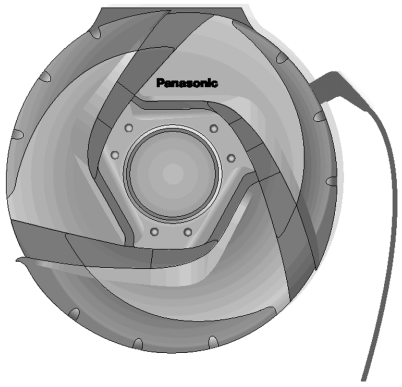
Order No.AD0504042CE
A6

Service Manual

Portable CD Player

COMPACT disc DIGITAL AUDIO



SL-SW947P
SL-SW947PC

Colour

(A).....Blue Type (SL-SW947PC only)

(S).....Silver Type (SL-SW947P only)

Specification

nAudio (CD-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

nGENERAL

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.

Batteries used:

2 alkaline batteries (LR6);	MP3 disc....110h CD-DA disc....60h
2 optional rechargeable batteries (P-3GAVA/2B);	MP3 disc....44h CD-DA disc....25h
Recharging time:	About 3 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):	140mmx32.7mmx141mm ($5^{17}/_{32}$"×$1^{5}/_{16}$"×$5^{9}/_{16}$")
Mass:	295.5g (10.43oz.) (with batteries) 249.1g (8.79oz.) (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.

Panasonic

⚠ WARNING

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

CONTENTS

1 Accessories

・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.)

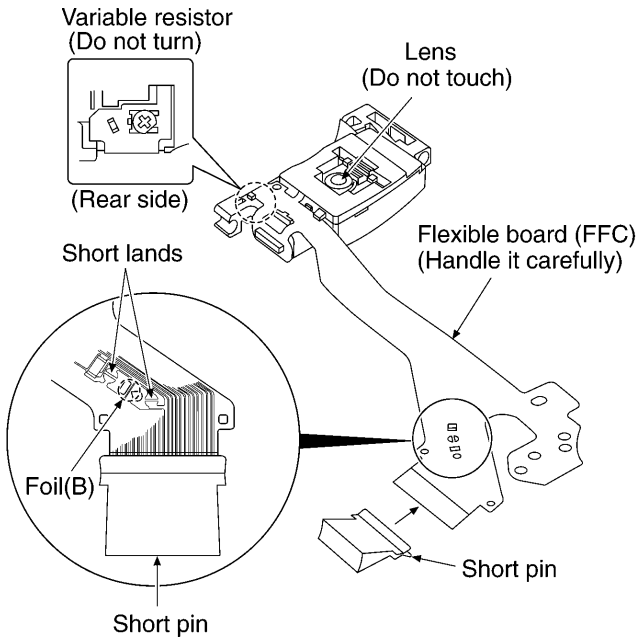


Fig. 3-1.

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.)

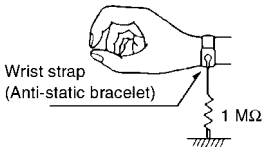


Fig. 3-2.

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.)

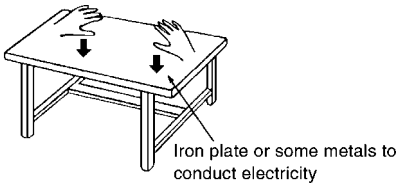


Fig. 3-3.

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).

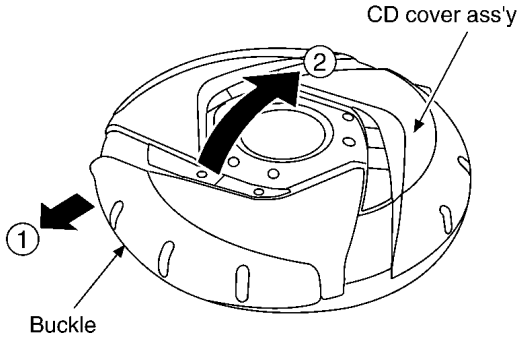
4 Operation Checks and Component Replacement Procedures

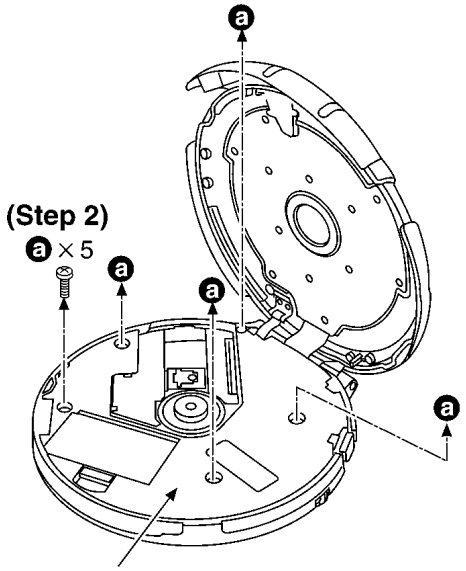
- **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
- **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**

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

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

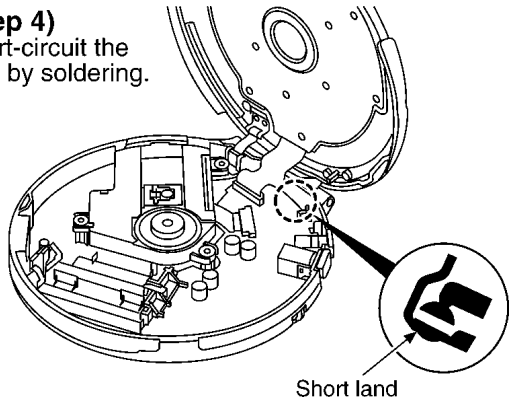
(Step 1)
Pull the buckle, and then open the CD cover ass'y.



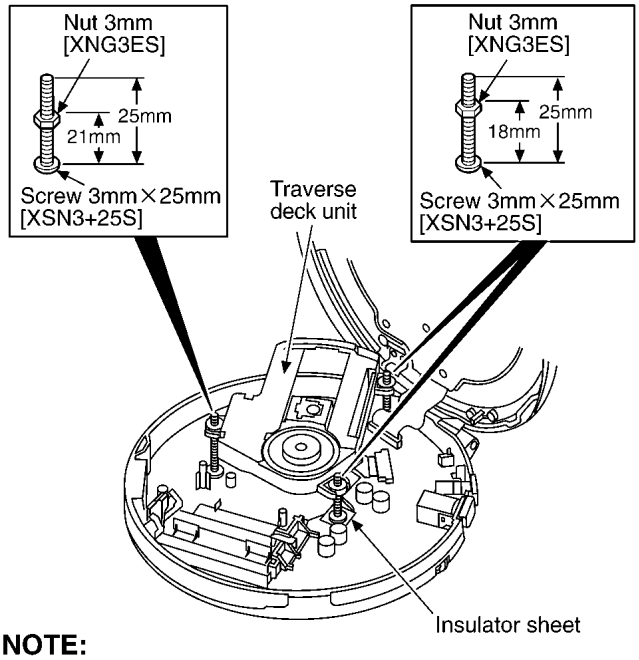


(Step 3)
Remove the middle cabinet ass'y.

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

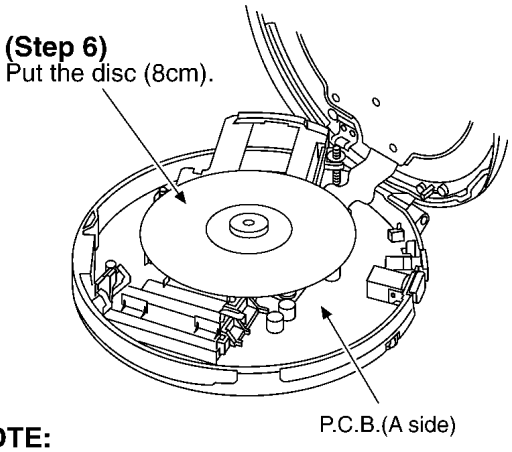


(Step 5)
Sustain the traverse deck unit with the floating rubber inserted screws and nuts as shown below.



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.

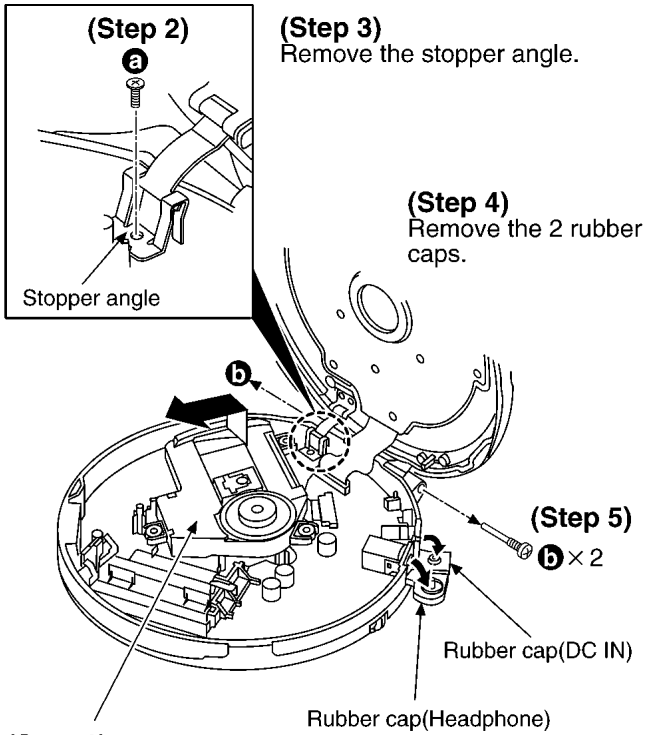
· **Check the P.C.B. ass'y (A side) as shown below.**



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

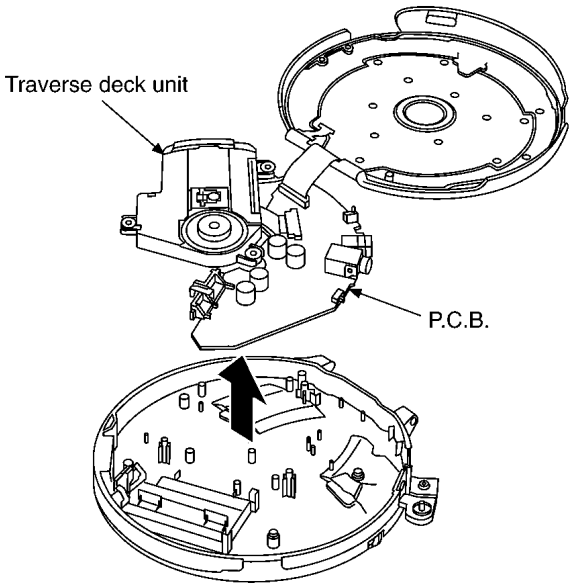
4.1.2. Checking for the P.C.B. ass'y (B side)

· Follow the **(Step 1)** - **(Step 4)** of item 4.1.1.

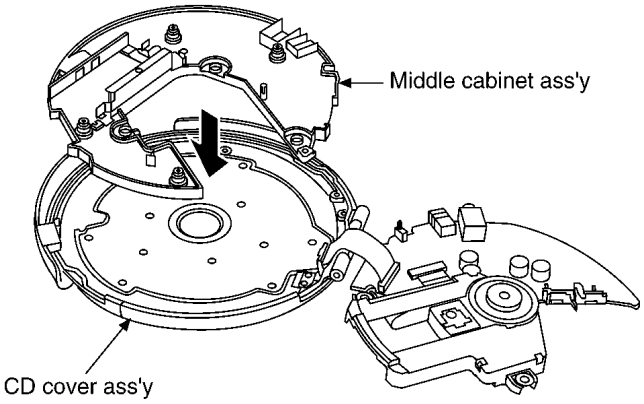


(Step 1)
Move the traverse deck unit in the direction of arrow.

