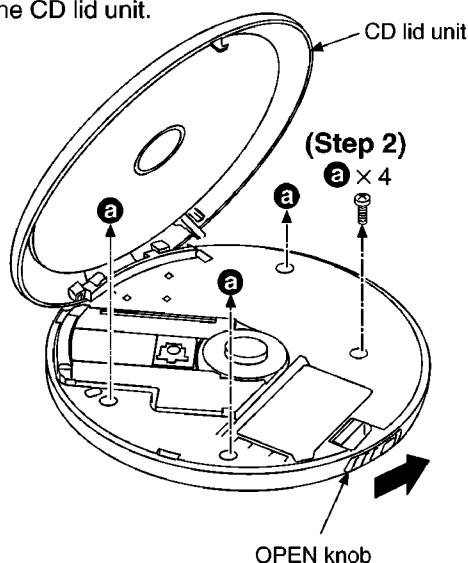
- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the P.C.B.

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

(Step 1)

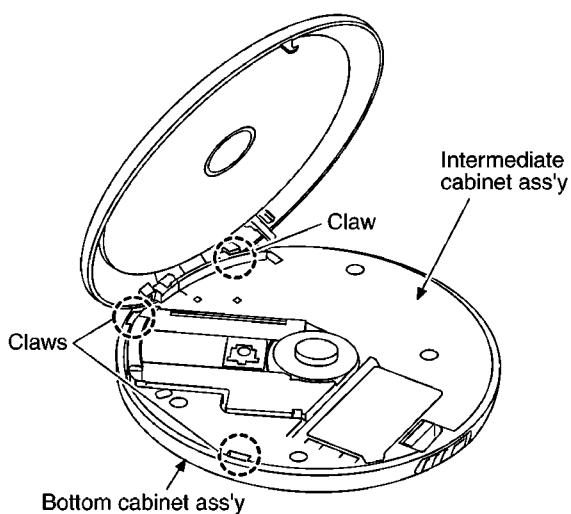
Sliding the OPEN knob to right, open the CD lid unit.



(Step 2)

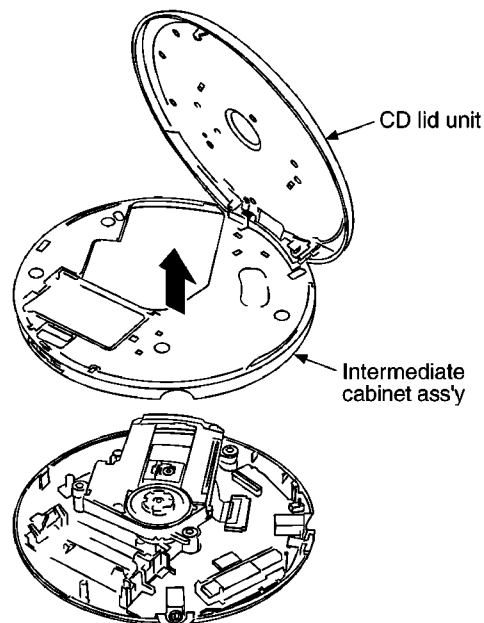
(Step 3)

Spread the clearance between the bottom cabinet ass'y and intermediate cabinet ass'y manually.



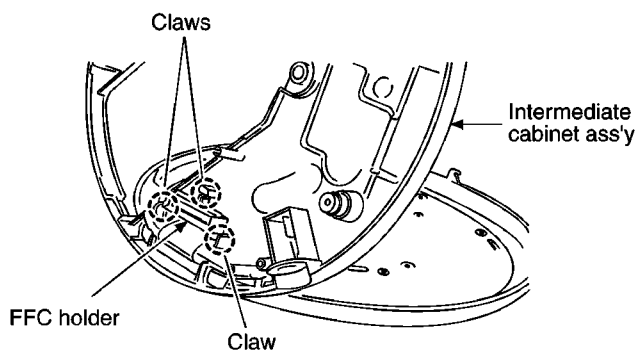
(Step 4)

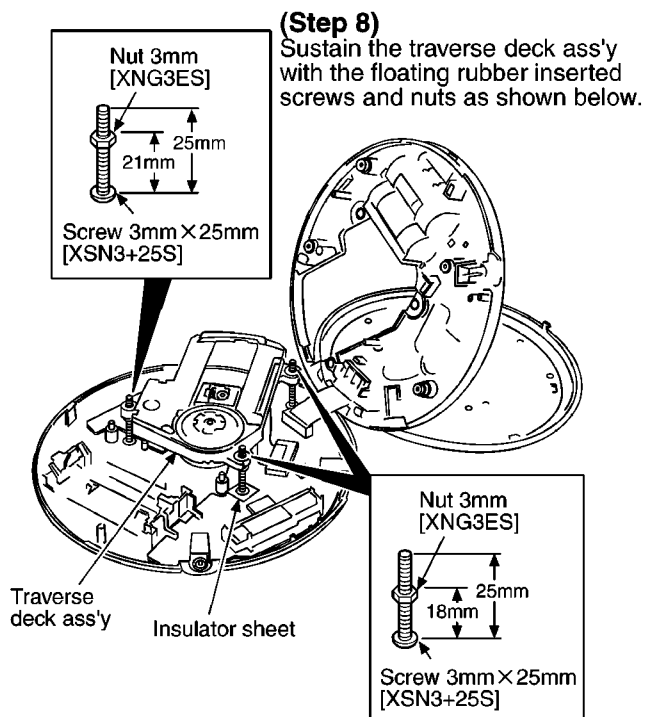
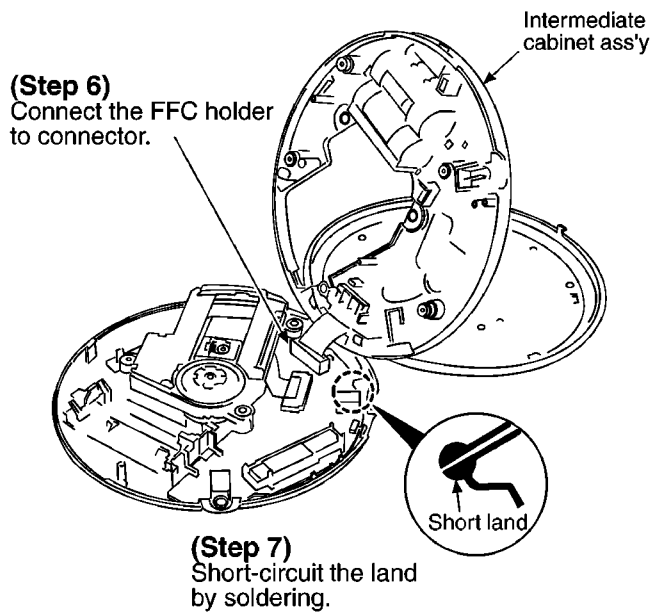
Remove the intermediate cabinet ass'y and CD lid unit



(Step 5)

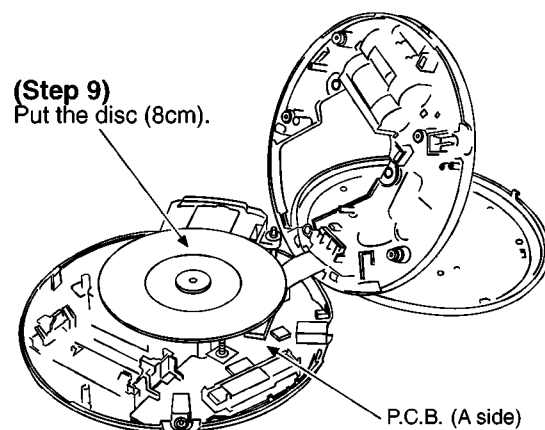
Release the 3 claws, and then remove the FFC holder.



**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 P.C.B. and the head of screws.

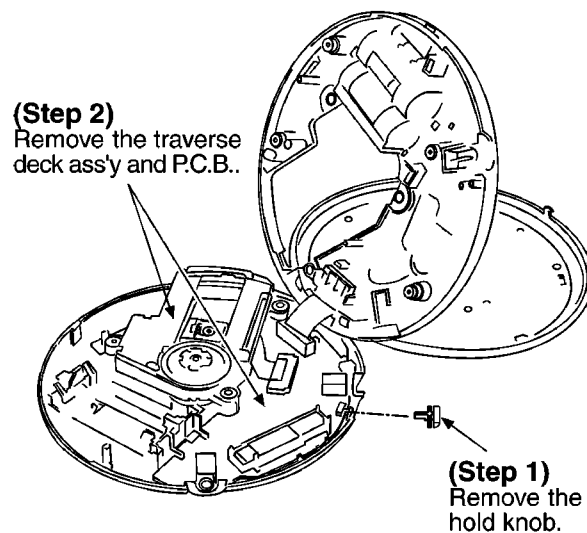
- Check the P.C.B. (A side) as shown below.

**NOTE:**

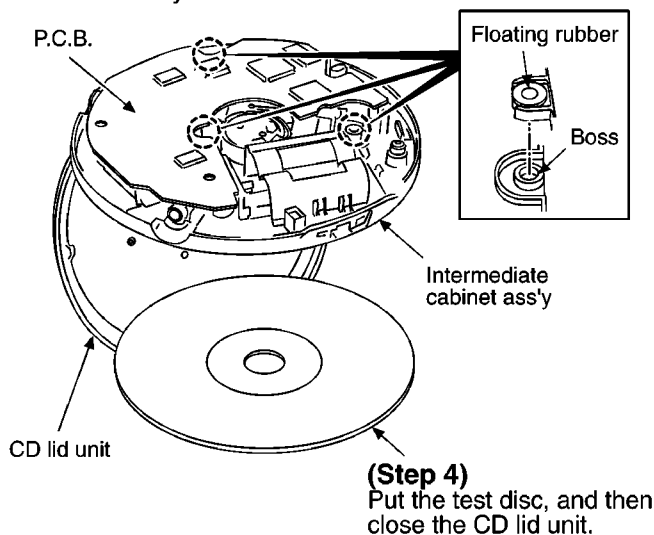
After checking, unsolder the short land to open circuit.

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

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

**(Step 3)**

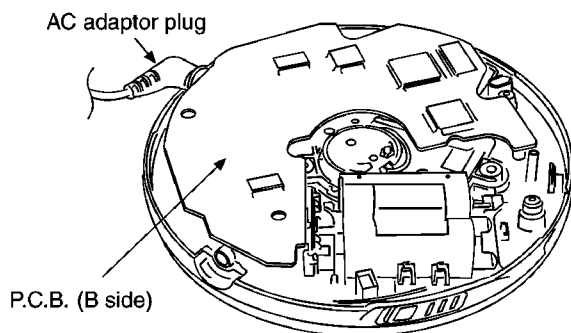
Align the floating rubbers with bosses, and then locate the traverse deck ass'y and P.C.B. on the intermediate cabinet ass'y.



- Check the 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.

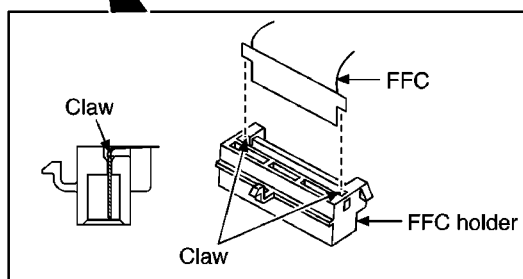
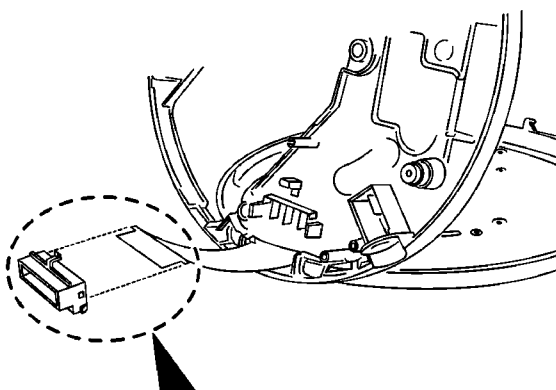


NOTE:

After checking, unsolder the short land to open circuit.

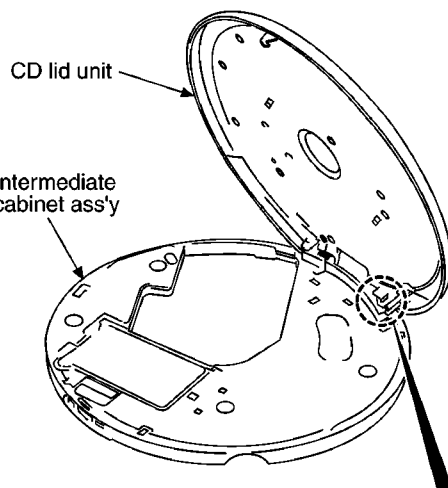
5.2. Replacement for the LCD, CD lid and operation SW

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



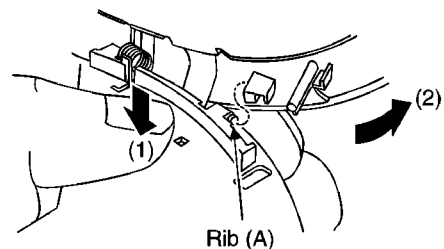
(Step 1)

Release the 2 claws, and then remove the FFC from FFC holder.



(Step 2)

Push the intermediate cabinet ass'y direction of arrow (1), and then remove the CD lid unit from rib (A).

