ORDER NO. AD0603012CE

Service Manual

Portable CD Player

COMPACT disc DIGITAL AUDIO

SL-SV592EE

Colour
(S).....Silver Type

⚠ WARNING

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

Panasonic®

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1 Safety Precaution

1.1. Precaution of Laser Diode

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pick-up lens.
Wave length: 795 nm
Maximum output radiation power from pick-up: 100 μW/VDE

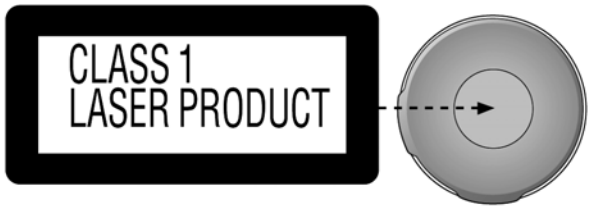
Laser radiation from the pick-up unit is safety level, but be sure the followings:

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

ACHTUNG: Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit adgestrahit.
Wellenlänge: 795 nm
Maximale Strahlungsleistung der Lasereinheit: 100 μW/VDE

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

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



(Bottom of product)

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

(Inside of product)

1.2. 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).

1.2.1. Handling of Traverse deck (optical pick-up)

1. Do not subject the optical pick-up to static electricity as it is extremely sensitive to electrical shock.
2. To protect the laser diode against electrostatic breakdown, be sure that the short land of the flexible board (FFC board) should be short-circuit by solder before pulling out the FFC. Then inserting a short pin or similar object into the tip of the flexible board.
   (Refer to Fig. TR1)
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. TR1)

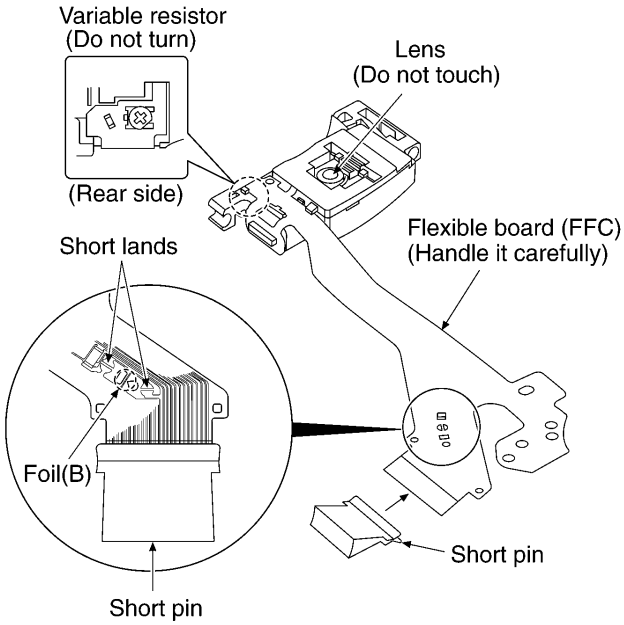


Fig. TR1

1.2.2. 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. TR1) (Take care not to make contact with cutting point each other.)
3. Unsolder the short lands. (Refer to Fig. TR1)

1.2.3. Ground for electrostatic breakdown prevebtion

1.2.3.1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body. (Refer to Fig. TR2)

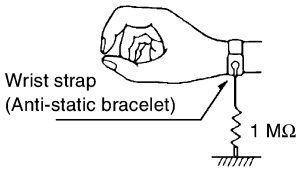


Fig. TR2

1.2.3.2. 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. TR3)

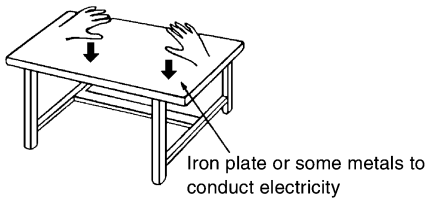


Fig. TR3

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).

2 Service Navigation

2.1. General Description About Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30°C more than that of the normal solder.

Distinction of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder.(See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.
  (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30°C .

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  RFKZ03D01K----------(0.3mm 100g Reel)
  RFKZ06D01K----------(0.6mm 100g Reel)
  RFKZ10D01K----------(1.0mm 100g Reel)

Note

* Ingredient: tin (Sn) 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

3 Specifications

Play time

Using on a flat stable surface at 25 °C, all sound quality/sound effects are canceled, Hold is on, Anti-skip is on POS 1 (CD-DA) and recommended bit rate (MP3: 128 kbps). Play times are in hours and approximate.

- The play time may be less depending on the operating conditions.
- Play time will be considerably reduced when playing CD-RW.

Batteries used	MP3	CD-DA	Radio (FM band)
2 alkaline batteries (LR6)	75	33	33
2 optional rechargeable batteries※ (P-3GAVE/2B)	33	15	15

※ When fully recharged.

CD Section

■Recharging time

About 3.5 to 4.5 hours

■Audio (CD-DA)

Sampling frequency: 44.1 kHz
No. of channels: 2 (left and right, stereo)
Frequency response: 20 Hz to 20,000 Hz (+0.5 dB to −7 dB)
Headphone output level: RMS max. 6.5 mW+6.5 mW/16 Ω (adjustable)

■Pickup

Light source: Semiconductor laser
Wavelength: 795 nm

■MP3

Supported bit rates (Supports variable bit rates): 32 kbps to 320 kbps (128 kbps is recommended)
Supported sampling frequency: 48 kHz/44.1 kHz/32 kHz
Maximum number of items
(total no. of albums and tracks): 999
(total no. of albums): 500
Maximum album levels: 100

Radio section (FM)

■Frequency

Radio frequency: 87.50 MHz to 108.00 MHz (0.05 MHz steps)
IF: 10.7 MHz

■Audio

Selectivity: 42 dB

General

Power supply:
DC input (via included AC adaptor): DC 4.5 V
AC adaptor input: AC 220 to 230 V 50/60 Hz

Power consumption:
Using AC adaptor (MP3/CD-DA/Radio): 4 W/4 W/3.7 W
Recharging: 5.8 W
Dimensions (W×H×D): 138.6 mm×24.4 mm×138.6 mm
Mass: 220 g (with batteries) 173 g (without batteries)
Operational temperature range: 0 °C to 40 °C
Rechargeable temperature range: 5 °C to 40 °C

AC adaptor standby power consumption: 3.6 W

Note:

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

Note on CD-R and CD-RW

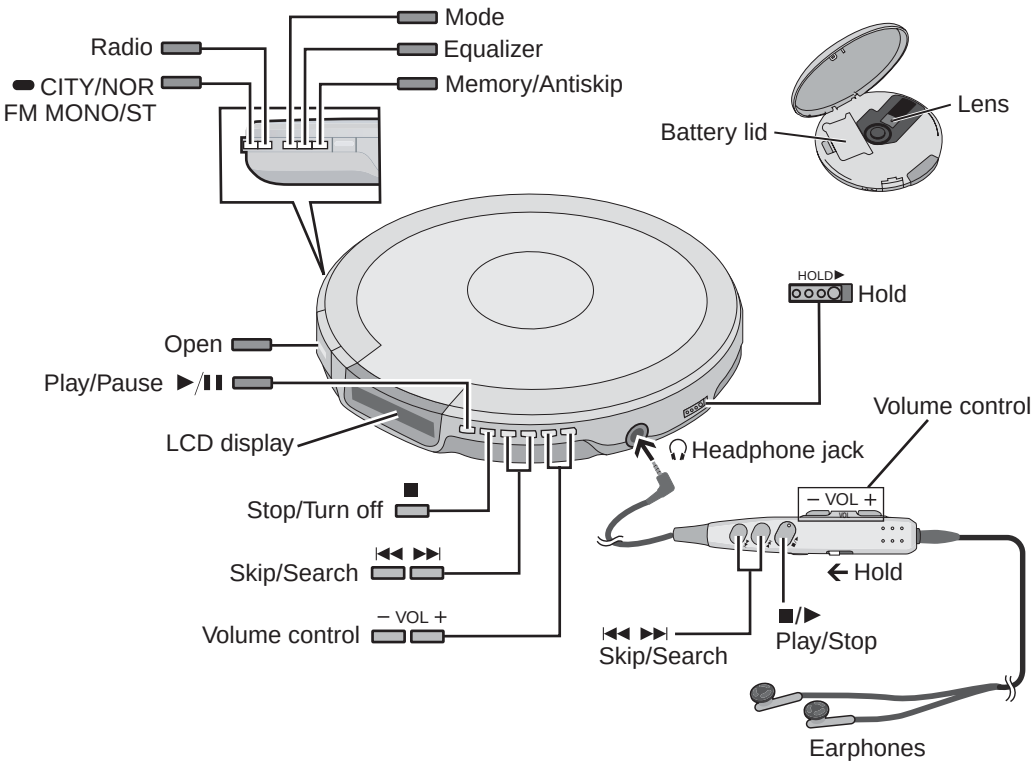
For CD-DA format, use a music disc and finalize※ it after recording. The unit may not be able to play some discs due to the condition of the recording.
※ A process performed after recording that enables CD-R/CD-RW players to play audio CD-R and CD-RW.

4 Location of Controls and Components

4.1. Accessories

- AC adaptor
  (RFEA418E-2S).....1 pc.
- Stereo earphones
  (L0BAB0000183).....1 pc.
- Wired remote controller
  (N2QCBD000011).....1 pc.

4.2. Location of Controls

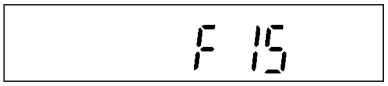


5 Service Mode

5.1. Display of Self-Diagnostic Function

This unit (SL-SV592) has self-diagnostic function. It may display below-mentioned on the LCD of this unit.

- The substance of self-diagnostic display.
  LCD display



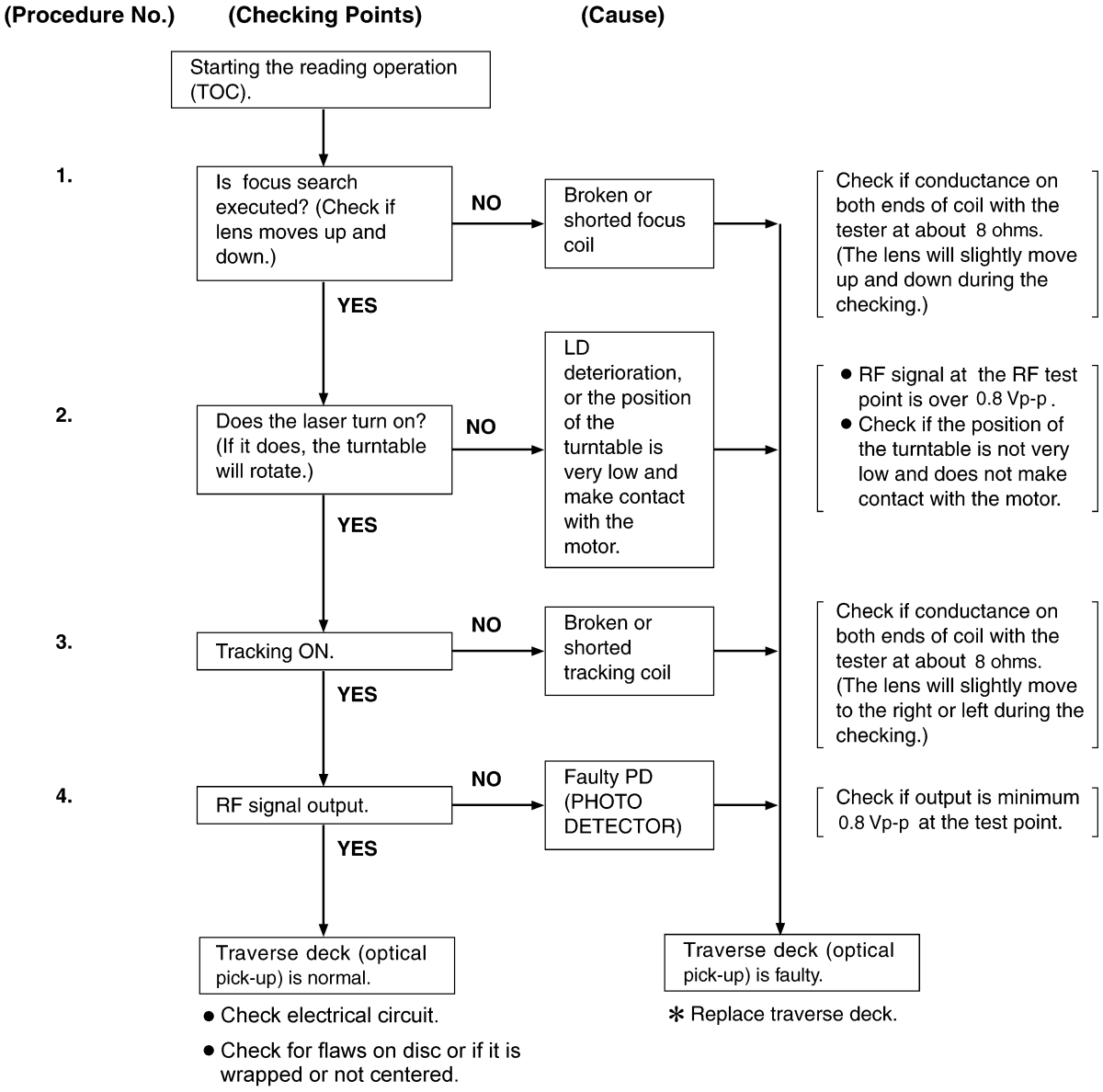
(Press PLAY and STOP button. After 15 seconds, it is displayed for 2 seconds.)

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 PCB. It is necessary for confirmation or repair and replacement each parts.

6 Troubleshooting Guide

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

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pick-up) before replacing it. Replace the traverse deck only after the problem is identified.



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

6.1.1.1. Checking skip search

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

6.1.1.2. Checking manual search

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

6.1.1.3. Checking playability

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the playability test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

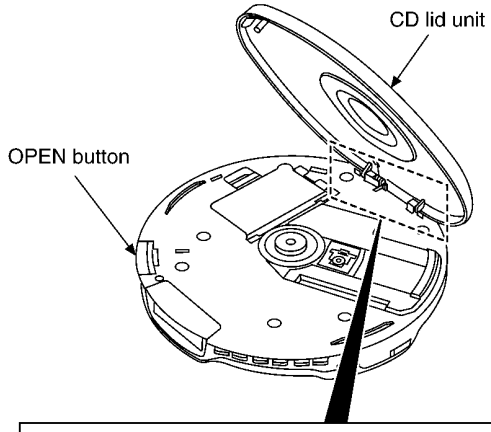
7 Disassembly and Assembly Instructions

- **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.**

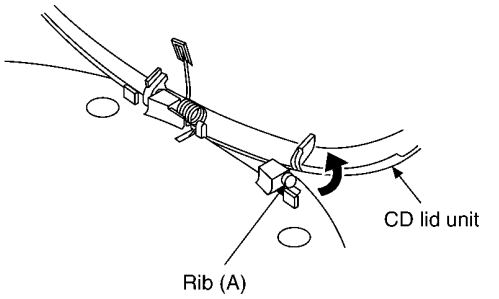
7.1. Checking for the PCB

7.1.1. Checking for the PCB (A side)

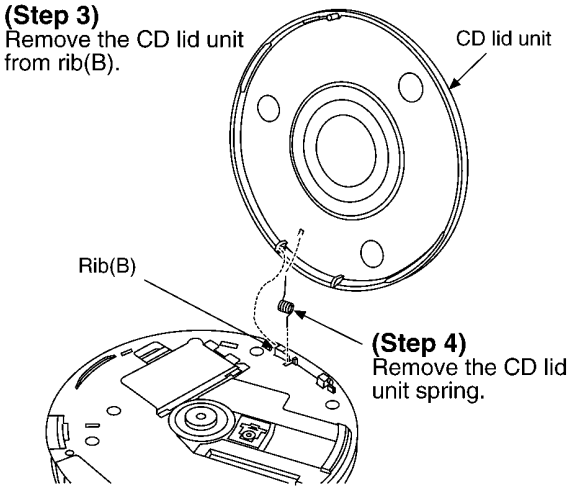
(Step 1)
Pressing the OPEN button, open the CD lid unit.



