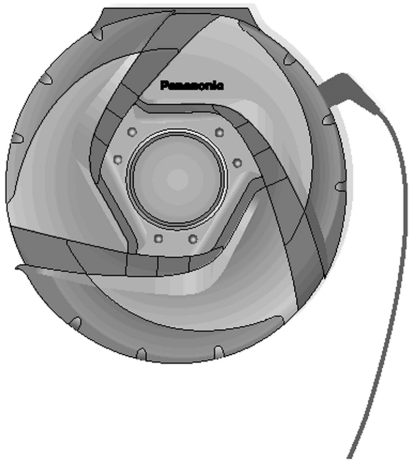
Order No.AD0503036CE
A6

Service Manual

Portable CD Player

COMPACT disc DIGITAL AUDIO



SL-SW967VP
SL-SW967VPC

Colour

(A).....Blue Type (SL-SW967VP only)

(S).....Silver Type

Specification

CD SECTION

nCD-DA

Sampling frequency:	44.1 kHz
No. of channels:	2 (left and right, stereo)
Headphone output level:	RMS max. 8mW+8mW/ 16Ω (adjustable)
Frequency response:	20 to 20,000 Hz (+0.5dB ~ -7dB)

nMP3

Supported bit-rates (Supports variable bit rates):	32kbps to 320kbps (128kbps is recommended)
Supported sampling frequency:	48kHz/44.1kHz/32kHz
Maximum number or items (total no. of albums and tracks):	999
Maximum album levels:	100

nPickup

Light source:	Semiconductor laser
Wavelength:	780 nm

RADIO SECTION

nFrequency

Radio frequency:	FM; 87.90—107.90 MHz (0.2 MHz steps)
	87.50—108.00 MHz (0.1 MHz/0.05 MHz steps)
	AM; 520—1710 kHz (10 kHz steps)
	522—1629 kHz (9 kHz steps)
IF:	FM; 10.7 MHz
	AM; 450kHz

nAudio

Selectivity:	FM; 42 dB
	AM; 7.4 kHz (6 dB) 21 dB/9 kHz
Sensitivity:	FM; 7 µV/0.5 mW output (S/N30 dB)
	AM; 707 µV/m/0.5 mW output (MAX)

GENERAL

Power supply:

DC input (RP-AC46, not included);	DC 4.5V
Operational temperature range:	0 °C—40 °C (32 °F—104 °F)
Rechargeable temperature range:	5 °C—40 °C (41 °F—104 °F)

Play time:

Using on a flat stable surface at 25°C (77°F), EQ is off, Hold is on, Anti-skip is on POS 1 (CD-DA), recommended bit rate (MP3: 128 kbps), and the Digital Re-master is off (MP3).Playtime are in hours and approximate.

Panasonic

Batteries used:

2 alkaline batteries; MP3 disc....100h
CD-DA disc....52h
RADIO (FM BAND)....75h

2 optional rechargeable batteries; MP3 disc....42h
CD-DA disc....22h
RADIO (FM BAND)....30h

Recharging time: About 3.5 to 4.5 hours

・The play time may be less depending on the operating conditions.

・Play time will be considerably reduced when playing CD-RW.

Dimensions (WxHxD): 140.0x32.7x141.0mm
($5^{17}/_{32}$ "×$1^{5}/_{16}$ "×$5^{9}/_{16}$ ")

Mass: 303g (10.7 oz.) (with batteries)
256g (9.0 oz.) (without batteries)

Note:

Specifications are subject to change without notice.

Mss and dimensions are approximate.

Note on CD-R and CD-RW:

For CD-DA format, use a music disc and finalize*it after recording.
The unit may not be able to play some discs due to the condition of therecording.
*A process performed after recording that enables CD-R/CD-RW players to playaudio CD-R and CD-RW.

⚠ 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

・1 Pair of stereo headphones: L0BAD0000174

・1 Hand strap: RGQT0006-K1

2 Precaution of Laser Diode

Caution:

This product utilizes a class 1 laser. Invisible laser radiation is emitted from the optical pick-up lens when the unit is turned on:

1. Do not look directly into the pick-up lens.

2. Do not use optical instruments to look at the pick-up lens.
3. Do not adjust the preset variable resister on the optical pick-up.
4. Do not disassemble the optical pick-up unit.
5. If the optical pick-up is replaced, use the manufacture's specified replacement pick-up only.
6. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

3 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).

3.1. 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 tipoftheflexible board.
   (Refer to Fig. 3-1.)
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. 3-1.)

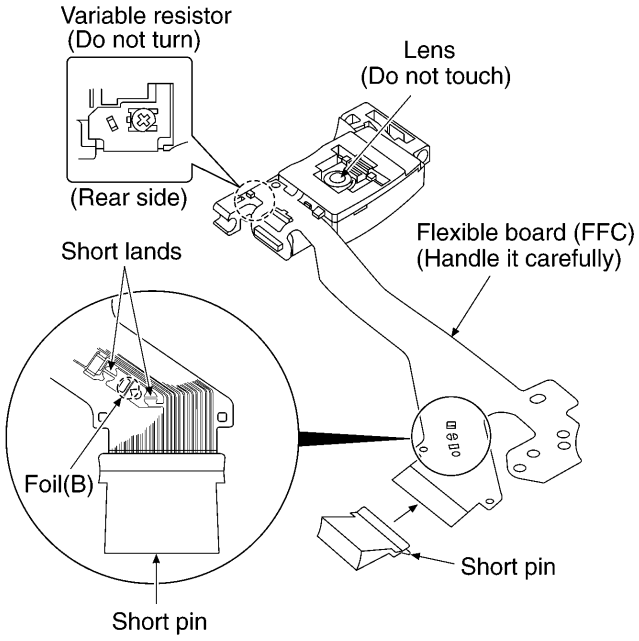


Fig. 3-1.

3.2. 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. 3-1.) (Take care not to make contact with cutting point each other.)
3. Unsolder the short lands. (Refer to Fig. 3-1.)

3.3. Grounding for electrostatic breakdown prevention

3.3.1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body. (Refer to Fig. 3-2.)

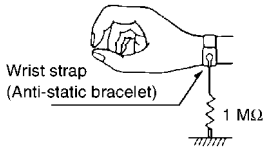


Fig. 3-2.

3.3.2. 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. 3-3.)

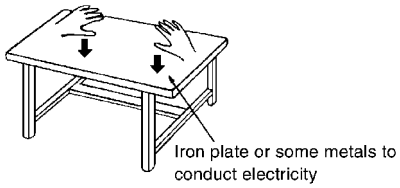


Fig. 3-3.

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).

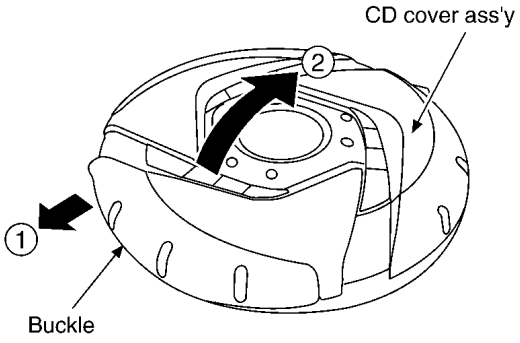
4 Operation Checks and Component Replacement Procedures

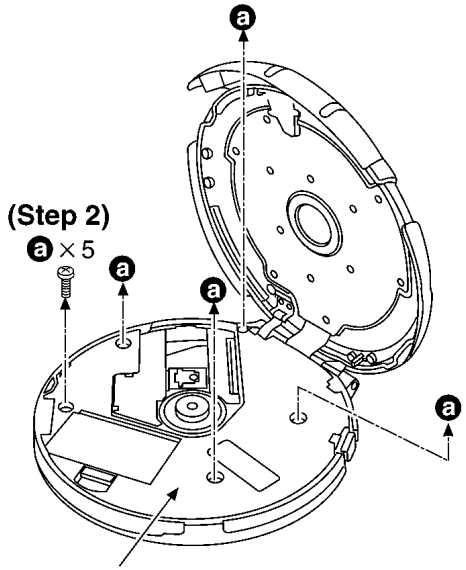
- **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
- **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**

4.1. Checking for the P.C.B. ass'y

4.1.1. Checking for the P.C.B. ass'y (A side)

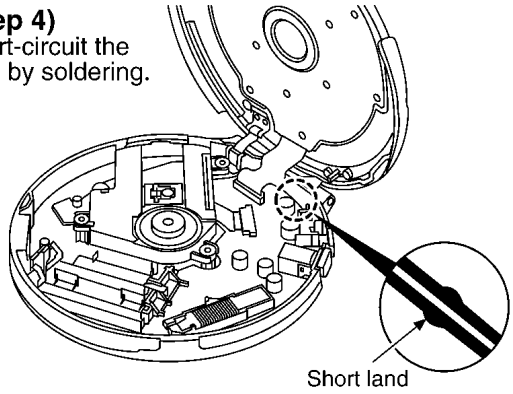
(Step 1)
Pull the buckle, and then open the CD cover ass'y.



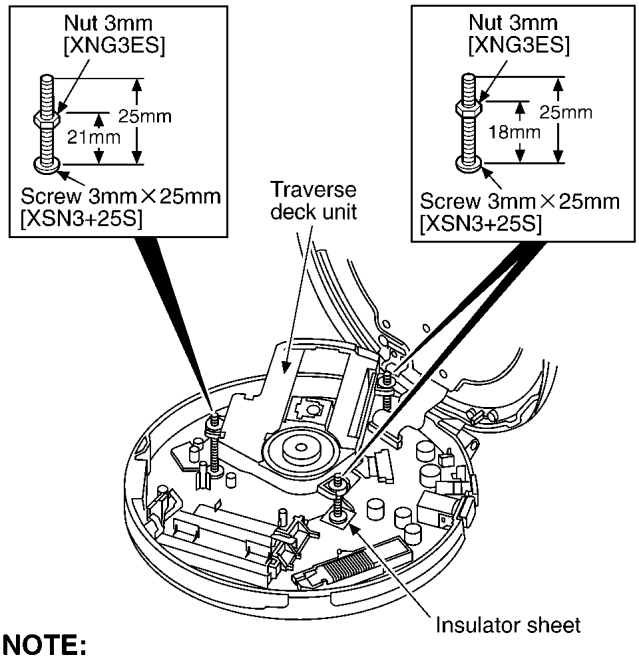


(Step 3)
Remove the middle cabinet ass'y.

(Step 4)
Short-circuit the land by soldering.

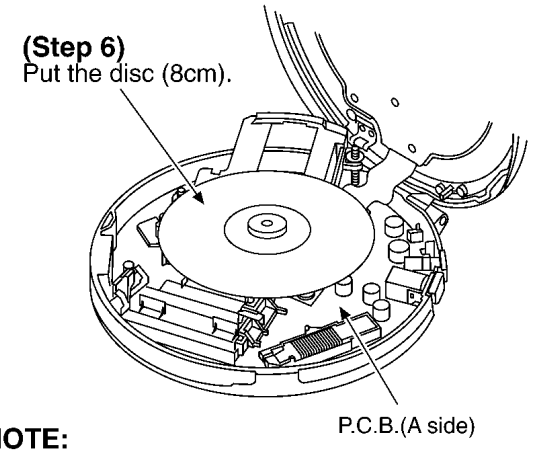


(Step 5)
Sustain the traverse deck unit with the floating rubber inserted screws and nuts as shown below.



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

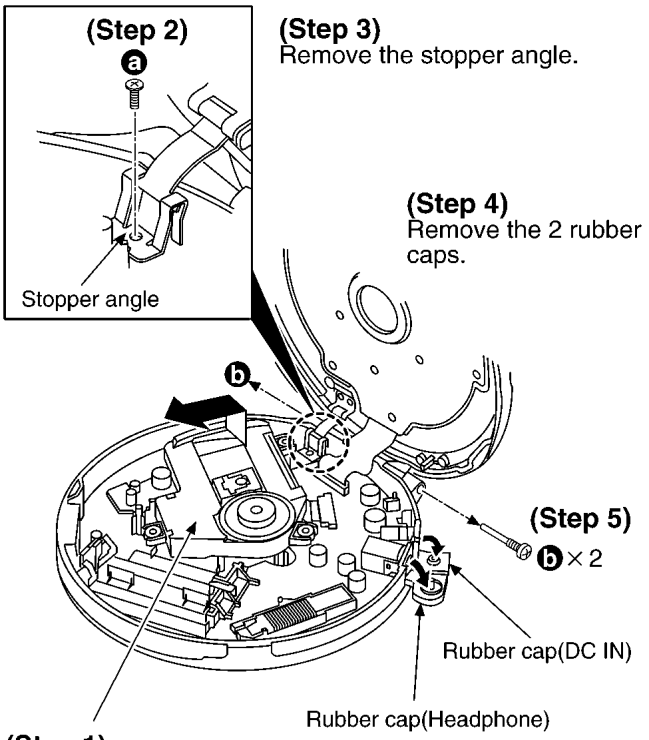
· **Check the P.C.B. ass'y (A side) as shown below.**

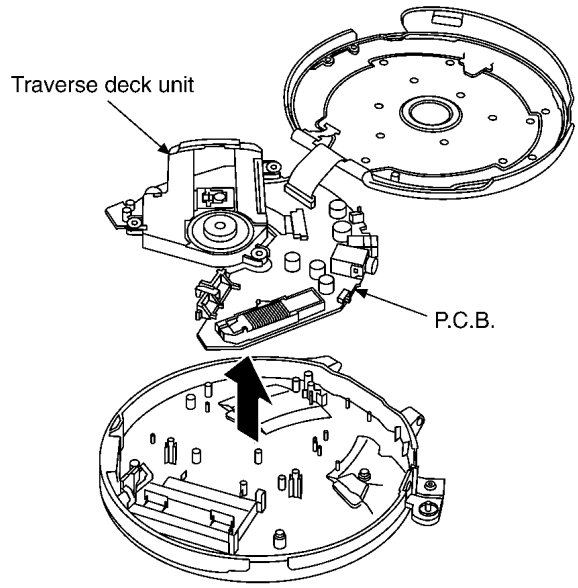


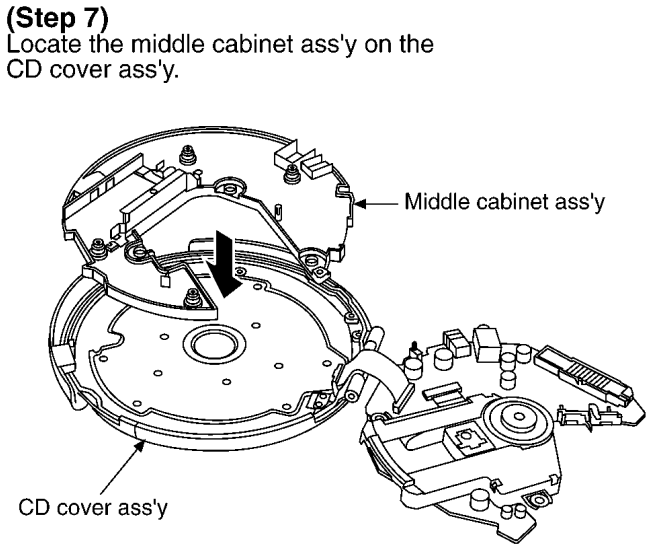
NOTE:
After checking, unsolder the short land to open circuit.