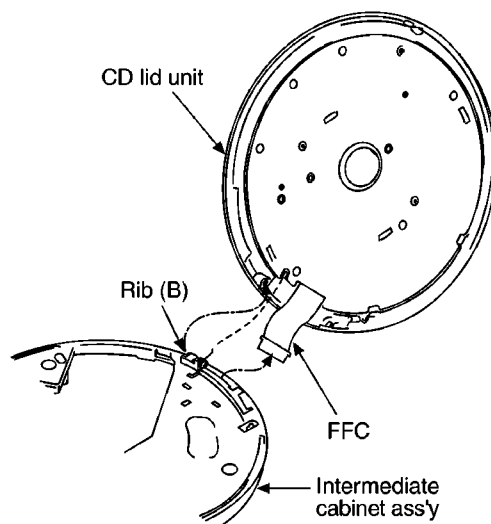


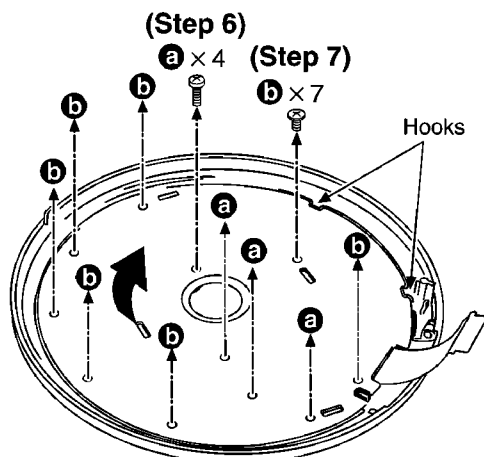
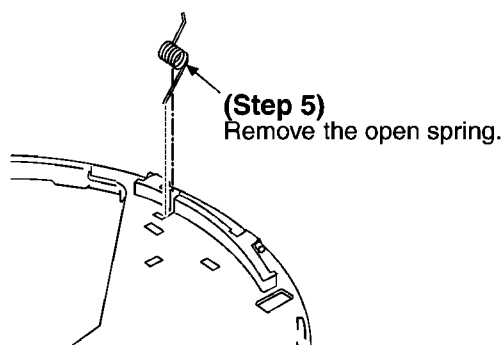
(Step 3)

Remove the CD lid unit from rib (B).

(Step 4)

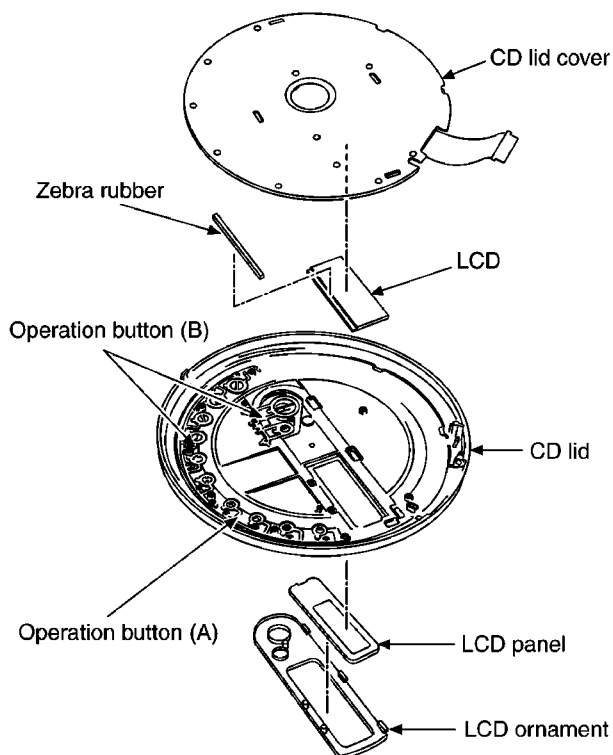
Draw the FFC from the intermediate cabinet ass'y. (Take care not to damage the FFC.)



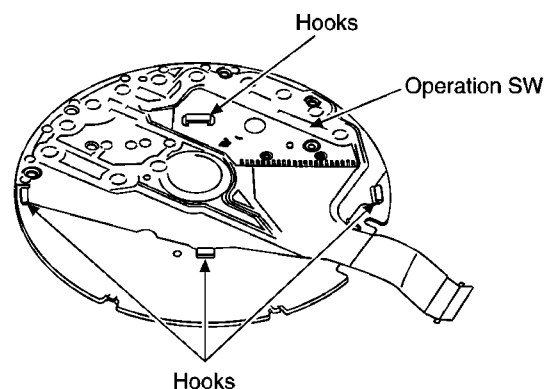


(Step 8)
Release the 2 hooks, and then remove the CD lid cover.

(Step 9)
The parts illustrated below will be free.

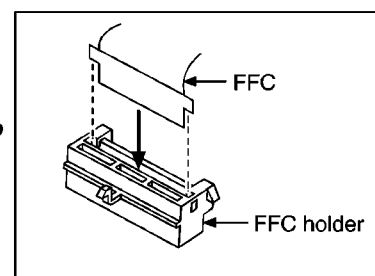


(Step 10)
Release the 4 hooks, and then remove the operation SW.

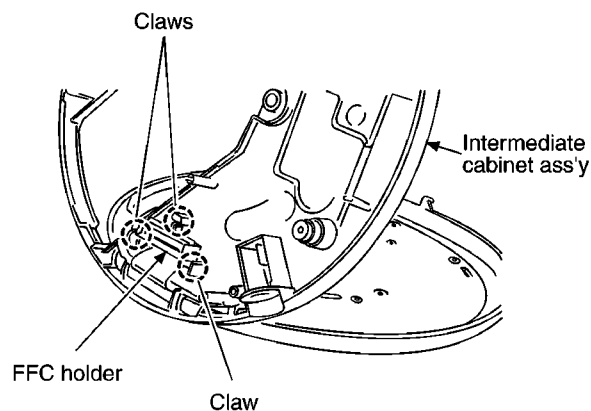


Installation of intermediate cabinet ass'y

(Step 1)
Install the FFC to FFC holder.



(Step 2)
Install the FFC holder to intermediate cabinet ass'y.

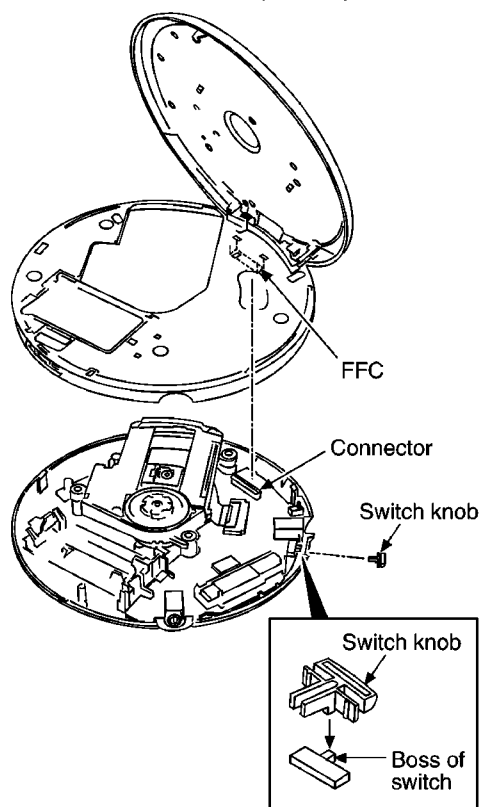
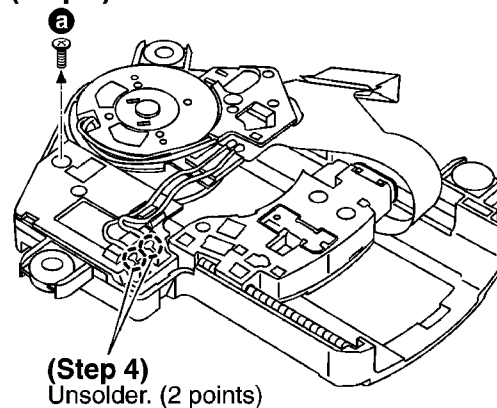


(Step 3)

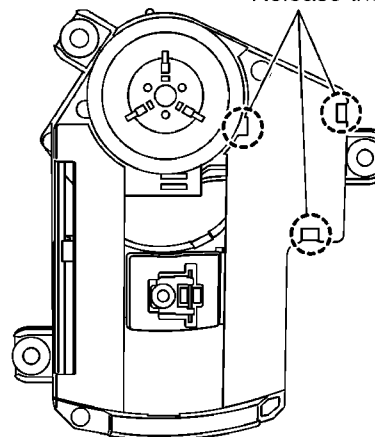
Make sure the boss of switch is fit in the switch knob.

(Step 4)

Connect the FFC to connector (CN301).

**(Step 3)****(Step 5)**

Release the 3 claws.

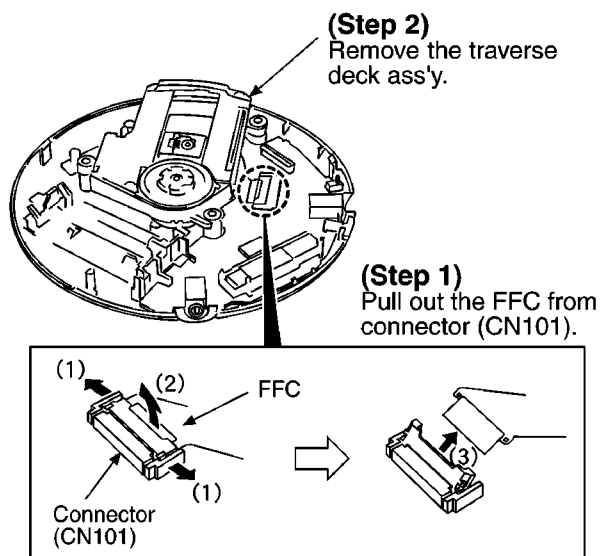


5.3. Replacement for the traverse motor

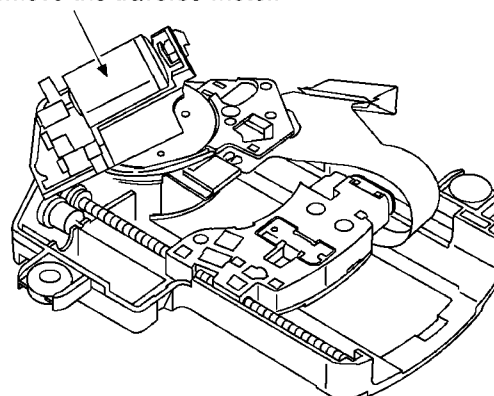
- Follow the **(Step 1)** - **(Step 4)** of item 5.1.1.

NOTE:

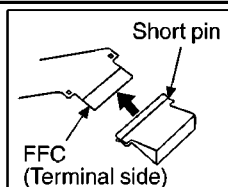
Be sure to confirm the item 4 "Handling Precautions for Traverse Deck" before removing the traverse deck ass'y.

**(Step 6)**

Remove the traverse motor.

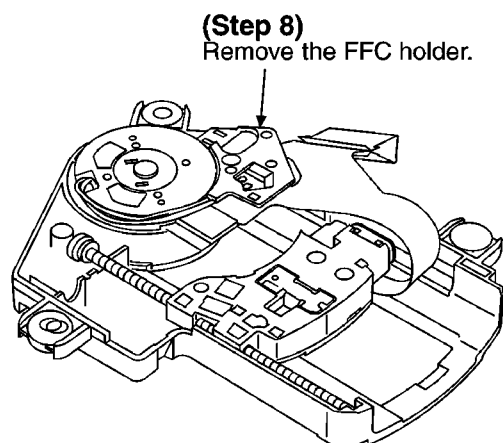
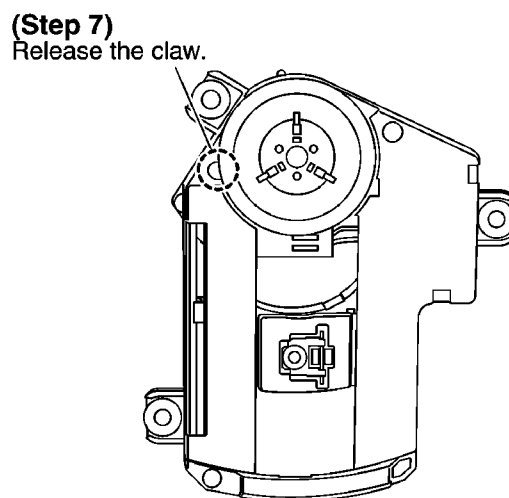
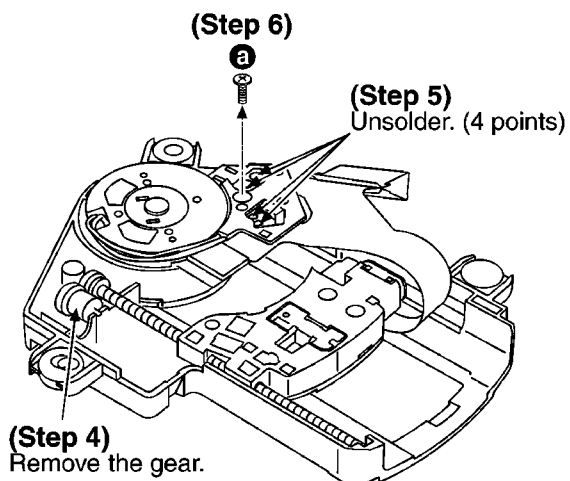
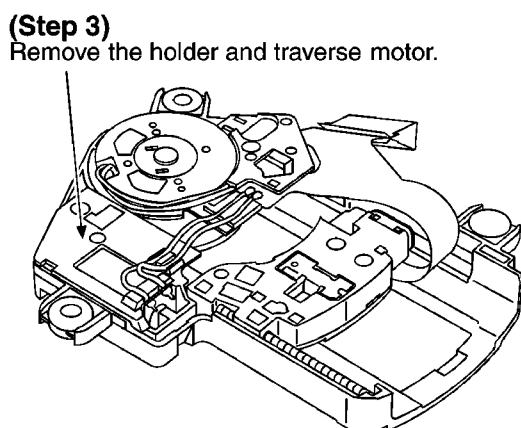
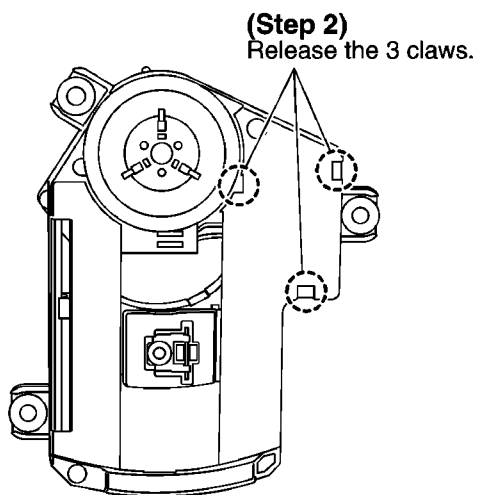
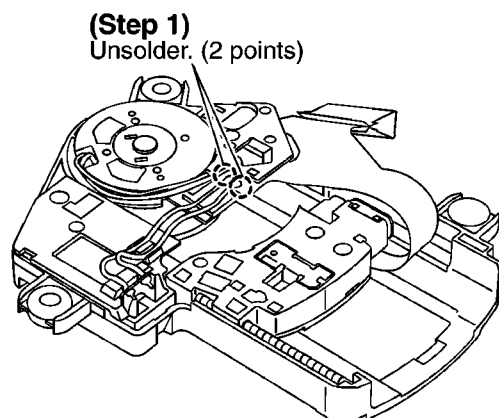
**NOTE:**

Insert a short pin into the traverse deck's FFC (Terminal side). (Refer to "Handling Precautions for Traverse Deck".)