(Step 2)
Pull the CD lid unit in the direction of arrow, and then remove the CD lid unit from rib (A).

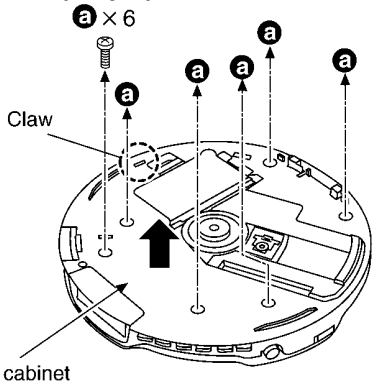


(Step 3)
Remove the CD lid unit from rib(B).



(Step 4)
Remove the CD lid unit spring.

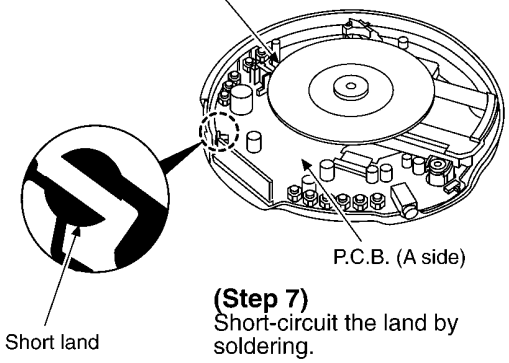
(Step 5)
ⓐ × 6



(Step 6)
Release the claw, and then remove the middle cabinet.

- **Check the PCB (A side) as shown below.**

(Step 8)
Put the disc (8cm).



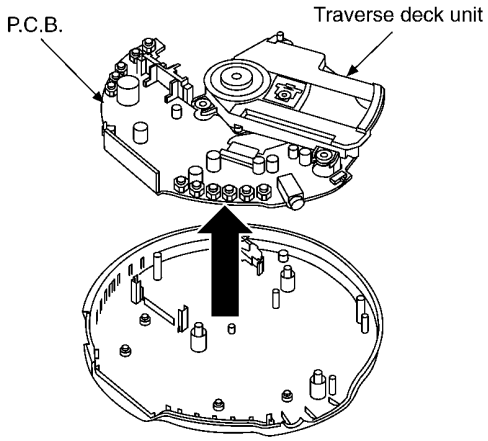
(Step 7)
Short-circuit the land by soldering.

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

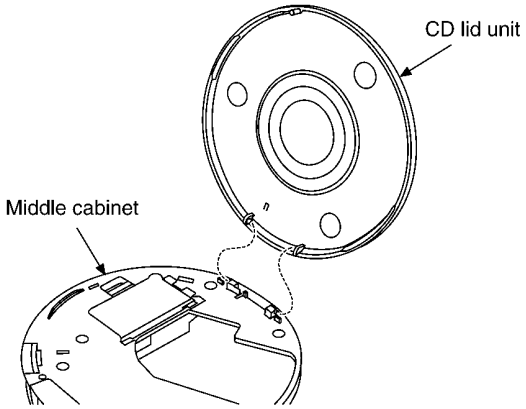
7.1.2. Checking for the PCB (B side)

• Follow the **(Step 1)** - **(Step 7)** of item 7.1.1.

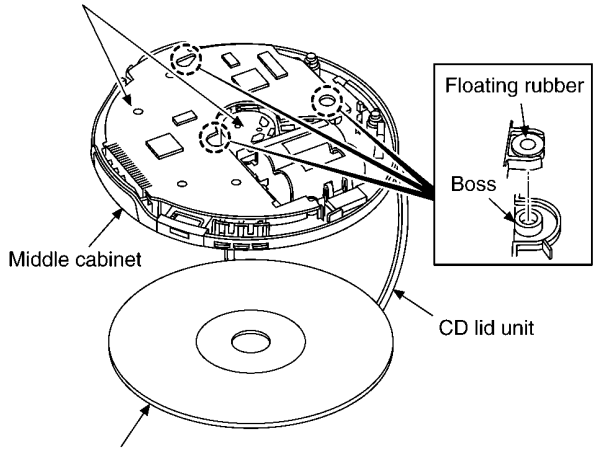
(Step 1)
Remove the traverse deck unit and P.C.B..



(Step 2)
Install the CD lid unit to middle cabinet.

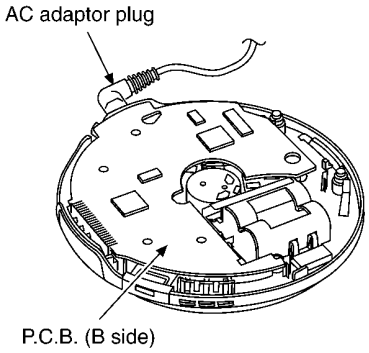


(Step 3)
Align the floating rubbers with bosses, and then locate the traverse deck unit and P.C.B. on the middle cabinet.



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

• Check the PCB (B side) as shown below.

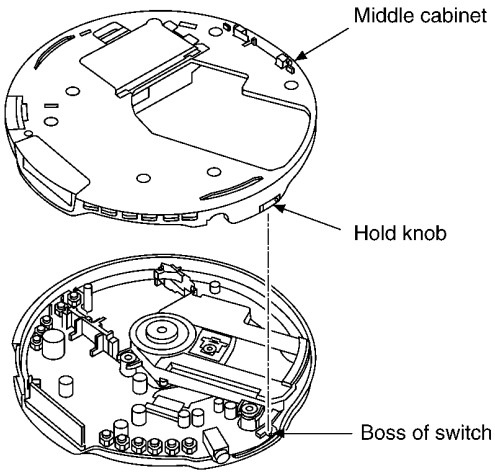


(Step 5)
Insert the AC adaptor plug into the DC IN jack, and then apply the power.

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

Notice for installation of middle cabinet

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



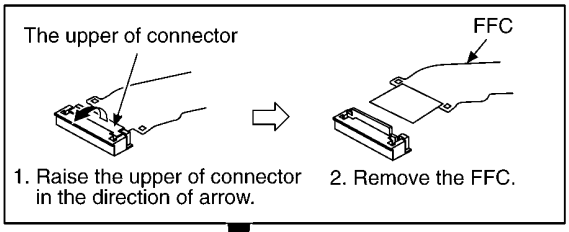
7.2. Replacement for the traverse motor

• Follow the **(Step 1)** - **(Step 6)** of item 7.1.1.

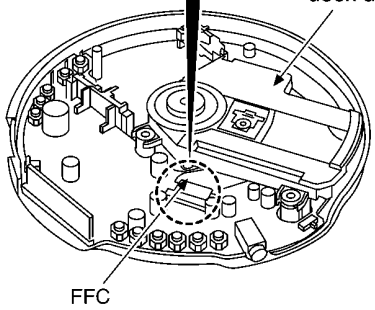
NOTE:

Be sure to confirm the item 1.2. “Handling Precautions for Traverse Deck” before removing the traverse deck ass’y.

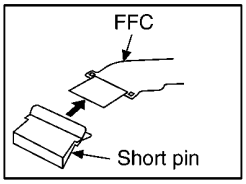
(Step 1)
Pull out the FFC from connector.



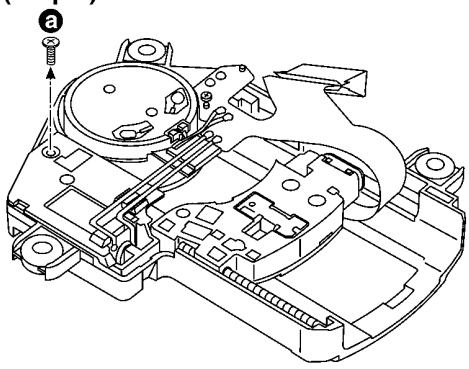
(Step 2)
Remove the traverse deck unit.



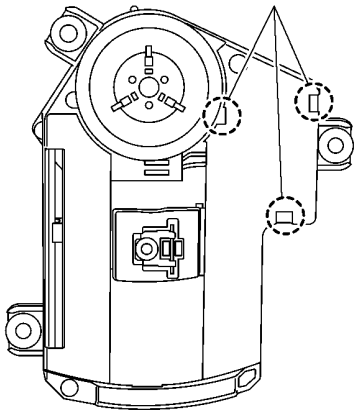
NOTE:
Insert a short pin into the traverse deck's FFC.
(Refer to “**Handling Precautions for Traverse Deck**”.)



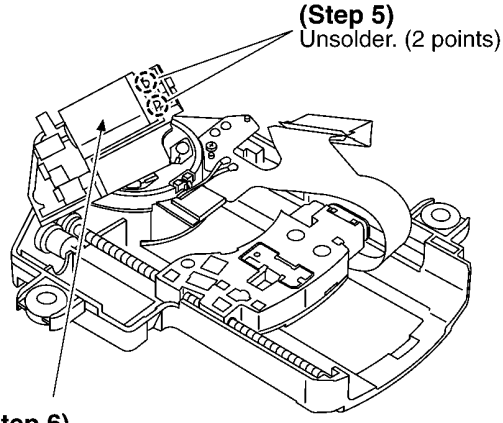
(Step 3)



(Step 4)
Release the 3 claws.



(Step 5)
Unsolder. (2 points)

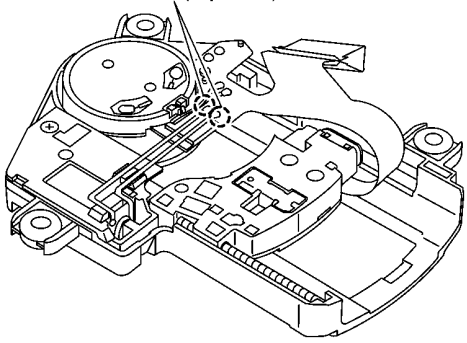


(Step 6)
Remove the traverse motor.

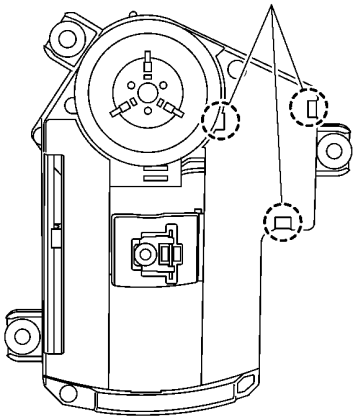
7.3. Replacement for the optical pick-up

• Follow the **(Step 1)** - **(Step 6)** of item 7.1.1.
• Follow the **(Step 1)** - **(Step 3)** of item 7.2.

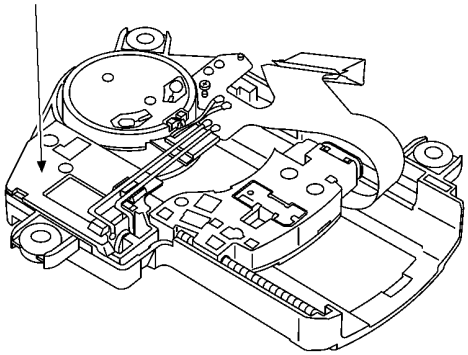
(Step 1)
Unsolder. (2 points)



(Step 2)
Release the 3 claws.

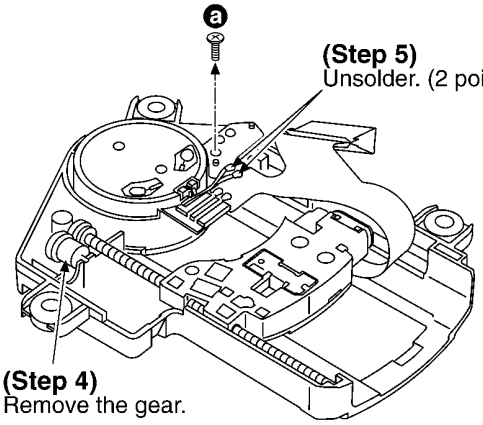


(Step 3)
Remove the holder and traverse motor.



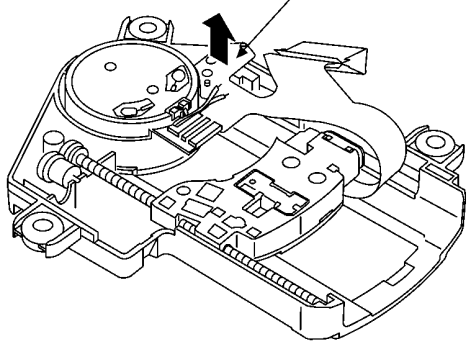
(Step 6)

(Step 5)
Unsolder. (2 points)

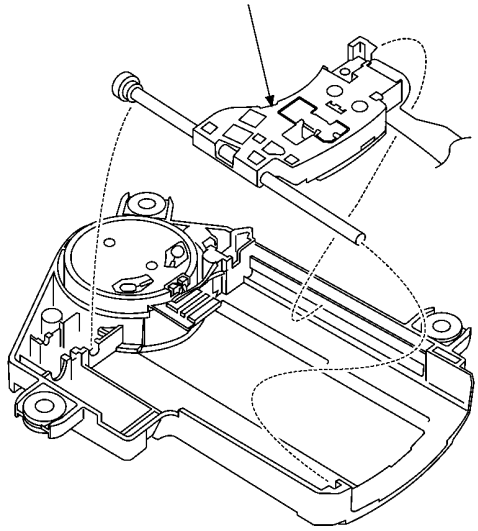


(Step 4)
Remove the gear.

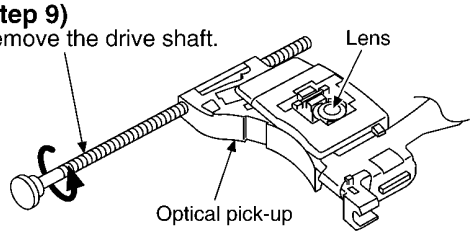
(Step 7)
Remove the FFC.



(Step 8)
Remove the optical pick-up ass'y.



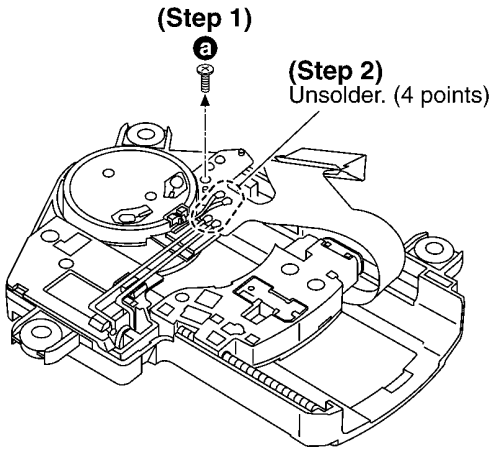
(Step 9)
Remove the drive shaft.