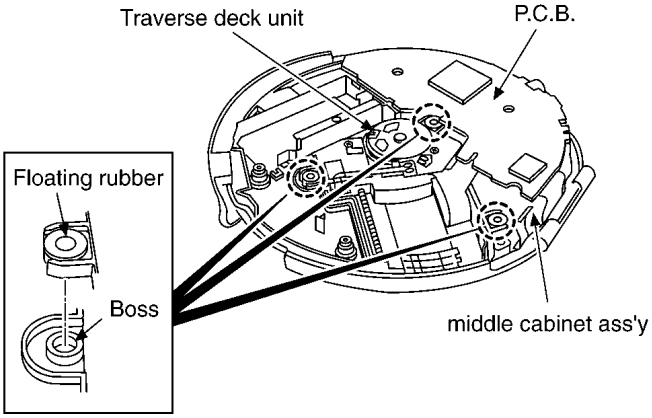
(Step 6)
Remove the P.C.B. and traverse deck unit.



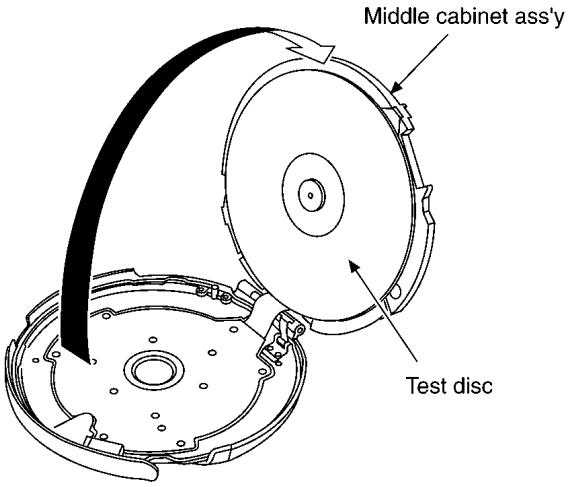
(Step 7)
Locate the middle cabinet ass'y on the CD cover ass'y.



(Step 8)
Align the floating rubbers with bosses, and then locate the traverse deck unit and P.C.B. on the middle cabinet ass'y.

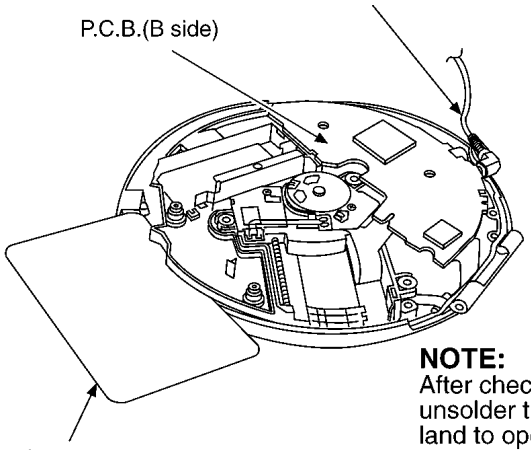


(Step 9)
Lift up the middle cabinet ass'y, and then put the test disc.



· **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.

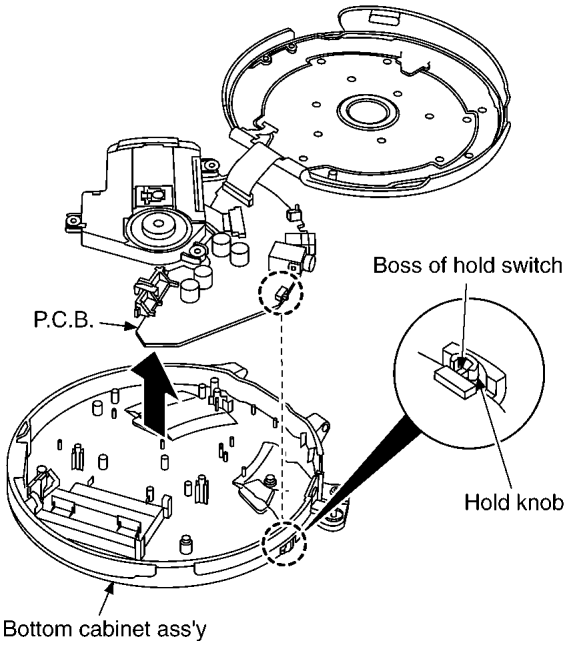


NOTE:
After checking, unsolder the short land to open circuit.

(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.

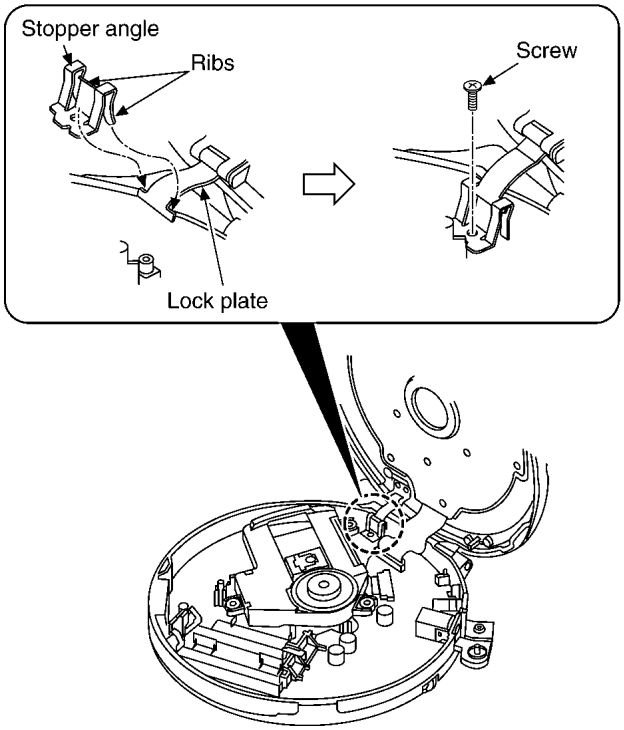
Notice for installation of P.C.B.

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



Installing the stopper angle

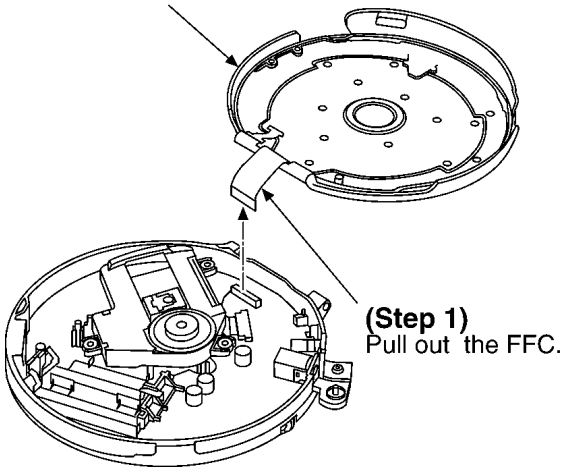
• Install the ribs of stopper angle with hooking the lock plate, and insert the screw.

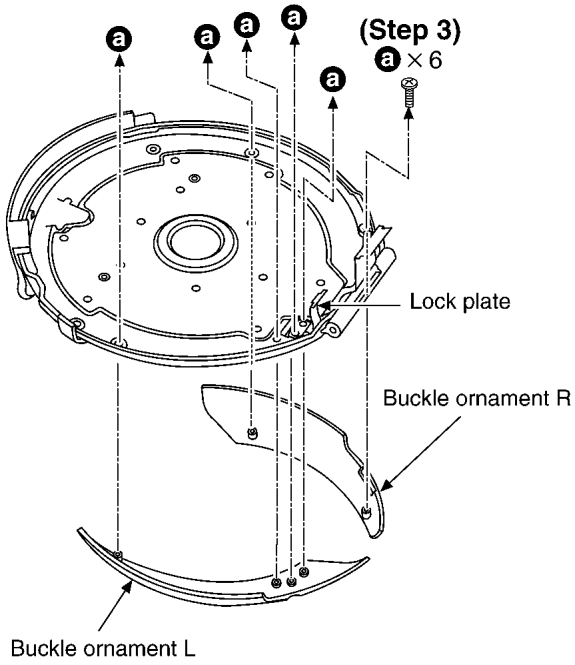


4.2. Replacement for the lock plate, buckle ornament L and buckle ornament R

- 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.

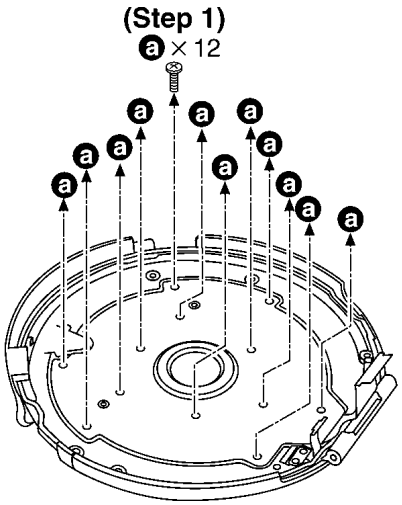




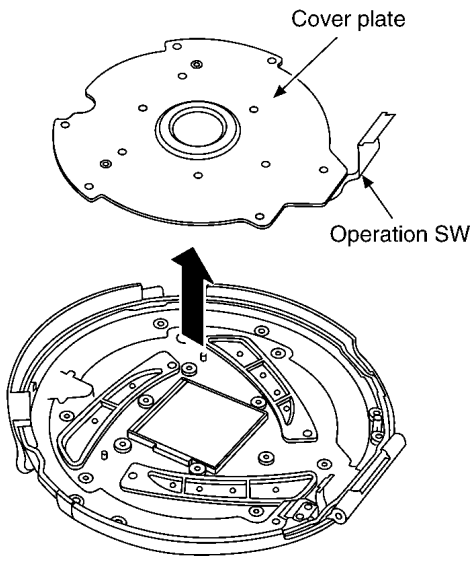
(Step 4)
Remove the lock plate, buckle ornament L and buckle ornament R.

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

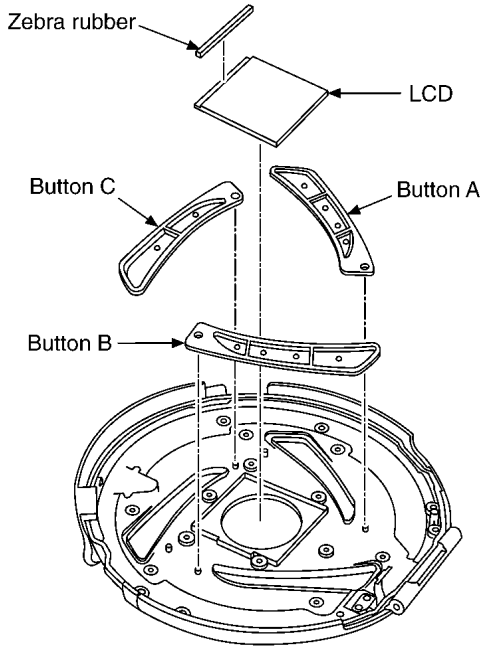
- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** - **(Step 5)** of item 4.1.2.
- Follow the **(Step 1)** - **(Step 2)** of item 4.2.



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

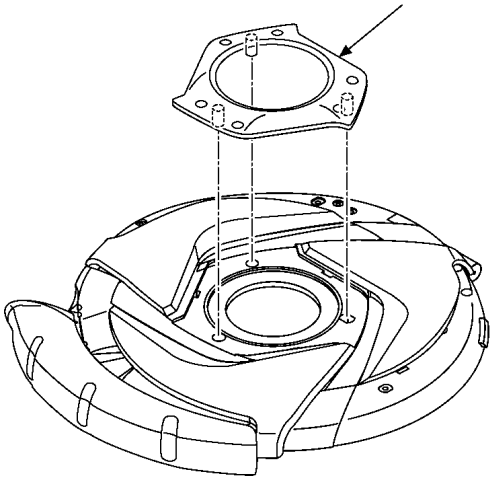


(Step 3)
The parts illustrated below will be free.