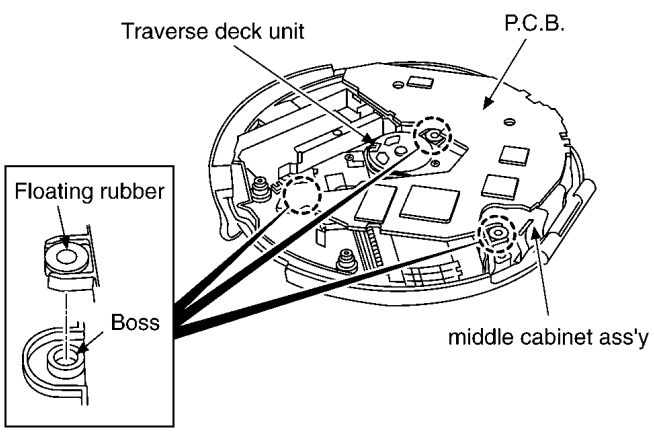
4.1.2. Checking for the P.C.B. ass'y (B side)

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

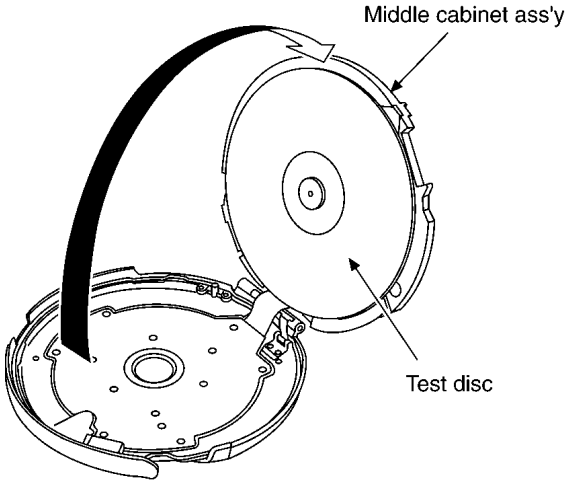






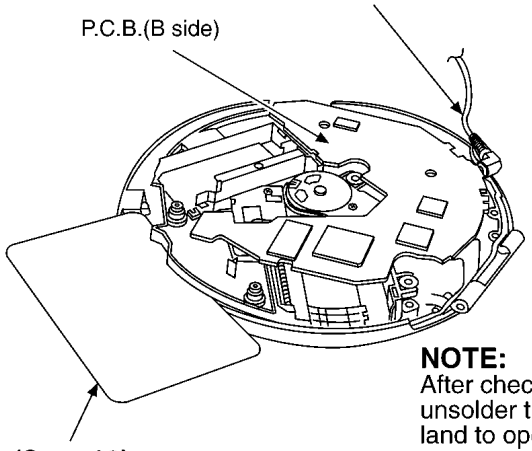


(Step 9)
Lift up the middle cabinet ass'y, and then put the test disc.



· **Check the P.C.B. ass'y (B side) as shown below.**

(Step 11)
Insert the AC adaptor plug into the DC IN jack, and then apply the power.

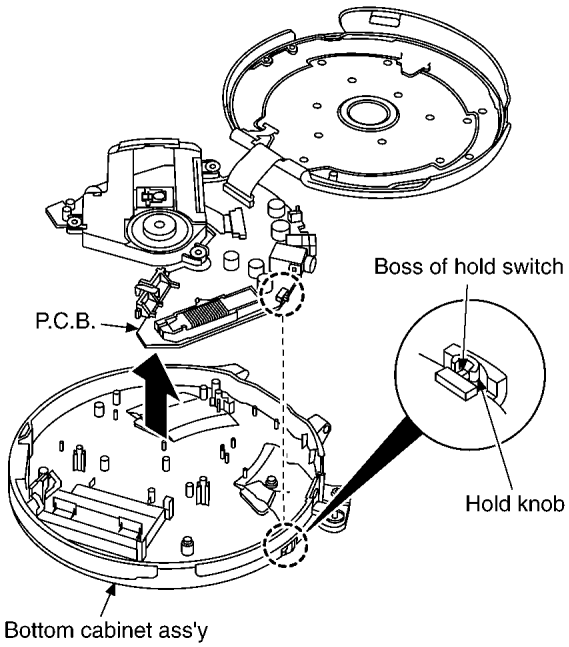


NOTE:
After checking, unsolder the short land to open circuit.

(Step 10)
Insert a sheet material such as prepaid card between test disc and middle cabinet ass'y to prevent the test disc from rubbing.

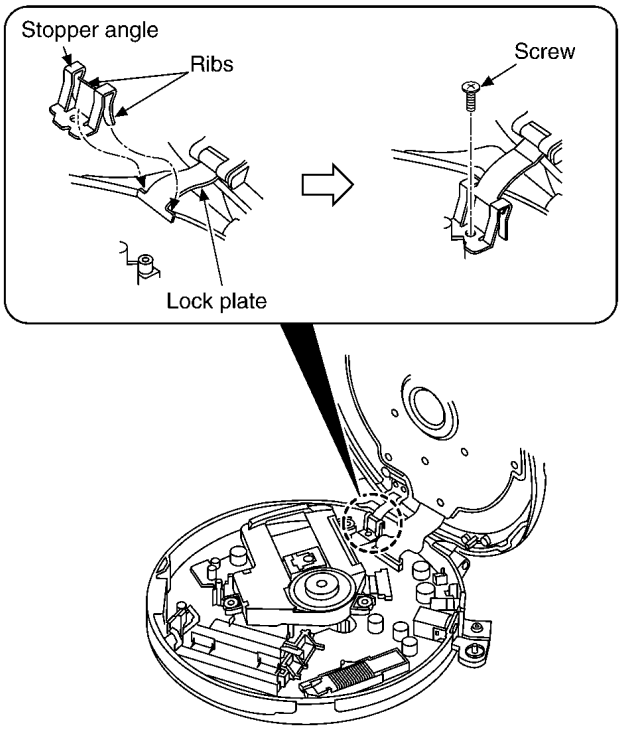
Notice for installation of P.C.B.

• Make sure the boss of hold switch fit in the hold switch knob.



Installing the stopper angle

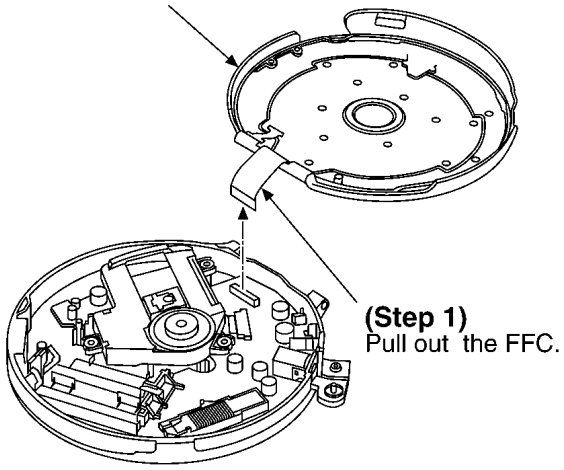
• Install the ribs of stopper angle with hooking the lock plate, and insert the screw.

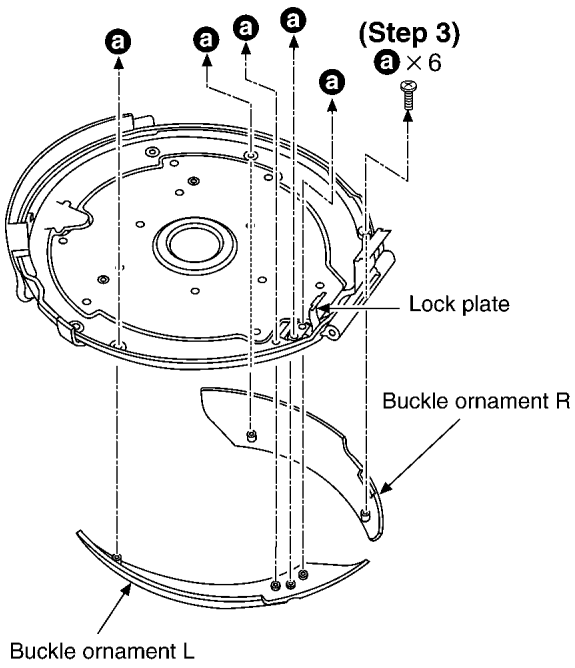


4.2. Replacement for the lock plate, buckle ornament L and buckle ornament R

- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** - **(Step 5)** of item 4.1.2.

(Step 2)
Remove the CD cover ass'y.

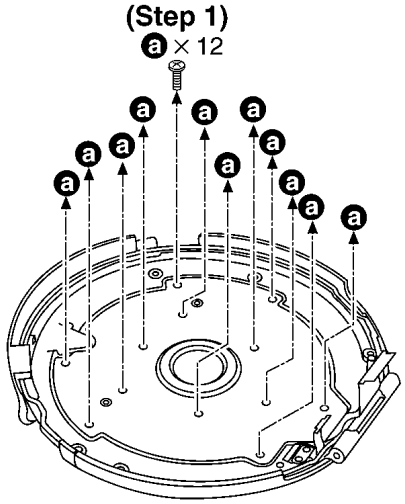




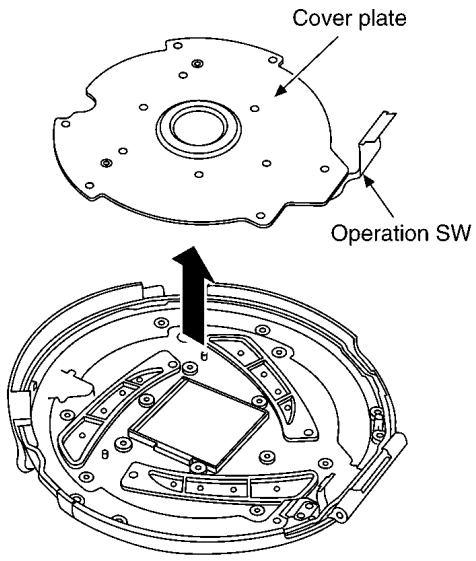
(Step 4)
Remove the lock plate, buckle ornament L and buckle ornament R.

4.3. Replacement for the LCD, button A, button B, buttonC and LCD ornament

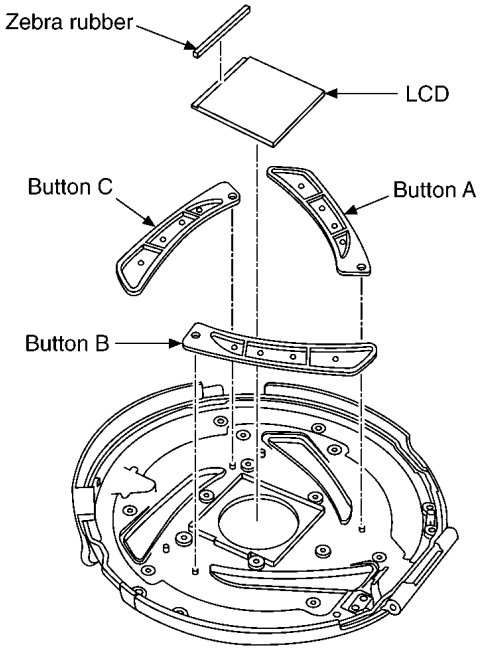
- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** - **(Step 5)** of item 4.1.2.
- Follow the **(Step 1)** - **(Step 2)** of item 4.2.



(Step 2)
Remove the cover plate and operation SW.

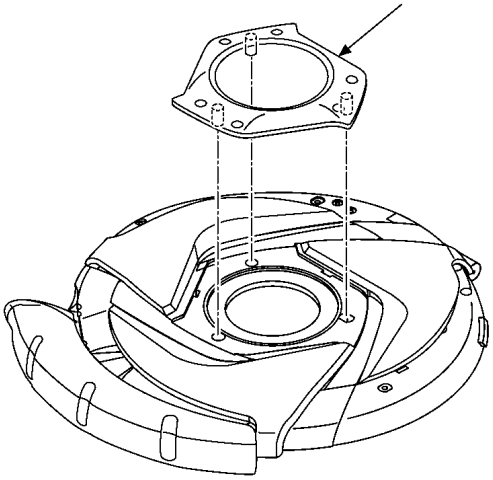


(Step 3)
The parts illustrated below will be free.



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

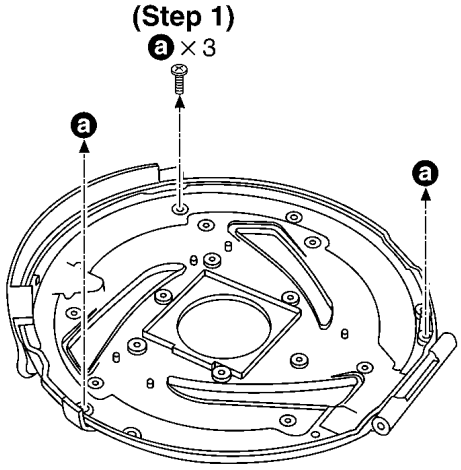
(Step 4)
Remove the LCD ornament.

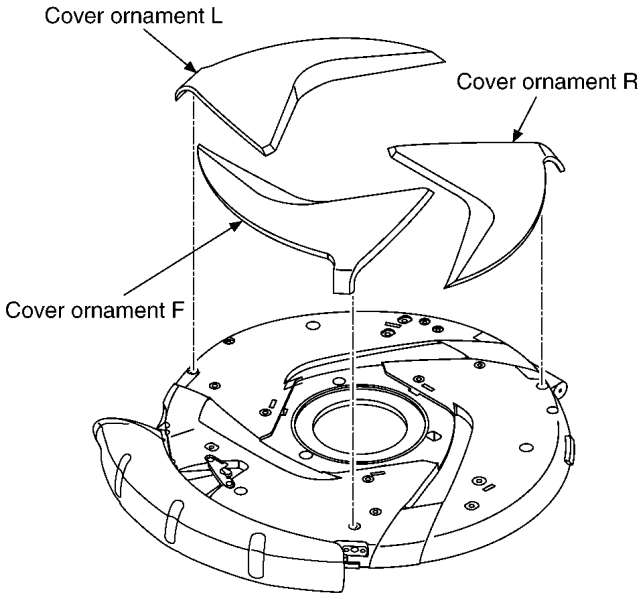


4.4. Replacement for the cover ornament F, cover ornament L, cover ornament R and buckle

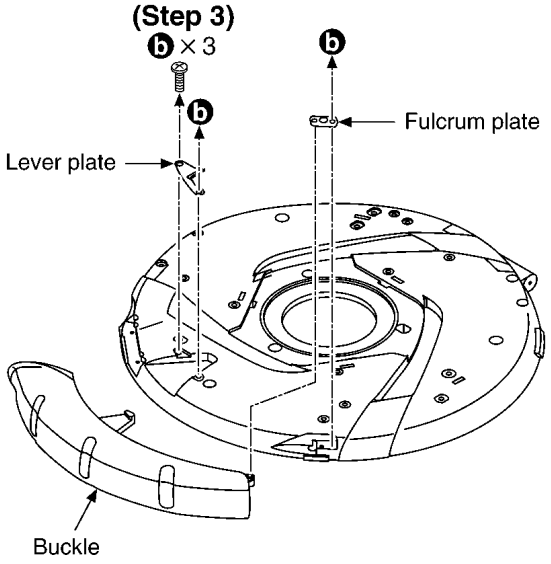
- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** - **(Step 5)** of item 4.1.2.
- Follow the **(Step 1)** - **(Step 4)** of item 4.2.
- Follow the **(Step 1)** - **(Step 4)** of item 4.3.

(Step 1)
ⓐ × 3





(Step 2)
Remove the cover ornament F, cover ornament L and cover ornament R.