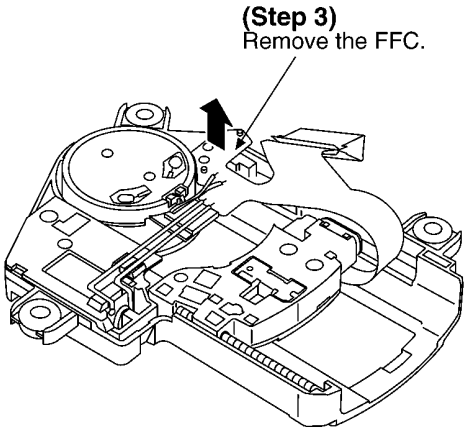


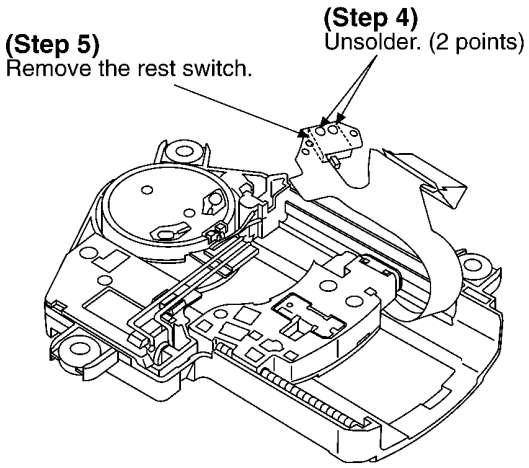
NOTE:
1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not apply the grease on the lens of optical pick-up.
3. Do not touch the lens of the optical pick-up.

7.4. Replacement for the rest switch

- Follow the **(Step 1)** - **(Step 6)** of item 7.1.1.
- Follow the **(Step 1)**, **(Step 2)** of item 7.2.







8 Measurements and Adjustments

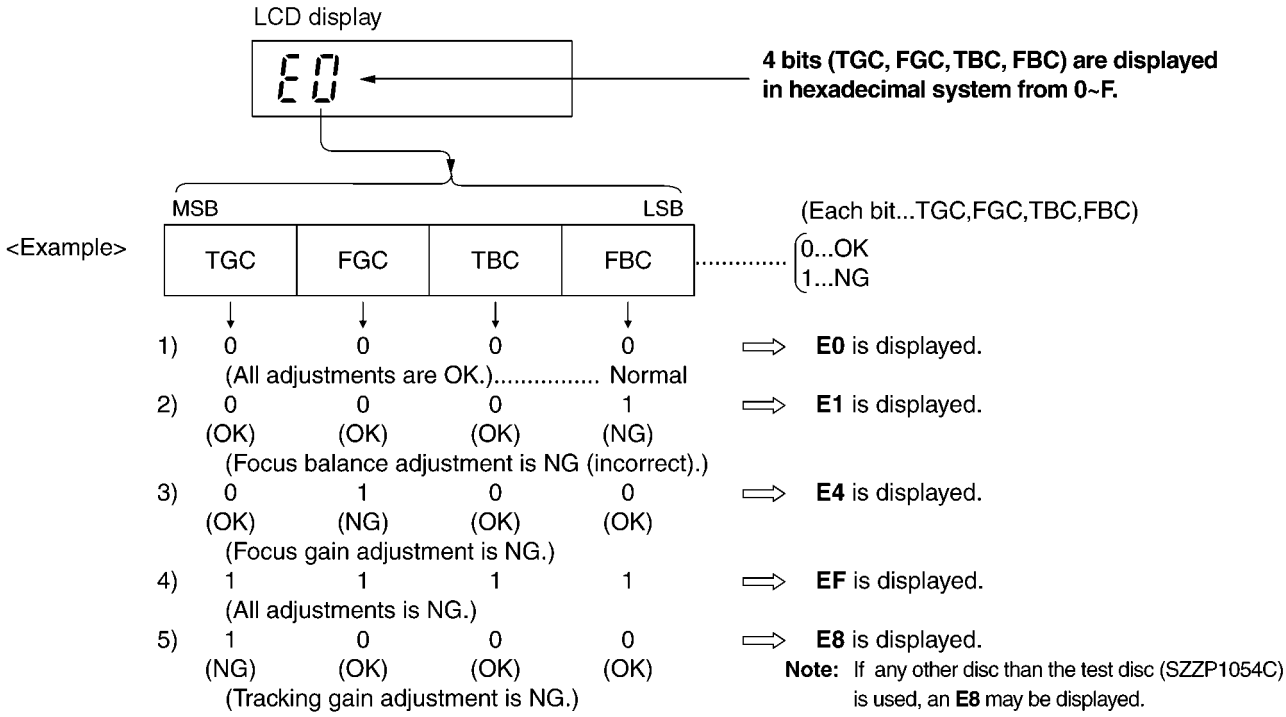
8.1. Automatic Adjustment Results Display Function (Self-Check Function)

On the unit (SL-SV592), each automatic adjustment result are displayed on the remote control display. 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).

8.1.1. How to display automatic adjustment results

1. Load the test disc (SZZP1054C).
2. Press the ⏮ (SKIP/SEARCH) and ⏭ (SKIP/SEARCH) buttons simultaneously and hold them, and additionally press the ▶/⏸ (PLAY/PAUSE) button.
3. Press the ■ (STOP/TURN OFF) button once.
4. An automatic adjustment result is displayed on the remote control display.

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



<Example>

Follow the below steps when E1 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 E4 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 EF 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.

AD0603012CE

Service Manual

Diagrams and Replacement Parts List

Portable CD Player

SL-SV592EE

Colour
(S).....Silver Type

Table of contents

S1. About Indication of The Schematic Diagram

S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

1.Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "$" mark.

2.It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.

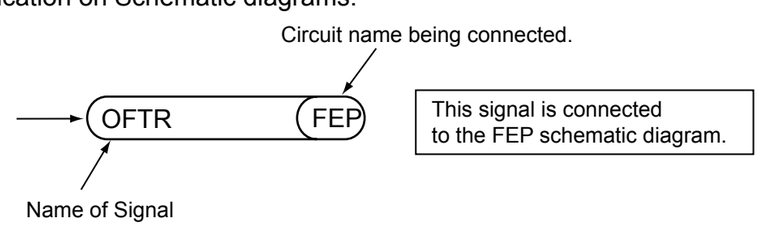
3.The voltage being indicated on the schematic diagram is measured in "Standard-Playback" mode when there is no specify mode is mentioned.

4.Although the voltage and waveform available on here is measured with standard frame, it may be differ from actual measurement due to modification of circuit and so on.

5.The voltage being indicated here may be include observational-error (deviation) due to internal-resistance and/or reactance of equipment. Therefore, handle the value indicated on here as reference.

6.Use the parts number indicated on the Replacement Parts List .

7.Indication on Schematic diagrams:



S2. Voltage Chart

Note) Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

S2.1. Main P.C.B.

REF No.	PIN No.	STOP	PLAY	FM
IC101	1	0.8	2.9	
IC101	2	2.5	2.3	
IC101	3	3	3	
IC101	4	0	3.1	
IC101	5	0	1.3	
IC101	6	0	1.8	
IC101	7	0	1.2	
IC101	8	0	1.5	
IC101	9	1.9	1.5	
IC101	10	2.9	1.5	
IC101	11	0	1.4	
IC101	12	1.4	1.4	
IC101	13	0	0.1	
IC101	14	0	0.1	
IC101	15	0	0.1	
IC101	16	0	3	
IC101	17	0	0	
IC101	18	3	0	
IC101	19	1.4	1.4	
IC101	20	0.7	1.4	
IC101	21	0.7	1.4	
IC101	22	0.5	1.4	
IC101	23	0.5	1.4	
IC101	24	0	0	
IC101	25	1.7	1.7	
IC101	26	1.4	1.4	
IC101	27	0	2.1	
IC101	28	0	2.1	
IC101	29	0	1.7	
IC101	30	0	1.8	
IC101	31	0	1.8	
IC101	32	3	3	
IC301	1	3.1	3.1	
IC301	2	3.1	3.1	
IC301	3	1.4	1.4	
IC301	4	2.8	2.8	
IC301	5	0	0	
IC301	6	3.1	3.1	
IC301	7	3.1	3.1	
IC301	8	3.1	3.1	
IC301	9	3.1	3.1	
IC301	10	3.1	3.1	
IC301	11	2.8	2.8	
IC301	12	3.1	3.1	
IC301	13	0	3.1	
IC301	14	0	0	
IC301	15	2.8	2.8	
IC301	16	2.8	2.8	
IC301	17	2.8	2.8	
IC301	18	3.1	3.1	
IC301	19	3.1	2.8	
IC301	20	0	0.5	
IC301	21	0	0	
IC301	22	2.8	2.8	
IC301	23	3.1	3.1	
IC301	24	2.8	2.8	
IC301	25	2.8	2.8	
IC301	26	0	0	
IC301	27	0	0	
IC301	28	1.4	1.4	
IC301	29	1.3	1.3	
IC301	30	0	0	
IC301	31	0	0	
IC301	32	0	0	
IC301	33	3	3	
IC301	34	0	0	
IC301	35	3	3	

REF No.	PIN No.	STOP	PLAY	FM
IC301	36	3.1	3.1	
IC301	37	0	0	
IC301	38	3	3	
IC301	39	3	0	
IC301	40	0	3	
IC301	41	0	0	
IC301	42	0	0	
IC301	43	0	0	
IC301	44	3.1	3.1	
IC301	45	1.4	1.4	
IC301	46	1.4	1.4	
IC301	47	3.1	3.1	
IC301	48	0	0	
IC301	49	0	0	
IC301	50	0	0	
IC301	51	0	0	
IC301	52	0	0	
IC301	53	1.4	1.4	
IC301	54	1.4	1.4	
IC301	55	1.4	1.4	
IC301	56	1.4	1.4	
IC301	57	1.4	1.4	
IC301	58	1.4	1.4	
IC301	59	1.4	1.4	
IC301	60	1.4	1.4	
IC301	61	1.4	1.4	
IC301	62	1.4	1.4	
IC301	63	1.4	1.4	
IC301	64	1.4	1.4	
IC301	65	1.4	1.4	
IC301	66	1.4	1.4	
IC301	67	1.4	1.4	
IC301	68	1.4	1.4	
IC301	69	1.4	1.4	
IC301	70	1.4	1.4	
IC301	71	3.1	3.1	
IC301	72	3.1	3.1	
IC301	73	0	0	
IC301	74	1.4	1.4	
IC301	75	1.4	1.4	
IC301	76	1.4	1.4	
IC301	77	1.4	1.4	
IC301	78	2.9	2.9	
IC301	79	1.9	1.9	
IC301	80	1	1	
IC501	1	0	1.5	
IC501	2	0	1.5	
IC501	3	3.2	1.5	
IC501	4	3.2	3.2	
IC501	5	3.2	3.2	
IC501	6	0.1	0.1	
IC501	7	0	0	
IC501	8	0	0	
IC501	9	0	0	
IC501	10	3.2	3.2	
IC501	11	0	0.5	
IC501	12	0	0.5	
IC501	13	3.2	3.2	
IC501	14	3.2	3.2	
IC501	15	3.2	3.2	
IC501	16	3.2	3.2	
IC501	17	3.2	3.2	
IC501	18	0.1	0.1	
IC501	19	0	1.5	
IC501	20	0	1.5	
IC501	21	0	1.5	
IC501	22	0	1.5	

REF No.	PIN No.	STOP	PLAY	FM
IC501	23	3.1	3.1	
IC501	24	0	0	
IC501	25	0	0	
IC501	26	1.1	0.9	
IC501	27	0	0	
IC501	28	3.2	3.2	
IC501	29	0	0.8	
IC501	30	0	0	
IC501	31	0	0	
IC501	32	0	0.1	
IC501	33	1.5	1.5	
IC501	34	0	0	
IC501	35	0	0.1	
IC501	36	0	0.1	
IC501	37	0	0	
IC501	38	0	0.4	
IC501	39	3.2	3.2	
IC501	40	1.4	1.4	
IC501	41	1.4	1.8	
IC501	42	0.4	1.3	
IC501	43	0.7	1.4	
IC501	44	1.4	1.2	
IC501	45	2.9	1.2	
IC501	46	0	3	
IC501	47	0	0.1	
IC501	48	0	0.1	
IC501	49	0	0.1	
IC501	50	3.2	3	
IC501	51	1.5	1.5	
IC501	52	1.5	1.5	
IC501	53	0	0.8	
IC501	54	0	0	
IC501	55	0.9	1.1	
IC501	56	0.9	1.1	
IC501	57	0	0	
IC501	58	3	3	
IC501	59	0	0	
IC501	60	0	1.5	
IC501	61	3	2.8	
IC501	62	0	3.1	
IC501	63	2.9	3	
IC501	64	0	1.5	
IC501	65	0	0	
IC501	66	0	0.7	
IC501	67	1.5	1.5	
IC501	68	0	0	
IC501	69	0	2.9	
IC501	70	0	0	
IC501	71	0	3.1	
IC501	72	3.1	3.1	
IC501	73	3.1	2.7	
IC501	74	3.1	3.1	
IC501	75	0	1.6	
IC501	76	0	0	
IC501	77	1.3	1.3	
IC501	78	1.6	1.6	
IC501	79	3.1	0.4	
IC501	80	0	3.1	
IC501	81	3.1	3.1	
IC501	82	3.1	3.1	
IC501	83	0	0	
IC501	84	1.3	0	
IC501	85	1.6	1.6	
IC501	86	3.2	3.2	
IC501	87	1.5	1.5	
IC501	88	0	0.5	
IC501	89	0	0.5	

REF No.	PIN No.	STOP	PLAY	FM
IC501	90	0	0.5	
IC501	91	0	0.5	
IC501	92	0	0.5	
IC501	93	0	0.5	
IC501	94	0	0.5	
IC501	95	0	0.5	
IC501	96	0	0.5	
IC501	97	0	0.5	
IC501	98	3.2	3.2	
IC501	99	0	0.4	
IC501	100	0	0.4	
IC503	1	3.1	3.1	
IC503	2	0	1.5	
IC503	3	0	1.5	
IC503	4	0	0	
IC503	5	0	1.5	
IC503	6	0	0.5	
IC503	7	3.1	3.1	
IC503	8	0	0.5	
IC503	9	0	0.5	
IC503	10	0	0	
IC503	11	0	0.5	
IC503	12	0	0.5	
IC503	13	3.1	3.1	
IC503	14	3.1	3.1	
IC503	15	3.1	3.1	
IC503	16	3	3.1	
IC503	17	3	3.1	
IC503	18	0	0	
IC503	19	0	0	
IC503	20	0	0	
IC503	21	0	1.7	
IC503	22	0	1.5	
IC503	23	0	1.5	
IC503	24	0	1.5	
IC503	25	3.1	3.1	
IC503	26	0	0	
IC503	27	3.1	1.6	
IC503	28	0	1.6	
IC503	29	0	1.6	
IC503	30	3.1	1.6	
IC503	31	0	0	
IC503	32	0	0	
IC503	33	0	0	
IC503	34	0.1	0.1	
IC503	35	0.1	0.1	
IC503	36	3.1	3.1	
IC503	37	0	0	
IC503	38	3.1	3.1	
IC503	39	3.1	1.5	
IC503	40	3.1	1.5	
IC503	41	0	0	
IC503	42	0	0.5	
IC503	43	0	0.5	
IC503	44	3.1	3.1	
IC503	45	0	0.5	
IC503	46	0	0.5	
IC503	47	0	0	
IC503	48	0	0.5	
IC503	49	0	0.5	
IC503	50	0	0	
IC1100	1			0.8
IC1100	2			0
IC1100	3			2.6
IC1100	4			0.6
IC1100	5			2.8
IC1100	6			2.9