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

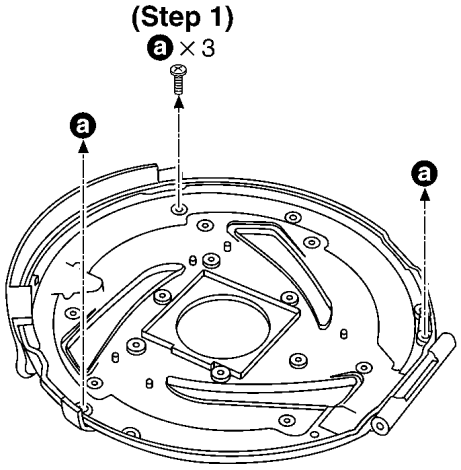
(Step 4)
Remove the LCD ornament.

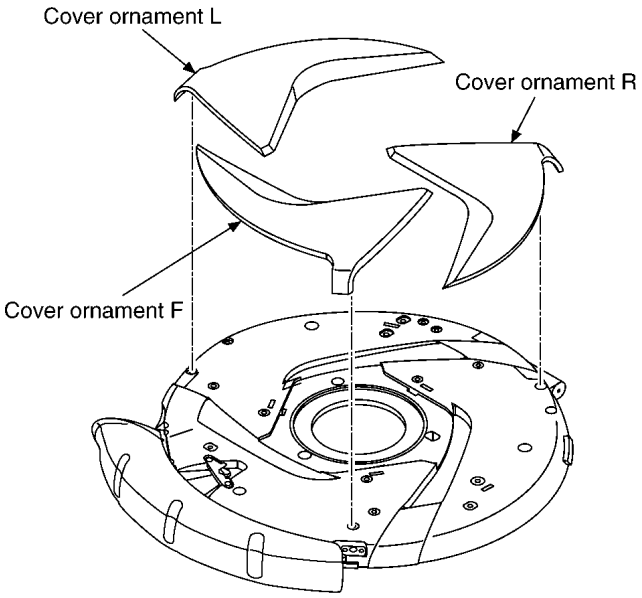


4.4. Replacement for the cover ornament F, cover ornament L, cover ornament R and buckle

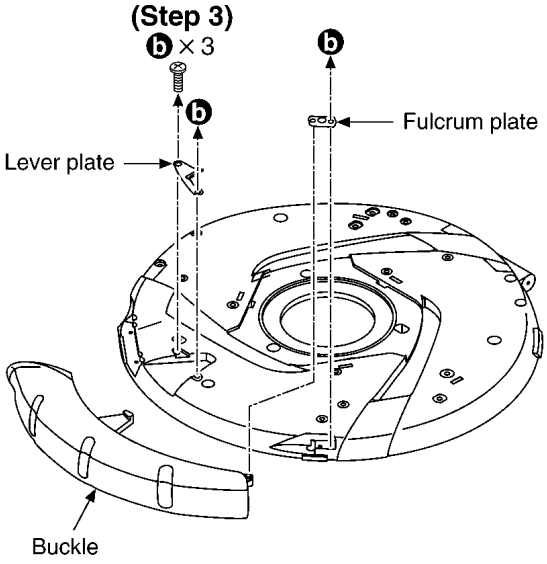
- Follow the **(Step 1)** - **(Step 3)** of item 4.1.1.
- Follow the **(Step 1)** - **(Step 5)** of item 4.1.2.
- Follow the **(Step 1)** - **(Step 4)** of item 4.2.
- Follow the **(Step 1)** - **(Step 4)** of item 4.3.

(Step 1)





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



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

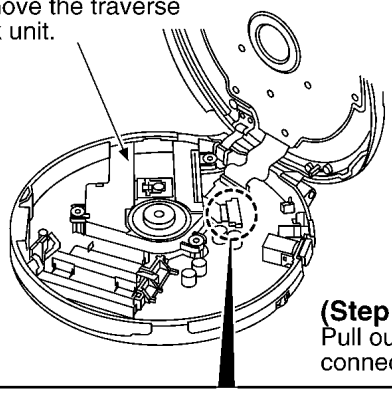
4.5. Replacement for the traverse motor

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

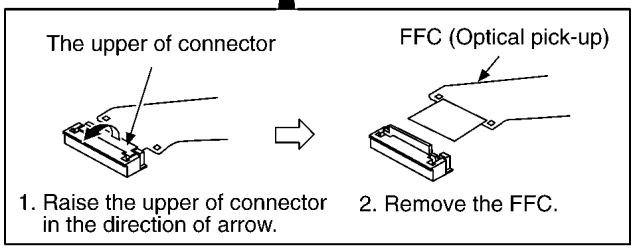
NOTE:

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

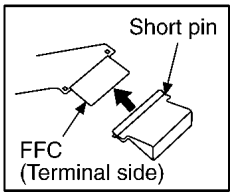
(Step 2)
Remove the traverse deck unit.



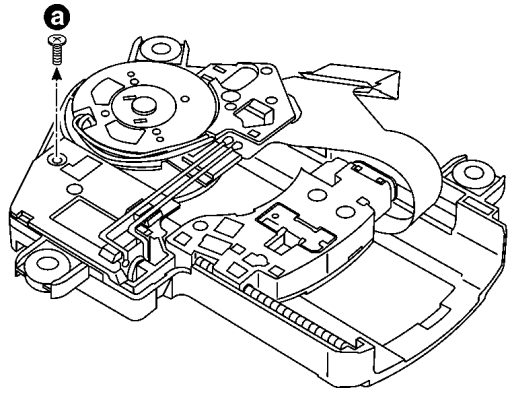
(Step 1)
Pull out the FFC from connector (CN101).



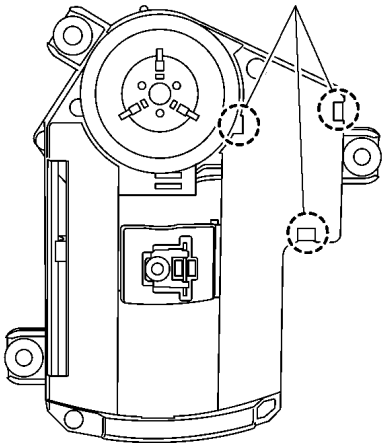
NOTE:
Insert a short pin into FFC(Terminal side) of the traverse deck.
(Refer to “**Handling Precautions for Traverse Deck**”.)



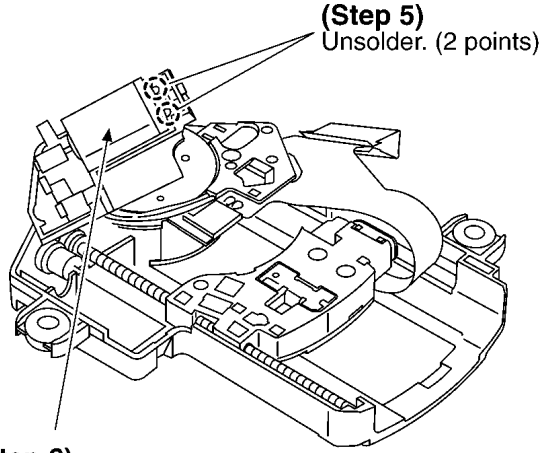
(Step 3)



(Step 4)
Release the 3 claws.



(Step 5)
Unsolder. (2 points)

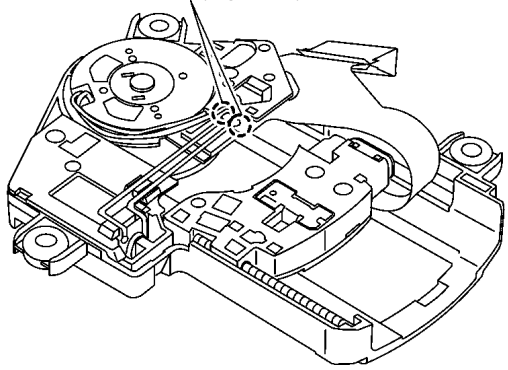


(Step 6)
Remove the traverse motor.

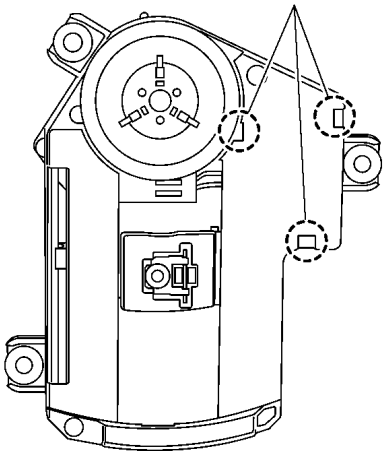
4.6. Replacement for the optical pick-up

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

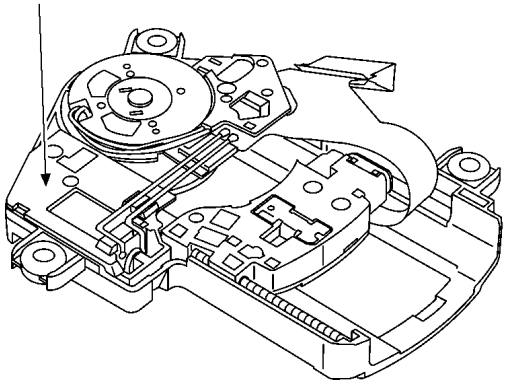
(Step 1)
Unsolder. (2 points)



(Step 2)
Release the 3 claws.

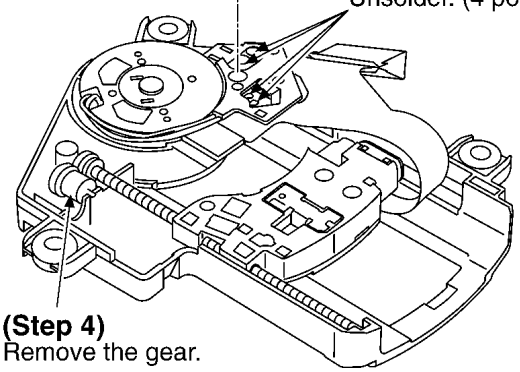


(Step 3)
Remove the holder and traverse motor.



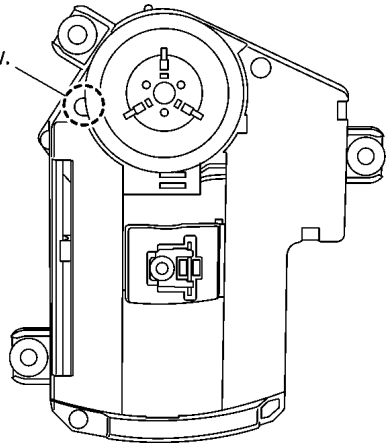
(Step 6)
ⓐ

(Step 5)
Unsolder. (4 points)

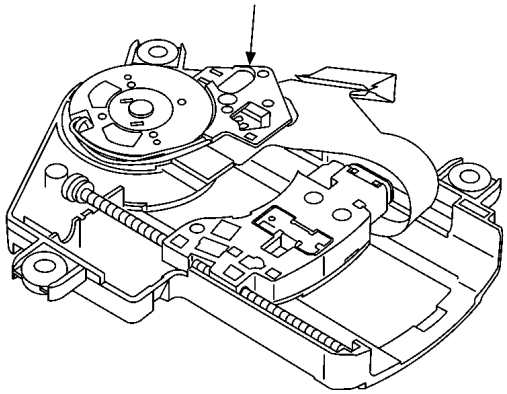


(Step 4)
Remove the gear.