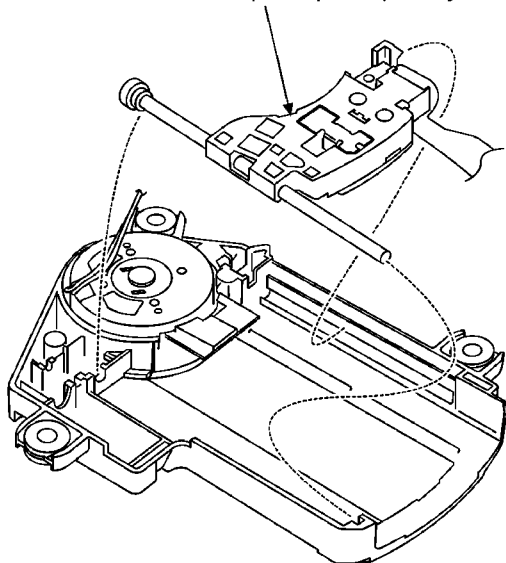


5.4. Replacement for the optical pick-up

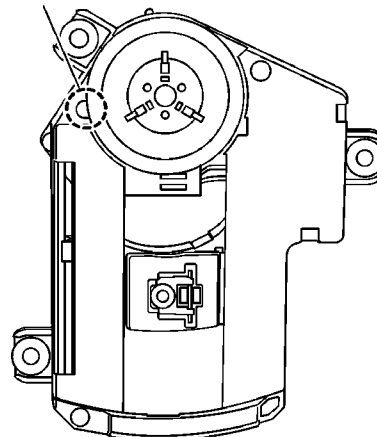
- Follow the (Step 1) - (Step 4) of item 5.1.1.
- Follow the (Step 1) - (Step 3) of item 5.3.



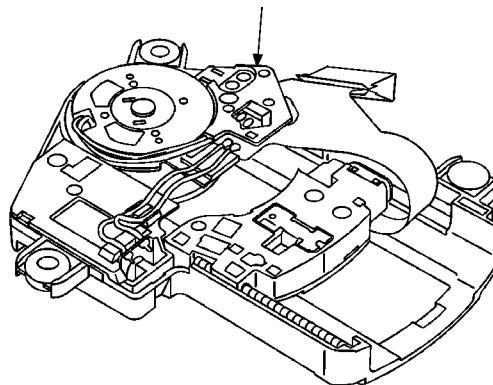
(Step 9)
Remove the optical pick-up ass'y.



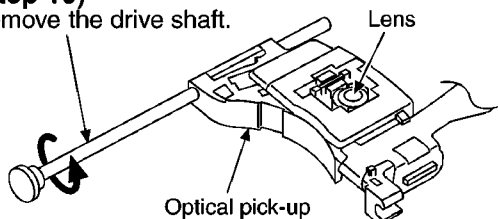
(Step 3)
Release the claw.



(Step 4)
Remove the FFC holder.



(Step 10)
Remove the drive shaft.



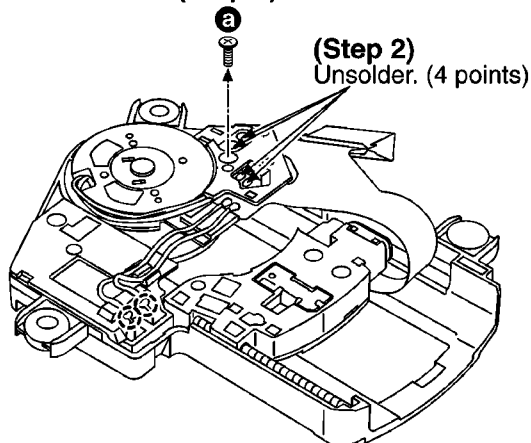
NOTE:

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.

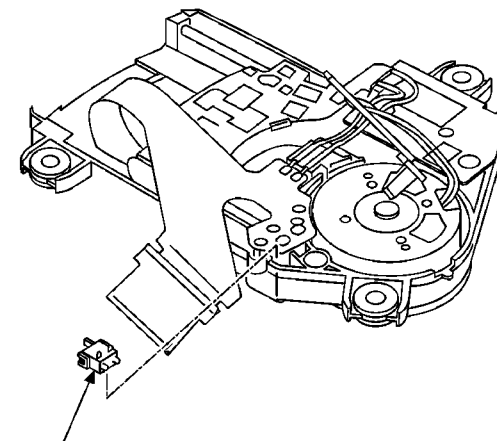
5.5. Replacement for the rest switch

- Follow the **(Step 1)** - **(Step 4)** of item 5.1.1.
- Follow the **(Step 1)** , **(Step 2)** of item 5.3.

(Step 1)



(Step 2)
Unsolder. (4 points)



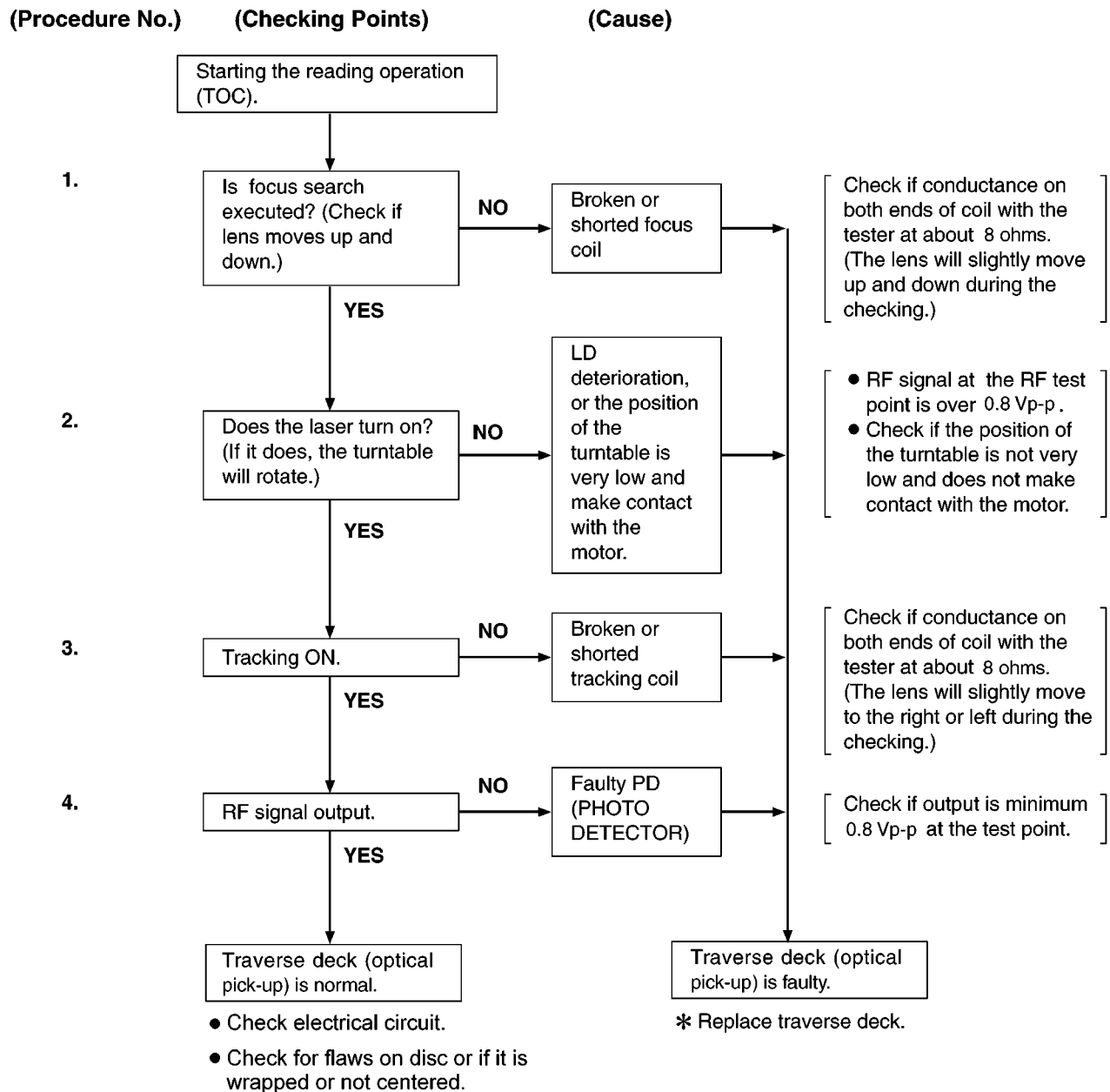
(Step 5)
Remove the rest switch.

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)

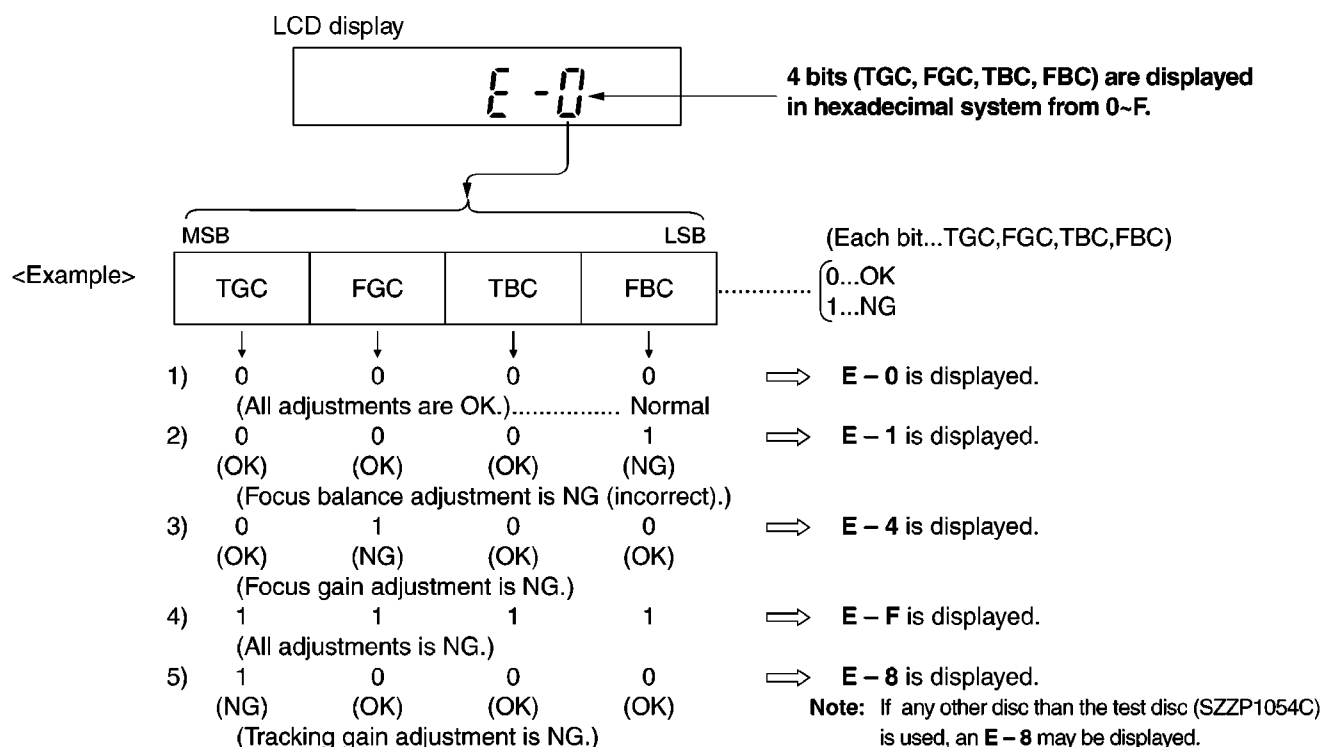
On the unit (SL-SV550), each automatic adjustment result are displayed on the LCD. This function is convenient to check or identify which automatic adjustment circuit is incorrect.

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 ►/||
4. Press the (PLAY/PAUSE) button.
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.

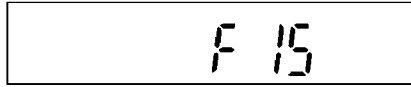
This is not a malfunction.

8 Display of Self-Diagnostic Function

This unit (SL-SV550) has self-diagnostic function. It may display below-mentioned on the LCD of this unit.

- The substance of self-diagnostic display.