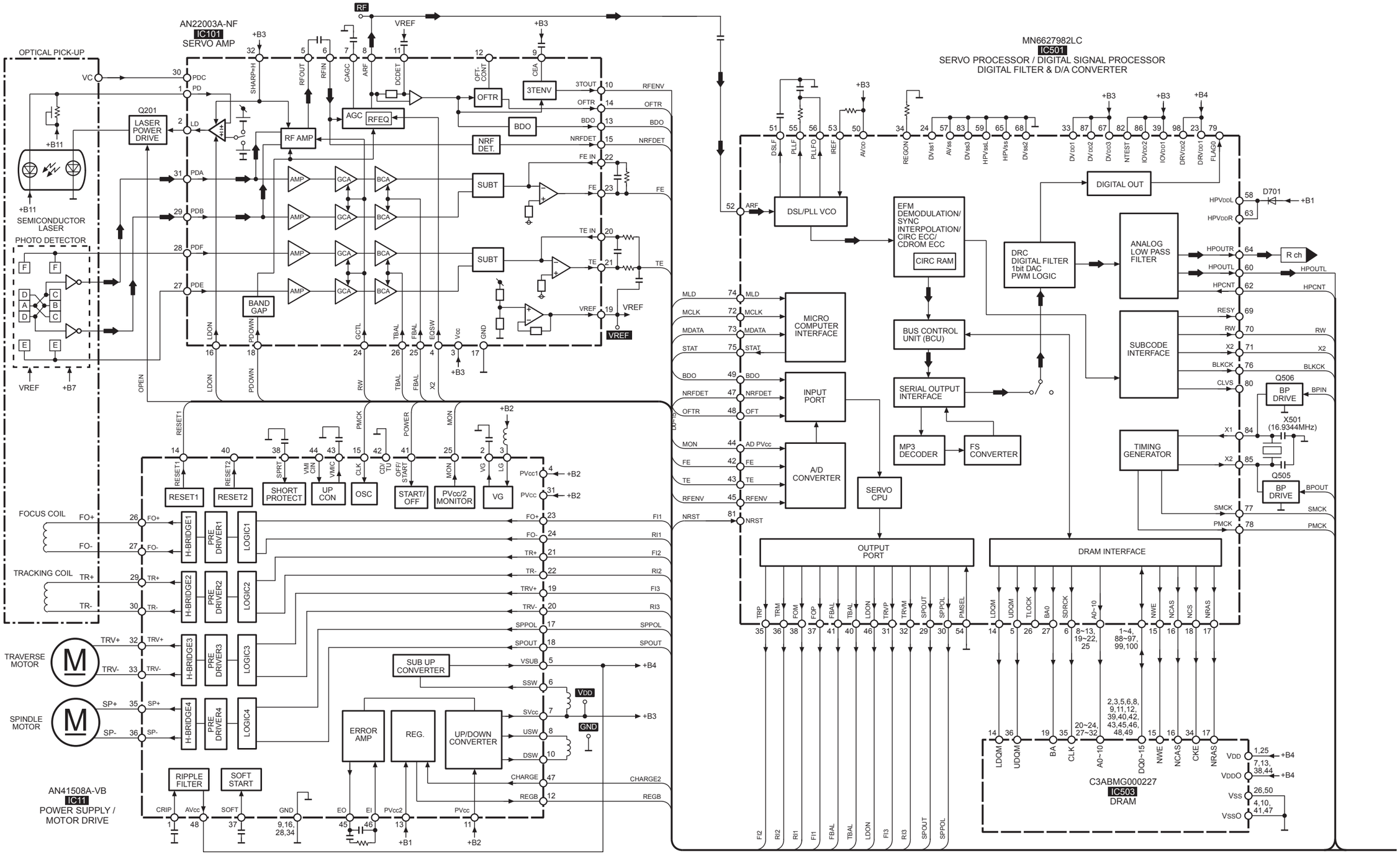
REF No.	PIN No.	STOP	PLAY	FM
IC1100	7			2.3
IC1100	8			2.1
IC1100	9			1
IC1100	10			0.7
IC1100	11			1.9
IC1100	12			2
IC1100	13			1.3
IC1100	14			1.3
IC1100	15			0.3
IC1100	16			0.1
IC1100	17			0
IC1100	18			0
IC1100	19			0
IC1100	20			1.1
IC1100	21			3.1
IC1100	22			3.1
IC1100	23			3.1
IC1100	24			0
IC1100	25			2.2
IC1100	26			3
IC1100	27			1.7
IC1100	28			2.9
IC1100	29			0
IC1100	30			2.9
IC1500	1	0	0	
IC1500	2	0	0	
IC1500	3	0	0	
IC1500	4	0.1	0.1	
IC1500	5	0	0	
IC1500	6	3.1	3	
IC1500	7	0	0	
IC1500	8	0	0	
IC1500	9	0	0	
IC1500	10	3.1	3.1	
IC1500	11	0	0	
IC1500	12	3.1	3.1	
IC1500	13	3.1	2.7	
IC1500	14	3.1	3.1	
IC1500	15	3.1	3.1	
IC1500	16	0	0	
IC1500	17	0	0	
IC1500	18	0	0	
IC1500	19	0	0	
IC1500	20	0	0	
IC1500	21	0	0	
IC1500	22	0	0	
IC1500	23	0	0	
IC1500	24	0	0	
IC1500	25	0	0	
IC1500	26	0	0	
IC1500	27	0	0	
IC1500	28	0	0	
IC1500	29	0	0	
IC1500	30	0	0	
IC1500	31	0	0	
IC1500	32	0	0	
Q102	S	3	3	
Q102	D	0.7	2.8	
Q102	G	3	0	
Q201	E	3.2	3.1	
Q201	C	1	1.8	
Q201	B	2.5	2.3	
Q505	E	0	0	
Q505	C	0.1	0.1	
Q505	B	0	0	
Q506	E	0	0	
Q506	C	0.1	0.1	

REF No.	PIN No.	STOP	PLAY	FM
Q506	B	0	0	
Q708	1	0	0	
Q708	2	2.8	2.8	
Q708	3	0	0	
Q708	4	0	0	
Q708	5	2.8	2.8	
Q708	6	0	0	
Q1012	E			0
Q1012	C			0.4
Q1012	B			0
Q1013	E			0
Q1013	C			1.8
Q1013	B			0.5
Q1152	E			0.6
Q1152	C			3
Q1152	B			1.1
Q1153	E			0
Q1153	C			3
Q1153	B			0.6
QR18	E	2.7	2.7	
QR18	C	0	0	
QR18	B	2.5	2.5	
QR19	E	0	0	
QR19	C	3.1	3.1	
QR19	B	0	0	
QR301	E	0	0	
QR301	C	2.8	2.8	
QR301	B	0	0	
QR704	E	3.2	3.2	
QR704	C	3.1	3.1	
QR704	B	0	0	
QR710	E	0	0	
QR710	C	0	0	
QR710	B	0	0	
QR711	E	0	0	
QR711	C	0	3.1	
QR711	B	3.1	0	
QR1201	E	3.1	3.1	
QR1201	C	0.4	0.4	
QR1201	B	3.1	3.1	
QR1202	E			0
QR1202	C			0.1
QR1202	B			0.7
QR1301	E	3.1	3.1	
QR1301	C	0	0	
QR1301	B	3.1	3.1	
QR1302	E	0	0	
QR1302	C	3.1	3.1	
QR1302	B	0	0	

S3. Block Diagram

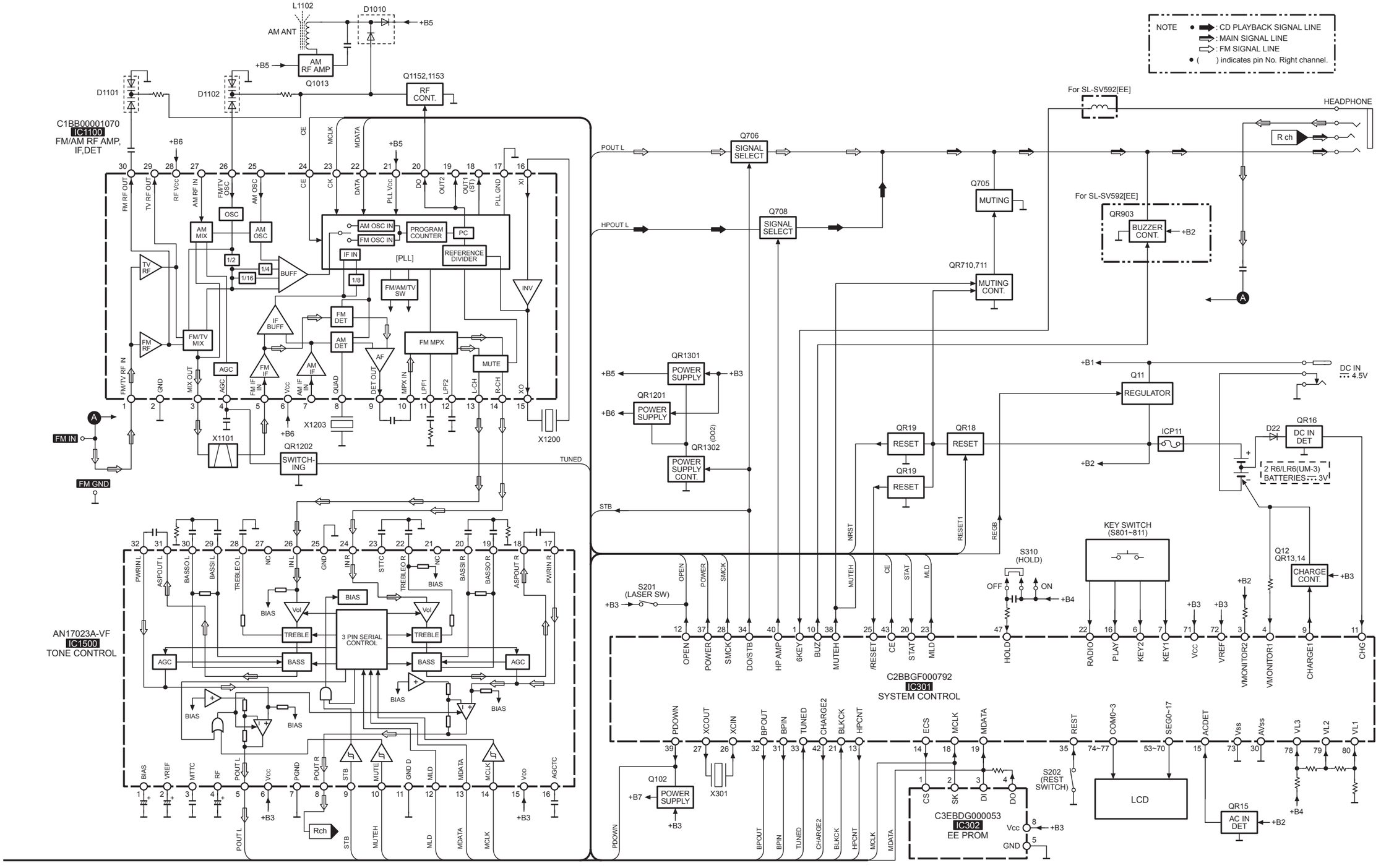
S3.1. Overall Block Diagram

S3.1.1. Overall Block Diagram (1)



SL-SV590/SV592 BLOCK DIAGRAM

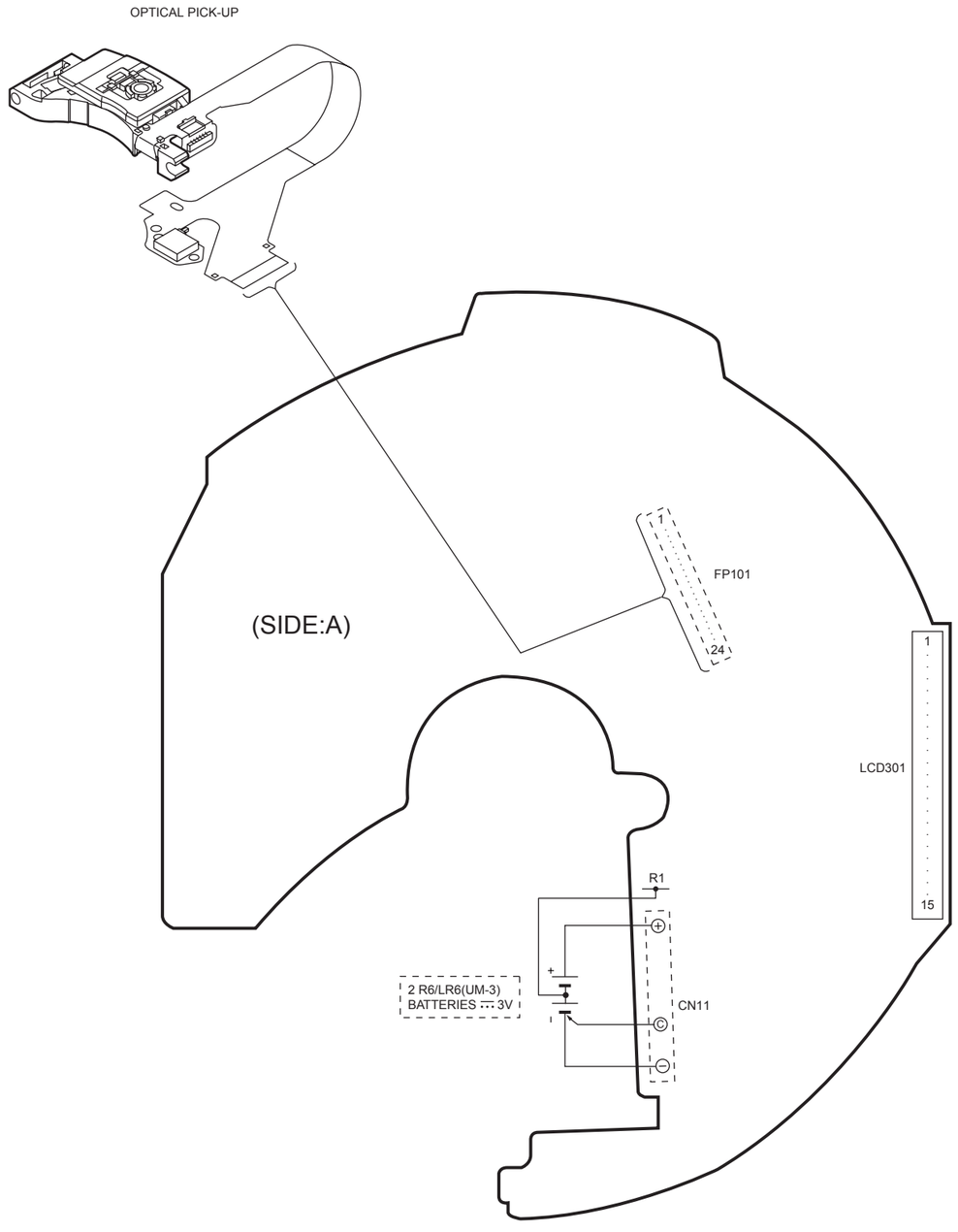
S3.1.2. Overall Block Diagram (2)