(Step 4)
Remove the lever plate, fulcrum plate and buckle.

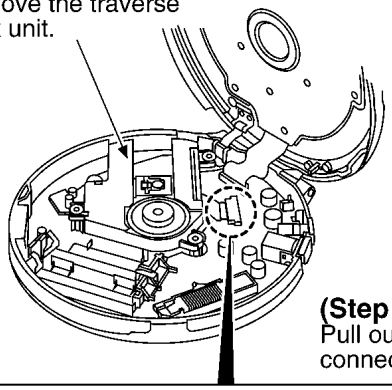
4.5. Replacement for the traverse motor

· Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.

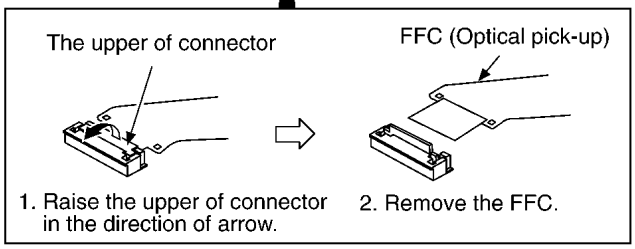
NOTE:

Be sure to confirm the item 3 “Handling Precautions for Traverse Deck” before removing the traverse deck ass’y.

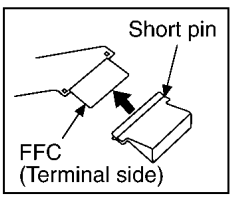
(Step 2)
Remove the traverse deck unit.



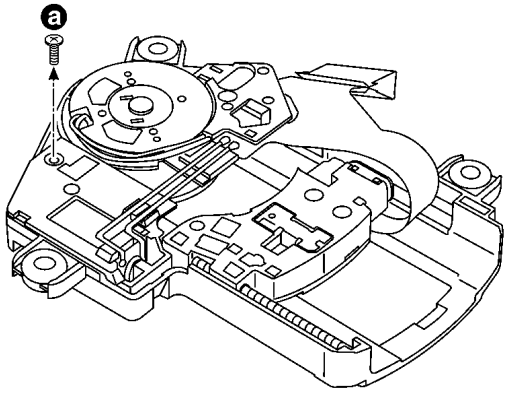
(Step 1)
Pull out the FFC from connector (CN101).



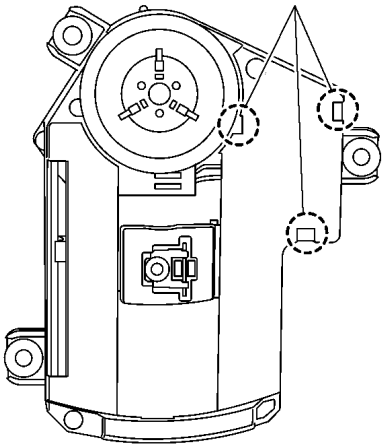
NOTE:
Insert a short pin into FFC(Terminal side) of the traverse deck.
(Refer to “**Handling Precautions for Traverse Deck**”.)



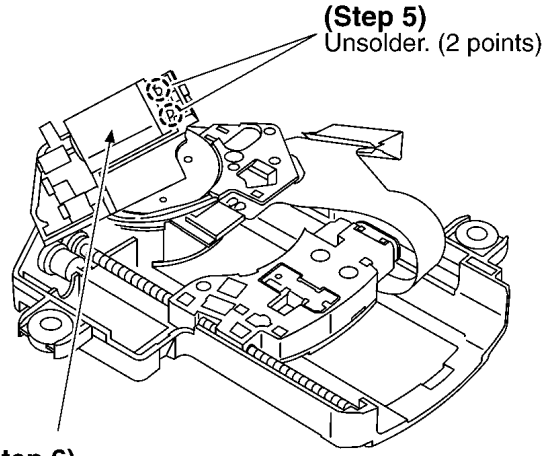
(Step 3)



(Step 4)
Release the 3 claws.



(Step 5)
Unsolder. (2 points)

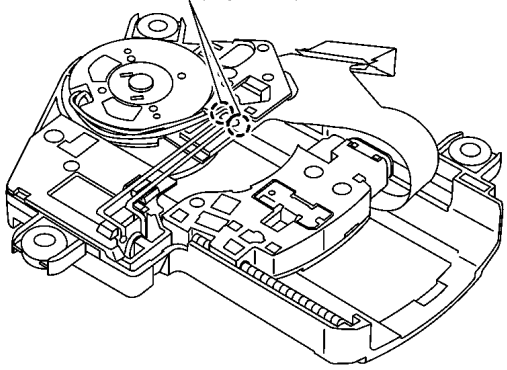


(Step 6)
Remove the traverse motor.

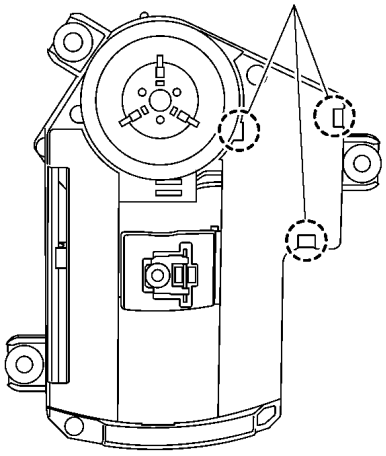
4.6. Replacement for the optical pick-up

- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** - **(Step 3)** of item 5.5.

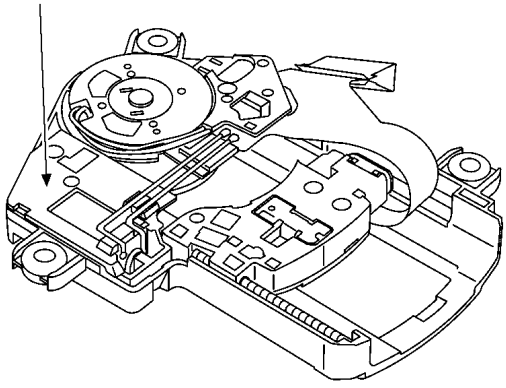
(Step 1)
Unsolder. (2 points)



(Step 2)
Release the 3 claws.

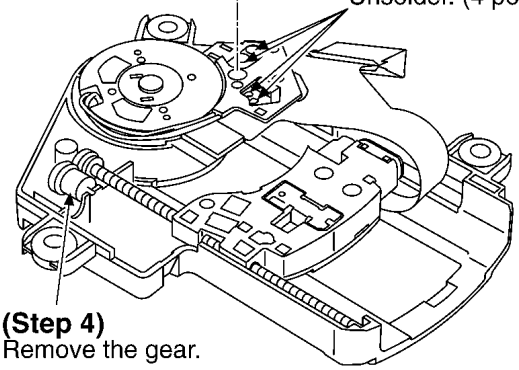


(Step 3)
Remove the holder and traverse motor.



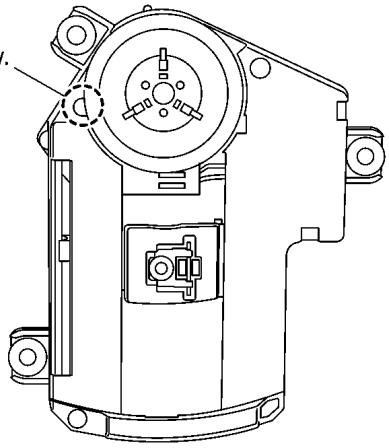
(Step 6)
ⓐ

(Step 5)
Unsolder. (4 points)

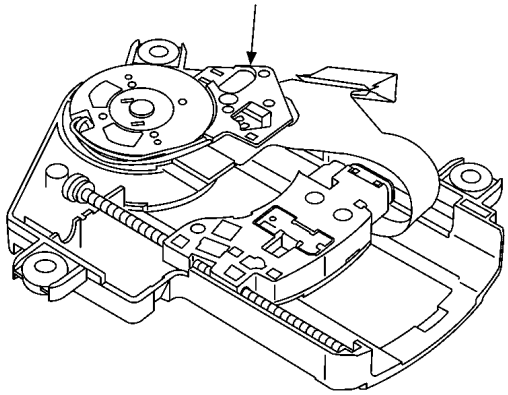


(Step 4)
Remove the gear.

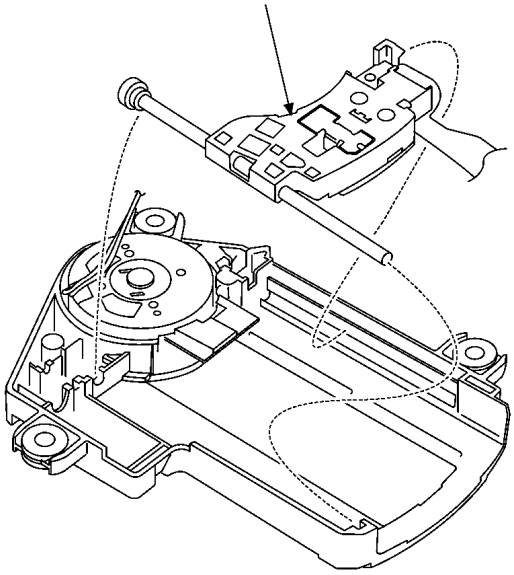
(Step 7)
Release the claw.



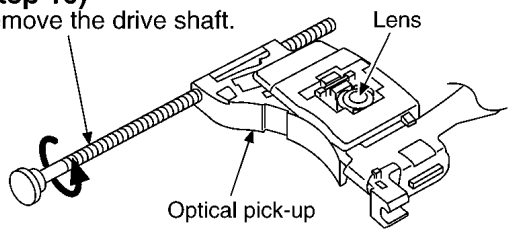
(Step 8)
Remove the FFC holder.



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



(Step 10)
Remove the drive shaft.



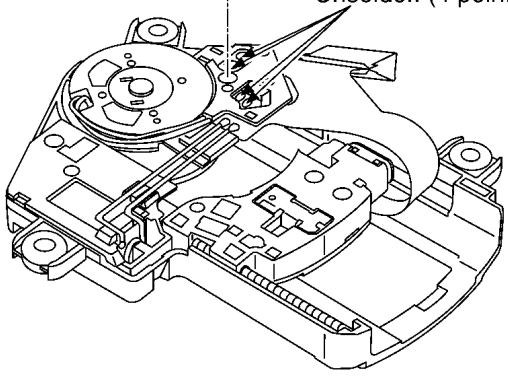
NOTE:
1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not apply the grease on the lens of optical pick-up.
3. Do not touch the lens of the optical pick-up.

4.7. Replacement for the rest switch

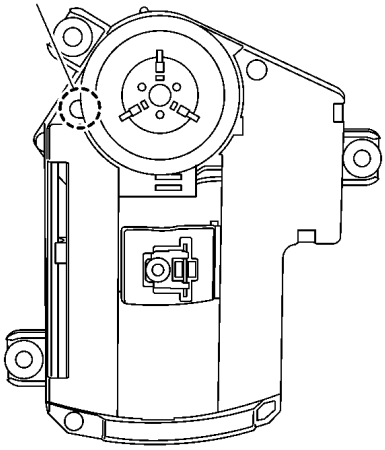
- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** , **(Step 2)** of item 4.5.

(Step 1)
ⓐ

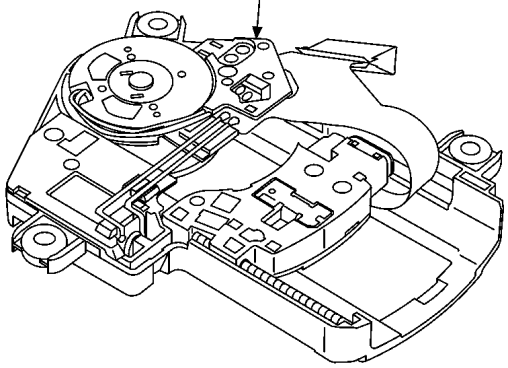
(Step 2)
Unsolder. (4 points)

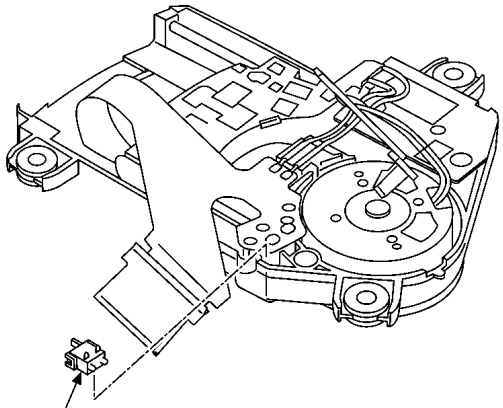


(Step 3)
Release the claw.



(Step 4)
Remove the FFC holder.



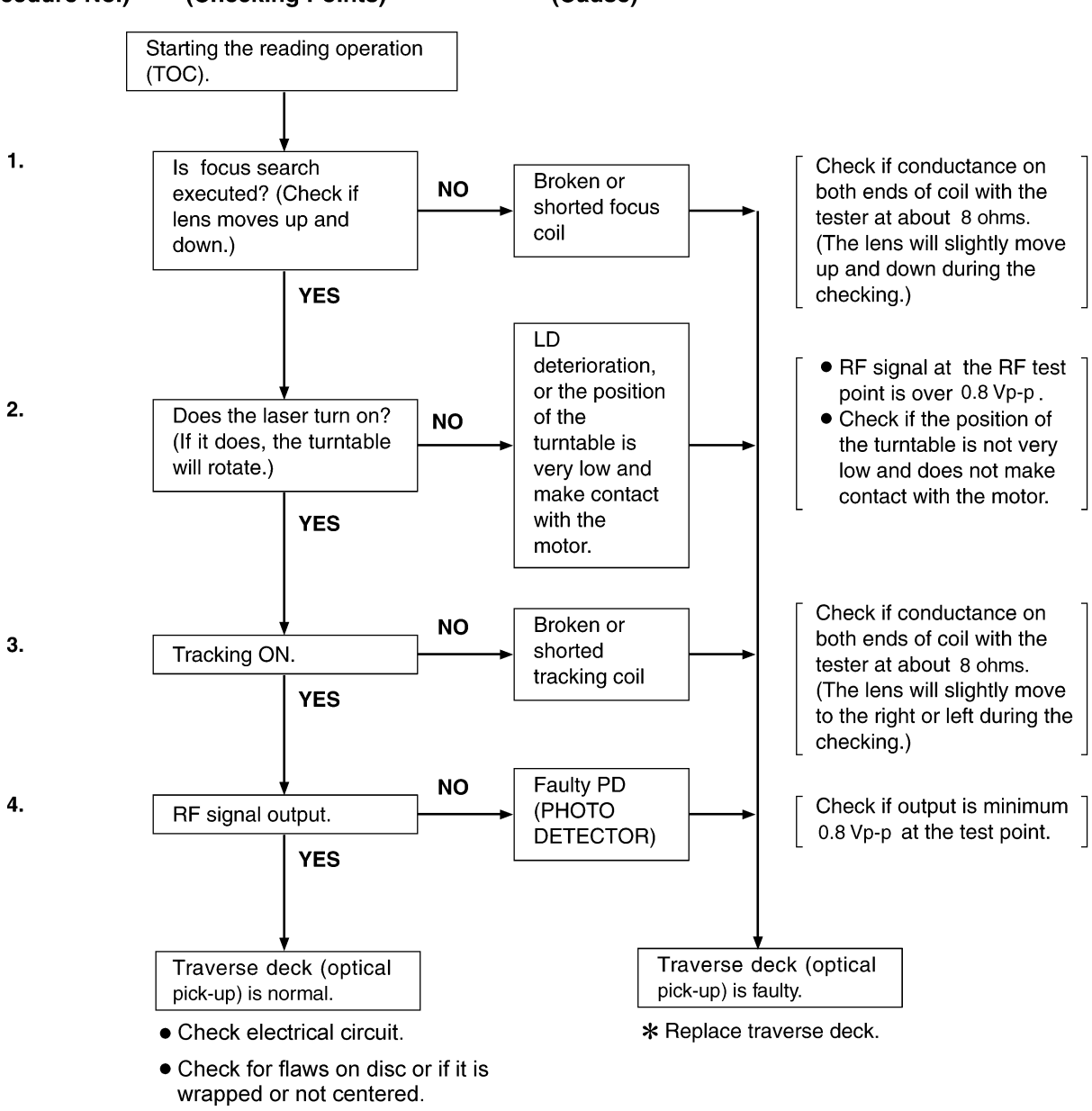


(Step 5)
Remove the rest switch.