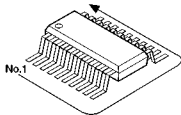
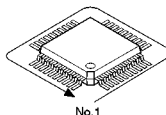
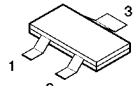
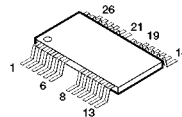
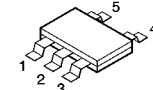
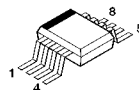
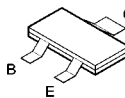
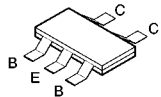
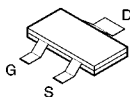
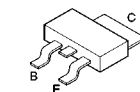
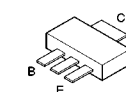
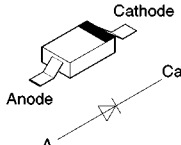
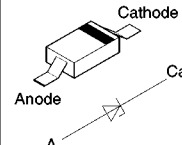
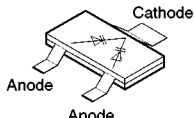
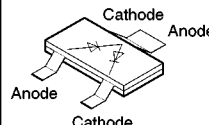
LCD display



(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

 <table><tr><td>AN22003A-NF</td><td>32PIN</td></tr><tr><td>C1BB00000786</td><td>10PIN</td></tr><tr><td>C0ZBZ0000515</td><td>16PIN</td></tr><tr><td>C1BB00000562</td><td>30PIN</td></tr></table>	AN22003A-NF	32PIN	C1BB00000786	10PIN	C0ZBZ0000515	16PIN	C1BB00000562	30PIN	 <table><tr><td>AN41506A-VB</td><td>48PIN</td></tr><tr><td>MN6627911AC1</td><td>80PIN</td></tr><tr><td>C2BBGE000658</td><td>80PIN</td></tr><tr><td>C2FBEB000002</td><td>64PIN</td></tr></table>	AN41506A-VB	48PIN	MN6627911AC1	80PIN	C2BBGE000658	80PIN	C2FBEB000002	64PIN	C0CBAAB00039 C0CBAAC00107 XC61CN2102MR 	C3ABMB000027 
AN22003A-NF	32PIN																		
C1BB00000786	10PIN																		
C0ZBZ0000515	16PIN																		
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AN41506A-VB	48PIN																		
MN6627911AC1	80PIN																		
C2BBGE000658	80PIN																		
C2FBEB000002	64PIN																		
C0ABAA000068 	AK93C45BH-L 	B1ADMB000003 UN5113TX 2SB709ATX UN5114TX 2SB815B7TX UN5115TX 2SC3931CTX UN521LTX 2SC4081STX UN5213TX 2SD1819ASTX UN5214TX UNR521000L UN5215TX UN511MTX 	XP0121000L 	XP152A12C0MR 2SK1067-4-TL 2SK1958T1 															
2SB1182TLPQR 	B1ABMD000004 	MA111TX 	MAZ812000L 	KV1450TL3-4 KV1610STL2-0 	MA147TX 														

10 Schematic Diagram Notes

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

Notes:

S1:	Tone selection (S-XBS) switch
S2:	Tuning, R.skip/search (◀◀ / -) switch
S3:	Sensitivity control, play mode selection (FM RECEPT ◼ CITY/NOR, MODE) switch
S4:	Monaural/stereo (FM MODE MONO/ST) switch
S5:	Volume control switch (VOL+)
S6:	Stop/operation off (◼ ,OPR OFF) switch
S7:	Tuning, F.skip/search (▶▶ / +) switch
S8:	Memory/recall (MEMORY/RECALL) switch
S9:	Volume control switch (VOL-)
S10:	Tuning mode selection (TUNING MODE) switch
S11:	Tuner on/band select (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 values and 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.

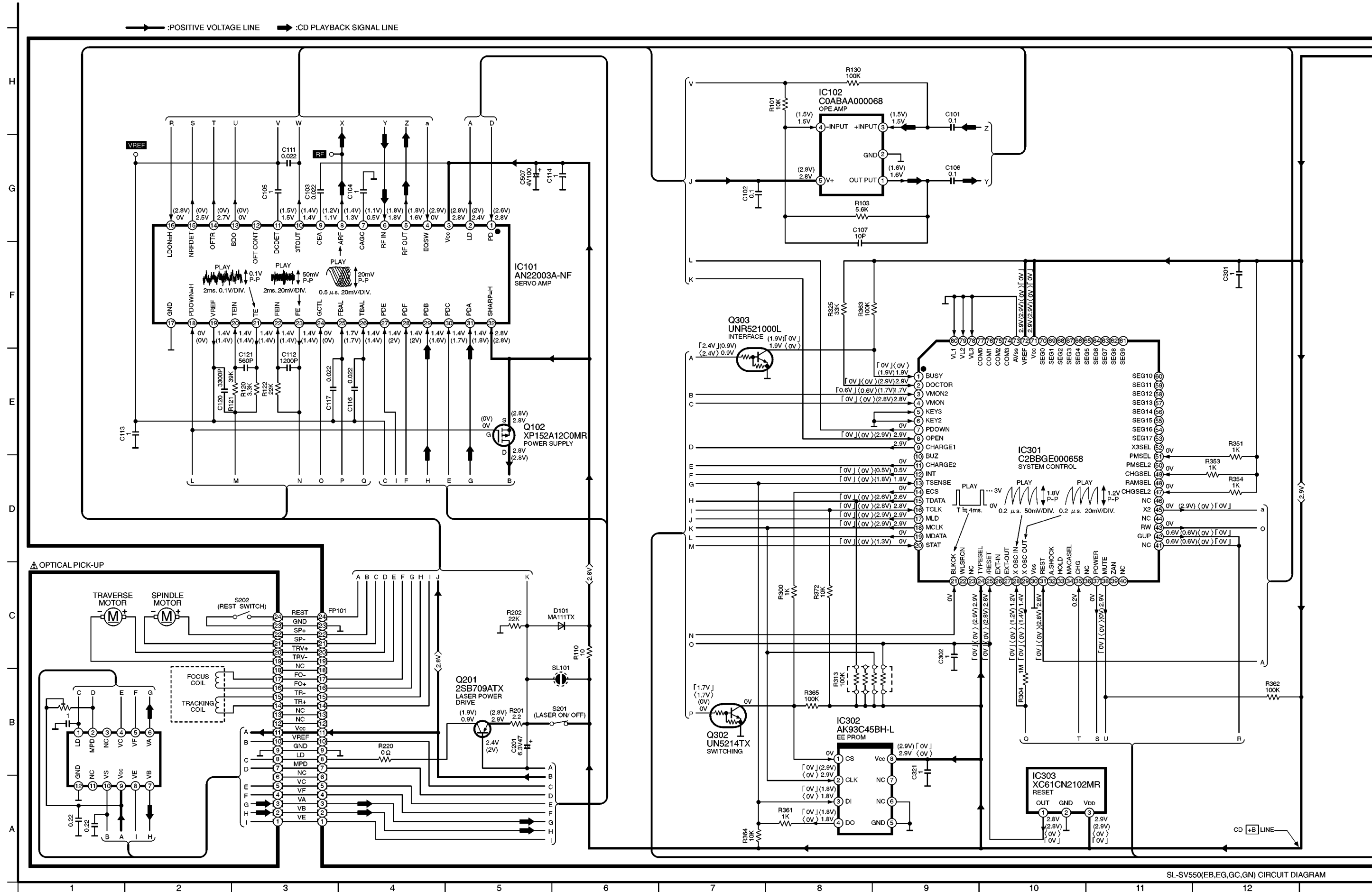
Put a conductive mat on the work table.

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

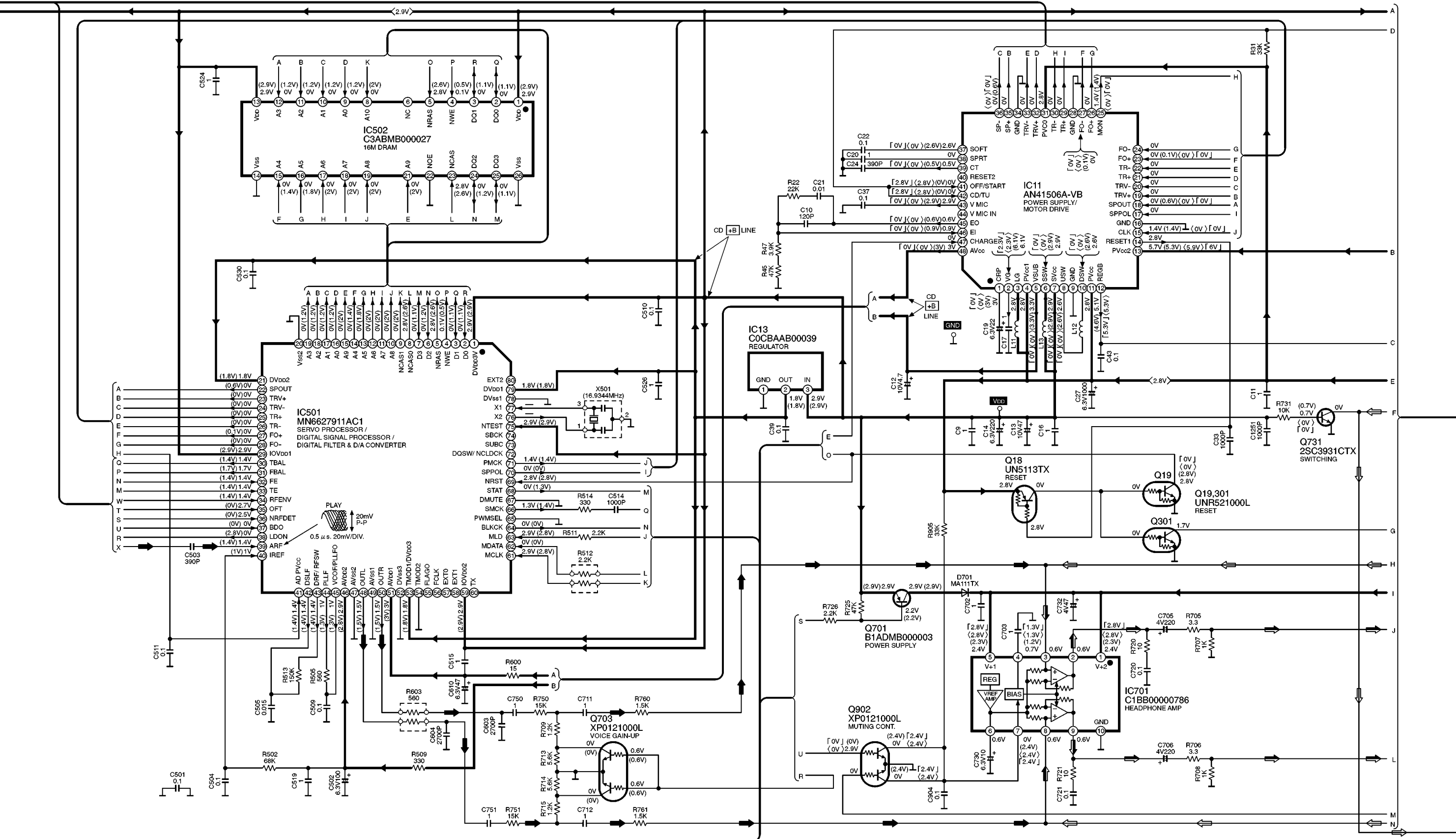
10.1. Cautions in Repair exchange of the Diode (D1101, D1102)

- When it is repaired, exchange the parts of D1101, D1102 together.
- The service parts of Number (KV1450TL3-4) are supplied only.