SL-SV590/SV592 BLOCK DIAGRAM

S4. Schematic Diagram

S4.1. Interconnection Diagram

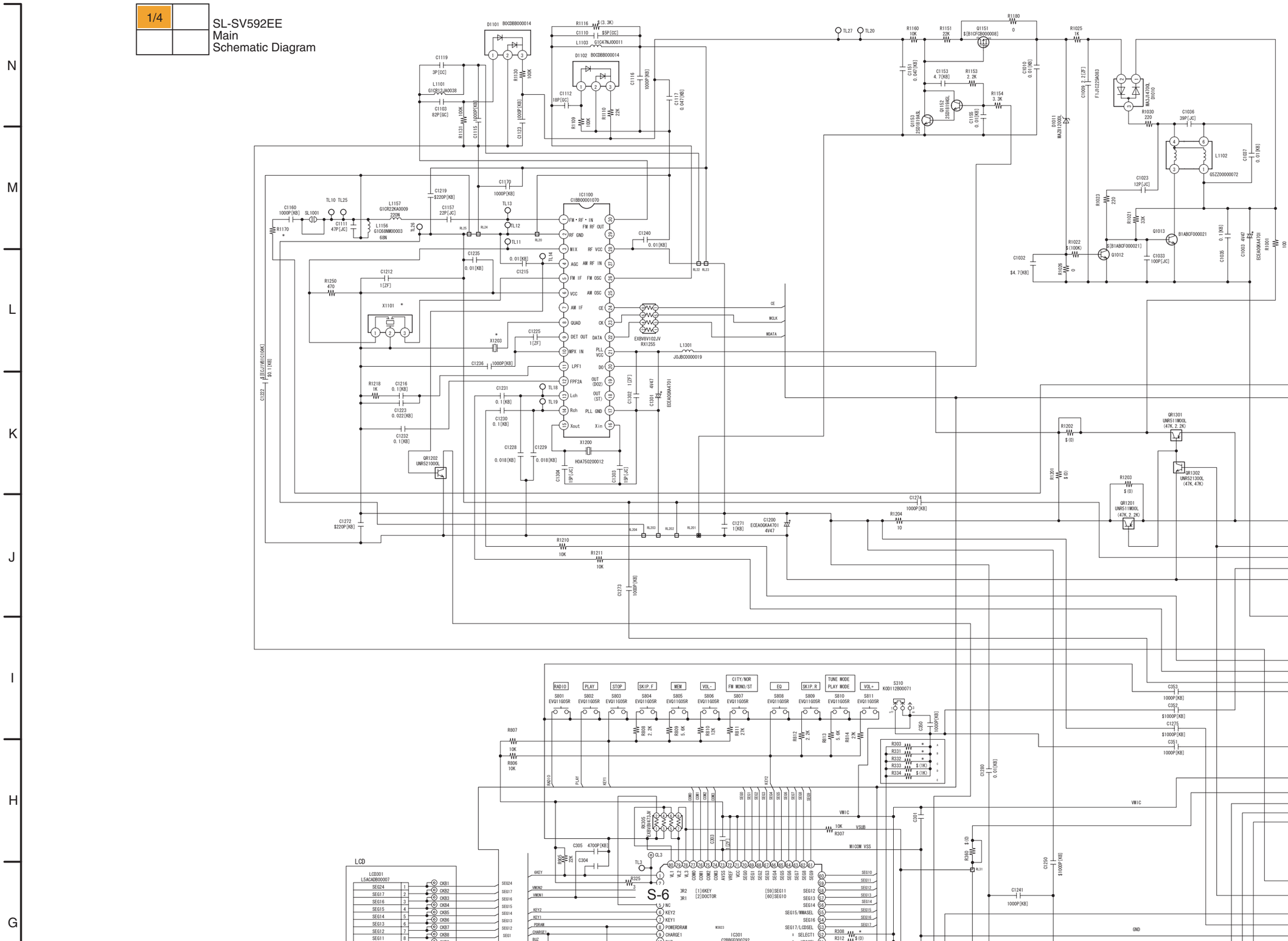


SL-SV590/SV592 WIRING CONNECTION DIAGRAM

S4.2. Main Schematic Diagram

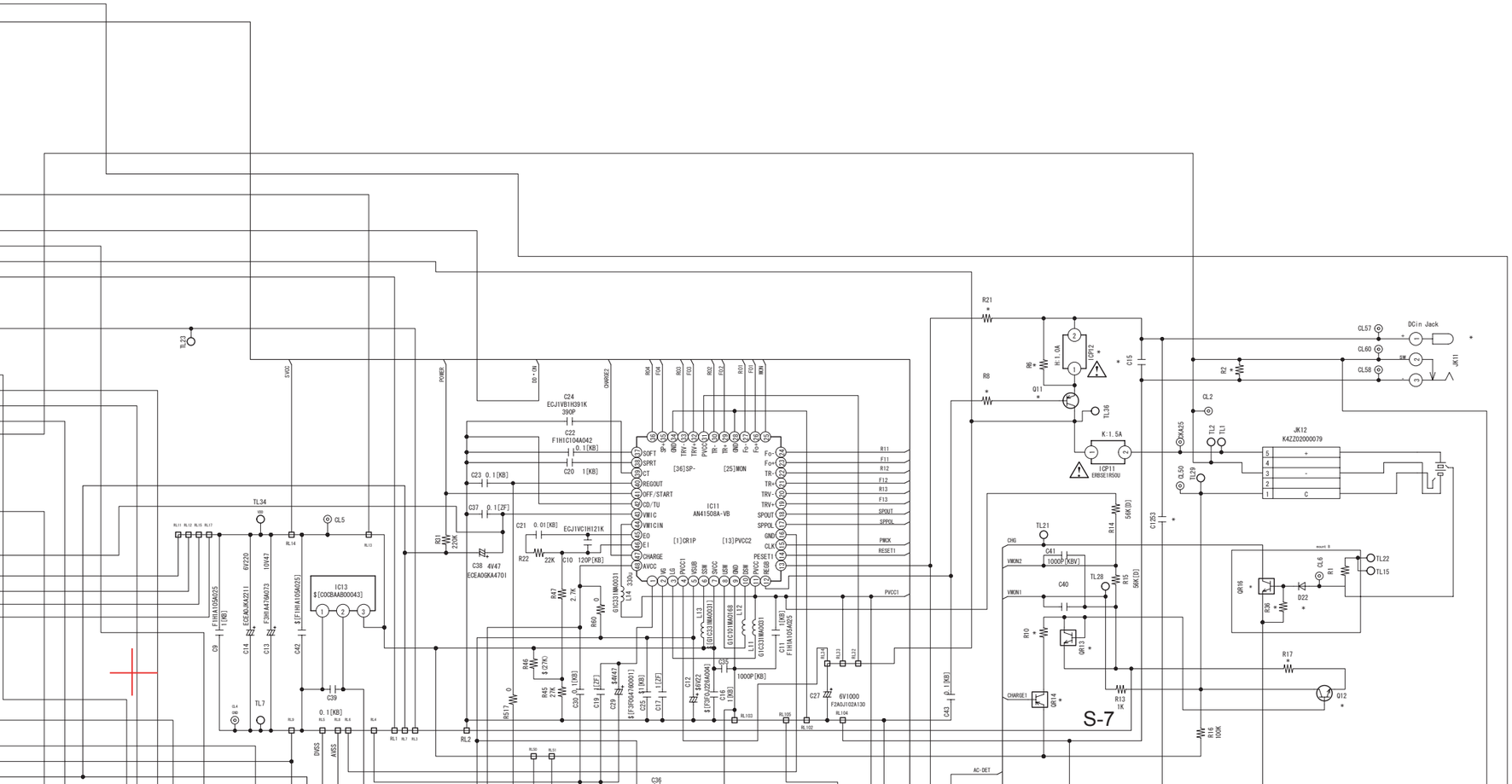
1/4	

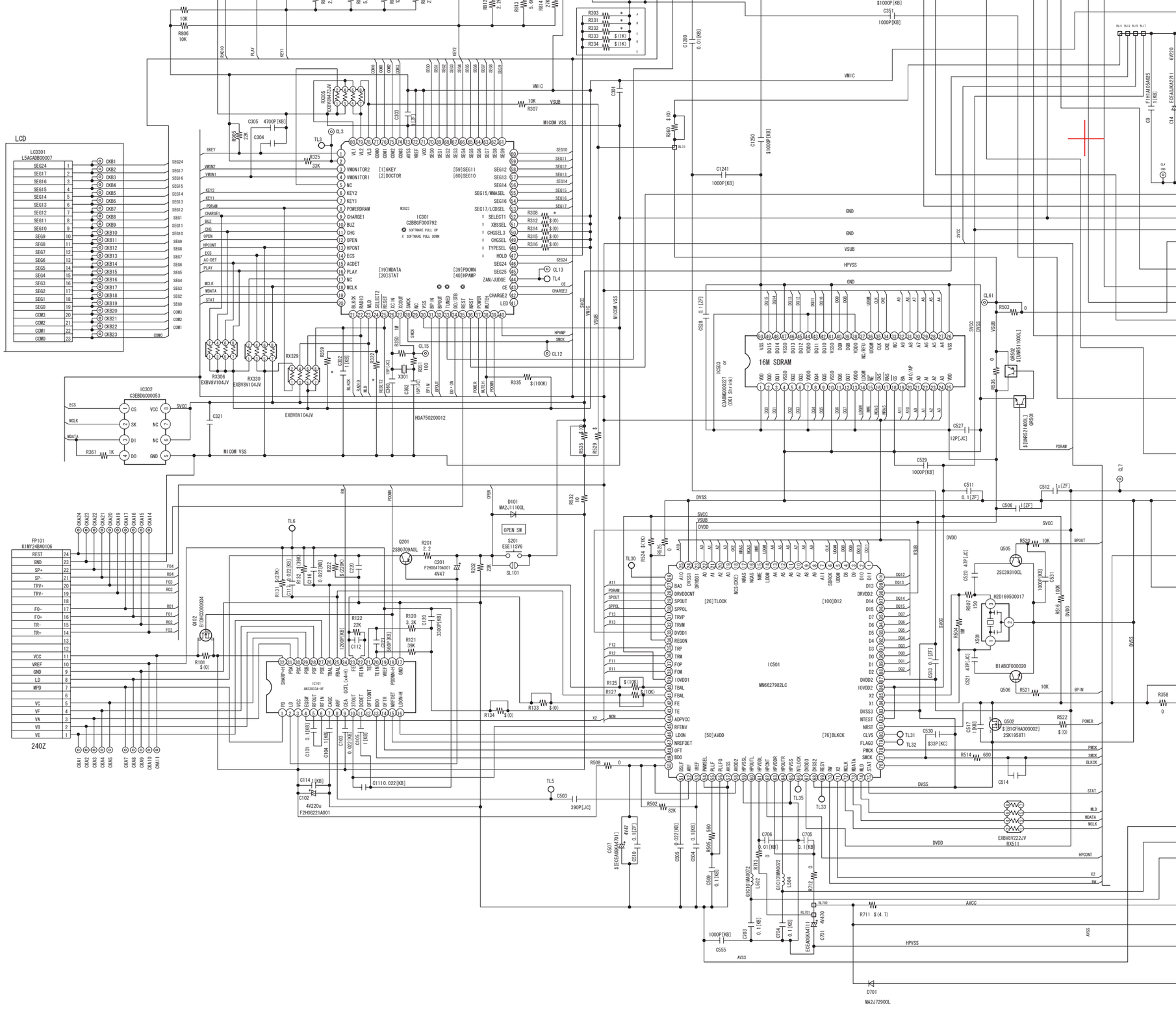
SL-SV592EE
Main
Schematic Diagram

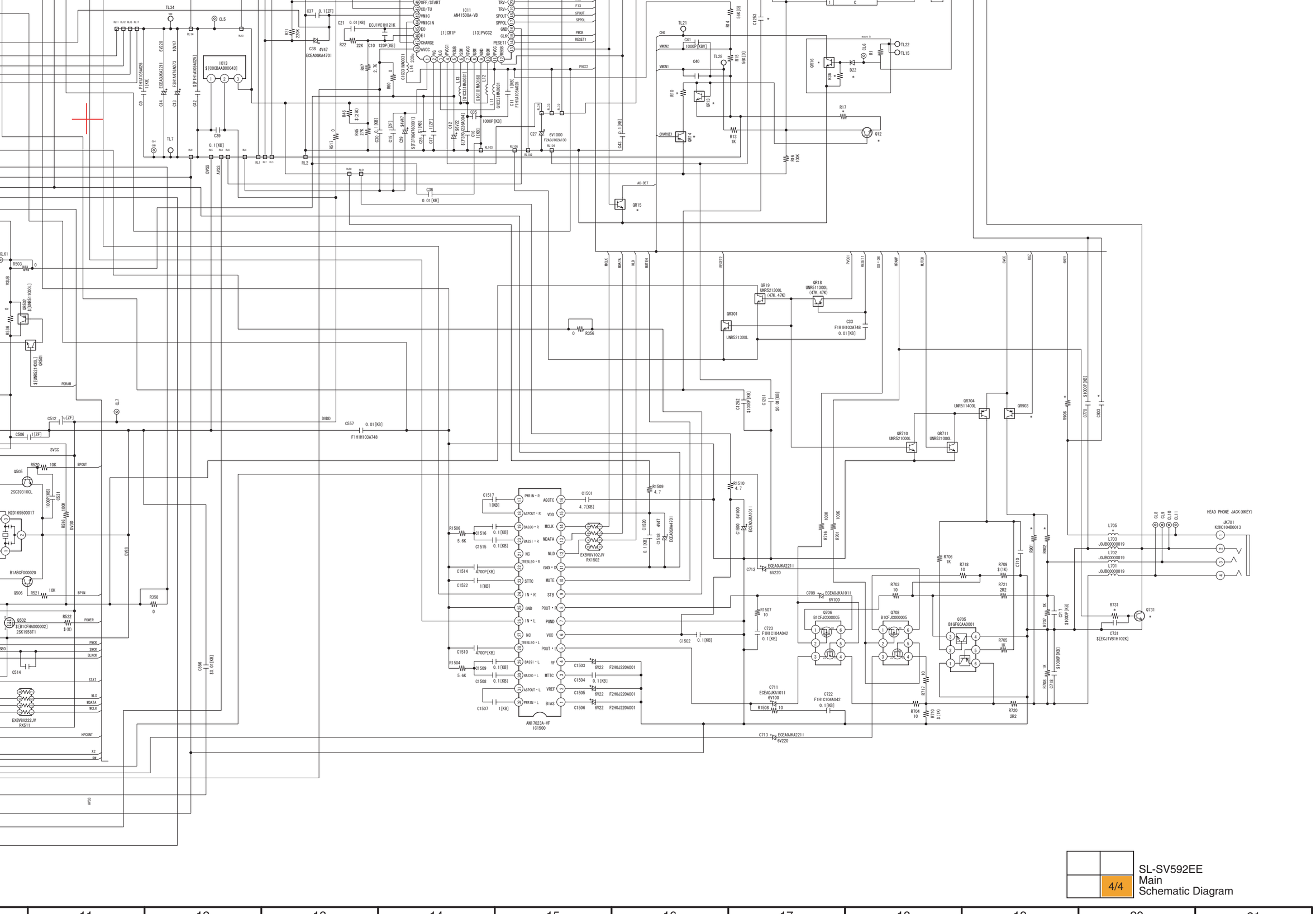


VariationCategory

	SV590P,PC	SV590EG,EB,GC,GN,GT	SV592EE
C15	$[F1H1A105A025]	F1H1A105A025	F1H1A105A025
C903	$[F1H1H103A748]	$[F1H1H103A748]	F1H1H103A748
C1253	$[F1H1H103A748]	F1H1H103A748	F1H1H103A748
D22	$[MA2J11100L]	MA2J11100L	MA2J11100L
ICP12	$[ERBSE1R00U]	ERBSE1R00U	ERBSE1R00U
JK11	$[K2EB2B000019]	K2EB2B000019	K2EB2B000019
L705	$[JOJBC0000019]	$[JOJBC0000019]	JOJBC0000019
Q11	$[B1BDND000001]	B1BDND000001	B1BDND000001
Q12	$[B1ABMD000004]	B1ABMD000004	B1ABMD000004
Q731	B1ABCF000020	$[B1ABCF000020]	$[B1ABCF000020]
QR13	$[UNR521L00L]	UNR521L00L	UNR521L00L
QR14	$[UNR511400L]	UNR511400L	UNR511400L
QR15	$[B1GBCFJG0004]	B1GBCFJG0004	B1GBCFJG0004
QR16	$[UNR521500L]	UNR521500L	UNR521500L
QR903	$[UNR511300L]	$[UNR511300L]	UNR511300L
R1	$[D0YBR0000010]	D0YBR0000010	D0YBR0000010
R2	0	$(0)	$(0)
R6	0	$(0)	$(0)
R8	$(10)	10	10
R10	$(270)	270	270
R17	$[ERJ12YJ1R8U]	ERJ12YJ1R8U	ERJ12YJ1R8U
R21	$(100)	100	100
R36	$(470K)	470K	470K
R303	1K	$(1K)	$(1K)
R308	$(0)	$(0)	$(0)
R322	$(0)	0	0
R331	$(1K)	1K	$(1K)
R332	$(1K)	$(1K)	1K
R359	100K	$(100K)	$(100K)
R731	10K	$(10K)	$(10K)
R901	$(2.2K)	$(2.2K)	2.2K
R902	$(2.2K)	$(2.2K)	2.2K
R906	$(47)	$(47)	47
R1170	47	0	0
X1101	J0B1075AA013	J0B1075AA013	J0B1075AA013
X1203	J0B1075AA008	J0B1075AA008	J0B1075AA008