5 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.



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

5.1.1. 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).

5.1.2. 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).

5.1.3. 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.

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

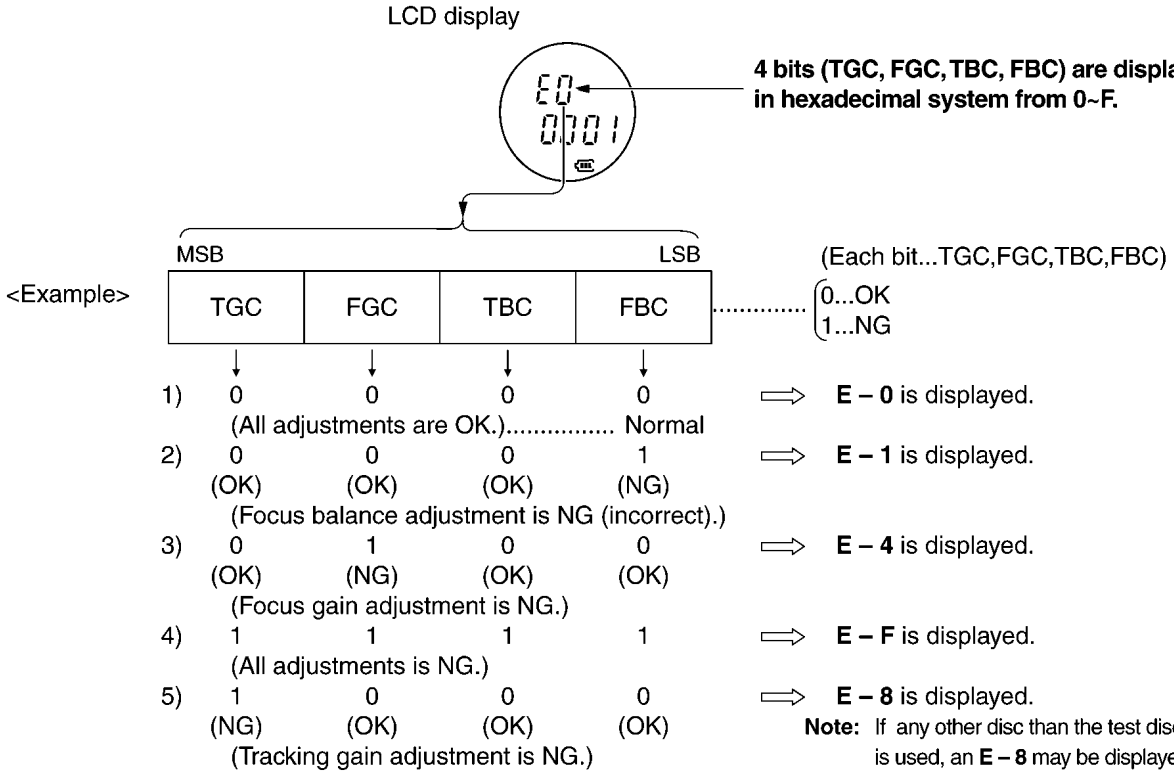
On the unit (SL-SW967V), each automatic adjustment result are displayed on the LCD. This function is convenient to check or identify which automatic adjustment circuit is incorrect.

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

6.1. How to display automatic adjustment results

1. Load the test disc (SZZP1054C).
2. Press the Vol - button and EQ buttons simultaneously and hold them, and additionallypressthe ▶/❚❚ (PLAY/PAUSE) button.
3. Press the ■ (STOP/OPR OFF) button once.
4. An automatic adjustment result is displayed on the LCD.

6.2. 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.

7 Display of Self-Diagnostic Function

This unit (SL-SW967V) has self-diagnostic function. It may display below-mentioned on the LCD of this unit.

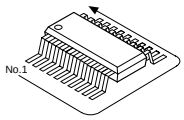
・The substance of self-diagnostic display.

LCD display

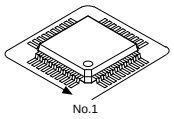
(Press PLAY and STOP button. After 15 seconds, it is displayed for 2 seconds.)

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.

8 Type Illustration of ICs, Transistors and Diodes

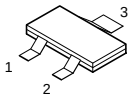


C1BB00000720	10PIN
C0ZBZ0000829	20PIN
C1BB00000562	30PIN
C3EBCG000096	8PIN
C3ABMG000207	50PIN

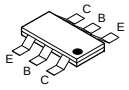


AN41508A-VB	48PIN
C2FBEB000007	64PIN
MN6627962JBA	128PIN
C2BBGF000593	80PIN

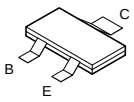
C0CBAAB00043



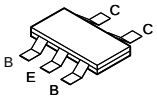
B1GFGCAA0001



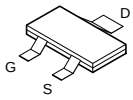
B1ADMB000003 UNR511M00L
B1GBCFJG0004 UNR521400L
UNR521000L UNR511400L
2SB0709A0L UNR521300L
2SD1819ASL UNR511300L
B1ABCF000021 UNR521500L
UNR521L00L UNR511500L



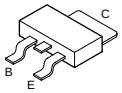
XP0121000L



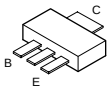
B1CFCB000017
B1CFHA000002



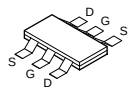
B1BDND000001



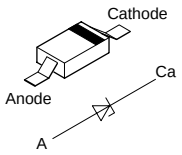
B1ABMD000004



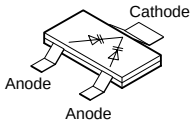
B1CFJC000005



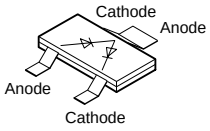
MAZ812000L



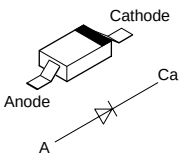
B0CDAE000001
B0CDBB000006



MA3J14700L



MA2J11100L



9 Schematic Diagram Notes

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

Notes:

S1:	Sound quality selection (EQ) switch
S2:	Tuning, R.skip/search (⏮ / -) switch
S3:	Sensitivity control, play mode selection (PLAY MODE ⬬ CITY/NOR) switch
S4:	Monaural/stereo (FM MODE/ MONO/ST) switch
S5:	Volume control switch (VOL+)
S6:	Stop/Turn 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

· Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

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.

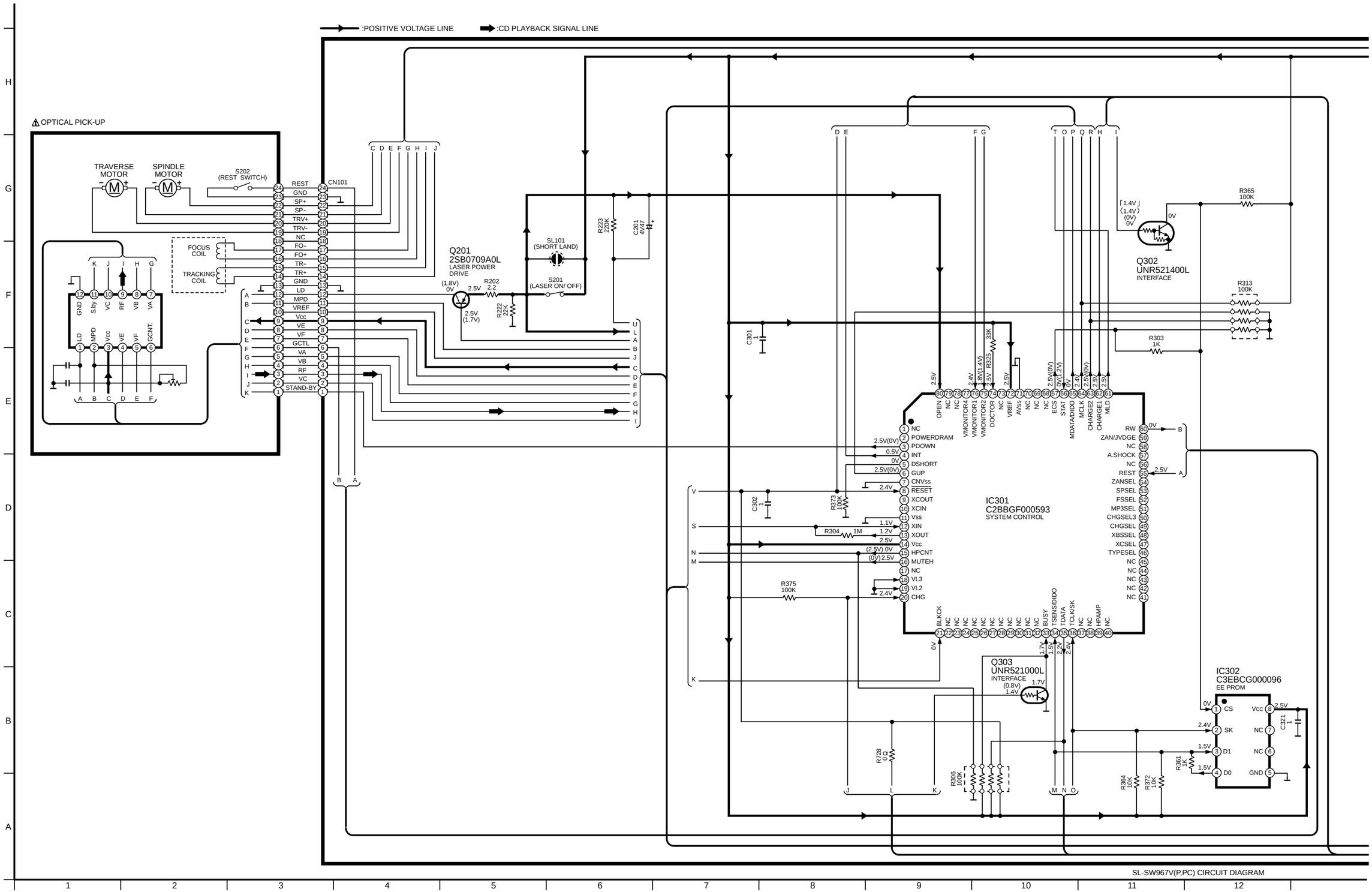
Do not touch the legs of IC or LSI with the fingers directly.

9.1. 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 (B0CDBB000006) are supplied only.

10 Schematic Diagram

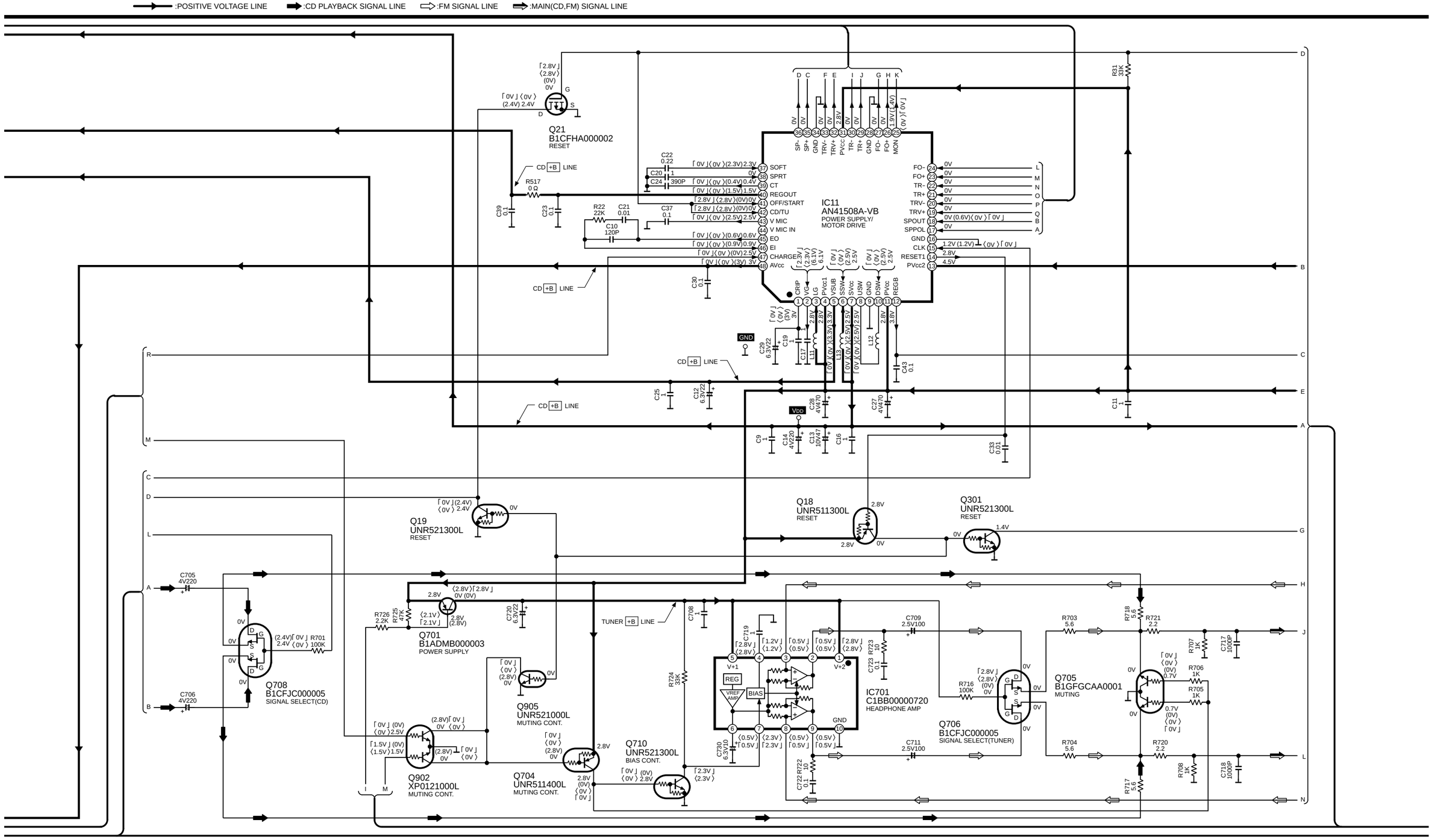


:POSITIVE VOLTAGE LINE :CD PLAYBACK SIGNAL LINE

IC501
MN6627962JBA
SERVO AMP/SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER & D/A CONVERTER