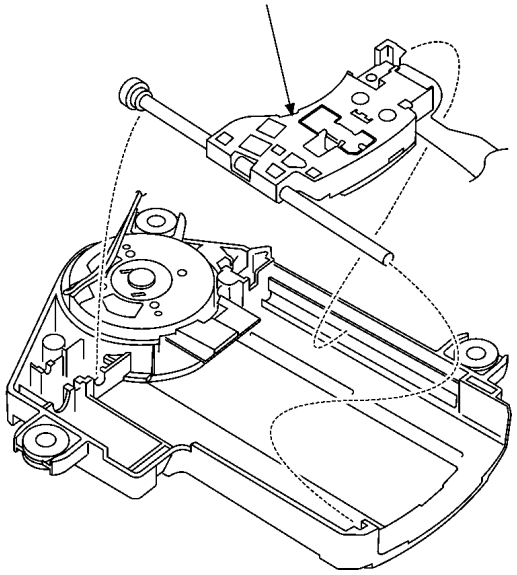
(Step 7)
Release the claw.



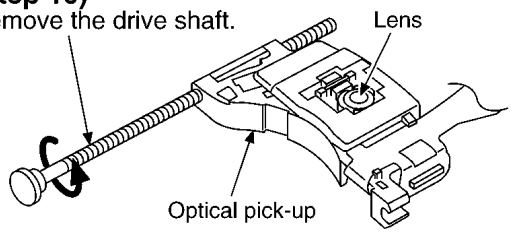
(Step 8)
Remove the FFC holder.



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



(Step 10)
Remove the drive shaft.

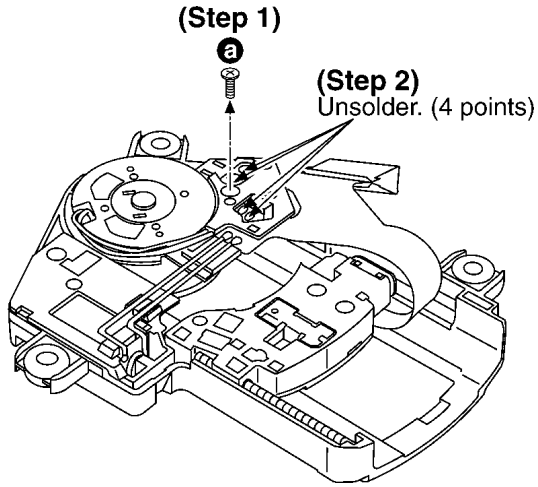


NOTE:
1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not apply the grease on the lens of optical pick-up.
3. Do not touch the lens of the optical pick-up.

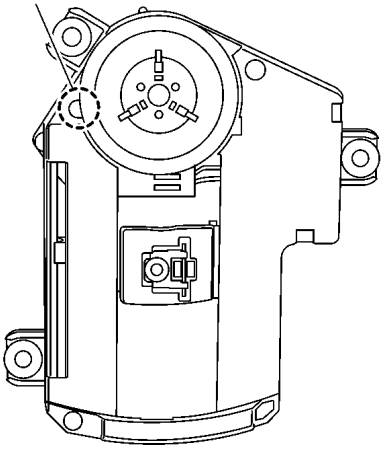
4.7. Replacement for the rest switch

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

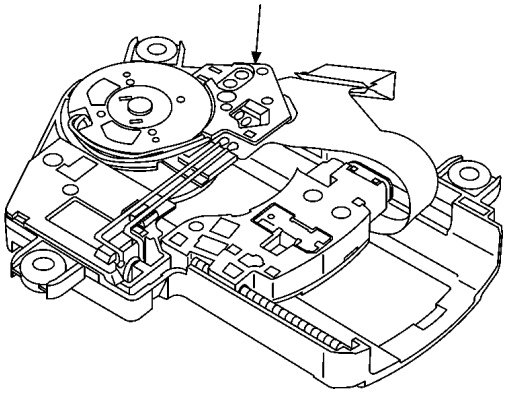
(Step 1)

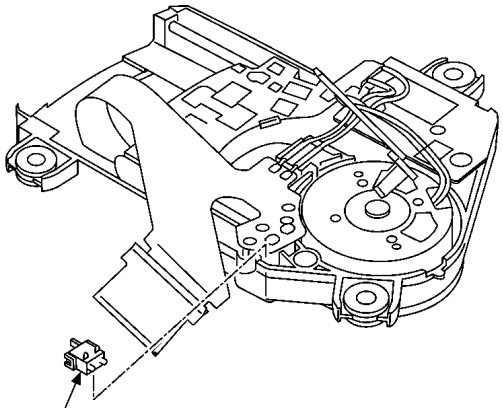


(Step 3)
Release the claw.



(Step 4)
Remove the FFC holder.



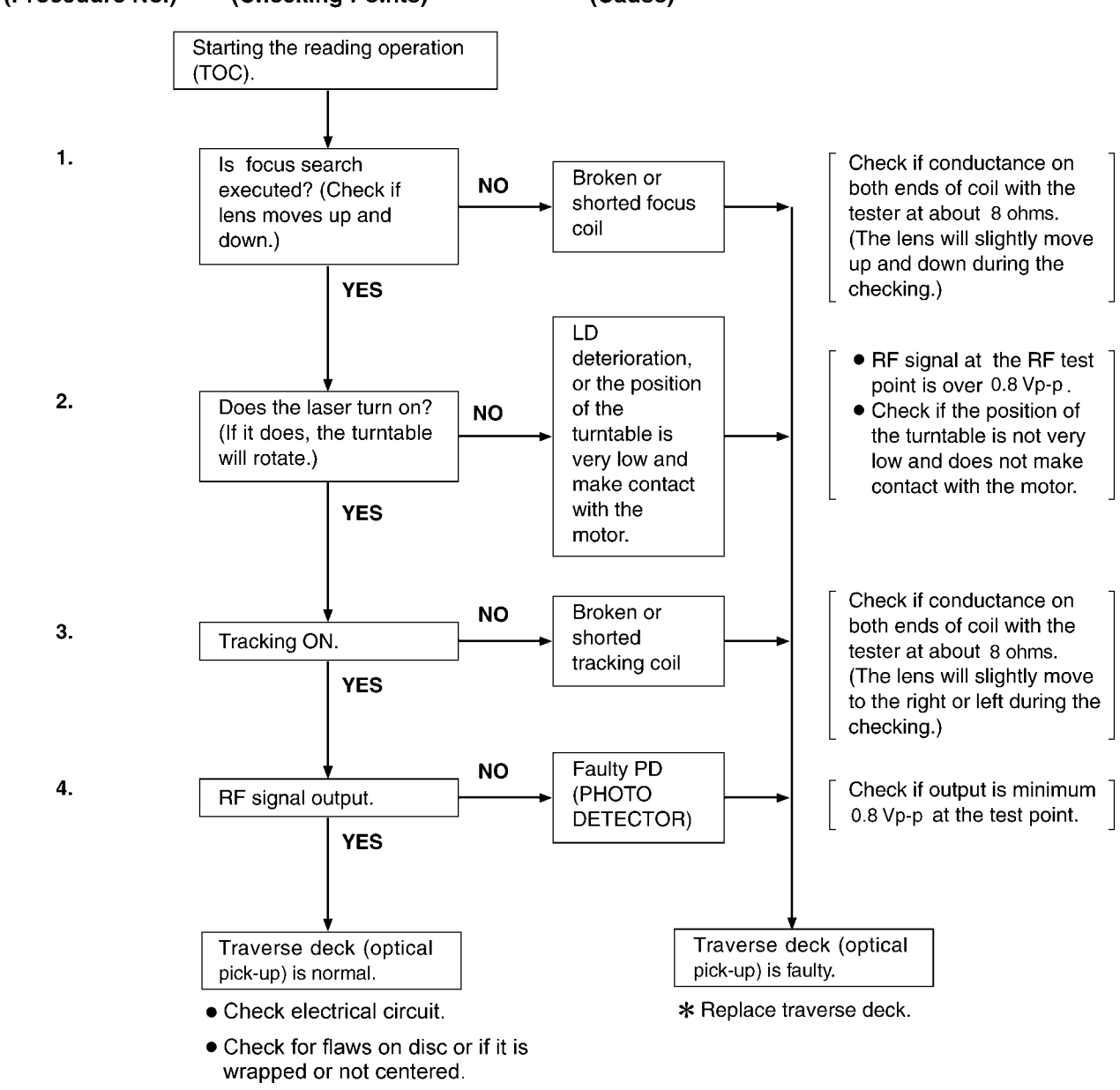


(Step 5)
Remove the rest switch.

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)

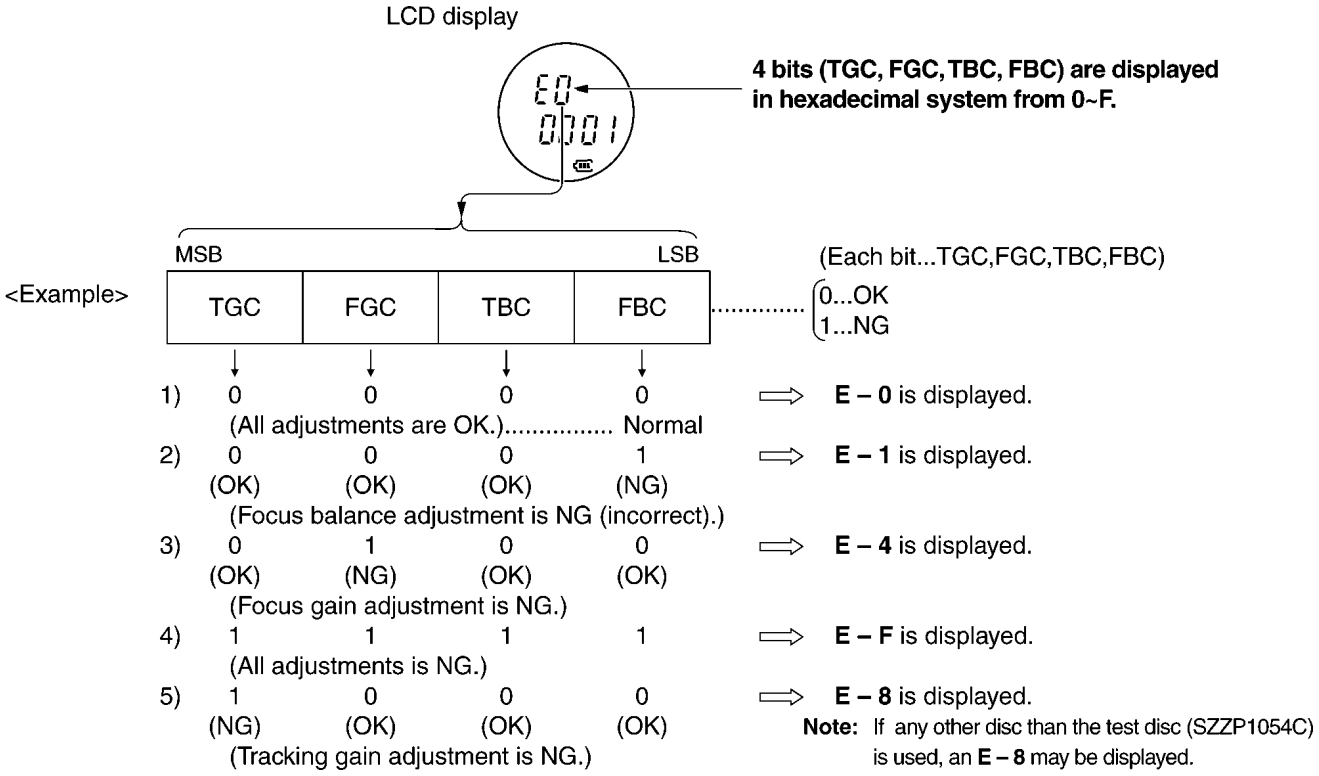
On the unit (SL-SW947), each automatic adjustment result are displayed on the LCD. This function is convenient to check or identify which automatic adjustment circuit is incorrect.

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 ▶▶I (F.skip) and I◀◀ (R.skip) buttons simultaneously and hold them, and additionallypress the ▶/II (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-SW947) has self-diagnostic function. It may display below-mentioned on the LCD of this unit.