LCD
LCD301
L5ACADB00007
IC301
C2BBGF000792
SOFTWARE PULL UP
SOFTWARE PULL DOWN
IC302
C3EBD6000053
FP101
K1MY24BA0106
240Z
16M SDRAM
IC503
or
1C501
MN6627982LC
[26]TLOCK
[100]D12
[50]AVDD
[76]BLKCK
[100]D11
[100]D10
[100]D9
[100]D8
[100]D7
[100]D6
[100]D5
[100]D4
[100]D3
[100]D2
[100]D1
[100]D0
VMIC
VSUB
MICOM VSS
SVCC
GND
HPVSS
DVSS
AVSS
AVCC
DVDD
PDRAM
HOA750200012
EXBV8V104JV
EXBV8V222JV
B1ABCF000020
2SC3931OCL
2SA1958T1
MA2J72900L
MA2J111OOL
2SB709AOL
F2H0G470A001
F2H0G221A001
4V220u
4V47
4V10
4V1
SL-SV592EE
Main
Schematic Diagram
3/4


IC11
AN41508A-VB
IC13
$ [C0CBAB00043]
IC1500
AN17023A-VF
IC1501
EXBV8V102JV
RX1502
EXBV8V222JV
RX511
HEAD PHONE JACK (6KEY)
JK701
K2HC104B0013
SL-SV592EE
Main
Schematic Diagram
4/4
11
12
13
14
15
16
17
18
19
20
21
S-9

S5. Print Circuit Board

S5.1. Main P.C.B.

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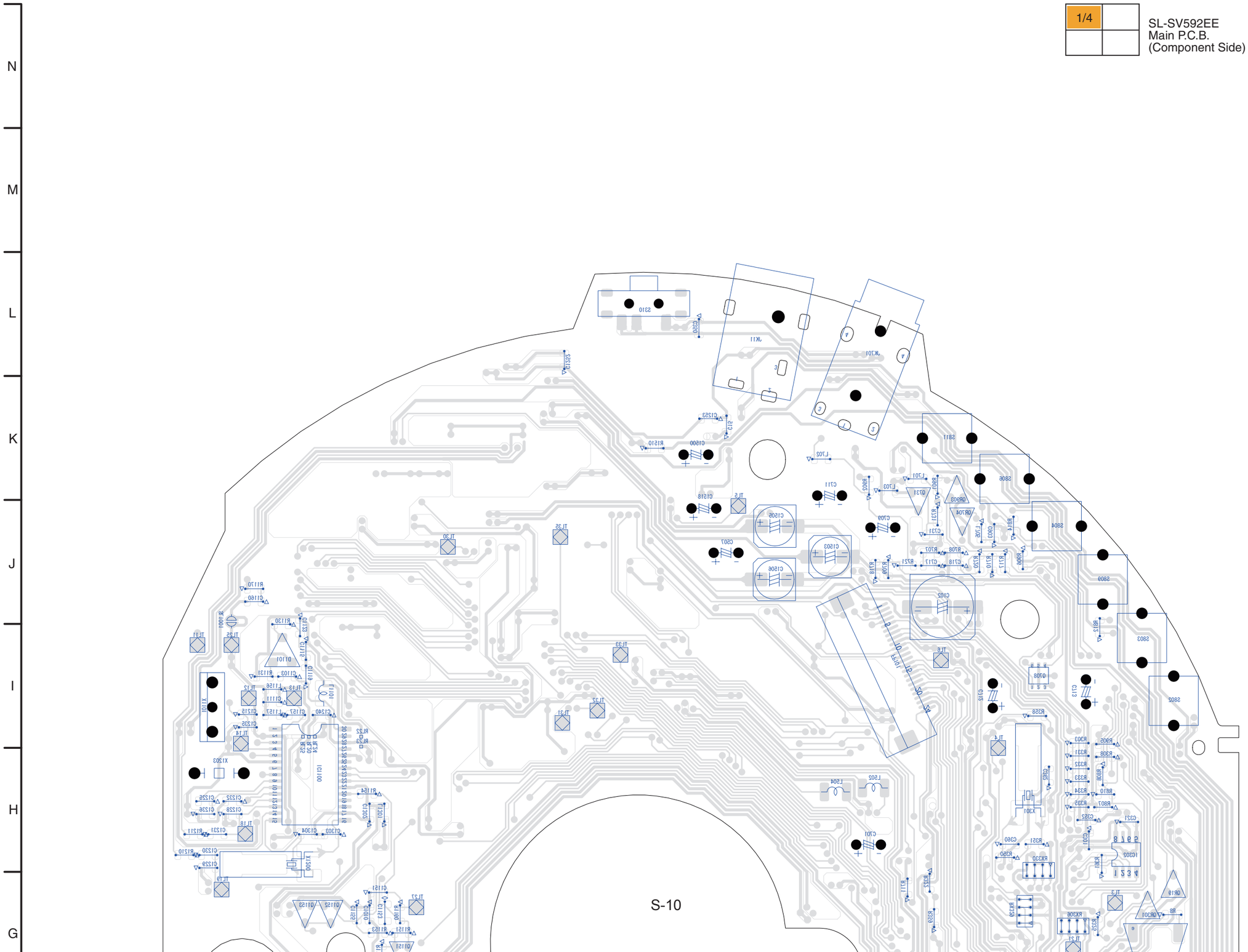
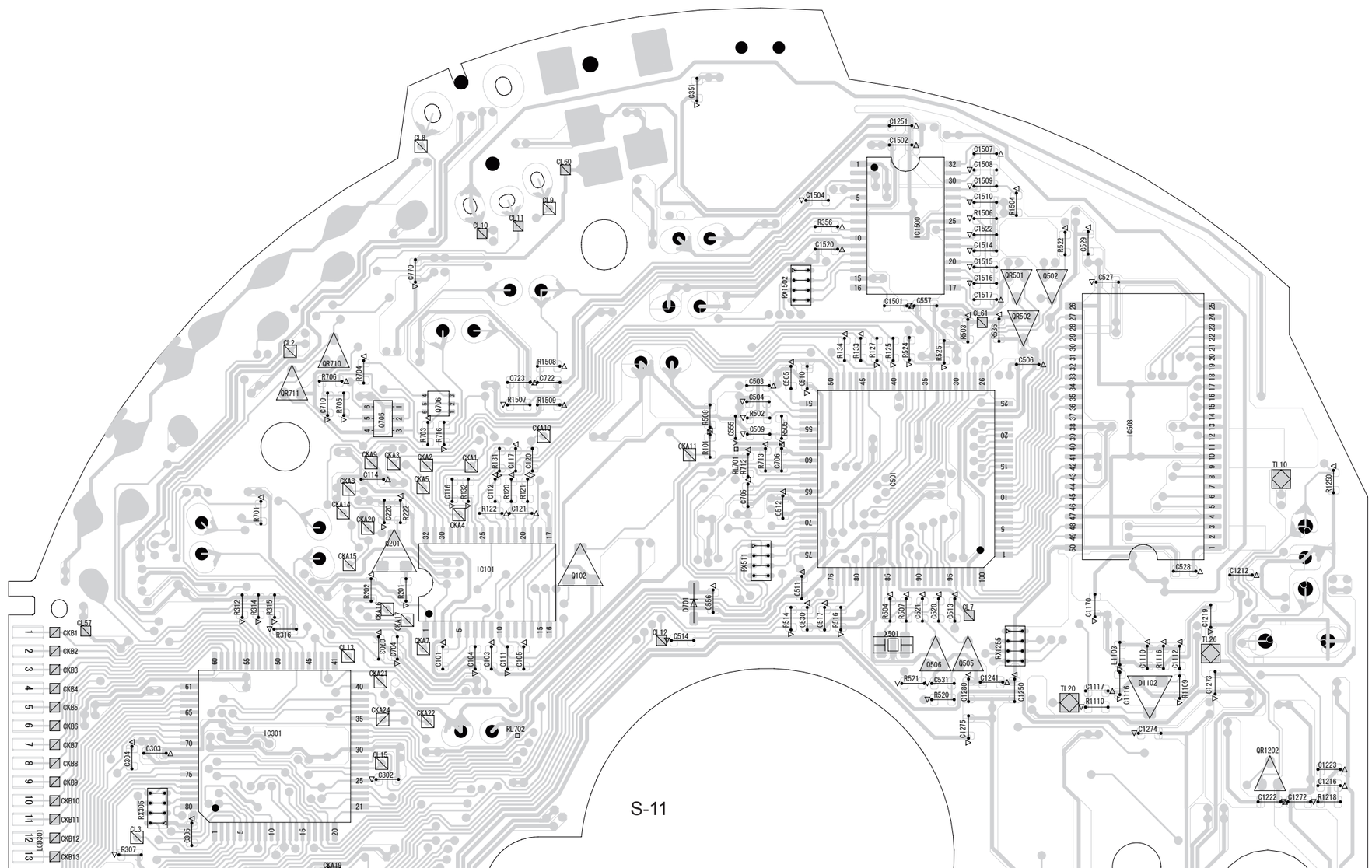
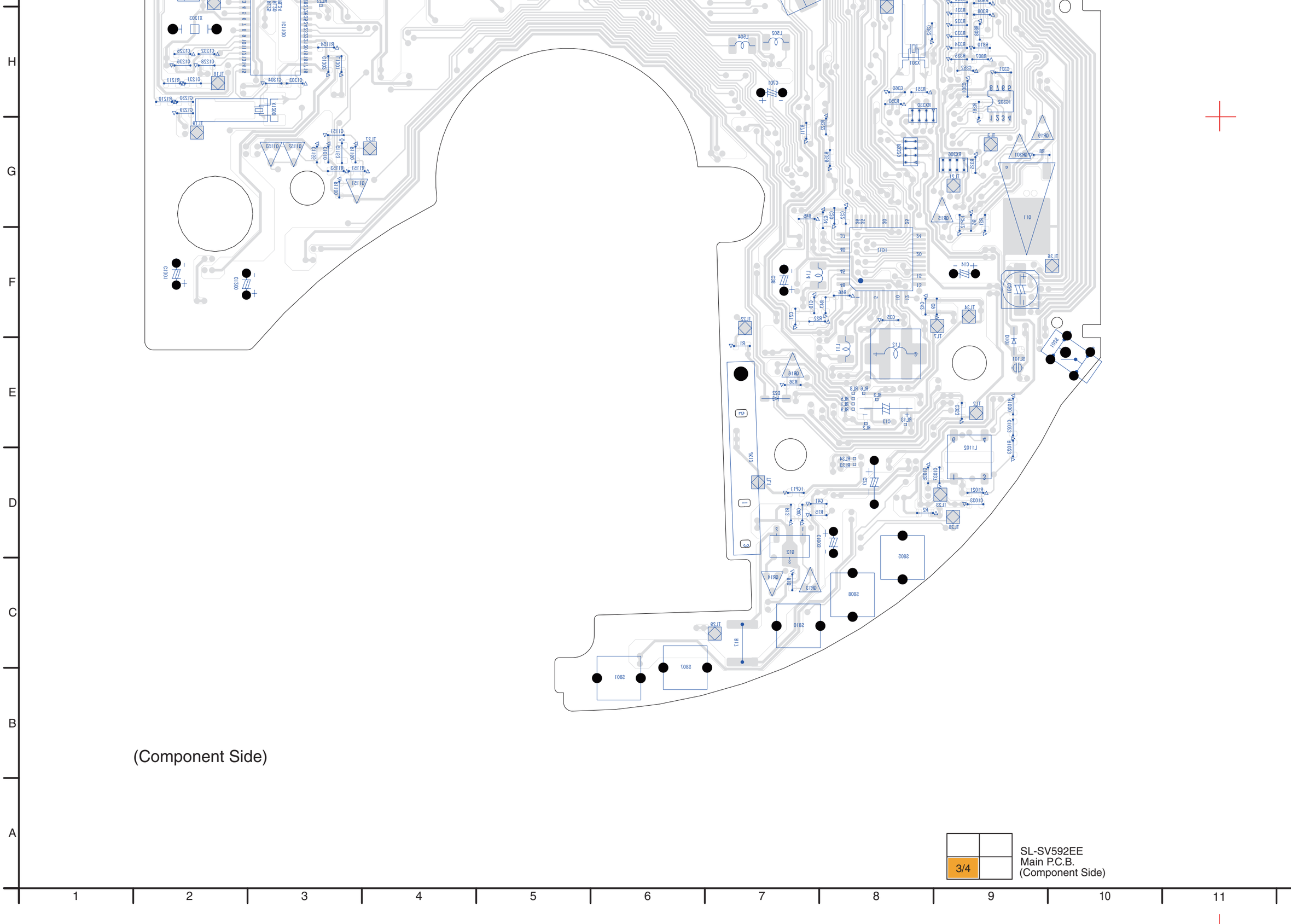
SL-SV592EE
Main P.C.B.
(Component Side)




IC1500
IC501
IC1503
IC101
IC301
Q102
Q501
Q502
QR501
QR502
QR710
QR711
Q705
Q706
QR1202
D1102
X501
RX1502
RK511
RX305
RX1256
TL10
TL20
TL26
L1103
RL702
CKB1
CKB2
CKB3
CKB4
CKB5
CKB6
CKB7
CKB8
CKB9
CKB10
CKB11
CKB12
CKB13
CKA1
CKA2
CKA3
CKA4
CKA5
CKA8
CKA9
CKA10
CKA11
CKA14
CKA15
CKA19
CKA20
CKA21
CKA22
CKA24
S-11