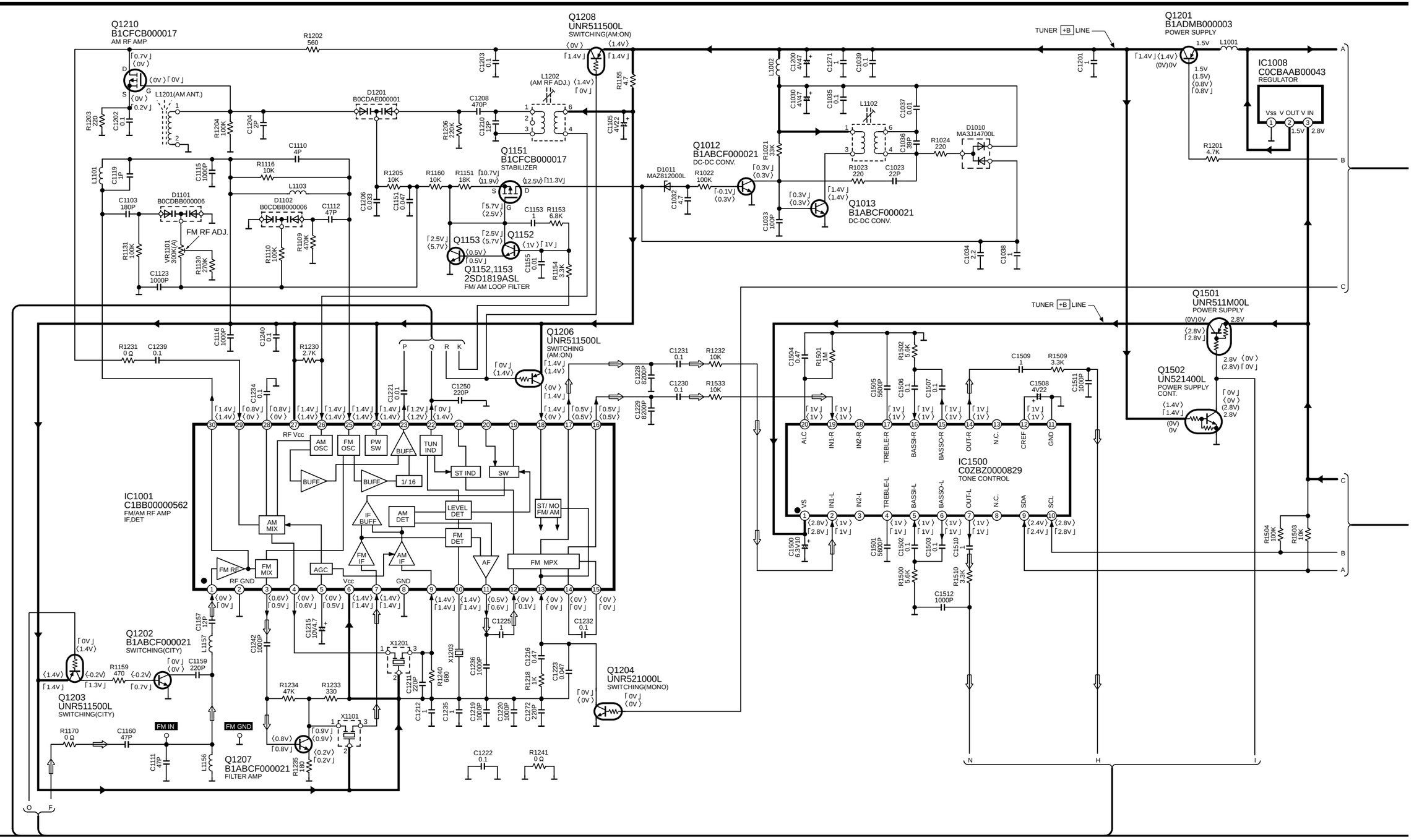
IC503
C3ABMG000207
DRAM

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



SL-SW967V(P,PC) CIRCUIT DIAGRAM

:POSITIVE VOLTAGE LINE :FM SIGNAL LINE



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

IC1301
C2FBEB000007
SYSTEM CONTROL/
LCD DRIVE

Q1307
UNR521400L
INTERFACE

Q1308
UNR521400L
INTERFACE

Q1304
B1GBCFJG0004
DC IN DET.
(AC ADAPTOR)

Q1301
UNR521400L
INTERFACE

Q13
UNR521L00L
CHARGE CONT.

Q14
UNR511400L
CHARGE CONT.

Q11
B1BDND000001
REGULATOR

Q12
B1ABMD000004
CHARGE CONT.

Q16
UNR521500L
DC IN DET.
(BATTERIES)

Q731
B1ABCF000021
SWITCHING

LCD1001(L5ACADD00002)
LCD DISPLAY

CN301

JK11
DC IN
4.5V

CN12

2 AA SIZE
BATTERIES 3V

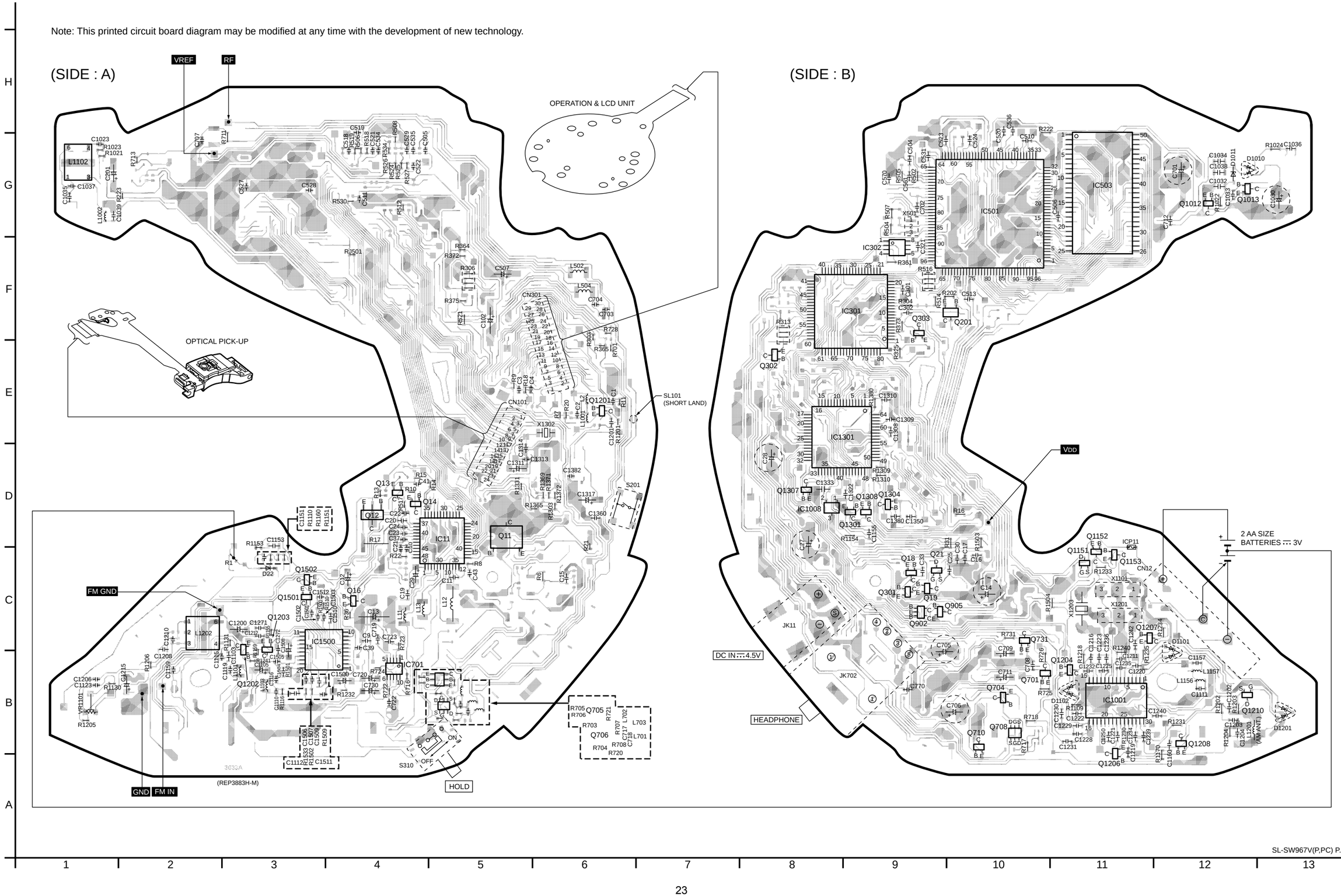
JK702
HEADPHONE

S12 (▶/❚❚)
S11 (RADIO/ BAND)
S6 (■ ,OPR OFF)
S10 (TUNING MODE)
S9 (VOL -)
S8 (MEMORY/ RECALL)
S7 (▶▶| , +)
S5 (VOL +)
S4 (FM MODE MONO/ ST)
S3 (PLAY MODE CITY/ NOR)
S2 (|◀◀ , -)
S1 (EQ)
S310 (HOLD)

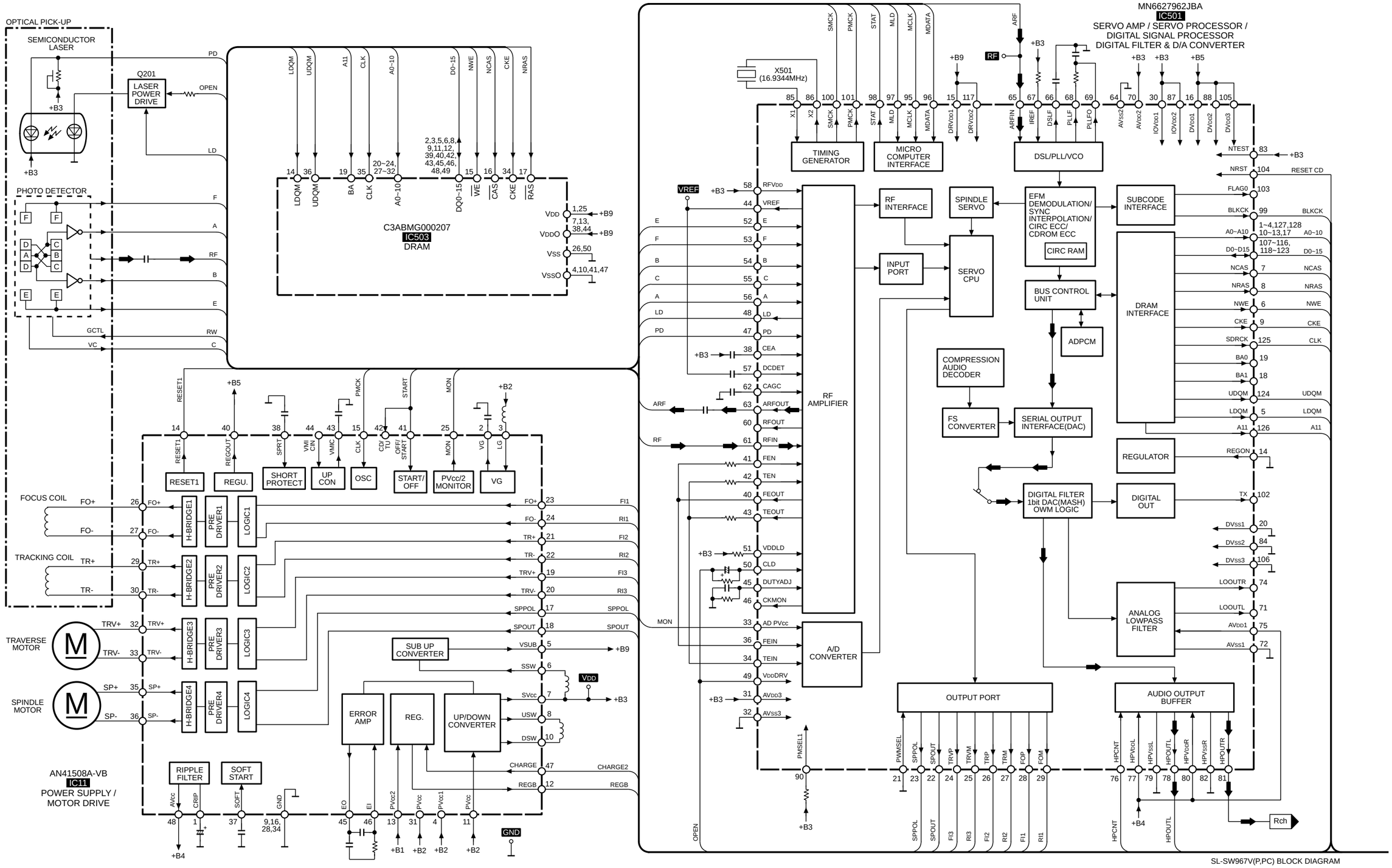
SL-SW967V(P,PC) CIRCUIT DIAGRAM

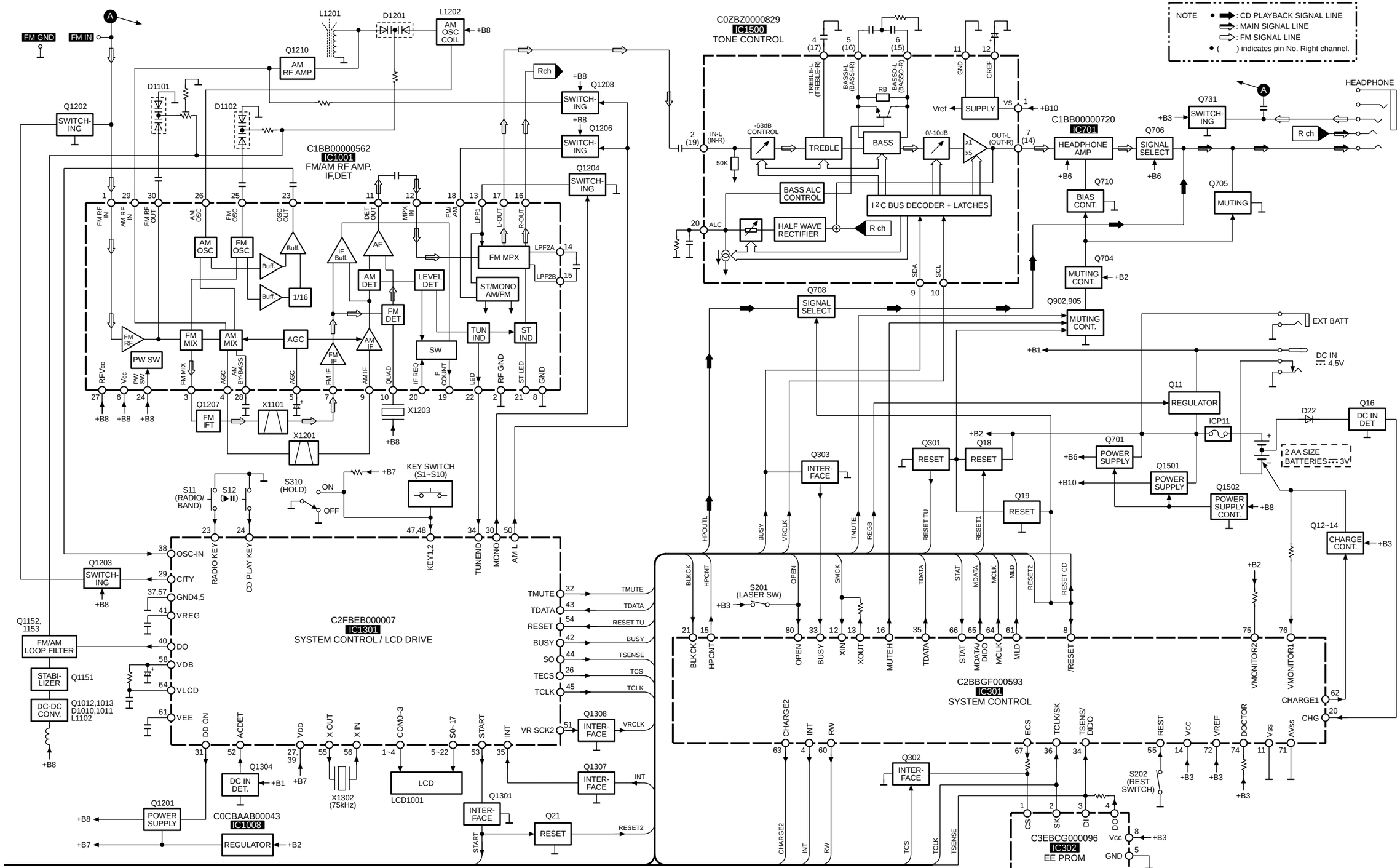
11 Printed Circuit Board and Wiring connection Diagram