11 Schematic Diagram

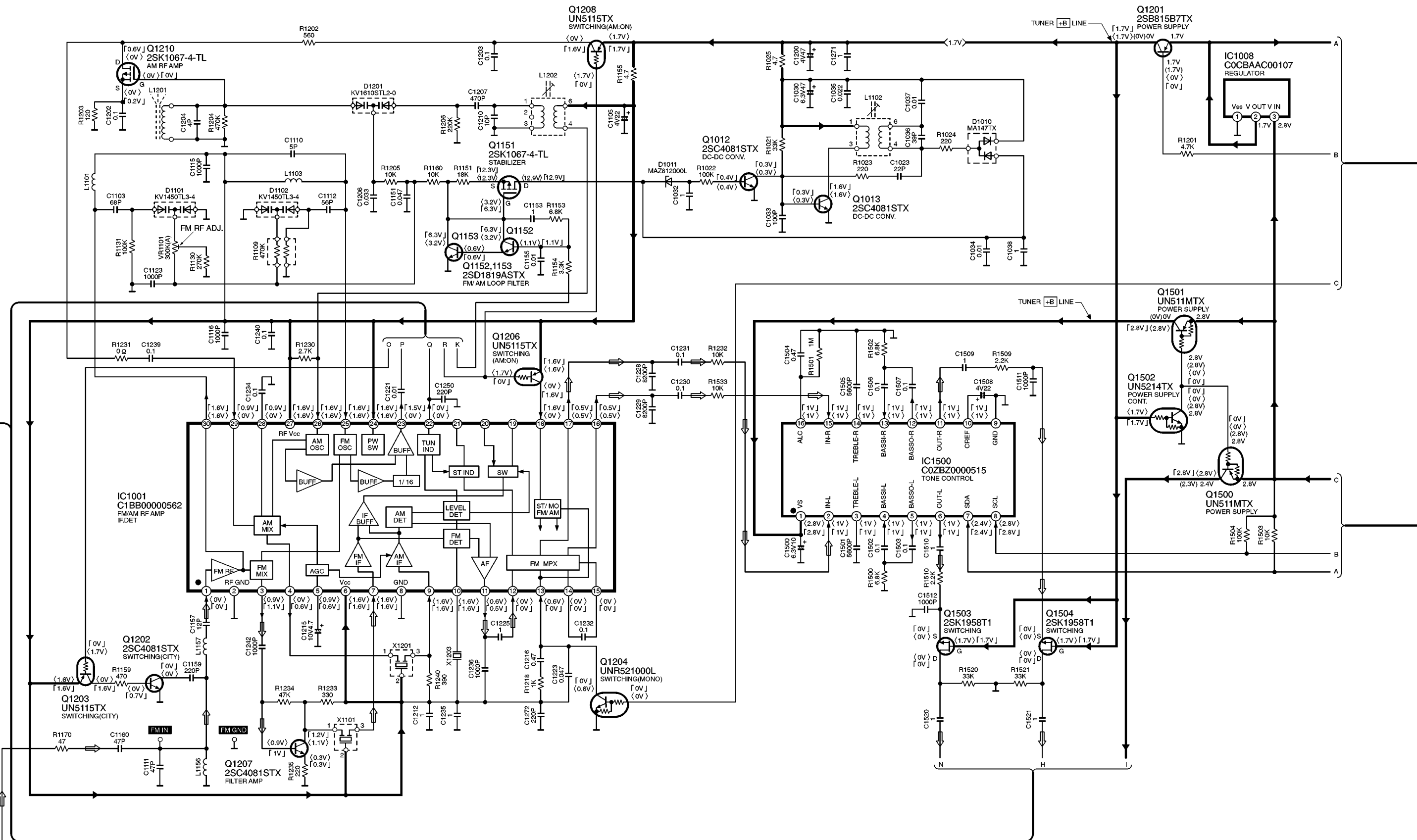


→ : POSITIVE VOLTAGE LINE → : CD PLAYBACK SIGNAL LINE ⇨ : FM SIGNAL LINE ⇨ : MAIN(CD,FM) SIGNAL LINE

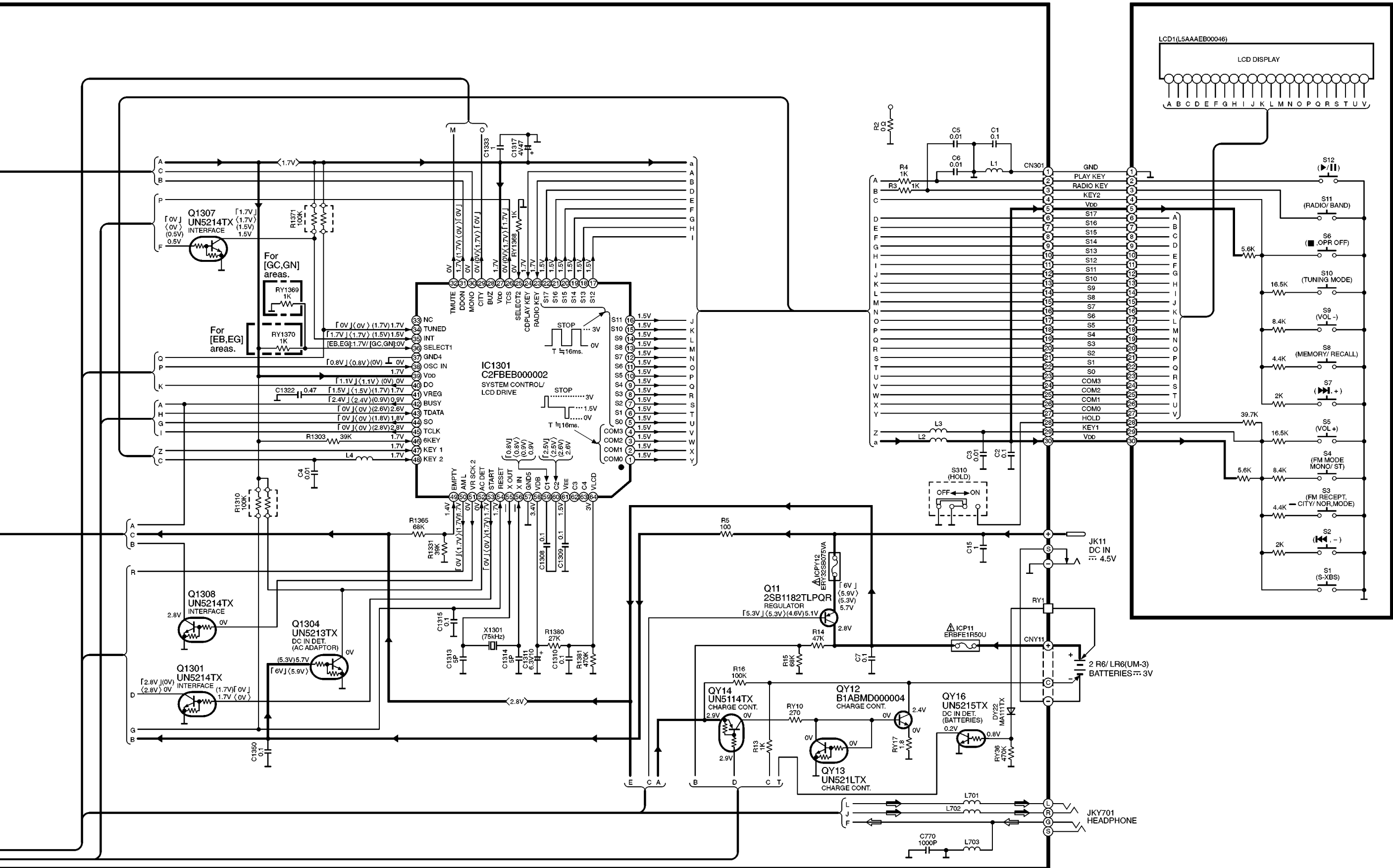


SL-SV550(EB,EG,GC,GN) CIRCUIT DIAGRAM

→ : POSITIVE VOLTAGE LINE ⇨ : FM SIGNAL LINE

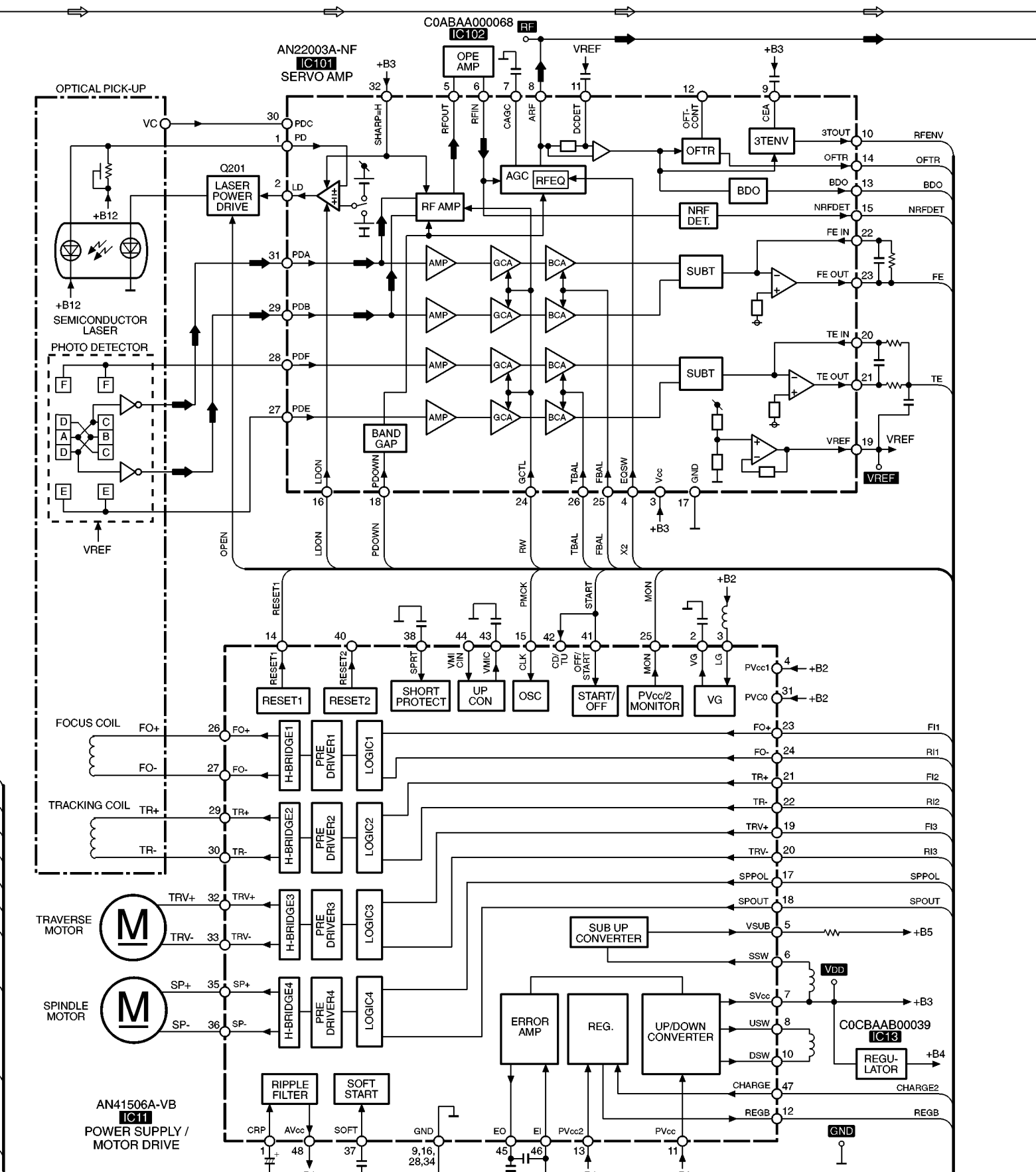
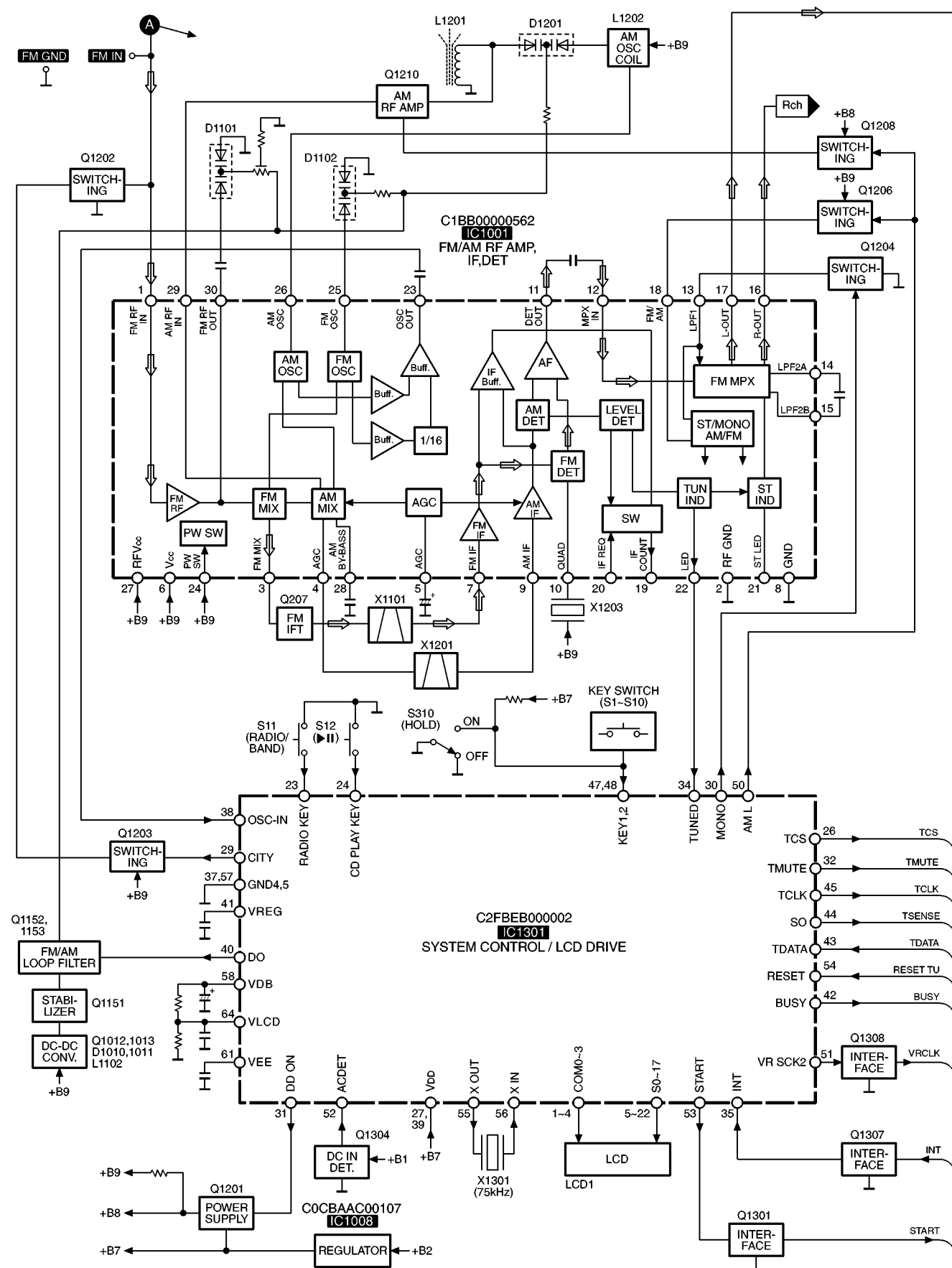


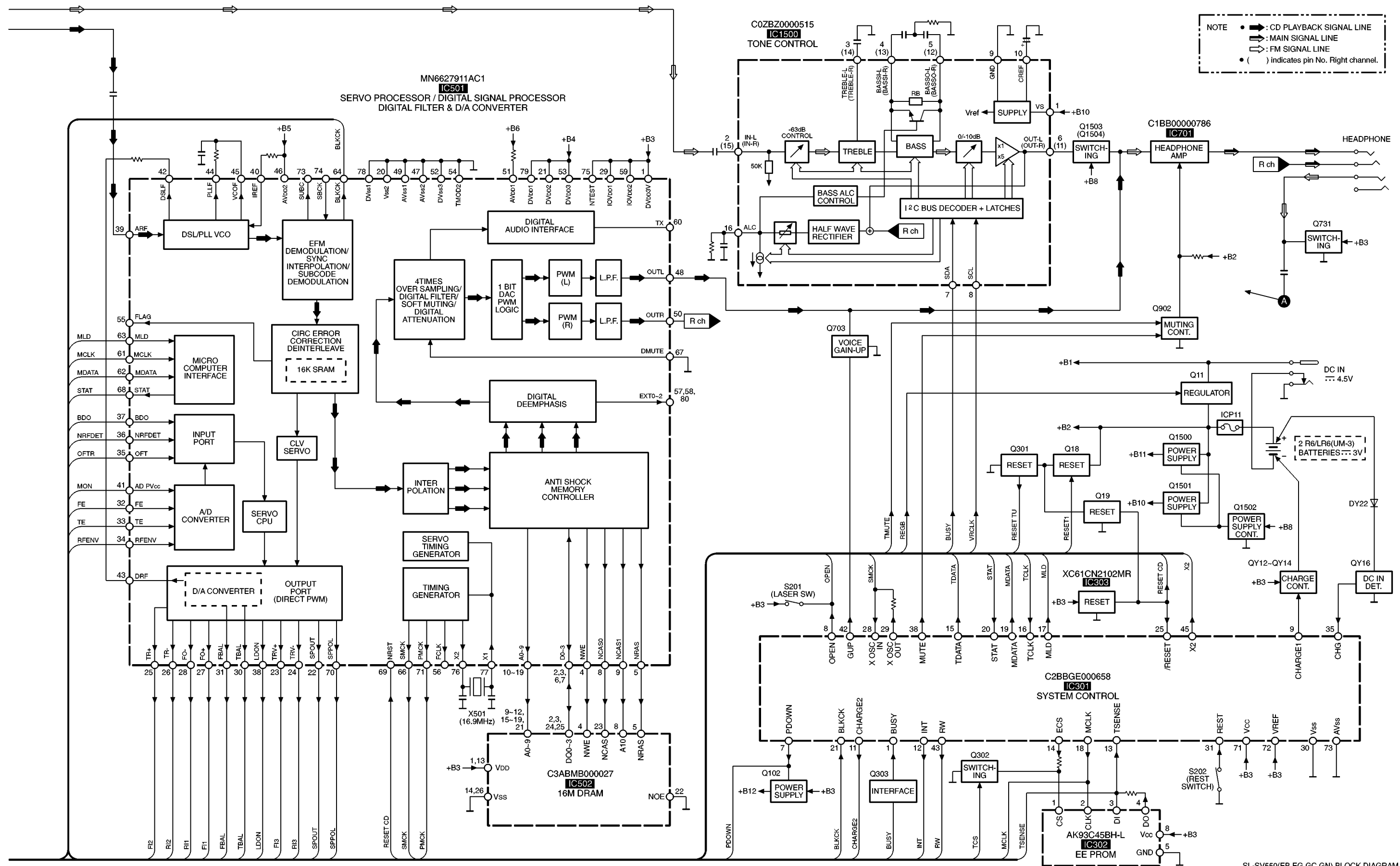
→ : POSITIVE VOLTAGE LINE ⇨ : FM SIGNAL LINE ⇨ : MAIN(CD,FM) SIGNAL LINE



SL-SV550(EB,EG,GC,GN) CIRCUIT DIAGRAM

13 Block Diagram





SL-SV550(EB,EG,GC,GN) 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	OFFCONT	-	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(C2BBGE000658): System Control