(Component Side)

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SL-SV592EE
Main P.C.B.
(Component Side)

(Foil Side)

SL-SV592EE
Main P.C.B.
(Foil Side)
4/4

S6. Replacement Parts List

Note:
1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
4. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

E.S.D. standards for Electrostatically Sensitive Devices, refer to "PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
##	REP4010C-1M	MAIN P.C.B. UNIT		
C1	F1H1A105A028	10V 1U	1	
C2	F1H1A224A028	10V 0.22U	1	
C3	F1G0J224A001	6.3V 0.22U	1	
C9	F1H1A105A025	10V 1U	1	
C10	ECJ1VC1H121K	50V 120P	1	
C11	F1H1A105A025	10V 1U	1	
C13	F3H1A476A073	10V 47U	1	
C14	ECEA0JKA221I	6.3V 220U	1	
C15	F1H1A105A025	10V 1U	1	
C16	F1H1A105A025	10V 1U	1	
C17	F1H1A1050002	10V 1U	1	
C19	F1H1A1050002	10V 1U	1	
C20	F1H1A105A025	10V 1U	1	
C21	F1H1H103A748	50V 0.01U	1	
C22	F1H1C104A042	16V 0.1U	1	
C23	F1H1C104A042	16V 0.1U	1	
C24	ECJ1VB1H391K	50V 390P	1	
C27	F2A0J102A130	6.3V 1000U	1	
C30	F1H1C104A042	16V 0.1U	1	
C33	F1H1H103A748	50V 0.01U	1	
C35	ECJ1VB1H102K	50V 1000P	1	
C36	F1H1H103A748	50V 0.01U	1	
C37	F1H1C104A072	16V 0.1U	1	
C38	ECEA0GKA470I	4V 47U	1	
C39	F1H1C104A042	16V 0.1U	1	
C41	ECJ1VB1H102K	50V 1000P	1	
C43	F1H1C104A042	16V 0.1U	1	
C101	F1H1C104A042	16V 0.1U	1	
C102	F2H0G221A001	4V 220U	1	
C103	F1H1E223A029	25V 0.022U	1	
C104	F1H1A105A025	10V 1U	1	
C105	F1H1A105A025	10V 1U	1	
C111	F1H1E223A029	25V 0.022U	1	
C112	ECJ1VB1H122K	50V 1200P	1	
C114	F1H1A105A025	10V 1U	1	
C116	F1H1E223A029	25V 0.022U	1	
C117	F1H1E223A029	25V 0.022U	1	
C120	ECJ1VB1H332K	50V 3300P	1	
C121	ECJ1VB1H561K	50V 560P	1	
C201	F2H0G470A001	4V 47U	1	
C302	F1H1A105A025	10V 1U	1	
C303	F1H1A1050002	10V 1U	1	
C305	ECJ1VB1H102K	50V 1000P	1	
C321	F1H1A105A025	10V 1U	1	
C350	ECJ1VB1H102K	50V 1000P	1	
C351	ECJ1VB1H102K	50V 1000P	1	
C353	ECJ1VB1H102K	50V 1000P	1	
C360	ECJ1VC1H150J	50V 15P	1	
C362	ECJ1VC1H150J	50V 15P	1	
C503	ECJ1VC1H391J	50V 390P	1	
C504	F1H1C104A042	16V 0.1U	1	
C505	F1H1E223A029	25V 0.022U	1	
C506	F1H1A1050002	10V 1U	1	
C509	F1H1C104A042	16V 0.1U	1	
C510	F1H1C104A008	16V 0.1U	1	
C511	F1H1C104A072	16V 0.1U	1	
C512	F1H1A1050002	10V 1U	1	
C513	F1H1C104A072	16V 0.1U	1	
C517	F1H1A105A025	10V 1U	1	
C520	ECJ1VC1H120J	50V 12P	1	
C521	ECJ1VC1H120J	50V 12P	1	
C527	ECJ1VC1H120J	50V 12P	1	
C528	F1H1C104A072	16V 0.1U	1	
C529	ECJ1VB1H102K	50V 1000P	1	
C531	ECJ1VB1H102K	50V 1000P	1	
C555	ECJ1VB1H102K	50V 1000P	1	
C557	F1H1H103A748	50V 0.01U	1	
C701	ECEA0GKA471I	4V 470U	1	
C703	F1H1C104A042	16V 0.1U	1	
C704	F1H1C104A042	16V 0.1U	1	
C705	F1H1C104A042	16V 0.1U	1	
C706	F1H1H103A748	50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C709	ECEA0JKA101I	6.3V 100U	1	
C711	ECEA0JKA101I	6.3V 100U	1	
C712	ECEA0JKA221I	6.3V 220U	1	
C713	ECEA0JKA221I	6.3V 220U	1	
C722	F1H1C104A042	16V 0.1U	1	
C723	F1H1C104A042	16V 0.1U	1	
C770	ECJ1VB1H102K	50V 1000P	1	
C903	F1H1H103A748	50V 0.01U	1	
C1003	ECEA0GKA470I	4V 47U	1	
C1009	F1J1C225A083	16V 2.2U	1	
C1010	F1H1H103A748	50V 0.01U	1	
C1023	ECJ1VC1H120J	50V 12P	1	
C1033	ECJ1VC1H101J	50V 100P	1	
C1035	F1H1C104A042	16V 0.1U	1	
C1036	ECJ1VC1H390J	50V 39P	1	
C1037	F1H1H103A748	50V 0.01U	1	
C1103	F1H1H820A002	50V 82P	1	
C1111	ECJ1VC1H470J	50V 47P	1	
C1112	F1H1H180A002	50V 18P	1	
C1115	ECJ1VB1H102K	50V 1000P	1	
C1116	ECJ1VB1H102K	50V 1000P	1	
C1117	F1H1C473A071	16V 0.047U	1	
C1119	F1H1H3R0A255	50V 3P	1	
C1123	ECJ1VB1H102K	50V 1000P	1	
C1151	F1H1C473A071	16V 0.047U	1	
C1153	F1J1C475A170	16V 4.7U	1	
C1155	F1H1H103A748	50V 0.01U	1	
C1157	ECJ1VC1H220J	50V 22P	1	
C1160	F1H1H2210001	50V 220P	1	
C1170	ECJ1VB1H102K	50V 1000P	1	
C1200	ECEA0GKA470I	4V 47U	1	
C1212	F1H1A1050002	10V 1U	1	
C1215	F1H1H103A748	50V 0.01U	1	
C1216	F1H1C104A042	16V 0.1U	1	
C1223	F1H1E223A029	25V 0.022U	1	
C1225	F1H1A1050002	10V 1U	1	
C1228	F1H1E183A050	25V 0.018	1	
C1229	F1H1E183A050	25V 0.018U	1	
C1230	F1H1C104A042	16V 0.1U	1	
C1231	F1H1C104A042	16V 0.1U	1	
C1232	F1H1C104A042	16V 0.1U	1	
C1235	F1H1H103A748	50V 0.01U	1	
C1236	ECJ1VB1H102K	50V 1000P	1	
C1240	F1H1H103A748	50V 0.01U	1	
C1241	ECJ1VB1H102K	50V 1000P	1	
C1253	F1H1H103A748	50V 0.01U	1	
C1271	F1H1A105A025	10V 1U	1	
C1273	ECJ1VB1H102K	50V 1000P	1	
C1274	ECJ1VB1H102K	50V 1000P	1	
C1280	F1H1H103A748	50V 0.01U	1	
C1301	ECEA0GKA470I	4V 47U	1	
C1302	F1H1A1050002	10V 1U	1	
C1303	ECJ1VC1H150J	50V 15P	1	
C1304	ECJ1VC1H150J	50V 15P	1	
C1500	ECEA0JKA101I	6.3V 100U	1	
C1501	F1H0J4750004	6.3V 4.7U	1	
C1502	F1H1C104A042	16V 0.1U	1	
C1503	F2H0J220A001	6.3V 22P	1	
C1504	F1H1C104A042	16V 0.1U	1	
C1505	F2H0J220A001	4V 22P	1	
C1506	F2H0J220A001	4V 22P	1	
C1507	F1H1A105A025	10V 1U	1	
C1508	F1H1C104A042	16V 0.1U	1	
C1509	F1H1C104A042	16V 0.1U	1	
C1510	F1H1H472A219	50V 4700P	1	
C1514	F1H1H472A219	50V 4700P	1	
C1515	F1H1C104A042	16V 0.1U	1	
C1516	F1H1C104A042	16V 0.1U	1	
C1517	F1H1A105A025	10V 1U	1	
C1518	ECEA0GKA470I	4V 47U	1	
C1520	F1H1C104A042	16V 0.1U	1	
C1522	F1H1A105A025	10V 1U	1	
D22	MA2J11100L	DIODE	1	
D101	MA2J11100L	DIODE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D701	MA2J72900L	DIODE	1	
D1010	MA3J14700L	DIODE	1	
D1011	MAZ812000L	DIODE	1	
D1101	B0CDBB000014	DIODE	1	
D1102	B0CDBB000014	DIODE	1	
FP101	K1MY24BA0106	CONNECTOR(24P)	1	
IC11	AN41508A-VB	IC	1	
IC101	AN22003A-VF	IC	1	
IC301	C2BBGF000792	IC	1	
IC302	C3EBDG000053	IC	1	
IC501	MN6627982LC	IC	1	
IC503	C3ABMG000227	IC	1	
IC1100	C1BB00001070	IC	1	
IC1500	AN17023A-VF	IC	1	
⚠ ICP11	ERBSE1R50U	IC PROTECTOR	1	
⚠ ICP12	ERBSE1R00U	IC PROTECTOR	1	
JK11	K2EB2B000019	JK,DC IN	1	
JK12	K4ZZ02000079	BATTERY TERMINAL	1	
JK701	K2HC1YYB0001	JACK,HEADPHONE	1	
L11	G1C331MA0031	COIL	1	
L12	G1C101MA0168	COIL	1	
L14	G1C331MA0031	COIL	1	
L502	G1C101MA0072	CHIP COIL	1	
L504	G1C101MA0072	CHIP COIL	1	
L701	J0JBC0000019	COIL	1	
L702	J0JBC0000019	COIL	1	
L703	J0JBC0000019	COIL	1	
L705	J0JBC0000019	COIL	1	
L1101	G1CR12JA0038	CHIP COIL	1	
L1102	G5ZZ00000072	DC COIL	1	
L1103	G1C47NJ00011	CHIP COIL	1	
L1156	G1C68NM00003	COIL	1	
L1157	G1CR22KA0009	COIL	1	
L1301	J0JBC0000019	COIL	1	
LCD301	L5ACADB00007	LCD	1	
PCB1	REP4010C-1M	MAIN P.C.B. UNIT	1	(RTL)
Q11	B1BDND000001	TRANSISTOR	1	
Q12	B1ABMD000004	TRANSISTOR	1	
Q102	B1DHCC000034	CHIP TRANSISTOR	1	
Q201	2SB0709A0L	TRANSISTOR	1	
Q505	2SC39310CL	TRANSISTOR	1	
Q506	B1ABCF000020	CHIP TRANSISTOR	1	
Q705	B1GFGCAA0001	TRANSISTOR	1	
Q706	B1CFJC000005	TRANSISTOR	1	
Q708	B1CFJC000005	TRANSISTOR	1	
Q1013	B1ABCF000021	TRANSISTOR	1	
Q1152	2SD1819ASL	TRANSISTOR	1	
Q1153	2SD1819ASL	TRANSISTOR	1	
QR13	UNR521L00L	TRANSISTOR	1	
QR14	UNR511400L	TRANSISTOR	1	
QR15	B1GBCFJG0004	TRANSISTOR	1	
QR16	UNR521500L	TRANSISTOR	1	
QR18	UNR511300L	TRANSISTOR	1	
QR19	UNR521300L	TRANSISTOR	1	
QR301	UNR521300L	TRANSISTOR	1	
QR704	UNR511400L	TRANSISTOR	1	
QR710	UNR521000L	TRANSISTOR	1	
QR711	UNR521000L	TRANSISTOR	1	
QR903	UNR511300L	TRANSISTOR	1	
QR1201	UNR511M00L	TRANSISTOR	1	
QR1202	UNR521000L	TRANSISTOR	1	
QR1301	UNR511M00L	TRANSISTOR	1	
QR1302	UNR521300L	TRANSISTOR	1	
R1	D0YBR0000010	CHIP RING	1	
R8	ERJ3GEYJ100V	1/10W 10	1	