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



12 Block Diagram





SL-SW967V(P,PC) BLOCK DIAGRAM

13 Terminal Function of ICs

13.1. IC301(C2BBGF000593): System Control

Pin No.	Terminal Name	I/O	Function
1	NC	-	Not used, open
2	POWER DRAM	-	Not used, open
3	PDOWN	O	Headamp power OFF signal output
4	INT	O	Serial communication starting signal output
5	DSHORT	-	Diode short output
6	GUP	-	Headphone gain up
7	CNVSS	-	GND
8	RESET	I	Reset signal input
9	XCOUT	-	Not used, open
10	XCIN	-	Not used, open
11	VSS	-	GND
12	XIN	I	System clock signal
13	XOUT	O	
14	VCC	I	Power supply terminal
15	HPCNT	O	Headphone output permit output
16	MUTEH	O	Hoeadphone mute output
17	NC	-	Not used, open
18	VL3	-	Not used, connected to GND
19	VL2	-	Not used, connected to GND
20	CHG	I	Battery judge signal
21	BLKCK	I	Sub-code block clock signal input
22 | 32	NC	-	Not used, open
33	BUSY	I	Communication signal input
34	TSENS/ DIDO	I	Data input from IC1301/Data input/output from IC302
35	TDATA	O	Date output for IC1301
36	TCLK/SK	I	Clock output for IC1301/IC302
37	NC	-	Not used, open
38	NC	-	Not used, open
39	HPAMP	-	Not used, open
40 | 45	NC		Not used, open
46	TYPESEL	-	Not used, open
47	XCSEL	-	Not used, open
48	XBSSEL	-	Not used, open
49	CHGSEL	-	Not used, open
50	CHGSEL3	-	Not used, open
51	MP3SEL	-	Not used, open
52	FSSEL	-	Not used, open
53	SPSEL	-	Not used, open
54	ZANSEL	-	Not used, open
55	REST	I	Rest detect switch signal input
56	NC	-	Not used, open
57	A.SHOCK	-	Not used, open
58	NC	-	Not used, open
59	ZAN/ JVDGE	-	Not used, open
60	RW	O	Output for CD-RW
61	MLD	O	Serial command latch output
62	CHARGE1	O	Charge ON output
63	CHARGE2	O	PVCC1 voltage up output
64	MCLK	O	Command/EEPROM clock output
65	MDATA/ DIDO	O	Command/EEPROM data input/output
66	STAT	I	Status signal input
67	ECS	O	EEPROM communication select output
68	NC	-	Not used, open
69	NC	-	Not used, open
70	NC	-	Not used, open
71	AVSS	-	GND
72	VREF	I	Reference voltage input
73	NC	-	Not used, open
74	DOCTOR	I	Doctor mode select
75	VMONI TOR2	I	Battery remaining measurement signal
76	VMONI TOR1	I	Rechargeable battery voltage detect signal
77	VMONI TOR4	-	Not used, open
78	NC	-	Not used, open
79	NC	-	Not used, open
80	OPEN	I	CD lid open switch input

13.2. IC501(MN6627962JBA): Servo Amp, Servo Processor, Digital Signal Processor, Digital Filter & D/A Converter

Pin No.	Terminal Name	I/O	Function
1	A7	O	Address 7 signal output
2	A6	O	Address 6 signal output
3	A5	O	Address 5 signal output
4	A4	O	Address 4 signal output
5	LDQM	O	Lower bite data mask signal output
6	NWE	O	Write enable signal output
7	NCAS	O	CAS control signal output
8	NRAS	O	RAS control signal output
9	CKE	O	Clock enable signal output
10	A3	O	Address 3 signal output
11	A2	O	Address 2 signal output
12	A1	O	Address 1 signal output
13	A0	O	Address 0 signal output
14	REGON	I	Built in regulator control signal
15	DRVDD1	I	Power supply terminal
16	DVDD1	I	Power supply terminal
17	A10	O	Address 10 signal output
18	BA1	-	Not used, open
19	BA0	-	Not used, open
20	DVSS1	-	GND
21	PWMSEL	I	PWM output mode select input
22	SPOUT	O	Spindle drive signal output
23	SPPOL	O	Spindle drive signal output
24	TRVP	O	Traverse drive signal output (+)
25	TRVM	O	Traverse drive signal output (-)
26	TRP	O	Tracking drive signal output (+)
27	TRM	O	Tracking drive signal output (-)
28	FOP	O	Focus drive signal output (+)
29	FOM	O	Focus drive signal output (-)
30	IOVDD1	I	Power supply terminal
31	AVDD3	I	Power supply terminal
32	AVSS3	-	GND
33	ADPVCC	I	Power supply voltage monitor signal input
34	TEIN	I	DSP tracking error signal input
35	ATOFS	-	Not used, open
36	FEIN	I	DSP focus error signal input
37	AFOFS	-	Not used, open
38	CEA	I	HPE amp capacitor connect terminal
39	RFENV	O	RF envelope signal monitor

Pin No.	Terminal Name	I/O	Function
40	FEOUT	O	Focus error signal amp output
41	FEN	I	Focus error signal amp inverting input
42	TEN	I	Tracking error signal amp inverting input
43	TEOUT	O	Tracking error signal amp output
44	VREF	O	VREF output
45	DUTYADJ	I	Laser intermittent drive clock duty adj. resistor terminal
46	CKMON	-	Not used, open
47	PD	I	APC amp input
48	LD	O	Laser power drive signal output
49	VDDDRV	I	Power supply terminal
50	CLD	I	APC loop filter connected terminal
51	VDDLD	I	Power supply terminal
52	E	I	Tracking signal input 1
53	F	I	Tracking signal input 2
54	B	I	Focus signal input 2/RF addition amp input 2
55	C	I	RF addition amp input 3
56	A	I	Focus signal input 1/RF addition amp input 1
57	DCDET	I	HPF capacitor connected terminal
58	RFVDD	I	Power supply terminal
59	RFN	-	Not used, open
60	RFOUT	-	Not used, open
61	RFIN	I	AGC input
62	CAGC	I	AGC loop filter capacitor connected terminal
63	ARFOUT	O	AGC output
64	AVSS2	-	GND
65	ARFIN	I	RF signal input
66	DSLF	O	Loop filter for DSL
67	IREF	I	Reference current input
68	PLLF	O	Loop filter for PLL
69	PLLFO	O	Loop filter for PLL
70	AVDD2	I	Power supply terminal
71	LOOUTL	-	Not used, open
72	AVSS1	-	GND
73	AVREF	-	Not used, open
74	LOOUTR	-	Not used, open
75	AVDD1	I	Power supply terminal
76	HPCNT	I	Headphone control signal input
77	HPVDDL	I	Power supply terminal
78	HPOUTL	O	L ch audio output for headphone
79	HPVSSL	-	GND
80	HPVDDR	I	Power supply terminal
81	HPOUTR	O	R ch audio output for headphone
82	HPVSSR	-	GND
83	NTEST	I	Test mode input
84	DVSS2	-	GND
85	X1	I	Crystal oscillator connected terminal (F=16.9 MHz)
86	X2	O	
87	IOVDD2	I	Power supply terminal
88	DVDD2	I	Power supply terminal
89	VM4SEL/ OFF	-	Not used, open
90	PMSEL1/ FBAL	I	Connected to power supply via resistor
91	PMSEL2/ TBAL	-	Not used, open
92	LASER SEL/BDO	-	Not used, open
93	CLVS/ RFDET	-	Not used, open
94	IPFLAG2/ VDET	-	Not used, open
95	MCLK	I	Command clock signal input
96	MDATA	I	Command data input
97	MLD	I	Command load input

Pin No.	Terminal Name	I/O	Function
98	STAT	O	Status signal output
99	BLKCK	O	Sub code block clock signal output
100	SMCK	O	System clock signal output
101	PCMK	O	Power clock signal output
102	TX	-	Not used, open
103	FLAG0	-	Not used, open
104	NRST	I	Reset signal input
105	DVDD3	I	Power supply terminal
106	DVSS3	-	GND
107	D2	I/O	Data signal input/output 2
108	D1	I/O	Data signal input/output 1
109	D0	I/O	Data signal input/output 0
110	D3	I/O	Data signal input/output 3
111	D4	I/O	Data signal input/output 4
112	D5	I/O	Data signal input/output 5
113	D6	I/O	Data signal input/output 6
114	D7	I/O	Data signal input/output 7
115	D15	I/O	Data signal input/output 15
116	D14	I/O	Data signal input/output 14
117	DRVDD2	I	Power supply terminal
118	D13	I/O	Data signal input/output 13
119	D12	I/O	Data signal input/output 12
120	D11	I/O	Data signal input/output 11
121	D10	I/O	Data signal input/output 10
122	D9	I/O	Data signal input/output 9
123	D8	I/O	Data signal input/output 8
124	UDQM	O	Higher bite data mask signal output
125	SDRCK	O	Clock signal output
126	A11	O	Address 11 signal output
127	A9	O	Address 9 signal output
128	A8	O	Address 8 signal output

13.3. IC1301(C2FBEB000007): 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	-	Not used, open
26	TECS	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 input
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
43	TDATA	I	Serial communication data signal input
44	SO	O	Serial communication data signal output

Pin No.	Terminal Name	I/O	Function
45	TCLK	O	Serial communication clock signal output
46	6KEY	I	Remote control signal input
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}	I	Power supply terminal
62	C3	-	Not used, open
63	C4	-	Not used, open
64	VLCD	-	LCD drive signal

14 Measurements and Adjustments

14.1. Tuner section

Connect lead wire for test points FM IN and FM GND.
Refer to Fig. 14-1.

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

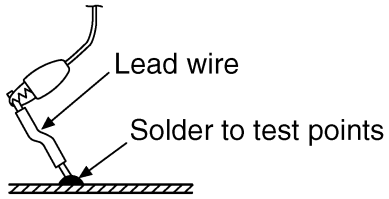


Fig. 14-1.

14.1.1. 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)

14.1.2. Control positions and equipment used

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

14.1.3. 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. 14-2.
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. 14-3.

14.1.4. 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. 14-2.
3. Set the unit to AM mode.
4. Set AM-SG to 600 kHz.
5. Receive 600 kHz in the unit.
6. Adjust **L1202** for maximum output. Refer to Fig. 14-3.

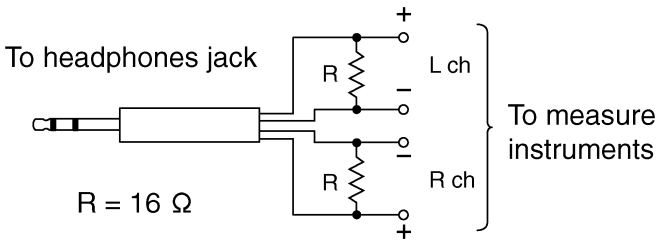


Fig. 14-2.

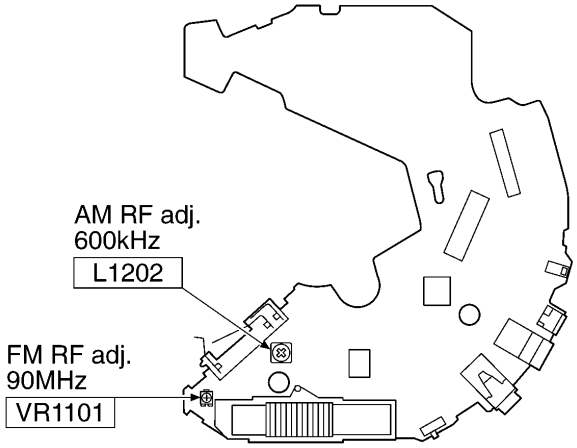


Fig. 14-3.

15 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 product.