Pin No.	Terminal Name	I/O	Function
1	BUSY	I	Busy signal input
2	DOCTOR	I	Connected to VREF through resistor
3	VMON2	I	Battery remaining measurement signal
4	VMON	I	Rechargeable battery voltage signal input
5	KEY3	I	Not used, connected to GND
6	KEY2	I	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/output
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

Pin No.	Terminal Name	I/O	Function
19	MDATA	O	Serial command data output
20	STAT	I	Status signal input
21	BLKCK	I	Sub-code block clock signal input
22	WLSRCN	-	Not used, open
23	NC	-	Not used, open
24	TYPESEL	-	Not used, connected to V _{CC}
25	/RESET	I	Reset detect signal input
26	EXT-IN	-	Not used, open
27	EXT-OUT	-	
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	HOLD	-	Not used, open
34	MACASEL	-	Not used, open
35	CHG	I	DC IN (Battery) detect signal input
36	NC	-	Not used, open
37	POWER	O	Power supply detect signal output
38	MUTE	O	Headphone amp muting signal output
39	ZAN	-	Not used, open
40	NC	-	Not used, open
41	NC	-	Not used, connected to GUP terminal
42	GUP	O	Voice gain up output
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	I	Not used, connected to V _{CC} via resistor
48	RAMSEL	-	Not used, open
49	CHGSEL	I	Not used, connected to V _{CC} via resistor
50	PMSEL2	-	Not used, open
51	PMSEL	I	Not used, connected to V _{CC} via resistor
52	X3SEL	-	Not used, open
53 70	SEG17 SEG0	-	Not used, open
71	V _{CC}	I	Power supply terminal
72	VREF	I	Reference voltage input terminal
73	AV _{SS}	-	GND
74 77	COM3 COM0	-	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(MN6627911AC1): Servo Processor, Digital Signal Processor, Digital Filter & D/A Converter

Pin No.	Terminal Name	I/O	Function
1	DV _{DD} 3V	I	Power supply terminal
2	D0	I/O	Data 0-1 input/output terminal
3	D1		
4	NWE	O	Write enable output terminal
5	NRAS	O	RAS control signal output terminal
6	D2	I/O	Data 2-3 input/output terminal
7	D3		

Pin No.	Terminal Name	I/O	Function
8	NCAS0	O	CAS control 0 signal output terminal
9	NCAS1	O	CAS control 1 signal output terminal
10 14	A8 A4	O	Addresses 8-4 output terminal
15	A9	O	Address 9 output terminal
16 19	A0 A3	O	Addresses 0-3 output terminal
20	V _{SS} 2	-	GND
21	DV _{DD} 2	I	Power supply terminal
22	SPOUT	O	Spindle motor drive output terminal
23	TRV+	O	Traverse motor drive (+) output terminal
24	TRV-	O	Traverse motor drive (-) output terminal
25	TR+	O	Tracking coil drive (+) output terminal
26	TR-	O	Tracking coil drive (-) output terminal
27	FO+	O	Focus coil drive (+) output terminal
28	FO-	O	Focus coil drive (-) output terminal
29	IOV _{DD} 1	I	Power supply terminal
30	TBAL	O	Tracking balance adjustment signal output
31	FBAL	O	Focus balance adjustment signal output
32	FE	I	Focus error signal input terminal
33	TE	I	Tracking error signal input terminal
34	RFENV	I	RF envelope signal input terminal
35	OFT	I	Off-track signal input terminal
36	NRFDET	I	RF detection signal input terminal
37	BDO	I	Dropout signal input terminal
38	LDON	O	Laser ON signal output terminal (H: ON)
39	ARF	I	RF signal input terminal
40	IREF	I	Reference current input terminal
41	AD PV _{CC}	I	A/D reference voltage input terminal
42	DSLIF	O	Loop filter output terminal for DSL
43	DRF/ RFSW	O	Not used, connected to GND
44	PLLIF	O	Not used, connected to GND
45	VCOF/ PLLFO	O	Not used, connected to GND via capacitor
46	AV _{DD} 2	I	Power supply terminal
47	AV _{SS} 2	-	GND
48	OUTL	O	L ch audio signal output terminal
49	AV _{SS} 1	-	GND
50	OUTR	O	R ch audio signal output terminal
51	AV _{DD} 1	I	Power supply terminal
52	DV _{SS} 3	-	Not used, connected to GND
53	TMOD1/ DV _{DD} 3	I	Power supply terminal
54	TMOD2	-	Not used, connected to GND
55	FLAGO	-	Not used, open
56	FCLK	-	Not used, open
57	EXT0	-	Not used, open
58	EXT1	-	Not used, open
59	IOV _{DD} 2	I	Power supply terminal
60	TX	-	Not used, open
61	MCLK	I	Serial command clock input
62	MDATA	I	Serial command data input
63	MLD	I	Serial command latch input
64	BLKCK	O	Sub-code block clock signal output
65	PWMSEL	-	Connected to GND
66	SMCK	O	System clock signal output
67	DMUTE	-	Connected to GND
68	STAT	O	Status signal output terminal
69	NRST	I	Reset signal input terminal
70	SPPOL	O	Spindle motor drive signal output terminal
71	PMCK	O	Clock signal output
72	DQSW/ NCLDCK	-	Not used, open
73	SUBC	-	Not used, open
74	SBCK	-	Not used, open

Pin No.	Terminal Name	I/O	Function
75	NTEST	I	Test terminal (Connected to power supply)
76	X2	O	Crystal oscillator connected (F=16.9 MHz)
77	X1	I	
78	DV _{SS} 1	-	GND
79	DV _{DD} 1	I	Power supply terminal
80	EXT2	-	Not used, open

14.4. IC1301(C2FBEB000002): 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	O	Not used, 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
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.)

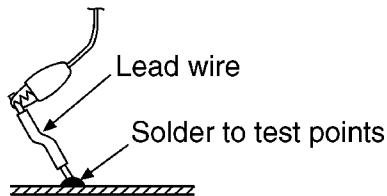


Fig. 15-1.

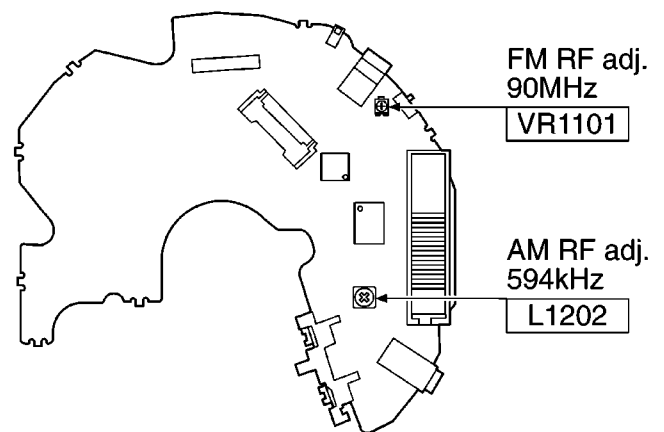


Fig. 15-3.

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.

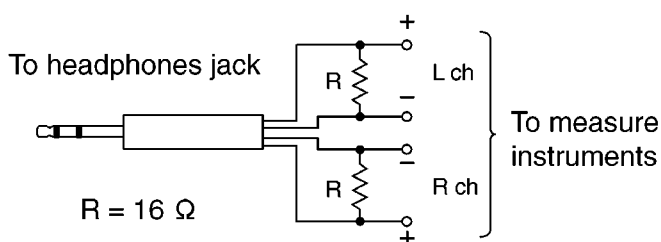


Fig. 15-2.

16 Replacement Parts List

Notes:

- Important safety notice:

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

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

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

- The parenthesized indications in Remarks columns specify the areas.

(EB): SL-SV550EB

(EG): SL-SV550EG

(GC): SL-SV550GC

(GN): SL-SV550GN

- 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	Δ
1-1	RMG0605-K1	FLOATING RUBBER	3	
1-2	RAF0240A	OPTICAL PICK-UP	1	Δ
1-3	RDG0554	GEAR 1	1	
1-4	RDG0555	GEAR 2	1	
1-5	RMQ1125	MOTOR HOLDER	1	
1-6	RMS0782	SHAFT	1	
1-7	XQN17+BG45	SCREW	1	
1-8	RXQ0971-3	MOTOR ASS'Y	1	
2	RGV0317-H1	KNOB, HOLD	1	
3	RJC93038-2	BATTERY TERMINAL	1	
4	RKS0376-A	BOTTOM CABINET	1	
5	XTN17+6GFZ	SCREW	4	
6	RMB0742-2	SPRING	1	
7	RMRI514-K	HOLDER	1	
8	L5AAAE00046	LCD (LCD1)	1	
9	RGD0098-S1	CD LID	1	
10	RGK1642-S	LCD ORNAMENT	1	
11	RGPI007-X	LCD PANEL	1	
12	RGU2198-S	BUTTON, TONE ETC	1	
13	RGU2199-1S	BUTTON, PLAY/PAUSE ETC	1	(EG) (EB)
13	RGU2199-S	BUTTON, PLAY/PAUSE ETC	1	(GC) (GN)
14	RHQ0088-S	SCREW	7	
15	RSQ0094	ZEBRA	1	
16	XQN14+BG3FC	SCREW	4	
17	K0RE01200005	SW, OPERATION (S1-12)	1	
18	RMRI525-H	LCD COVER	1	
19	RGV0318-H1	KNOB, OPEN	1	
20	RGN2460-H	NAME PLATE	1	(EG)
20	RGN2461-H	NAME PLATE	1	(EB)
20	RGN2462-H	NAME PLATE	1	(GC)
20	RGN2463-H	NAME PLATE	1	(GN)
21	RHQ0088-K	SCREW	3	
22	RKK0171-A	BATTERY LID	1	
23	RKM0482A-A	MIDDLE CABINET	1	
24	RMA1648-2	SHIELD PLATE	1	
25	RMRI412-K1	LOCK PLATE	1	
26	RMC0537	SPRING	1	
27	RQLS0244	LASER LABEL	1	
A1	LOBAB0000123	STEREO EARPHONES	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A2	RFEA418E-S	AC ADAPTOR	1	Δ (EG)
A2	N0JCCE000004	AC ADAPTOR	1	Δ (EB)
A2	N0JDCE000001	AC ADAPTOR	1	Δ (GC)
A2	N0JCCE000003	AC ADAPTOR	1	Δ (GN)
A3	RQT6667-B	OPERATING INSTRUCTIONS	1	ENGLISH
A3	RQT6668-E	OPERATING INSTRUCTIONS	1	(EG), FRENCH, GERMANY, SPANISH, NETHERLANDS, SWEDISH, DANISH, ITALIAN, PORTUGUESE, RUSSIAN, CZECH, POLISH
A3	RQT6669-K	OPERATING INSTRUCTIONS	1	(GC), CHINESE
A3	RQT6670-A	OPERATING INSTRUCTIONS	1	(GC), ARABIC
A4	RJP16ZAS	POWER PLUG ADAPTOR	1	Δ K2DR42E00003 (GC)
C1, C2	ECJ1VB1C104K	16V 0.1U	2	
C3-C6	ECUVNH103KBV	50V 0.01U	4	F1H1H103A748
C7	ECJ1VB1C104K	16V 0.1U	1	
C9	F1H1A105A028	10V 1U	1	
C10	ECJ1XC1H121J	50V 120P	1	
C11	F1H1A105A028	10V 1U	1	
C12	RCST1AY475RE	10V 4.7U	1	F3F1A475A001
C13	F3H1A476A001	10V 47U	1	
C14	RCE0JKA221IG	6.3V 220U	1	F2A0J2210012
C15	ECUVNA105ZFV	10V 1U	1	F1H1A105A030
C16	F1H1A105A028	10V 1U	1	
C17	ECUVNA105ZFV	10V 1U	1	F1H1A105A030
C19	F3F0J226A001	6.3V 22U	1	
C20	F1H1A105A028	10V 1U	1	
C21	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C22	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C24	ECUV1H391KBV	50V 390P	1	ECJ1VB1H391K
C27	F2A0J102A130	6.3V 1000U	1	
C33	ECJ1VB1H102K	50V 1000P	1	
C37	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C39	ECJ1VB1C104K	16V 0.1U	1	
C43	ECJ1VB1C104K	16V 0.1U	1	
C101, 02	ECJ1VB1C104K	16V 0.1U	2	
C103	ECJ1VB1E223K	25V 0.022U	1	
C104, 05	F1H1A105A028	10V 1U	2	
C106	ECJ1VB1C104K	16V 0.1U	1	
C107	ECJ1VC1H100C	50V 10P	1	
C111	ECJ1VB1E223K	25V 0.022U	1	
C112	ECJ1VB1H122K	50V 1200P	1	
C113	ECUVNA105ZFV	10V 1U	1	F1H1A105A030
C114	F1H1A105A028	10V 1U	1	
C116, 17	ECJ1VB1E223K	25V 0.022U	2	
C120	ECJ1VB1H332K	50V 3300P	1	
C121	ECJ1VB1H561K	50V 560P	1	
C201	F3F0J4760003	6.3V 47U	1	
C301	ECUVNA105ZFV	10V 1U	1	F1H1A105A030
C302	F1H1A105A028	10V 1U	1	
C321	ECUVNA105ZFV	10V 1U	1	F1H1A105A030
C501	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C502	ECEA0JKS101	6.3V 100U	1	
C503	ECUV1H391KBV	50V 390P	1	ECJ1VB1H391K
C504	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C505	ECJ1VB1H153K	50V 0.015U	1	
C507	F3G0G1070001	4V 100U	1	
C509, 10	ECJ1VB1C104K	16V 0.1U	2	
C511	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C514	ECJ1VB1H102K	50V 1000P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C515	FIH1A105A028	10V 1U	1	
C519	FIH1A105A028	10V 1U	1	
C524	FIH1A105A028	10V 1U	1	
C526	FIH1A105A028	10V 1U	1	
C530	ECJ1VB1C104K	16V 0.1U	1	
C603,04	ECJ1VB1H272K	50V 2700P	2	
C610	F3F0J4760003	6.3V 47U	1	
C702,03	FIH1A105A028	10V 1U	2	
C705,06	ECA0GAD221XI	4V 220U	2	
C711,12	ECUVNA105ZFB	10V 1U	2	F1H1A105A030
C720,21	ECJ1VB1C104K	16V 0.1U	2	
C730	F3F0J106A007	6.3V 10U	1	
C732	RCST0GY476RG	4V 47U	1	F3F0G4760001
C750,51	ECUVNA105ZFB	10V 1U	2	F1H1A105A030
C770	ECJ1VB1H102K	50V 1000P	1	
C904	ECJ1VB1C104K	16V 0.1U	1	
C1023	FIH1H220A230	50V 22P	1	
C1030	ECA0JKS470	6.3V 47U	1	
C1032	ECUV1C105KBN	16V 1U	1	F1J1C105A118
C1033	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C1034	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C1035	ECJ1VB1E223K	25V 0.022U	1	
C1036	FIH1H390A230	50V 39P	1	
C1037	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C1038	ECUV1C105KBN	16V 1U	1	F1J1C105A118
C1103	ECUV1H680GCV	50V 68P	1	F1H1H680A002
C1105	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C1110	ECJ1VC1H050C	50V 5P	1	
C1111	ECUV1H470JCV	50V 47P	1	F1H1H470A736
C1112	ECUV1H560GCV	50V 56P	1	F1H1H560A002
C1115,16	ECJ1VB1H102K	50V 1000P	2	
C1123	ECJ1VB1H102K	50V 1000P	1	
C1151	ECUVNC473KBV	16V 0.047U	1	F1H1C473A071
C1153	ECUVNC105KBN	16V 1U	1	F1J1C105A091
C1155	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C1157	ECJ1VC1H120J	50V 12P	1	
C1159	ECUV1H221KBV	50V 220P	1	F1H1H2210001
C1160	ECUV1H470JCV	50V 47P	1	F1H1H470A736
C1200	RCST0GY476RG	4V 47U	1	F3F0G4760001
C1202,03	ECUZNC104ZFB	16V 0.1U	2	F1H1C1040008
C1204	ECJ1VC1H040C	50V 4P	1	
C1206	ECUVNC333KBV	16V 0.033U	1	F1H1C333A071
C1207	FIH1H471A002	50V 470P	1	
C1210	ECUV1H100DCV	50V 10P	1	ECJ1VC1H100D
C1212	ECUVNA105ZFB	10V 1U	1	F1H1A105A030
C1215	RCST1AY475RE	10V 4.7U	1	F3F1A475A001
C1216	ECUVNJ474KBV	6.3V 0.47U	1	F1H0J474A002
C1221	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C1223	ECUVNC473KBV	16V 0.047U	1	F1H1C473A071
C1225	ECUVNA105ZFB	10V 1U	1	F1H1A105A030
C1228,29	ECJ1VB1H822K	50V 8200P	2	
C1230-32	ECJ1VB1C104K	16V 0.1U	3	
C1234	ECJ1VB1C104K	16V 0.1U	1	
C1235	ECUVNA105ZFB	10V 1U	1	F1H1A105A030
C1236	ECJ1VB1H102K	50V 1000P	1	
C1239	ECUZNC104ZFB	16V 0.1U	1	F1H1C1040008
C1240	ECJ1VB1C104K	16V 0.1U	1	
C1242	ECJ1VB1H102K	50V 1000P	1	
C1250	ECUV1H221KBV	50V 220P	1	F1H1H2210001
C1251	ECJ1VB1H102K	50V 1000P	1	
C1271	FIH1A105A028	10V 1U	1	
C1272	ECUV1H221KBV	50V 220P	1	F1H1H2210001
C1308	ECJ1VB1C104K	16V 0.1U	1	
C1309	ECUZNC104ZFB	16V 0.1U	1	F1H1C1040008
C1310	ECJ1VB1C104K	16V 0.1U	1	
C1311	F3F0J106A007	6.3V 10U	1	
C1313,14	ECUV1H050DCV	50V 5P	2	ECJ1VC1H050D
C1315	ECUZNC104ZFB	16V 0.1U	1	F1H1C1040008
C1317	RCST0GY476RG	4V 47U	1	F3F0G4760001
C1322	ECUVNJ474KBV	6.3V 0.47U	1	F1H0J474A002
C1333	ECUVNA105ZFB	10V 1U	1	F1H1A105A030
C1350	ECJ1VB1C104K	16V 0.1U	1	
C1500	F3F0J106A007	6.3V 10U	1	