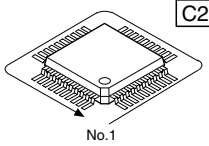
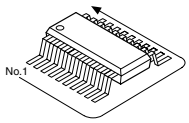
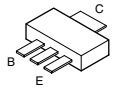
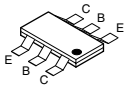
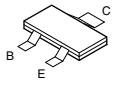
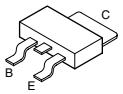
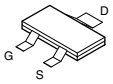
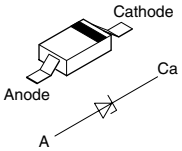
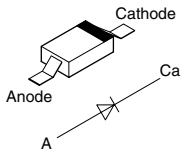
・The substance of self-diagnostic display.

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

MN6627962JBA 128PIN C0DBFFB00005 48PIN C2BBGF000768 80PIN  	C3EBCG000096 8PIN C3ABMG000207 50PIN  		B1ABMD000004  	B1GFGCAA0001 
B1GBCFJG0004 2SB0709A0L  UNR511300L UNR521500L UNR521L00L UNR511400L UNR521M00L UNR521000L	B1BDND000001  	B1CFHA000002  	MAZ80560ML  	MA2J11100L 

9 Schematic Diagram Notes

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

Notes:

S1:	Stop/Turn off (■) switch
S2:	R.skip/search (I◄◄) switch
S3:	Play mode selection (PLAY MODE) switch
S4:	Memory/Recall/Digital Re-master/Anti-skip mode selection (MEMORY/RECALL) switch
S5:	F.skip/search (►►I) switch
S6:	Volume control switch (VOL-)
S7:	Volume control switch (VOL+)
S8:	Sound quality selection (EQ) switch
S9:	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

- 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

  ⇨ : 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)

Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

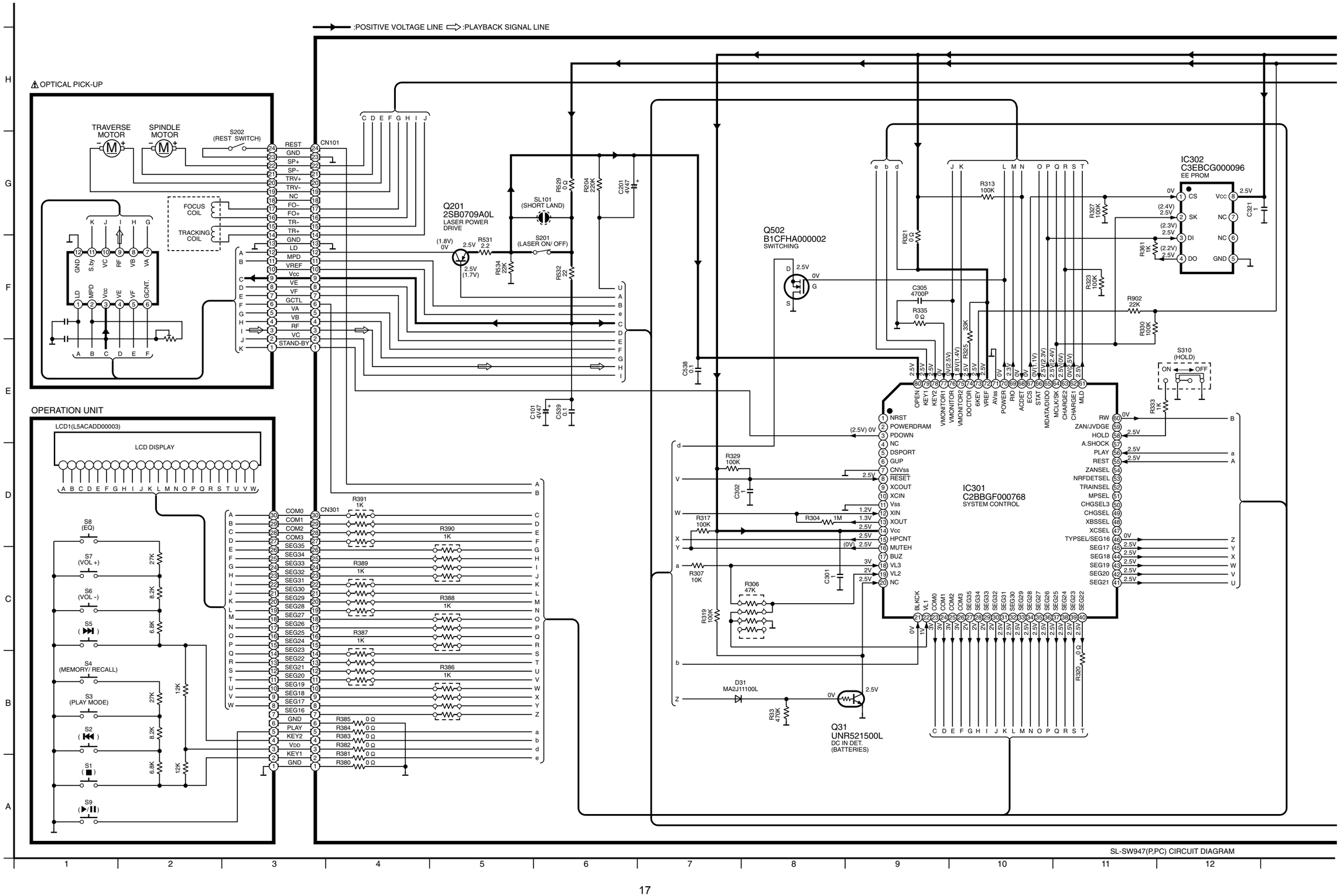
Cover the parts boxes made of plastics with aluminum foil.

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 Schematic Diagram



:POSITIVE VOLTAGE LINE :PLAYBACK SIGNAL LINE

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

IC503
C3ABMG000207
DRAM

X501
(16.9344MHz)

SL-SW947(P,PC) CIRCUIT DIAGRAM

:POSITIVE VOLTAGE LINE :PLAYBACK SIGNAL LINE

IC11
C0DBFFB00005
POWER SUPPLY/
MOTOR DRIVE

Q15
B1GBCFJG0004
DC IN DET.
(AC ADAPTOR)

Q11
B1BDND000001
REGULATOR

Q16
UNR511300L
RESET

Q301
UNR521M00L
RESET

Q14
UNR511400L
CHARGE CONT.

Q12
B1ABMD000004
CHARGE CONT.

Q13
UNR521L00L
CHARGE CONT.

Q19
UNR521M00L
RESET

Q902
UNR521000L
MUTING CONT.

Q901
UNR511400L
MUTING CONT.

Q905
UNR521500L
MUTING CONT.