  (PS): SL-SW967VP-S

  (PCS): SL-SW967VPCS

  (PA):SL-SW967VP-A

- 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 ASPC.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RAE0241Z-X	TRAVERSE DECK UNIT	1	⚠
1-1	RAF0241A	OPTICAL PICK-UP	1	⚠
1-2	RDG0554	GEAR 1	1	
1-3	RDG0555	GEAR 2	1	
1-4	RMG0605-K	FLOATING RUBBER	3	
1-5	RMQ1125	MOTOR HOLDER	1	
1-6	RMS0782	DRIVE SHAFT	1	
1-7	RXQ0971-4	MOTOR ASS'Y	1	
1-8	XQN17+BG45FJ	SCREW	1	
2	RGN2827A-K	NAME PLATE	1	⚠
3	RHD20039-K1	SCREW	2	
4	RMA1922	STOPPER ANGLE	1	
5	RMX0149	WATER PROOF RING 1	1	
6	RGK1899-S	BUCKLE ORNAMENT L	1	
7	K0RC01200009	SW,OPERATION	1	
8	L5ACADD00002	LCD(LCD1001)	1	
9	RGD0118-K	CD COVER	1	
10	RGK1895-S	LCD ORNAMENT	1	
11	RGK1896-1S	COVER ORNAMENT F	1	(PS)(PCS)
11	RGK1896-1A	COVER ORNAMENT F	1	(PA)
12	RGK1897-1S	COVER ORNAMENT L	1	(PS)(PCS)
12	RGK1897-1A	COVER ORNAMENT L	1	(PA)
13	RGK1898-1S	COVER ORNAMENT R	1	(PS)(PCS)
13	RGK1898-1A	COVER ORNAMENT R	1	(PA)
14	RGK1900-S	BUCKLE ORNAMENT R	1	
15	RGU2392-K	BUTTON A	1	
16	RGU2395-K	BUTTON B	1	
17	RGU2396-K	BUTTON C	1	
18	RKW0787-D	LCD WINDOW	1	
19	RMA1918	COVER PLATE	1	
20	RMA1919	FULCRUM PLATE	1	
21	RMA1920	SHAFT HOLDER	1	
22	RMA1921	LOCK PLATE	1	
23	RMA1924	TOP BUCKLE PLATE	1	
24	RMA1926	LEVER PLATE	1	
25	RMG0678-D	WATER PROOF RING 2	1	
26	RMS0868	LOCK SHAFT	1	
27	RMZ0777	DOUBLE SIDES TAPE	1	
28	RSQ0096-1	ZEBRA RUBBER	1	
29	RGK1901-S	BUCKLE	1	
30	RMA1923	ROLLER HOLDER	1	
31	RMS0869	ROLLER	2	
32	XQN14+BG3FC	SCREW	21	
33	XQN14+BG4FJK	SCREW	17	
34	RHQ0088-K	SCREW	1	
35	RKK0185-K	BATTERY LID	1	
36	RKM0533-K	MIDDLE CABINET	1	
37	RMC0623	DETECTION TERMINAL	1	
38	RGV0173-D	KNOB,HOLD	1	
39	RJC93039-1	BATTERY TERMINAL	1	
40	RKS0411-K	BOTTOM CABINET	1	
41	RMA1925	CAB BUCKLE PLATE	1	
42	RMG0679-K	RUBBER CAP	1	
43	RML0541	LEVER	1	
44	RMR1618-X1	REVERSE PREVENT PLATE	1	
45	RMR1701-K	GRIP L	1	
46	RMR1702-K	GRIP R	1	
47	RMX0122	WATER PROOF RING 3	1	
48	XTN17+6GFJK	SCREW	5	
A1	L0BAD0000174	STEREO HEADPHONES	1	
A2	RGQT0006-K1	HAND STRAP	1	
A3	RQT7822-P	O/I BOOK	1	
A4	RQT7823-C	O/I BOOK	1	(PCS)
C1	F1G1A104A014	10V 0.1U	1	
C2	F1G1A104A014	10V 0.1U	1	
C3	ECJ0EB1C103K	16V 0.01U	1	
C4	ECJ0EB1C103K	16V 0.01U	1	
C9	F1H1A105A028	10V 1U	1	
C10	F1G1H121A451	50V 120P	1	
C11	F1H1A105A028	10V 1U	1	
C12	F3F0J226A004	6.3V 22U	1	
C13	F3H1A476A001	10V 47U	1	
C14	F2A0G221A012	4V 220U	1	
C15	F1H1A105A028	10V 1U	1	
C16	F1H1A105A028	10V 1U	1	
C17	ECUV1A105ZFV	10V 1U	1	
C19	ECUV1A105ZFV	10V 1U	1	
C20	F1H1A105A028	10V 1U	1	
C21	ECJ0EB1C103K	16V 0.01U	1	
C22	F1G0J224A001	6.3V 0.22U	1	
C23	F1G1A104A014	10V 0.1U	1	
C24	F1G1H391A416	50V 390P	1	
C25	F1H1A105A028	10V 1U	1	
C27	ECEA0GKS471I	4V 470U	1	
C28	ECEA0GKS471I	4V 470U	1	
C29	F3F0J226A004	6.3V 22U	1	
C30	ECUV1C104KBV	16V 0.1U	1	
C33	ECUV1H103KBV	50V 0.01U	1	
C37	F1G1C104A083	16V 0.1U	1	
C39	F1G1A104A014	10V 0.1U	1	
C41	F1G1H1020008	50V 1000P	1	
C43	F1G1C104A083	16V 0.1U	1	
C102	F2H0G221A001	4V 220U	1	
C201	F2H0G470A001	4V 47U	1	
C301	ECUV1A105ZFV	10V 1U	1	
C302	F1H1A105A028	10V 1U	1	
C321	ECUV1A105ZFV	10V 1U	1	
C504	ECUV1C104KBV	16V 0.1U	1	
C505	ECJ0EB1C223K	16V 0.022U	1	
C506	ECUV1A105ZFV	10V 1U	1	
C507	F2H0G470A001	4V 47U	1	
C510	ECUV1A105ZFV	10V 1U	1	
C511	F1G1C104A083	16V 0.1U	1	
C513	F1H1C104A008	16V 0.1U	1	
C518	F1G1H561A416	50V 560P	1	
C519	F1G1H561A416	50V 560P	1	
C520	F1H1A105A028	10V 1U	1	
C521	ECJ0EB1H152K	50V 1500P	1	
C522	F1G1A104A014	10V 0.1U	1	
C523	F1H1A105A028	10V 1U	1	
C524	F1H1A105A028	10V 1U	1	
C527	F1G1C104A083	16V 0.1U	1	
C528	F1G1C104A083	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C529	F1G1C104A083	16V 0.1U	1	
C531	ECJ1VC1H391J	50V 390P	1	
C534	F1G1A473A014	10V 0.047U	1	
C535	F1G1C104A083	16V 0.1U	1	
C536	ECUV1A105ZFV	10V 1U	1	
C561	ECUV1C104KBV	16V 0.1U	1	
C570	F1H1A105A028	10V 1U	1	
C701	ECEA0GKS471I	4V 470U	1	
C702	F1H1A105A028	10V 1U	1	
C703	F1G1A104A014	10V 0.1U	1	
C704	F1G1A104A014	10V 0.1U	1	
C705	ECA0GAD221XI	4V 220U	1	
C706	ECA0GAD221XI	4V 220U	1	
C707	F1G1H221A571	50V 220P	1	
C708	F1H1A105A028	10V 1U	1	
C709	F3F0E107A022	2.5V 100U	1	
C711	F3F0E107A022	2.5V 100U	1	
C712	ECUV1H221KBV	50V 220P	1	
C717	F1G1H1020008	50V 1000P	1	
C718	F1G1H1020008	50V 1000P	1	
C719	F1H1A105A028	10V 1U	1	
C720	F3F0J226A004	6.3V 22U	1	
C722	F1G1A104A014	10V 0.1U	1	
C723	F1G1A104A014	10V 0.1U	1	
C730	F3F0J106A007	6.3V 10U	1	
C770	ECUV1H102KBV	50V 1000P	1	
C1023	F1G1H220A422	50V 22P	1	
C1030	F2A0G470A012	4V 47U	1	
C1032	F1J0J4750010	6.3V 4.7U	1	
C1033	ECJ1VC1H101J	50V 100P	1	
C1034	F1J1C225A083	16V 2.2U	1	
C1035	ECUV1C104KBV	16V 0.1U	1	
C1036	ECUV1H390JCV	50V 39P	1	
C1037	ECJ0EB1C103K	16V 0.01U	1	
C1038	F1J1C1050011	16V 1U	1	
C1039	ECUV1C104KBV	16V 0.1U	1	
C1103	F1H1H181A002	50V 180P	1	
C1105	F3F0G226A001	4V 22U	1	
C1110	F1G1H4R0A418	50V 4P	1	
C1111	ECUV1H470JCV	50V 47P	1	
C1112	F1H1H470A002	50V 47P	1	
C1115	F1G1H1020008	50V 1000P	1	
C1116	F1G1H1020008	50V 1000P	1	
C1119	F1G1H1R0A577	50V 1P	1	
C1123	F1G1H1020008	50V 1000P	1	
C1151	F1G1A473A014	10V 0.047U	1	
C1153	F1J1C1050011	16V 1U	1	
C1155	ECUV1H103KBV	50V 0.01U	1	
C1157	ECUV1H120JCV	50V 12P	1	
C1159	F1G1H221A571	50V 220P	1	
C1160	ECUV1H470JCV	50V 47P	1	
C1200	F3F0G4760001	4V 47U	1	
C1201	F1H1A105A028	10V 1U	1	
C1202	F1H1C104A008	16V 0.1U	1	
C1203	F1H1C104A008	16V 0.1U	1	
C1204	F1H1H2R0A259	50V 2P	1	
C1206	F1G1C333A051	16V 0.033U	1	
C1208	ECUV1H471GCV	50V 470P	1	
C1210	F1G1H120A565	50V 12P	1	
C1211	ECUV1H221KBV	50V 220P	1	
C1212	ECUV1A105ZFV	10V 1U	1	
C1215	F3F1A475A001	10V 4.7U	1	
C1216	F1H0J474A002	6.3V 0.47U	1	
C1219	ECUV1H102KBV	50V 1000P	1	
C1220	ECUV1H102KBV	50V 1000P	1	
C1221	ECUV1H103KBV	50V 0.01U	1	
C1222	ECUV1C104KBV	16V 0.1U	1	
C1223	ECUV1C473KBV	16V 0.047U	1	
C1225	ECUV1A105ZFV	10V 1U	1	
C1228	ECUV1H822KBV	50V 8200P	1	
C1229	ECUV1H822KBV	50V 8200P	1	
C1230	ECUV1C104KBV	16V 0.1U	1	
C1231	ECUV1C104KBV	16V 0.1U	1	

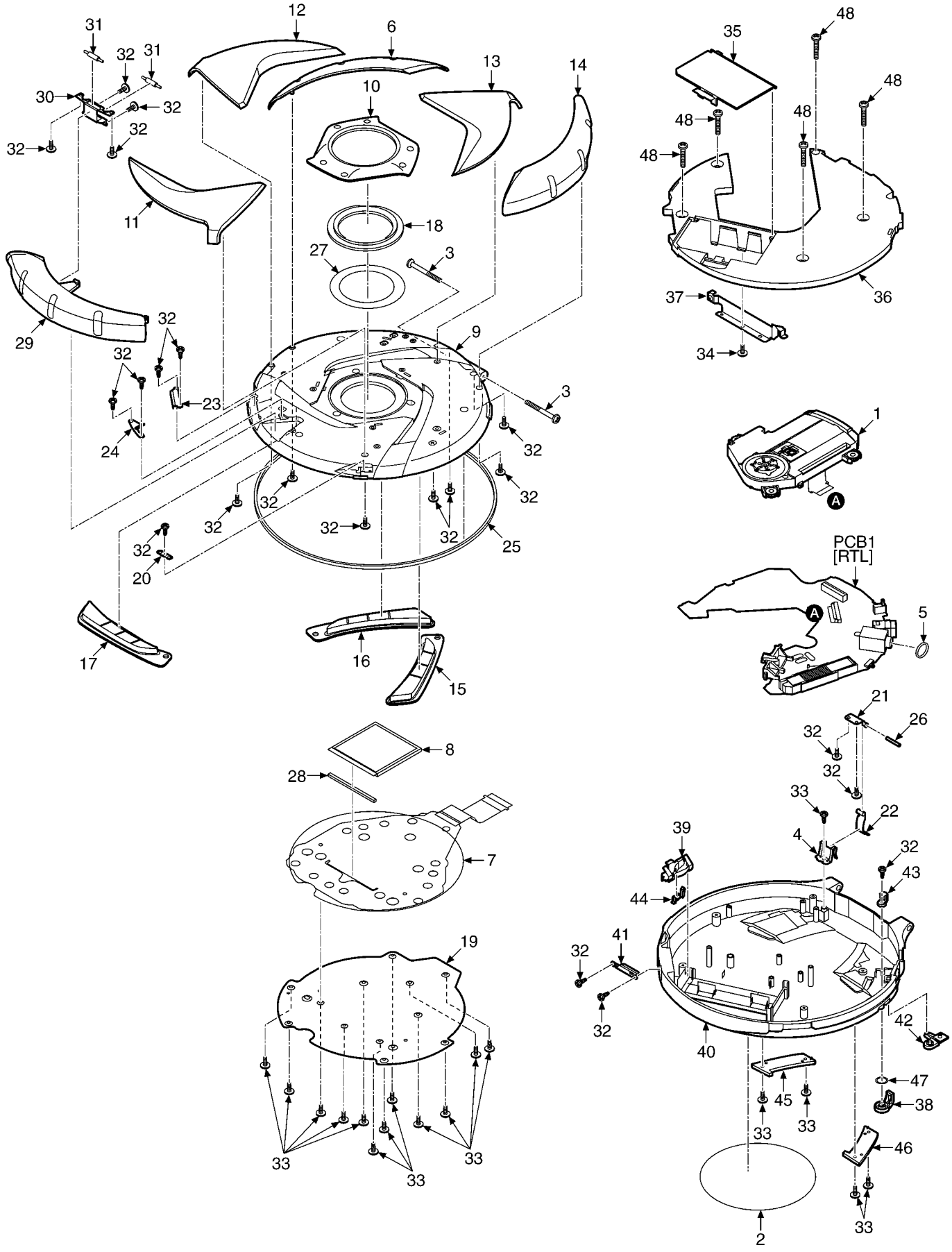
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1232	ECUV1C104KBV	16V 0.1U	1	
C1234	ECUV1C104KBV	16V 0.1U	1	
C1235	ECUV1A105ZFV	10V 1U	1	
C1236	ECUV1H102KBV	50V 1000P	1	
C1239	F1H1C104A008	16V 0.1U	1	
C1240	ECUV1C104KBV	16V 0.1U	1	
C1242	ECUV1H102KBV	50V 1000P	1	
C1250	ECUV1H221KBV	50V 220P	1	
C1271	F1H1A105A028	10V 1U	1	
C1272	F1G1H221A571	50V 220P	1	
C1308	ECUV1C104KBV	16V 0.1U	1	
C1309	F1H1C104A008	16V 0.1U	1	
C1310	ECUV1C104KBV	16V 0.1U	1	
C1311	F3F0G226A001	4V 22U	1	
C1313	ECJ0EC1H150J	50V 15P	1	
C1314	ECJ0EC1H150J	50V 15P	1	
C1317	F2H0G470A001	4V 47U	1	
C1322	F1H0J474A002	6.3V 0.47U	1	
C1333	F1J0J4750010	6.3V 4.7U	1	
C1350	ECUV1C104KBV	16V 0.1U	1	
C1360	F1H1A105A028	10V 1U	1	
C1380	F1H1C104A008	16V 0.1U	1	
C1382	F1G1A104A014	10V 0.1U	1	
C1500	F3F0J106A007	6.3V 10U	1	
C1501	ECJ0EB1E562K	16V 5600P	1	
C1502	F1G1C104A083	16V 0.1U	1	
C1503	F1G1C104A083	16V 0.1U	1	
C1504	ECJ1VF1C474Z	16V 0.47U	1	
C1505	ECJ0EB1E562K	16V 5600P	1	
C1506	F1G1C104A083	16V 0.1U	1	
C1507	F1G1C104A083	16V 0.1U	1	
C1508	F3F0G226A001	4V 22U	1	
C1509	ECUV1A105ZFV	10V 1U	1	
C1510	ECUV1A105ZFV	10V 1U	1	
C1511	F1G1H1020008	50V 1000P	1	
C1512	F1G1H1020008	50V 1000P	1	
CN12	K4BC03B00020	BATTERY TERMINAL	1	
CN101	K1MN24B00108	CONNECTOR(24P)	1	
CN301	K1MN30A00061	CONNECTOR(30P)	1	
D22	MA2J11100L	DIODE	1	
D1010	MA3J14700L	DIODE	1	
D1011	MAZ812000L	DIODE	1	
D1101	B0CDBB000006	DIODE	1	
D1102	B0CDBB000006	DIODE	1	
D1201	B0CDAE000001	DIODE	1	
IC11	AN41508A-VB	IC	1	
IC301	C2BBGF000593	IC	1	
IC302	C3EBCG000096	IC	1	
IC501	MN6627962JBA	IC	1	
IC503	C3ABMG000207	IC	1	
IC701	C1BB00000720	IC	1	
IC1001	C1BB00000562	IC	1	
IC1008	C0CBAAB00043	IC	1	
IC1301	C2FBEB000007	IC	1	
IC1500	C0ZBZ0000829	IC	1	
ICP11	ERBSE1R50U	IC PROTECTOR	1	⚠
JK11	K2EB2B000006	JACK,DC IN	1	
JK702	K2HC105B0004	JACK,HEADPHONE	1	
L2	J0JBC0000019	COIL	1	
L11	G1C331K00008	COIL	1	
L12	G1C101MA0035	COIL	1	
L13	G1C101K00033	COIL	1	
L502	G1C101K00033	COIL	1	
L504	G1C101K00033	COIL	1	
L701	J0JBC0000019	COIL	1	
L702	J0JBC0000019	COIL	1	
L703	J0JBC0000019	COIL	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L1001	J0JCC0000077	COIL	1	
L1002	J0JCC0000077	COIL	1	
L1101	G1CR10JA0038	COIL	1	
L1102	G5ZZ00000072	DC COIL	1	
L1103	G1CR10JA0038	COIL	1	
L1156	G1C68NM00003	COIL	1	
L1157	G1CR22KA0009	COIL	1	
L1201	G2CBCB000021	BAR ANTENNA COIL	1	
L1202	G3A124C00003	VARI ABLE COIL	1	
P1	RPN1796	TRAY 2	1	
P2	RPN1795	TRAY 1	1	
P3	RPQ1943	PAD A	1	(PS)
P3	RPQ1944	PAD A	1	(PA)
P3	RPQ1945	PAD A	1	(PCS)
P4	RPQ1940	PAD B	1	(PA)(PS)
P4	RPQ1942	BAD B	1	(PCS)
P5	RPHW0020	PROTECTION SHEET	1	(PA)(PS)
PCB1	REP3883H-M	P.C.B. ASS'Y	1	
Q11	B1BDND000001	TRANSISTOR	1	
Q12	B1ABMD000004	TRANSISTOR	1	
Q13	UNR521L00L	TRANSISTOR	1	
Q14	UNR511400L	TRANSISTOR	1	
Q16	UNR521500L	TRANSISTOR	1	
Q18	UNR511300L	TRANSISTOR	1	
Q19	UNR521300L	TRANSISTOR	1	
Q21	B1CFHA000002	TRANSISTOR	1	
Q201	2SB0709A0L	TRANSISTOR	1	
Q301	UNR521300L	TRANSISTOR	1	
Q302	UNR521400L	TRANSISTOR	1	
Q303	UNR521000L	TRANSISTOR	1	
Q701	B1ADMB000003	TRANSISTOR	1	
Q704	UNR511400L	TRANSISTOR	1	
Q705	B1GFGCAA0001	TRANSISTOR	1	
Q706	B1CFJC000005	TRANSISTOR	1	
Q708	B1CFJC000005	TRANSISTOR	1	
Q710	UNR521300L	TRANSISTOR	1	
Q731	B1ABCF000021	TRANSISTOR	1	
Q902	XP0121000L	TRANSISTOR	1	
Q905	UNR521000L	TRANSISTOR	1	
Q1012	B1ABCF000021	TRANSISTOR	1	
Q1013	B1ABCF000021	TRANSISTOR	1	
Q1151	B1CFCB000017	TRANSISTOR	1	
Q1152	2SD1819ASL	TRANSISTOR	1	
Q1153	2SD1819ASL	TRANSISTOR	1	
Q1201	B1ADMB000003	TRANSISTOR	1	
Q1202	B1ABCF000021	TRANSISTOR	1	
Q1203	UNR511500L	TRANSISTOR	1	
Q1204	UNR521000L	TRANSISTOR	1	
Q1206	UNR511500L	TRANSISTOR	1	
Q1207	B1ABCF000021	TRANSISTOR	1	
Q1208	UNR511500L	TRANSISTOR	1	
Q1210	B1CFCB000017	TRANSISTOR	1	
Q1301	UNR521400L	TRANSISTOR	1	
Q1304	B1GBCFJG0004	TRANSISTOR	1	
Q1307	UNR521400L	TRANSISTOR	1	
Q1308	UNR521400L	TRANSISTOR	1	
Q1501	UNR511M00L	TRANSISTOR	1	
Q1502	UNR521400L	TRANSISTOR	1	
R1	D0YBR0000010	CHIP RING	1	
R6	ERJ3GEY0R00V	1/10W 0	1	
R7	ERJ2GEJ102X	1/16W 1K	1	
R8	ERJ2GEJ100X	1/16W 10	1	
R9	ERJ2GEJ470X	1/16W 47	1	
R10	ERJ2GEJ271X	1/16W 270	1	
R11	ERJ2GE0R00X	1/16W 0	1	
R13	ERJ2GEJ102X	1/16W 1K	1	
R14	ERJ2RKD563X	1/16W 56K	1	
R15	ERJ2RKD563X	1/16W 56K	1	
R16	ERJ3GEYJ104V	1/10W 100K	1	