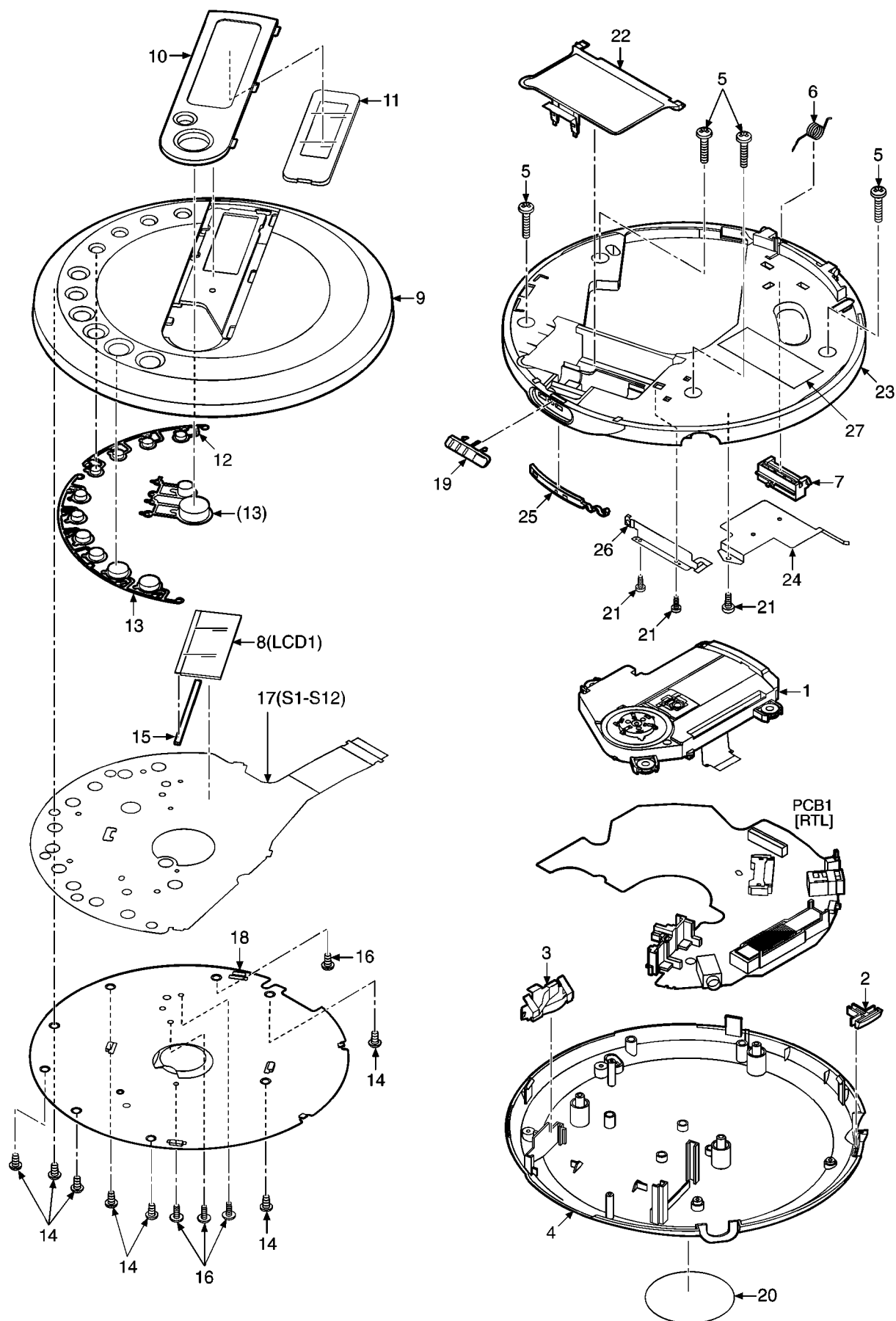
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1501	ECJ1VB1H562K	50V 5600P	1	
C1502,03	ECUZNC104ZFB	16V 0.1U	2	F1H1C1040008
C1504	ECJ1VF1C474Z	16V 0.47U	1	
C1505	ECJ1VB1H562K	50V 5600P	1	
C1506,07	ECUZNC104ZFB	16V 0.1U	2	F1H1C1040008
C1508	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C1509,10	ECUVNA105ZFB	10V 1U	2	F1H1A105A030
C1511,12	ECJ1VB1H102K	50V 1000P	2	
C1520,21	ECUVNA105ZFB	10V 1U	2	F1H1A105A030
CN301	RJS2A6130T	CONNECTOR (30P)	1	K1MN30A00023
CNY11	K4BC03B00014	BATTERY TERMINAL	1	
D101	MA2J11100L	DIODE	1	
D701	MA2J11100L	DIODE	1	
D1010	MA147TX	DIODE	1	MA3J14700L
D1011	MA8120	DIODE	1	MAZ8120
D1101,02	KV1450TL3-4	DIODE	2	B0CDBB000006
D1201	KV1610STL2-0	DIODE	1	B0CDBB000004
DY22	MA2J11100L	DIODE	1	
FP101	K1MN24B00093	CONNECTOR (24P)	1	
IC11	AN41506A-VB	IC	1	
IC13	C0CBAAB00039	IC	1	
IC101	AN22003A-NF	IC	1	
IC102	C0ABAA000068	IC	1	
IC301	C2BBGE000658	IC	1	
IC302	AK93C45BH-L	IC	1	C3EBCG000028
IC303	C0EBD0000066	IC	1	
IC501	MN6627911AC1	IC	1	
IC502	C3ABMB000027	IC	1	
IC701	C1BB00000786	IC	1	
IC1001	C1BB00000562	IC	1	
IC1008	C0CBAAC00107	IC	1	
IC1301	C2FBEB000002	IC	1	
IC1500	C0ZBZ0000515	IC	1	
ICP11	ERBFELR50U	IC PROTECTOR	1	△
ICPY12	ERY32SB075VA	IC PROTECTOR	1	△
JK11	RJJ43K09-C	JK,DC IN	1	K2EB2B000006
JKY701	K2HC104B0013	JK,HEADPHONE	1	
L1-L4	RLBV252AV-Y	COIL	4	J0JBC0000019
L11	RLQU331KT-W	COIL	1	G1C331K00004
L12	GLC101MA0035	COIL	1	
L13	GLC101K00021	COIL	1	
L701-03	RLBV252AV-Y	COIL	3	J0JBC0000019
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	G1CR22KA00009
L1201	G2CBCB000016	COIL	1	
L1202	G3A124C00002	COIL	1	
LCD1	L5AAAE00046	LCD	1	
P1	RPF0111-2	PROTECTION BAG	1	
P2	RPK1930	GIFT BOX	1	
P3	RPQ0836-3	PAD1	1	
P4	RPQ1529	PAD2	1	(EG) (EB) (GN)
P4	RPQ1531	PAD2	1	(GC)
PCB1	REP3521C-M	PCB ASS'Y	1	[RTL] (EG) (EB)
PCB1	REP3521D-M	PCB ASS'Y	1	[RTL] (GC) (GN)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q11	2SB1182TLPQR	TRANSISTOR	1	B1BDND000001
Q18	UN5113TW	TRANSISTOR	1	
Q19	UN5210TW	TRANSISTOR	1	UNR521000L
Q102	B1DHAC000002	TRANSISTOR	1	
Q201	2SB709A	TRANSISTOR	1	2SB0709A
Q301	UN5210TW	TRANSISTOR	1	UNR521000L
Q302	UN5214TX	TRANSISTOR	1	UNR521400L
Q303	UN5210TW	TRANSISTOR	1	UNR521000L
Q701	B1ADMB000003	TRANSISTOR	1	
Q703	XP1210	TRANSISTOR	1	XP01210
Q731	2SC3931CTX	TRANSISTOR	1	2SC39310CL
Q902	XP1210	TRANSISTOR	1	XP01210
Q1012,13	2SC4081STX	TRANSISTOR	2	B1ABCF000021
Q1151	2SK1067-4-TL	TRANSISTOR	1	B1CFBC000008
Q1152,53	2SD1819ASTX	TRANSISTOR	2	2SD1819ASL
Q1201	2SB815B7TX	TRANSISTOR	1	B1ADJB000001
Q1202	2SC4081STX	TRANSISTOR	1	B1ABCF000021
Q1203	UN5115TX	TRANSISTOR	1	UNR511500L
Q1204	UN5210TW	TRANSISTOR	1	UNR521000L
Q1206	UN5115TX	TRANSISTOR	1	UNR511500L
Q1207	2SC4081STX	TRANSISTOR	1	B1ABCF000021
Q1208	UN5115TX	TRANSISTOR	1	UNR511500L
Q1210	2SK1067-4-TL	TRANSISTOR	1	B1CFBC000008
Q1301	UN5214TX	TRANSISTOR	1	UNR521400L
Q1304	UN5213TX	TRANSISTOR	1	UNR521300L
Q1307,08	UN5214TX	TRANSISTOR	2	UNR521400L
Q1500,01	UN511MTX	TRANSISTOR	2	UNR511M00L
Q1502	UN5214TX	TRANSISTOR	1	UNR521400L
Q1503,04	B1CFHA000001	TRANSISTOR	2	
QY12	B1ABMD000004	TRANSISTOR	1	
QY13	UNR5211L00L	TRANSISTOR	1	
QY14	UNR511400L	TRANSISTOR	1	
QY16	UN5215TX	TRANSISTOR	1	UNR521500L
R2	D0YBR0000010	RESISTOR	1	
R3,R4	ERJ3GEYJ102V	1/16W 1K	2	
R5	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002
R13	ERJ3GEYJ102V	1/16W 1K	1	
R14	ERJ3RBD473	1/16W 47K	1	
R15	ERJ3RBD683V	1/16W 68K	1	
R16	ERJ3GEYJ104	1/16W 100K	1	
R22	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R31	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002
R45	ERJ3RBD473	1/16W 47K	1	
R47	ERJ3RBD392V	1/16W 3.9K	1	
R101	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R103	ERJ3GEYJ562V	1/16W 5.6K	1	D0GB562JA002
R110	ERJ3GEYJ100	1/16W 10	1	
R120	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R121	ERJ3GEYJ393V	1/16W 39K	1	D0GB393JA002
R122	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R130	ERJ3GEYJ104	1/16W 100K	1	
R201	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R202	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R220	ERJ3GEY0R00V	1/16W 0	1	
R300	ERJ3GEYJ102V	1/16W 1K	1	
R304	ERJ3GEYJ105V	1/16W 1M	1	
R313	EXBV8V104JV	1/16W 100K	1	
R325	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002
R351	ERJ3GEYJ102V	1/16W 1K	1	
R353,54	ERJ3GEYJ102V	1/16W 1K	2	
R361	ERJ3GEYJ102V	1/16W 1K	1	
R362,63	ERJ3GEYJ104	1/16W 100K	2	
R364	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R365	ERJ3GEYJ104	1/16W 100K	1	
R372	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R502	ERJ3GEYJ683V	1/16W 68K	1	D0GB683JA002
R505	MCR03PZHJ561	1/16W 560	1	
R509	ERJ3GEYJ331V	1/16W 330	1	
R511	ERJ3GEYJ222V	1/16W 2.2K	1	
R512	EXBV4V222JV	1/16W 2.2K	1	
R513	ERJ3GEYJ154V	1/16W 150K	1	