Q704
B1GFGCAA0001
MUTING

ICP11
ERBSE1R50U

2 AA SIZE
BATTERIES 3V

JK11
DC IN 4.5V

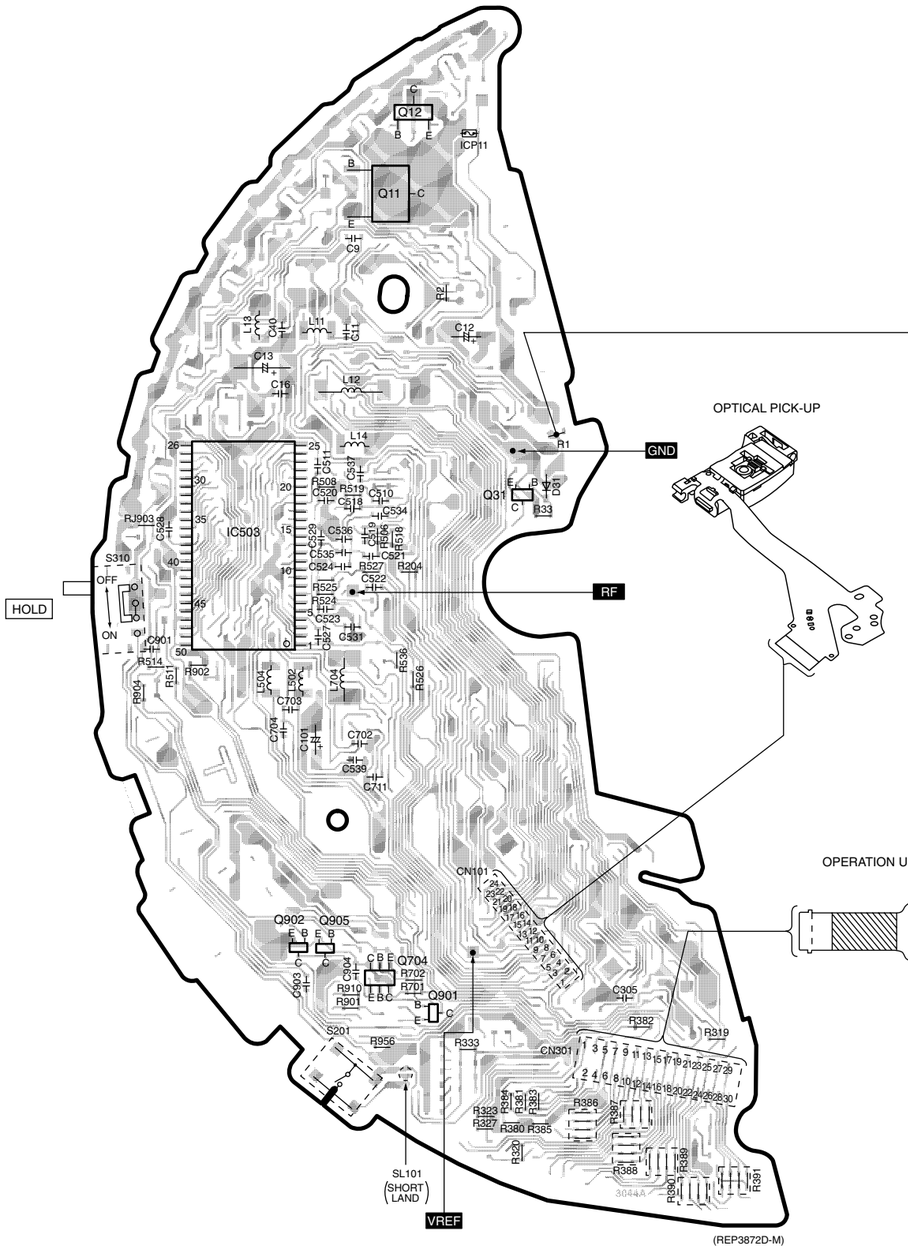
JK702
HEADPHONE

SL-SW947(P,PC) CIRCUIT DIAGRAM

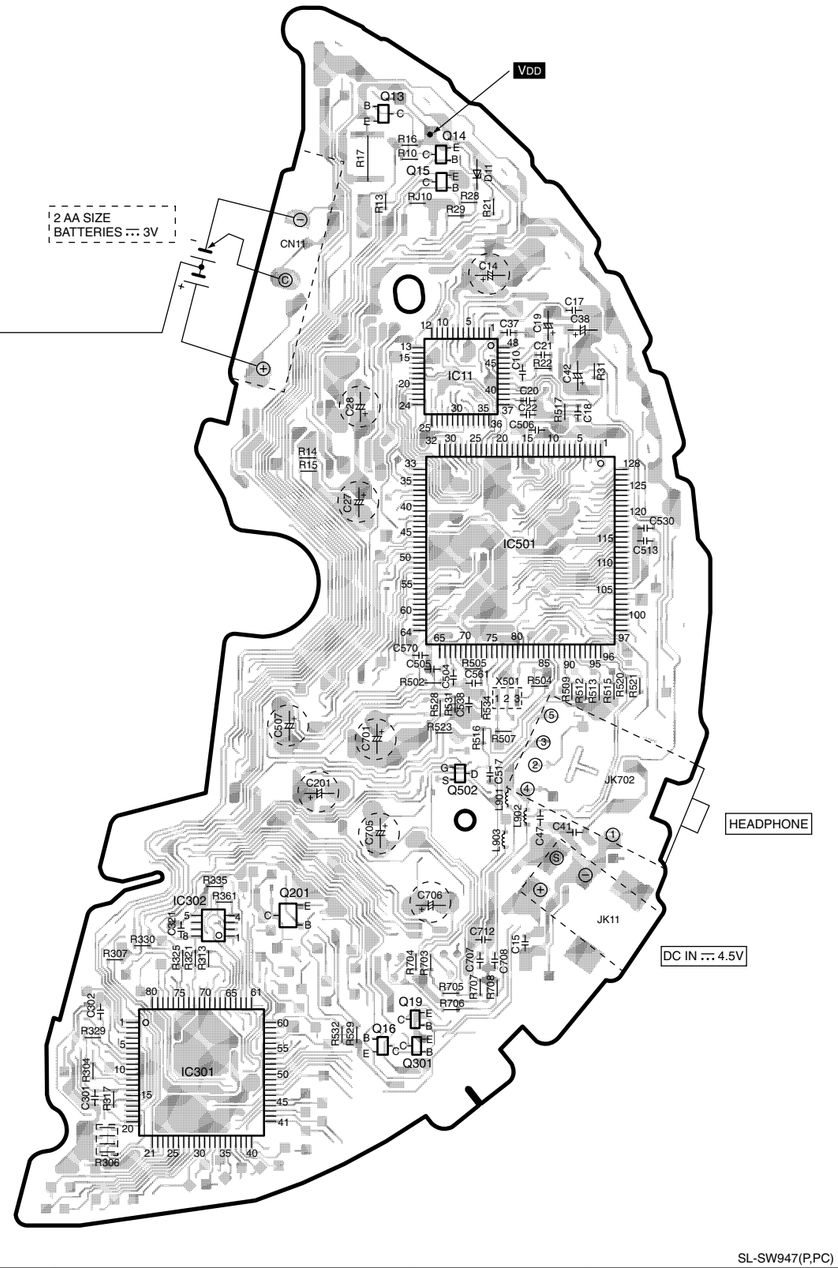
11 Printed Circuit Board and Wiring connection Diagram

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

(SIDE: A)

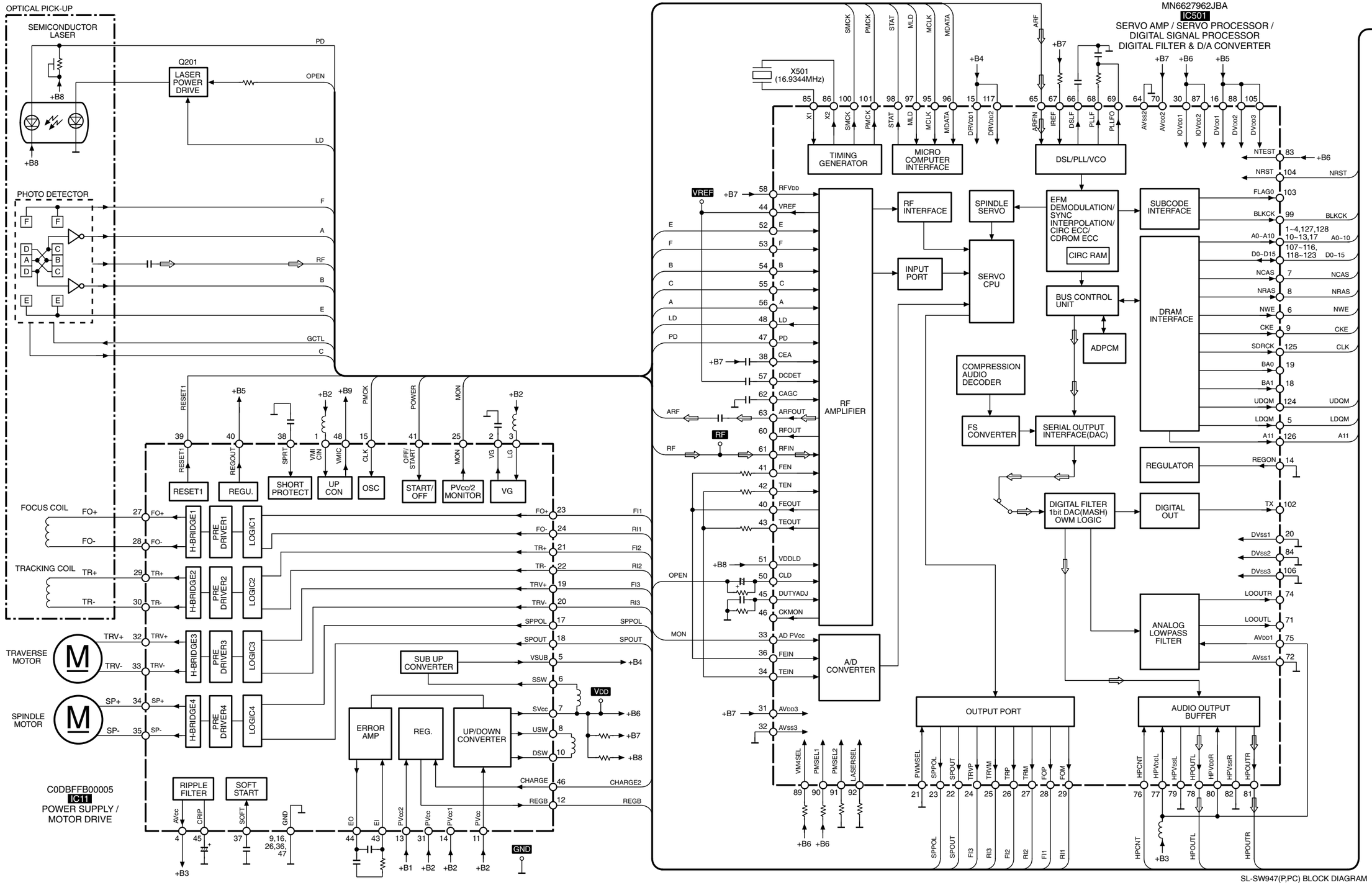


(SIDE: B)

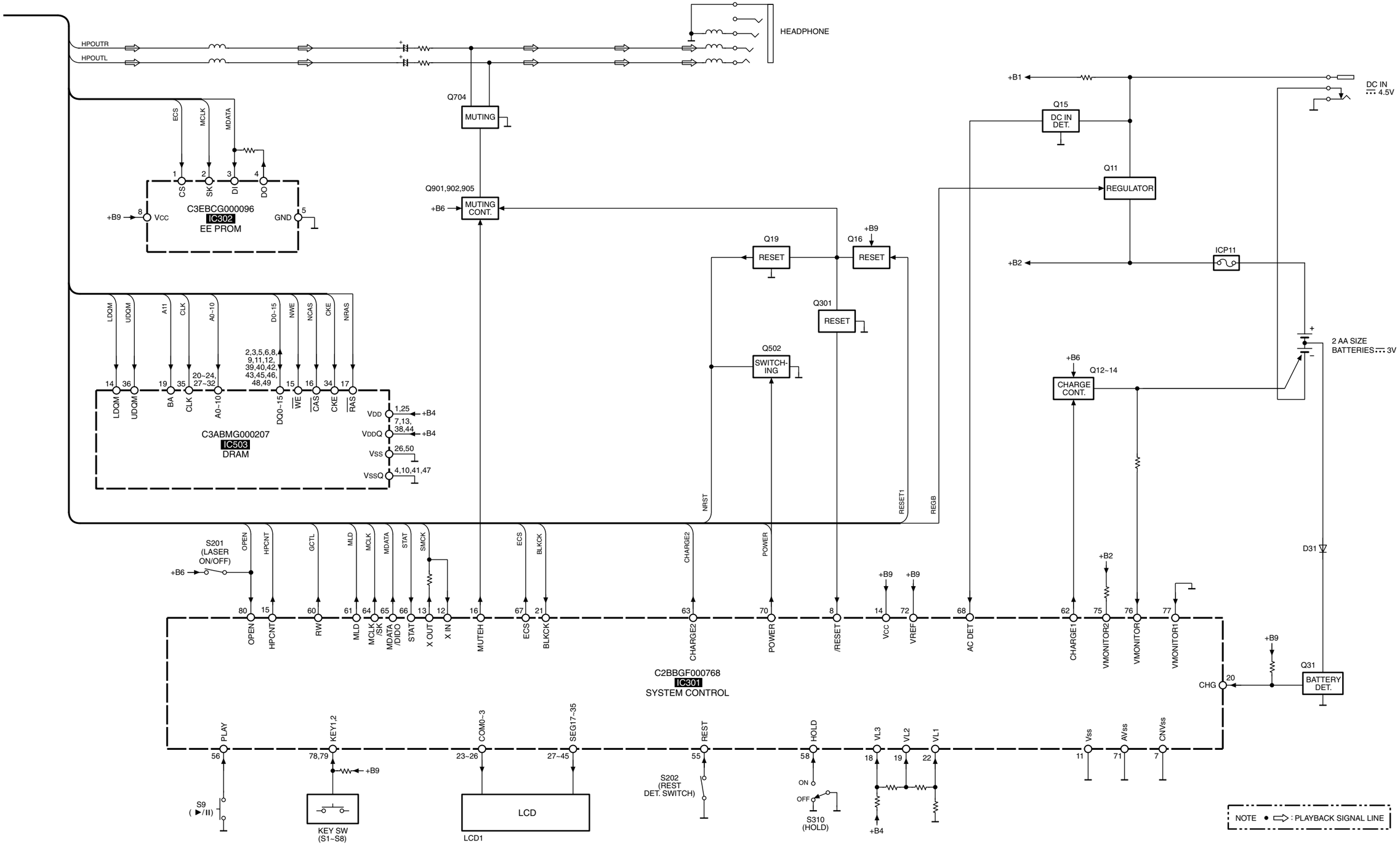


SL-SW947(P,PC) P.C.B.

12 Block Diagram



SL-SW947(P,PC) BLOCK DIAGRAM



SL-SW947(P,PC) BLOCK DIAGRAM

13 Terminal Function of ICs

13.1. IC301(C2BBGF000768): System Control

Pin No.	Terminal Name	I/O	Function
1	NRST	-	Not used, open
2	POWER DRAM	-	Not used, open
3	PDOWN	O	Hologram laser circuit power down output
4	NC	-	Not used, open
5	DSPORT	-	Not used, open
6	GUP	-	Not used, open
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 input
13	XOUT	O	System clock output
14	VCC	I	Power supply terminal
15	HPCNT	O	Headphone output permit output
16	MUTEH	O	Headphone mute output
17	BUZ	O	Buzzer signal output
18	VL3	I	Power supply connected terminal
19	VL2	I	Power supply connected terminal
20	NC	I	DC IN detect signal input
21	BLKCK	I	Block clock signal input
22	VL1	I	Power supply connected terminal
23 | 26	COM0 | COM3	O	LCD common signal output terminal
27 | 39	SEG35 | SEG23	O	LCD segment signal output
40	SEG22	O	Charge ON LED output
41 | 45	SEG21 | SEG17	O	LCD segment signal output
46	TYPESEL/ SEG16	O	Model select signal
47	XCSEL	-	Not used, open
48	XBSSEL	-	Not used, open
49	CHGSEL	-	Not used, open
50	CHGSEL3	-	Not used, open
51	MPSEL	-	Not used, open
52	TRAINSEL	-	Not used, open
53	NRFDET SEL	-	Not used, open
54	ZANSEL	-	Not used, open
55	REST	I	Rest detect switch signal input
56	PLAY	I	Play key signal input
57	A.SHOCK	-	Not used, open
58	HOLD	I	Hold switch signal input
59	ZAN/ JVDGE	-	Not used, open
60	RW	O	CD-RW output
61	MLD	O	Serial command latch output
62	CHARGE1	O	Charge ON output
63	CHARGE2	O	PVCC1 voltage up output
64	MCLK/SK	O	Clock output for IC302/IC501
65	MDATA/ DIDO	O	Data output for IC501/Data input/output for IC302
66	STAT	I	Status signal input
67	ECS	O	Communication signal output for IC302
68	ACDET	I	AC detect signal input
69	RIO	O	Remote control communication signal output
70	POWER	O	Power ON signal output
71	AVSS	-	GND
72	VREF	I	Reference voltage input
73	6KEY	I	6Key Remote control key signal input
74	DOCTOR	I	Doctor mode AD input
75	VMONI TOR2	I	PVCC1 voltage measurement input
76	VMONI TOR	I	Battery voltage (GND) measurement input
77	VMONI TOR1	I	Connected to GND via resistor
78	KEY2	I	Operation key signal input
79	KEY1	I	Operation key signal input
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
40	FEOUT	O	Focus error signal amp output
41	FEN	I	Focus error signal amp inverting input

Pin No.	Terminal Name	I/O	Function
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	-	Not used, open
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	NC	-	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	-	Connected to DVDD2 via resistor
90	PMSEL1/ FBAL	-	Connected to DVDD2 via resistor
91	PMSEL2/ TBAL	-	Connected to GND via resistor
92	LASER SEL/BDO	-	Connected to GND via resistor
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
98	STAT	O	Status signal output
99	BLKCK	O	Sub code block clock signal output
100	SMCK	O	System clock signal output

Pin No.	Terminal Name	I/O	Function
101	PMCK	O	Power supply clock 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

14 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.