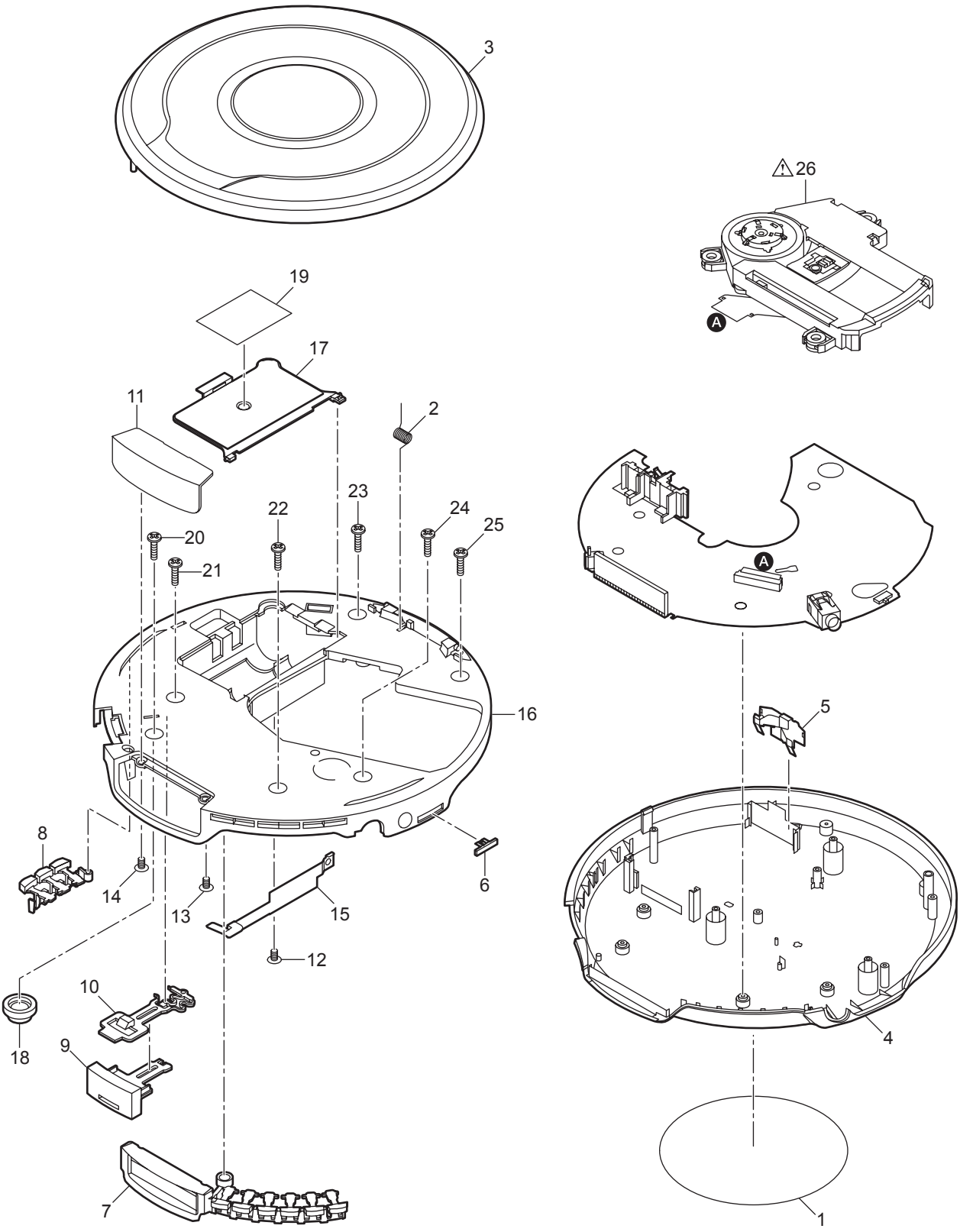
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R10	ERJ3GEYJ271V	1/10W 270	1	
R13	ERJ3GEYJ102V	1/10W 1K	1	
R14	ERJ3RBD563V	1/16W 56K	1	
R15	ERJ3RBD563V	1/16W 56K	1	
R16	ERJ3GEYJ104V	1/10W 100K	1	
R17	ERJ12YJ1R8U	1/2W 1.8	1	
R21	ERJ3GEYJ101V	1/10W 100	1	
R22	ERJ3GEYJ223V	1/10W 22K	1	
R31	ERJ3GEYJ224V	1/10W 220K	1	
R36	ERJ3GEYJ474V	1/10W 470K	1	
R45	ERJ3GEYJ273V	1/10W 27K	1	
R47	ERJ3GEYJ272V	1/10W 2.7K	1	
R60	ERJ3GEY0R00V	1/10W 0	1	
R120	ERJ3GEYJ332V	1/10W 3.3K	1	
R121	ERJ3GEYJ393V	1/10W 39K	1	
R122	ERJ3GEYJ223V	1/10W 22K	1	
R201	ERJ3GEYJ2R2V	1/10W 2.2	1	
R202	ERJ3GEYJ223V	1/10W 22K	1	
R307	ERJ3GEYJ103V	1/10W 10K	1	
R322	ERJ3GEY0R00V	1/10W 0	1	
R325	ERJ3GEYJ333V	1/10W 33K	1	
R332	ERJ3GEYJ102V	1/10W 1K	1	
R350	ERJ3GEYJ105V	1/10W 1M	1	
R351	ERJ3GEYJ101V	1/10W 100	1	
R356	ERJ3GEY0R00V	1/10W 0	1	
R358	ERJ3GEY0R00V	1/10W 0	1	
R361	ERJ3GEYJ102V	1/10W 1K	1	
R502	ERJ3GEYJ823V	1/10W 82K	1	
R503	ERJ3GEY0R00V	1/10W 0	1	
R504	ERJ3GEYJ105V	1/10W 1M	1	
R505	ERJ3GEYJ561V	1/10W 560	1	
R507	ERJ3GEYJ151V	1/10W 150	1	
R508	ERJ3GEY0R00V	1/10W 0	1	
R514	ERJ3GEYJ681V	1/10W 680	1	
R516	ERJ3GEYJ104V	1/10W 100K	1	
R517	ERJ3GEY0R00V	1/10W 0	1	
R520	ERJ3GEYJ103V	1/10W 10K	1	
R521	ERJ3GEYJ103V	1/10W 10K	1	
R525	ERJ3GEY0R00V	1/10W 0	1	
R532	ERJ3GEYJ100V	1/10W 10	1	
R536	ERJ3GEY0R00V	1/10W 0	1	
R701	ERJ3GEYJ104V	1/10W 100K	1	
R703	ERJ3GEYJ100V	1/10W 10	1	
R704	ERJ3GEYJ100V	1/10W 10	1	
R705	ERJ3GEYJ102V	1/10W 1K	1	
R706	ERJ3GEYJ102V	1/10W 1K	1	
R707	ERJ3GEYJ102V	1/10W 1K	1	
R708	ERJ3GEYJ102V	1/10W 1K	1	
R712	ERJ3GEY0R00V	1/10W 0	1	
R713	ERJ3GEY0R00V	1/10W 0	1	
R716	ERJ3GEYJ104V	1/10W 100K	1	
R717	ERJ3GEYJ100V	1/10W 10	1	
R718	ERJ3GEYJ100V	1/10W 10	1	
R720	ERJ3GEYJ2R2V	1/10W 2.2	1	
R721	ERJ3GEYJ2R2V	1/10W 2.2	1	
R806	ERJ3GEYJ103V	1/10W 10K	1	
R807	ERJ3GEYJ103V	1/10W 10K	1	
R808	ERJ3GEYJ222V	1/10W 2.2K	1	
R809	ERJ3GEYJ562V	1/10W 5.6K	1	
R810	ERJ3GEYJ123V	1/10W 12K	1	
R811	ERJ3GEYJ273V	1/10W 27K	1	
R812	ERJ3GEYJ222V	1/10W 2.2K	1	
R813	ERJ3GEYJ562V	1/10W 5.6K	1	
R814	ERJ3GEYJ273V	1/10W 27K	1	
R901	ERJ3GEYJ222V	1/10W 2.2K	1	
R902	ERJ3GEYJ222V	1/10W 2.2K	1	
R905	ERJ3GEYJ223V	1/10W 22K	1	
R906	ERJ3GEYJ470V	1/10W 47	1	
R1001	ERJ3GEYJ101V	1/10W 100	1	
R1021	ERJ3GEYJ333V	1/10W 33K	1	
R1023	ERJ3GEYJ221V	1/10W 220	1	
R1025	ERJ3GEYJ102V	1/10W 1K	1	
R1026	ERJ3GEY0R00V	1/10W 0	1	
R1030	ERJ3GEYJ221V	1/10W 220	1	
R1109	ERJ3GEYJ104V	1/10W 100K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1110	ERJ3GEYJ223V	1/10W 22K	1	
R1130	ERJ3GEYJ104V	1/10W 100K	1	
R1131	ERJ3GEYJ104V	1/10W 100K	1	
R1151	ERJ3GEYJ223V	1/10W 22K	1	
R1153	ERJ3GEYJ222V	1/10W 2.2K	1	
R1154	ERJ3GEYJ332V	1/10W 3.3K	1	
R1160	ERJ3GEYJ103V	1/10W 10K	1	
R1170	ERJ3GEY0R00V	1/10W 0	1	
R1180	ERJ3GEY0R00V	1/10W 0	1	
R1204	ERJ3GEYJ100V	1/10W 10	1	
R1210	ERJ3GEYJ103V	1/10W 10K	1	
R1211	ERJ3GEYJ103V	1/10W 10K	1	
R1218	ERJ3GEYJ102V	1/10W 1K	1	
R1250	ERJ3GEYJ471V	1/10W 470	1	
R1504	ERJ3GEYJ562V	1/10W 5.6K	1	
R1506	ERJ3GEYJ562V	1/10W 5.6K	1	
R1507	ERJ3GEYJ100V	1/10W 10	1	
R1508	ERJ3GEYJ100V	1/10W 10	1	
R1509	ERJ3GEYJ4R7V	1/10W 4.7	1	
R1510	ERJ3GEYJ4R7V	1/10W 4.7	1	
RX305	EXBV8V473JV	1/16W 47K	1	
RX306	EXBV8V104JV	1/16W 100K	1	
RX329	EXBV8V104JV	1/16W 100K	1	
RX330	EXBV8V104JV	1/16W 100K	1	
RX511	EXBV8V222JV	1/16W 2.2K	1	
RX1255	EXBV8V102JV	1/16W 1K	1	
RX1502	EXBV8V102JV	1/16W 1K	1	
S201	ESE11SV6	SW,LASER ON/OFF	1	
S202	K0L1BB000025	SW,REST DET.	1	
S310	K0D112B00071	SW,HOLD	1	
S801	EVQ11G05R	SW,OPERATION	1	
S802	EVQ11G05R	SW,OPERATION	1	
S803	EVQ11G05R	SW,OPERATION	1	
S804	EVQ11G05R	SW,OPERATION	1	
S805	EVQ11G05R	SW,OPERATION	1	
S806	EVQ11G05R	SW,OPERATION	1	
S807	EVQ11G05R	SW,OPERATION	1	
S808	EVQ11G05R	SW,OPERATION	1	
S809	EVQ11G05R	SW,OPERATION	1	
S810	EVQ11G05R	SW,OPERATION	1	
S811	EVQ11G05R	SW,OPERATION	1	
X301	H0A750200012	CRYSTAL RESONATOR	1	
X501	H2D169500025	OSCILLATOR	1	
X1101	J0B1075AA013	OSCILLATOR	1	
X1200	H0A750200012	CRYSTAL RESONATOR	1	
X1203	J0B1075AA008	OSCILLATOR	1	
##		CASING SECTION		
1	RGN2905-H	NAME PLATE	1	
2	RMB0839-4	OPEN SPRING	1	
3	RFKLLSV592EE	CD LID ASS'Y	1	
4	RKS0418-1H1	BOTTOM CAB	1	
5	RJC93038-3	BATTERY TERMINAL	1	
6	RGV0352-S	KNOB,HOLD	1	
7	RGU2417-H	BUTTON,VOL+/- ETC.	1	
8	RGU2454-H	BUTTON,PLAYMODE ETC.	1	
9	RGU2419-H	BUTTON,OPEN	1	
10	RGU2420-W	LEVER	1	
11	RKW0793-D	LCD WINDOW	1	
12	RHQ0088-S	SCREW	1	
13	RHQ0088-S	SCREW	1	
14	RHQ0088-S	SCREW	1	
15	RMC0662	DETECT SPRING	1	
16	RKM0543C-H	MIDDLE CABINET	1	
17	RKK0171-H	BATTERY LID	1	
18	RMR1789-X	HOLDER	1	
19	RQLS0244-1	LASER LABEL	1	
20	XTN17+6GFJK	SCREW	1	
21	XTN17+6GFJK	SCREW	1	
22	XTN17+6GFJK	SCREW	1	
23	XTN17+6GFJK	SCREW	1	

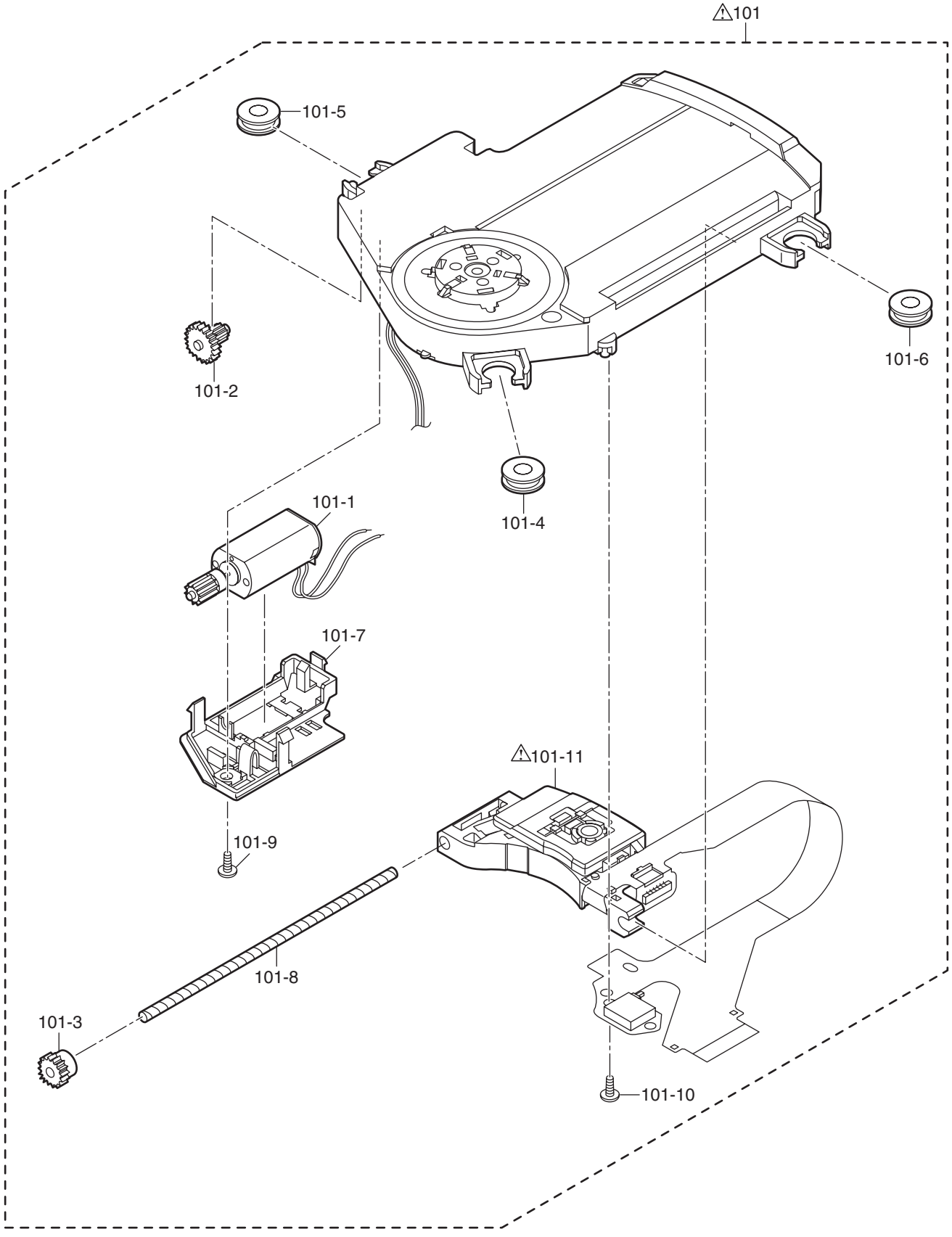
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
24	XTN17+6GFJK	SCREW	1	
25	XTN17+6GFJK	SCREW	1	
⚠ 26	RAE0240Z-7X	TRAVERSE DECK UNIT	1	
##		TRAVERSE DECK SECTION		
⚠ 101	RAE0240Z-7X	TRAVERSE DECK UNIT	1	
101-1	PKN7EB90A2	TRAVERSE MOTOR ASS'Y	1	
101-2	RDG0554	GEAR 1	1	
101-3	RDG0555	GEAR 2	1	
101-4	RMG0605-K	FLOATING RUBBER	1	
101-5	RMG0605-K	FLOATING RUBBER	1	
101-6	RMG0605-K	FLOATING RUBBER	1	
101-7	RMQ1125	MOTOR HOLDER	1	
101-8	RMS0782-1	DRIVE SHAFT	1	
101-9	XQN17+BG45FJ	SCREW	1	
101-10	XQN17+BG45FJ	SCREW	1	
⚠ 101-11	RAF0240A-8X	OPTICAL PICK-UP	1	
##		PACKING SECTION		
⚠ A1	RFEA418E-2S	AC ADAPTOR	1	
A2	L0BAB0000183	STEREO EARPHONES	1	
A3	RQT8664-1R	OPERATING INSTRUCTIONS	1	RUSSIAN,UKRAINE
A4	N2QCBD000011	WIRED REMOTE CONTROL	1	
P1	RPFW0013	PROTECTION BAG	1	
P2	RPK2467	GIFT BOX	1	
P3	RPQ2007	PAD	1	

S7. Exploded View

S7.1. Frame and Casing Section



S7.2. Traverse Unit Parts Location



S7.3. Packing Parts and Accessories Section