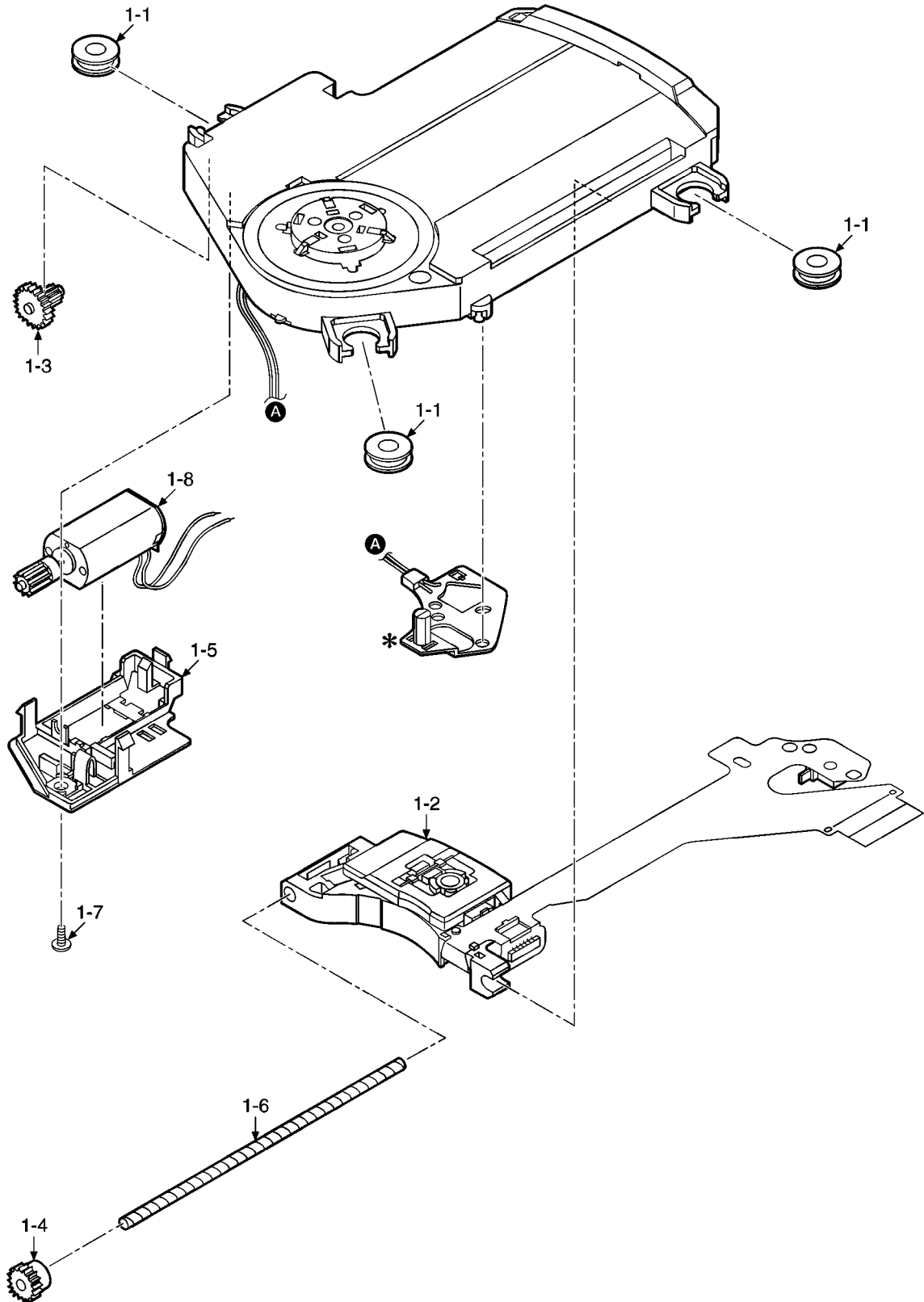
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R514	ERJ3GEYJ331V	1/16W 330	1	
R600	ERJ3GEYJ150V	1/16W 15	1	
R603	EXBV4V561JV	1/32W 560	1	
R705,06	ERJ3GEYJ3R3V	1/16W 3.3	2	
R707,08	ERJ3GEYJ102V	1/16W 1K	2	
R709	ERJ3GEYJ122V	1/16W 1.2K	1	
R713,14	ERJ3GEYJ562V	1/16W 5.6K	2	D0GB562JA002
R715	ERJ3GEYJ122V	1/16W 1.2K	1	
R720,21	ERJ3GEYJ100	1/16W 10	2	
R725	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R726	ERJ3GEYJ222V	1/16W 2.2K	1	
R731	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R750,51	ERJ3GEYD153V	1/16W 15K	2	D0HB153ZA002
R760,61	ERJ3GEYJ152V	1/16W 1.5K	2	
R905	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002
R1021	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002
R1022	ERJ3GEYJ104	1/16W 100K	1	
R1023,24	ERJ3GEYJ221V	1/16W 220	2	
R1025	ERJ3GEYJ4R7V	1/16W 4.7	1	
R1109	EXBV4V474JV	1/32W 470K	1	
R1130	ERJ3GEYJ274V	1/16W 270K	1	
R1131	ERJ3GEYJ104	1/16W 100K	1	
R1151	ERJ3GEYJ183V	1/16W 18K	1	D0GB183JA002
R1153	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R1154	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R1155	ERJ3GEYJ4R7V	1/16W 4.7	1	
R1159	ERJ3GEYJ471V	1/16W 470	1	
R1160	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R1170	ERJ3GEYJ470V	1/16W 47	1	
R1201	ERJ3GEYJ472V	1/16W 4.7K	1	
R1202	MCR03PZHJ561	1/16W 560	1	
R1203	ERJ3GEYJ121V	1/16W 120	1	
R1204	ERJ3GEYJ474V	1/16W 470K	1	
R1205	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R1206	ERJ3GEYJ224V	1/16W 220K	1	D0GB224JA002
R1218	ERJ3GEYJ102V	1/16W 1K	1	
R1230	ERJ3GEYJ272V	1/16W 2.7K	1	
R1231	ERJ3GEY0R00V	1/16W 0	1	
R1232	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R1233	ERJ3GEYJ331V	1/16W 330	1	
R1234	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R1235	ERJ3GEYJ221V	1/16W 220	1	
R1240	ERJ3GEYJ391V	1/16W 390	1	
R1303	ERJ3GEYJ393V	1/16W 39K	1	D0GB393JA002
R1310	EXBV4V104JV	1/32W 100K	1	D1H41042A001
R1331	ERJ3RBD393	1/16W 39K	1	
R1365	ERJ3RBD683V	1/16W 68K	1	
R1371	EXBV4V104JV	1/32W 100K	1	D1H41042A001
R1380	ERJ3GEYJ273V	1/16W 27K	1	D0GB273JA002
R1381	ERJ3GEYJ474V	1/16W 470K	1	
R1500	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R1501	ERJ3GEYJ105V	1/16W 1M	1	
R1502	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R1503	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R1504	ERJ3GEYJ104	1/16W 100K	1	
R1509,10	ERJ3GEYJ222V	1/16W 2.2K	2	
R1520,21	ERJ3GEYJ333V	1/16W 33K	2	D0GB333JA002
R1533	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
RY1	D0YBR0000010	RESISTOR	1	
RY10	ERJ3GEYJ271V	1/16W 270	1	
RY17	ERJ12YJ1R8U	1/2W 1.8	1	
RY36	ERJ3GEYJ474V	1/16W 470K	1	
RY1368	ERJ3GEYJ102V	1/16W 1K	1	
RY1369	ERJ3GEYJ102V	1/16W 1K	1	(GC) (GN)
RY1370	ERJ3GEYJ102V	1/16W 1K	1	(EG) (EB)
S1-12	K0RE01200005	SW, OPERATION	12	
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	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
X501	H2D169500026	OSCILLATOR	1	
X1101	RLFFETNL02AL	CERAMIC FILTER	1	J0B1075A0081
X1201	J0B4503A0061	CERAMIC FILTER	1	(GC) (GN)
X1201	J0B4593A0003	CERAMIC FILTER	1	(EG) (EB)
X1203	J0B1075A0104	CERAMIC FILTER	1	
X1301	H0J750200009	OSCILLATOR	1	

17 Cabinet Parts Location

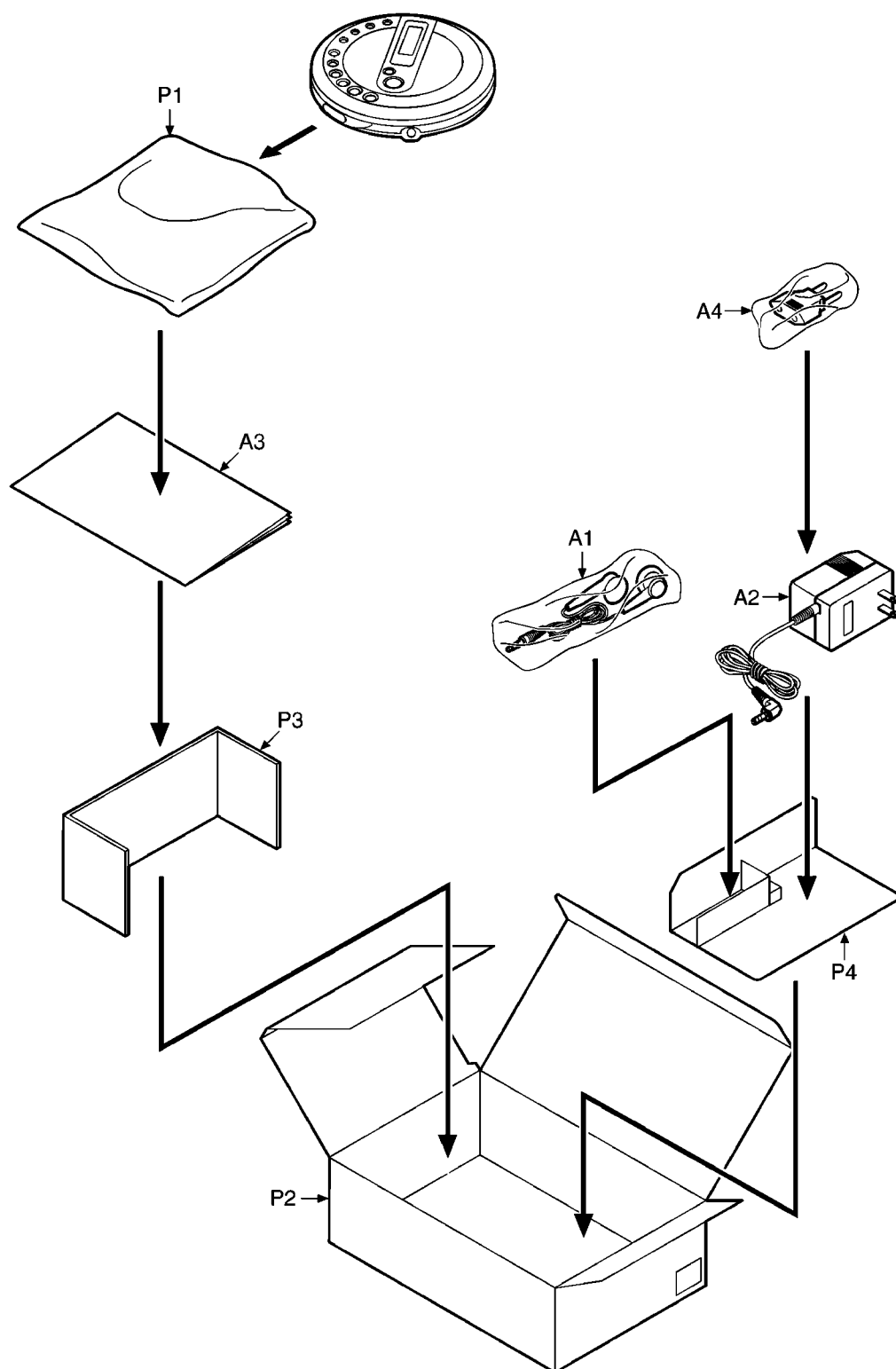


18 Traverse Unit Parts Location



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

19 Packaging



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