  (P): SL-SW947P-S

  (PC): SL-SW947PC-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.

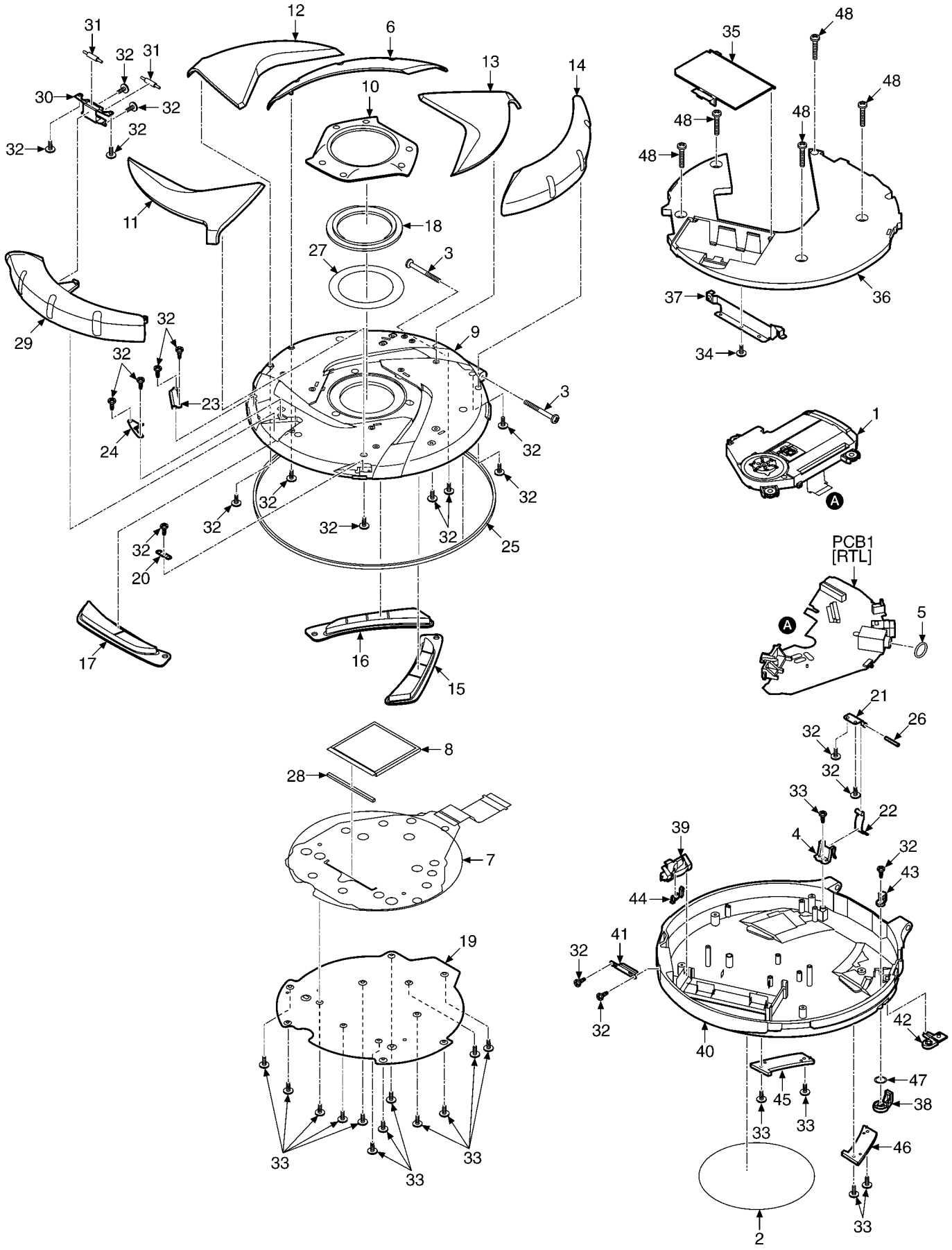
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RAE0241Z-X	TRAVERSE DECK UNIT	1	⚠
1-1	RAF0241A	OPTICAL PICK-UP	1	⚠
1-2	RDG0554	GEAR 1	1	
1-3	RDG0555	GEAR 2	1	
1-4	RMG0605-K	FLOATING RUBBER	3	
1-5	RMQ1125	MOTOR HOLDER	1	
1-6	RMS0782	DRIVE SHAFT	1	
1-7	RXQ0971-4	MOTOR ASS'Y	1	
1-8	XQN17+BG45FJ	SCREW	1	
2	RGN2827-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	K0RC00900009	SW,OPERATION	1	
8	L5ACADD00003	LCD(LCD1)	1	
9	RGD0118-H	CD COVER	1	
10	RGK1895-S	LCD ORNAMENT	1	
11	RGK1896-S	COVER ORNAMENT F	1	(P)
11	RGK1896-A	COVER ORNAMENT F	1	(PC)
12	RGK1897-S	COVER ORNAMENT L	1	(P)
12	RGK1897-A	COVER ORNAMENT L	1	(PC)
13	RGK1898-S	COVER ORNAMENT R	1	(P)
13	RGK1898-A	COVER ORNAMENT R	1	(PC)
14	RGK1900-S	BUCKLE ORNAMENT R	1	
15	RGU2392-H	BUTTON A	1	
16	RGU2393-H	BUTTON B	1	
17	RGU2394-H	BUTTON C	1	
18	RKW0787-G	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-H	BOTTOM CABINET	1	
41	RMA1925	CAB BUCKLE PLATE	1	
42	RMG0679-H	RUBBER CAP	1	
43	RML0541	LEVER	1	
44	RMR1618-X1	REVERSE PREVENT PLATE	1	
45	RMR1701-H	GRIP L	1	
46	RMR1702-H	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	RQT7824-P	O/I BOOK	1	English
A4	RQT7825-C	O/I BOOK	1	(PC) Canadian French
C9	ECJ1VB0J105K	6.3V 1U	1	
C10	ECUV1H271JCV	50V 270P	1	
C11	ECUV1A105KBV	10V 1U	1	
C12	F2H0G470A001	4V 47U	1	
C13	F3H1A476A001	10V 47U	1	
C14	F2A0G221A012	4V 220U	1	
C15	ECUV1A105ZFV	10V 1U	1	
C16	ECUV1A105KBV	10V 1U	1	
C17	ECUV1A105ZFV	10V 1U	1	
C18	ECUV1A105KBV	10V 1U	1	
C19	F3F0J226A004	6.3V 22U	1	
C20	ECUV1A105KBV	10V 1U	1	
C21	F1H1H222A219	50V 2200P	1	
C22	ECUZ1C104ZFV	16V 0.1U	1	
C27	ECEA0GKS471I	4V 470U	1	
C28	ECEA0GKS471I	4V 470U	1	
C37	ECUV1A105KBV	10V 1U	1	
C38	F3F0J226A004	6.3V 22U	1	
C40	ECUV1A105KBV	10V 1U	1	
C41	F1H1C104A008	16V 0.1U	1	
C42	F3F0J226A004	6.3V 22U	1	
C47	ECUV1H330JCV	50V 33P	1	
C101	F2H0G470A001	4V 47U	1	
C201	F2A0G470A012	4V 47U	1	
C301	ECUV1A105ZFV	10V 1U	1	
C302	ECUV1A105KBV	10V 1U	1	
C305	F1H1H472A219	50V 4700P	1	
C321	ECUV1A105ZFV	10V 1U	1	
C504	ECUV1C104KBV	16V 0.1U	1	
C505	ECUV1E223KBV	25V 0.022U	1	
C506	ECUV1A105ZFV	10V 1U	1	
C507	ECEA0JKS331I	6.3V 330U	1	
C510	ECUV1C393KBV	16V 0.039U	1	
C511	ECUZ1C104ZFV	16V 0.1U	1	
C513	ECUZ1C104ZFV	16V 0.1U	1	
C517	ECUV1A105KBV	10V 1U	1	
C518	ECUV1H561KBV	50V 560P	1	
C519	ECUV1H561KBV	50V 560P	1	
C520	ECUV1A105KBV	10V 1U	1	
C521	ECUV1H332KBV	50V 3300P	1	
C522	ECUV1C104KBV	16V 0.1U	1	
C523	ECUV1A105KBV	10V 1U	1	
C524	ECUV1A105KBV	10V 1U	1	
C527	ECUZ1C104ZFV	16V 0.1U	1	
C528	ECUZ1C104ZFV	16V 0.1U	1	
C529	ECUZ1C104ZFV	16V 0.1U	1	
C530	ECUV1H330JCV	50V 33P	1	
C531	ECJ1VC1H391J	50V 390P	1	
C534	ECJ1VB1C473K	16V 0.047U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C535	ECUZ1C104ZFV	16V 0.1U	1	
C536	ECUV1A105ZFV	10V 1U	1	
C537	ECUV1C104KBV	16V 0.1U	1	
C538	ECUV1C104KBV	16V 0.1U	1	
C539	ECUV1C104KBV	16V 0.1U	1	
C561	ECUV1C104KBV	16V 0.1U	1	
C570	ECUV1A105KBV	10V 1U	1	
C701	ECEA0GKS471I	4V 470U	1	
C702	ECUV1A105KBV	10V 1U	1	
C703	ECUV1C104KBV	16V 0.1U	1	
C704	ECUV1C104KBV	16V 0.1U	1	
C705	F2A0G221A012	4V 220U	1	
C706	F2A0G221A012	4V 220U	1	
C707	F1H1H102A219	50V 1000P	1	
C708	F1H1H102A219	50V 1000P	1	
C711	ECUZ1C104ZFV	16V 0.1U	1	
C712	F1H1C104A008	16V 0.1U	1	
C901	F1H1H151A736	50V 150P	1	
C903	F1H1H102A219	50V 1000P	1	
C904	ECUZ1C104ZFV	16V 0.1U	1	
CN11	K4BC03B00020	BATTERY TERMINAL	1	
CN101	K1MN24B00108	CONNECTOR(24P)	1	
CN301	K1MN30A00061	CONNECTOR(30P)	1	
D11	MAZ80560ML	DIODE	1	
D31	MA2J11100L	DIODE	1	
IC11	C0DBFFB00005	IC	1	
IC301	C2BBGF000768	IC	1	
IC302	C3EBCG000096	IC	1	
IC501	MN6627962JBA	IC	1	
IC503	C3ABMG000207	IC	1	
ICP11	ERBSE1R50U	IC PROTECTOR	1	⚠
JK11	K2EB2B000006	JACK,DC IN	1	
JK702	K2HC105B0004	JACK,HEADPHONE	1	
L11	G1C331K00008	COIL	1	
L12	G1A101D00009	COIL	1	
L13	G1C101K00033	COIL	1	
L14	G1C101K00033	COIL	1	
L502	G1C101K00033	COIL	1	
L504	G1C101K00033	COIL	1	
L704	G1C471K00007	COIL	1	
L901	J0JCC0000077	COIL	1	
L902	J0JBC0000014	COIL	1	
L903	J0JBC0000014	COIL	1	
P1	RPN1796	TRAY 1	1	
P2	RPN1795	TRAY 2	1	
P3	RPQ1939	PAD A	1	(P)
P3	RPQ1941	PAD A	1	(PC)
P4	RPQ1940	PAD B	1	(P)
P4	RPQ1942	PAD B	1	(PC)
P5	RPHW0020	PROTECTION SHEET	1	
PCB1	REP3872D-M	P.C.B. ASS'Y	1	[RTL]
Q11	B1BDND000001	TRANSISTOR	1	
Q12	B1ABMD000004	TRANSISTOR	1	
Q13	UNR521L00L	TRANSISTOR	1	
Q14	UNR511400L	TRANSISTOR	1	
Q15	B1GBCFJG0004	TRANSISTOR	1	
Q16	UNR511300L	TRANSISTOR	1	
Q19	UNR521M00L	TRANSISTOR	1	
Q31	UNR521500L	TRANSISTOR	1	
Q201	2SB0709A0L	TRANSISTOR	1	
Q301	UNR521M00L	TRANSISTOR	1	
Q502	B1CFHA000002	TRANSISTOR	1	
Q704	B1GFGCAA0001	TRANSISTOR	1	
Q901	UNR511400L	TRANSISTOR	1	