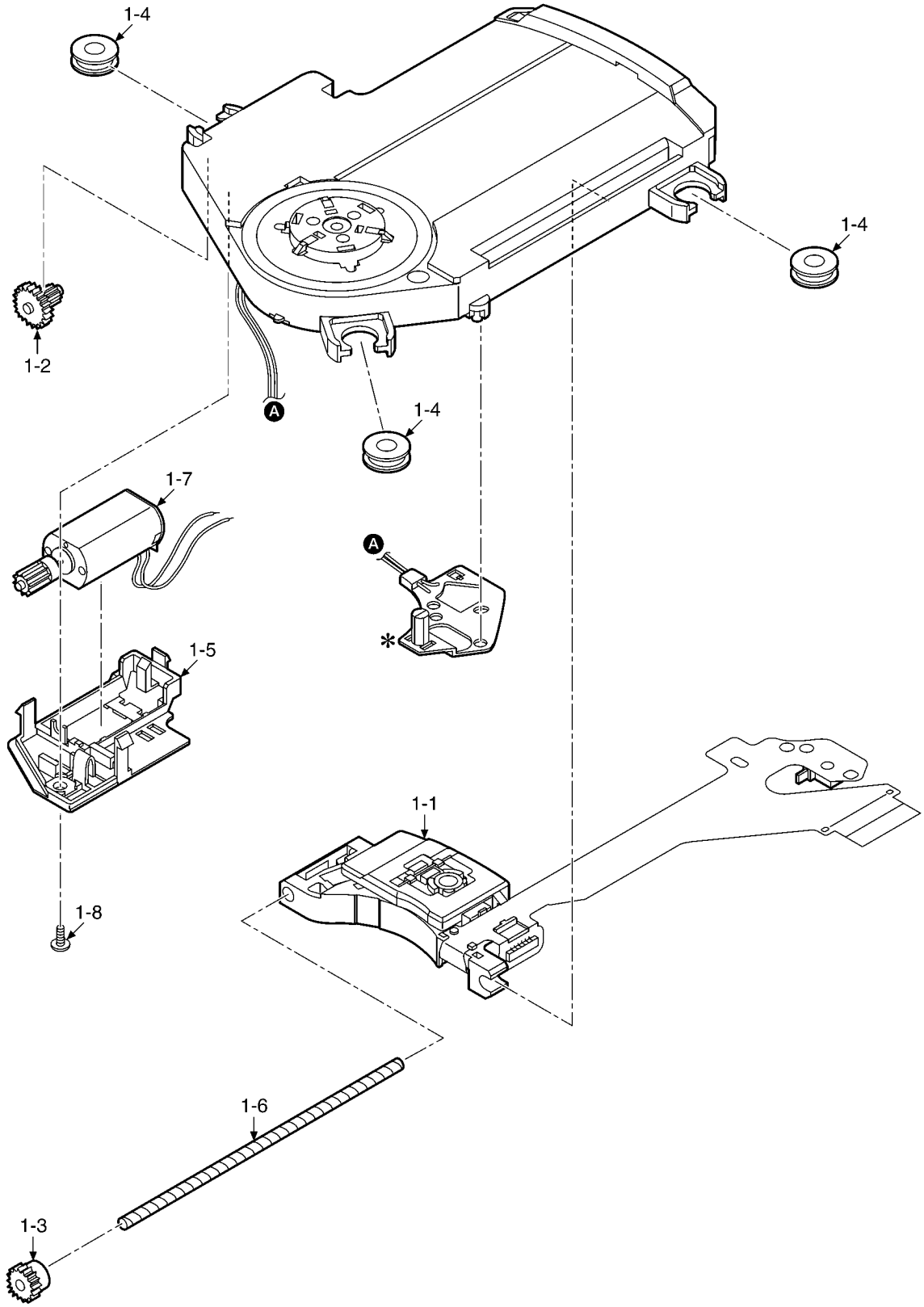
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R17	ERJ12YJ1R5U	1/2W 1.5	1	
R18	ERJ2GEJ470X	1/16W 47	1	
R20	ERJ2GEJ102X	1/16W 1K	1	
R21	ERJ2GEJ101X	1/16W 100	1	
R22	ERJ2GEJ223X	1/16W 22K	1	
R31	ERJ3GEYJ333V	1/10W 33K	1	
R36	ERJ2GEJ474X	1/16W 470K	1	
R202	ERJ3GEYJ2R2V	1/10W 2.2	1	
R222	ERJ3GEYJ223V	1/10W 22K	1	
R223	ERJ2GEJ224X	1/16W 220K	1	
R303	ERJ2GEJ102X	1/16W 1K	1	
R304	ERJ3GEYJ105V	1/10W 1M	1	
R306	EXBV8V104JV	1/16W 100K	1	
R313	EXBV8V104JV	1/16W 100K	1	
R325	ERJ3GEYJ333V	1/10W 33K	1	
R361	ERJ3GEYJ102V	1/10W 1K	1	
R364	ERJ2GEJ103X	1/16W 10K	1	
R365	ERJ2GEJ104X	1/16W 100K	1	
R372	ERJ2GEJ103X	1/16W 10K	1	
R373	ERJ3GEYJ104V	1/10W 100K	1	
R375	ERJ2GEJ104X	1/16W 100K	1	
R502	ERJ3GEYJ563V	1/10W 56K	1	
R504	ERJ3GEYJ473V	1/10W 47K	1	
R505	ERJ3GEYJ561V	1/10W 560	1	
R506	ERJ2GEJ393X	1/16W 39K	1	
R507	ERJ3GEY0R00V	1/10W 0	1	
R508	ERJ2GEJ682X	1/16W 6.8K	1	
R512	ERJ2GEJ104X	1/16W 100K	1	
R514	ERJ3GEYJ331V	1/10W 330	1	
R516	EXBV8V222JV	1/16W 2.2K	1	
R517	ERJ2GE0R00X	1/16W 0	1	
R518	ERJ2GEJ332X	1/16W 3.3K	1	
R519	ERJ2GEJ473X	1/16W 47K	1	
R521	ERJ3GEYJ100V	1/10W 10	1	
R524	ERJ2GEJ103X	1/16W 10K	1	
R525	ERJ2GEJ103X	1/16W 10K	1	
R526	ERJ2GEJ222X	1/16W 2.2K	1	
R527	ERJ2GEJ222X	1/16W 2.2K	1	
R530	ERJ2GE0R00X	1/16W 0	1	
R534	ERJ2GEJ220X	1/16W 22	1	
R701	ERJ2GEJ104X	1/16W 100K	1	
R703	ERJ2GEJ5R6X	1/16W 5.6	1	
R704	ERJ2GEJ5R6X	1/16W 5.6	1	
R705	ERJ2GEJ102X	1/16W 1K	1	
R706	ERJ2GEJ102X	1/16W 1K	1	
R707	ERJ2GEJ102X	1/16W 1K	1	
R708	ERJ2GEJ102X	1/16W 1K	1	
R711	ERJ3GEYJ4R7V	1/10W 4.7	1	
R713	ERJ2GE0R00X	1/16W 0	1	
R716	ERJ2GEJ104X	1/16W 100K	1	
R717	ERJ3GEYJ5R6V	1/10W 5.6	1	
R718	ERJ3GEYJ5R6V	1/10W 5.6	1	
R720	ERJ2GEJ2R2X	1/16W 2.2	1	
R721	ERJ2GEJ2R2X	1/16W 2.2	1	
R722	ERJ2GEJ100X	1/16W 10	1	
R723	ERJ2GEJ100X	1/16W 10	1	
R724	ERJ2GEJ333X	1/16W 33K	1	
R725	ERJ3GEYJ473V	1/10W 47K	1	
R726	ERJ3GEYJ222V	1/10W 2.2K	1	
R728	ERJ2GE0R00X	1/16W 0	1	
R731	ERJ3GEYJ103V	1/10W 10K	1	
R1021	ERJ2GEJ333X	1/16W 33K	1	
R1022	ERJ3GEYJ104V	1/10W 100K	1	
R1023	ERJ2GEJ221X	1/16W 220	1	
R1024	ERJ3GEYJ221V	1/10W 220	1	
R1109	ERJ3GEYJ474V	1/10W 470K	1	
R1110	ERJ2GEJ104X	1/16W 100K	1	
R1116	ERJ2GEJ103X	1/16W 10K	1	
R1130	ERJ2GEJ274X	1/16W 270K	1	
R1131	ERJ2GEJ104X	1/16W 100K	1	
R1151	ERJ2GEJ183X	1/16W 18K	1	
R1153	ERJ2GEJ682X	1/16W 6.8K	1	
R1154	ERJ3GEYJ332V	1/10W 3.3K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1155	ERJ2GEJ4R7X	1/16W 4.7	1	
R1159	ERJ2GEJ471X	1/16W 470	1	
R1160	ERJ2GEJ103X	1/16W 10K	1	
R1170	ERJ3GEY0R00V	1/10W 0	1	
R1201	ERJ2GEJ472X	1/16W 4.7K	1	
R1202	ERJ3GEYJ561V	1/10W 560	1	
R1203	ERJ3GEYJ221V	1/10W 220	1	
R1204	ERJ3GEYJ104V	1/10W 100K	1	
R1205	ERJ2GEJ103X	1/16W 10K	1	
R1206	ERJ2GEJ224X	1/16W 220K	1	
R1218	ERJ3GEYJ102V	1/10W 1K	1	
R1230	ERJ3GEYJ272V	1/10W 2.7K	1	
R1231	ERJ3GEY0R00V	1/10W 0	1	
R1232	ERJ2GEJ103X	1/16W 10K	1	
R1233	ERJ3GEYJ331V	1/10W 330	1	
R1234	ERJ3GEYJ473V	1/10W 47K	1	
R1235	ERJ3GEYJ181V	1/10W 180	1	
R1240	ERJ3GEYJ681V	1/10W 680	1	
R1241	ERJ2GE0R00X	1/16W 0	1	
R1303	ERJ2GEJ393X	1/16W 39K	1	
R1309	ERJ3GEYJ104V	1/10W 100K	1	
R1310	ERJ3GEYJ104V	1/10W 100K	1	
R1331	ERJ2GEJ333X	1/16W 33K	1	
R1365	ERJ2GEJ563X	1/16W 56K	1	
R1369	ERJ2GEJ104X	1/16W 100K	1	
R1371	ERJ2GEJ104X	1/16W 100K	1	
R1372	ERJ2GEJ104X	1/16W 100K	1	
R1380	ERJ3GEYJ273V	1/10W 27K	1	
R1500	ERJ2GEJ562X	1/16W 5.6K	1	
R1501	ERJ3GEYJ105V	1/10W 1M	1	
R1502	ERJ2GEJ562X	1/16W 5.6K	1	
R1503	ERJ3GEYJ103V	1/10W 10K	1	
R1504	ERJ3GEYJ104V	1/10W 100K	1	
R1509	ERJ2GEJ332X	1/16W 3.3K	1	
R1510	ERJ2GEJ332X	1/16W 3.3K	1	
R1533	ERJ2GEJ103X	1/16W 10K	1	
RJ501	ERJ2GE0R00X	1/16W 0	1	
S201	ESE11MV9T	SW,LASER ON/OFF	1	
S202	K0L1BB000025	SW,REST DET.	1	
S310	K0D112B00071	SW,HOLD	1	
VR1101	D3DA3304A002	VR,FM RF ADJ.	1	
X501	H2D169500017	OSCILLATOR	1	
X1101	J0B1075AA013	OSCILLATOR	1	
X1201	J0B4503A0065	OSCILLATOR	1	
X1203	J0B1075AA008	OSCILLATOR	1	
X1302	H0A750200012	CRYSTAL RESONATOR	1	

16 Cabinet Parts Location



17 Traverse Unit Parts Location



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

18 Packaging