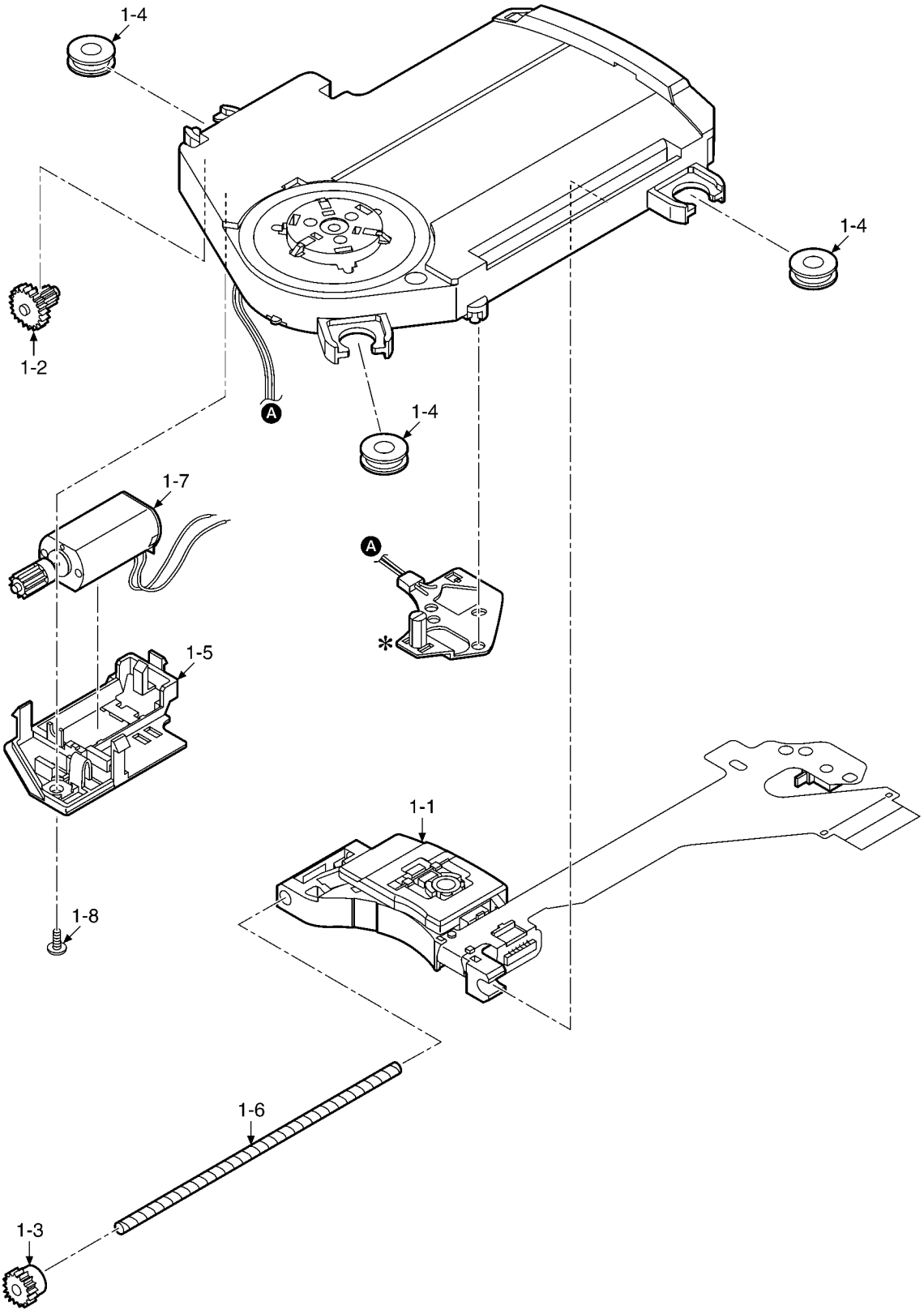
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q902	UNR521000L	TRANSISTOR	1	
Q905	UNR521500L	TRANSISTOR	1	
R1	D0YBR0000010	CHIP RING	1	
R2	ERJ3GEY0R00V	1/10W 0	1	
R10	ERJ3GEYJ271V	1/10W 270	1	
R13	ERJ3GEYJ102V	1/10W 1K	1	
R14	ERJ3RBD563V	1/16W 56K	1	
R15	ERJ3RBD563V	1/16W 56K	1	
R16	ERJ3GEYJ104V	1/10W 100K	1	
R17	ERJ12YJ1R8U	1/2W 1.8	1	
R21	ERJ3GEYJ100V	1/10W 10	1	
R22	ERJ3GEYJ223V	1/10W 22K	1	
R28	ERJ3GEYJ271V	1/10W 270	1	
R29	ERJ3GEYJ560V	1/10W 56	1	
R31	ERJ3GEYJ224V	1/10W 220K	1	
R33	ERJ3GEYJ474V	1/10W 470K	1	
R204	ERJ3GEYJ224V	1/10W 220K	1	
R304	ERJ3GEYJ105V	1/10W 1M	1	
R306	EXBV8V473JV	1/16W 47K	1	
R307	ERJ3GEYJ103V	1/10W 10K	1	
R313	ERJ3GEYJ104V	1/10W 100K	1	
R317	ERJ3GEYJ104V	1/10W 100K	1	
R319	ERJ3GEYJ104V	1/10W 100K	1	
R320	ERJ3GEY0R00V	1/10W 0	1	
R321	ERJ3GEY0R00V	1/10W 0	1	
R323	ERJ3GEYJ104V	1/10W 100K	1	
R325	ERJ3GEYJ333V	1/10W 33K	1	
R327	ERJ3GEYJ104V	1/10W 100K	1	
R329	ERJ3GEYJ104V	1/10W 100K	1	
R330	ERJ3GEYJ104V	1/10W 100K	1	
R333	ERJ3GEYJ102V	1/10W 1K	1	
R335	ERJ3GEY0R00V	1/10W 0	1	
R361	ERJ3GEYJ102V	1/10W 1K	1	
R380	ERJ3GEY0R00V	1/10W 0	1	
R381	ERJ3GEY0R00V	1/10W 0	1	
R382	ERJ3GEY0R00V	1/10W 0	1	
R383	ERJ3GEY0R00V	1/10W 0	1	
R384	ERJ3GEY0R00V	1/10W 0	1	
R385	ERJ3GEY0R00V	1/10W 0	1	
R386	EXBV8V102JV	1/16W 1K	1	
R387	EXBV8V102JV	1/16W 1K	1	
R388	EXBV8V102JV	1/16W 1K	1	
R389	EXBV8V102JV	1/16W 1K	1	
R390	EXBV8V102JV	1/16W 1K	1	
R391	EXBV8V102JV	1/16W 1K	1	
R502	ERJ3GEYJ563V	1/10W 56K	1	
R504	ERJ3GEYJ105V	1/10W 1M	1	
R505	ERJ3GEYJ681V	1/10W 680	1	
R506	ERJ3GEYJ393V	1/10W 39K	1	
R507	ERJ3GEYJ151V	1/10W 150	1	
R508	ERJ3GEYJ682V	1/10W 6.8K	1	
R509	ERJ3GEYJ104V	1/10W 100K	1	
R511	ERJ3GEYJ222V	1/10W 2.2K	1	
R512	ERJ3GEYJ104V	1/10W 100K	1	
R513	ERJ3GEYJ104V	1/10W 100K	1	
R514	ERJ3GEYJ681V	1/10W 680	1	
R515	ERJ3GEYJ104V	1/10W 100K	1	
R516	ERJ3GEYJ104V	1/10W 100K	1	
R517	ERJ3GEY0R00V	1/10W 0	1	
R518	ERJ3GEYJ332V	1/10W 3.3K	1	
R519	ERJ3GEYJ473V	1/10W 47K	1	
R520	ERJ3GEYJ222V	1/10W 2.2K	1	
R521	ERJ3GEYJ222V	1/10W 2.2K	1	
R523	ERJ3GEYJ100V	1/10W 10	1	
R524	ERJ3GEYJ103V	1/10W 10K	1	
R525	ERJ3GEYJ103V	1/10W 10K	1	
R526	ERJ3GEYJ222V	1/10W 2.2K	1	
R527	ERJ3GEYJ222V	1/10W 2.2K	1	
R528	ERJ3GEYJ104V	1/10W 100K	1	
R529	ERJ3GEY0R00V	1/10W 0	1	
R531	ERJ3GEYJ2R2V	1/10W 2.2	1	
R532	ERJ3GEYJ220V	1/10W 22	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R534	ERJ3GEYJ223V	1/10W 22K	1	
R536	ERJ3GEY0R00V	1/10W 0	1	
R701	ERJ3GEYJ561V	1/10W 560	1	
R702	ERJ3GEYJ561V	1/10W 560	1	
R703	ERJ3GEYJ5R6V	1/10W 5.6	1	
R704	ERJ3GEYJ5R6V	1/10W 5.6	1	
R705	ERJ3GEYJ2R2V	1/10W 2.2	1	
R706	ERJ3GEYJ2R2V	1/10W 2.2	1	
R707	ERJ3GEYJ102V	1/10W 1K	1	
R708	ERJ3GEYJ102V	1/10W 1K	1	
R901	ERJ3GEYJ222V	1/10W 2.2K	1	
R902	ERJ3GEYJ223V	1/10W 22K	1	
R904	ERJ3GEYJ102V	1/10W 1K	1	
R910	ERJ3GEYJ222V	1/10W 2.2K	1	
R956	ERJ3GEYJ330V	1/10W 33	1	
RJ10	ERJ3GEY0R00V	1/10W 0	1	
RJ903	ERJ3GEYJ100V	1/10W 10	1	
S201	ESE11MV9T	SW,LASER ON/OFF	1	
S202	K0L1BB000025	SW,REST DET.	1	
S310	K0D112B00071	SW,HOLD	1	
X501	H2D169500017	OSCILLATOR	1	

15 Cabinet Parts Location



16 Traverse Unit Parts Location



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

17 Packaging