

Service Manual

CD Stereo System



Digital Audio Broadcasting

**SC-EN29EB**

Remote Control Transmitter

SA-EN29

SB-EN7

Colour

(S).....Silver Type

System

ISC-EN29EB

Main Unit: SA-EN29EB

Speakers: SB-EN7P

Specification

Main Unit

Radio

Frequency range

FM

87.50 - 108.00 MHz (50 kHz steps)

AM

522 - 1629 kHz (9 kHz steps)

DAB

Frequency range

Band III

5A-13F (174.928-239.200 MHz)

CD Player

Sampling frequency

44.1kHz

Decoding

16 bit linear

Beam source

Semiconductor laser (wavelength 780 nm)

Number of channels

2 channel, stereo

Wow and flutter

Less than possible measurement data

D/A converter

MASH (1 bit DAC)

Terminals

Input

AUX: 3.5 mm stereo (27 kΩ)

DAB EXT ANT: F-Connector (75 Ω)

PHONES: 3.5 mm stereo (32 Ω)

LINE OUT: 3.5 mm stereo (2.2 kΩ)

General

Power supply

AC 230 - 240 V, 50 Hz

AC adaptor

DC 13 V, 1.5 A

Power consumption

30 W

Dimensions (W x H x D)

240 x 216 x 170 mm

Speakers

Full range

8 cm, 3 Ω × 2

Ceramic tweeter

1.52 cm × 2

Dimensions (W x H x D)

107 x 230 x 165 mm

Mass

3.1 kg

With speakers

1.7 kg

Without speakers

Power consumption in standby mode

2.6 W

Notes:

1.Specifications are subject to change without notice.

2.Mass and dimensions are approximate.

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WARNING

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

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1 Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

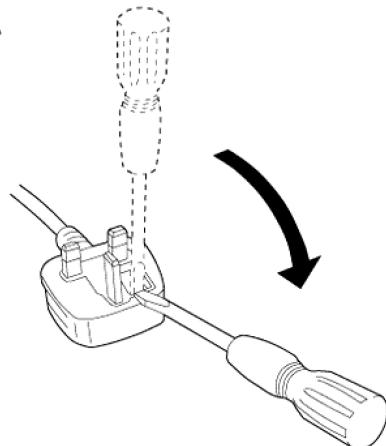
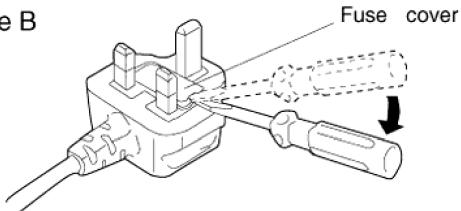


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

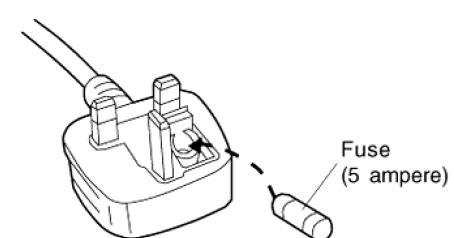
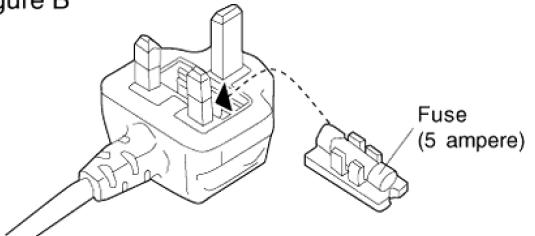


Figure B



2 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Stop during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outline below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

3 Accessories

- | | |
|---|--|
| • Remote control (EUR7711130).....1pc. | • DAB "T" antenna (N1EADY000001)....1pc. |
| • AC adaptor (RFAW2646).....1pc. | • Battery.....2pcs. |
| • AM loop antenna (G0zz00002036).....1pc. | |

4 Handling Precautions For Traverse Deck (Optical Pickup)

The laser diode in the traverse deck (optical pickup) may break down due to potential caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into flexible board (FFC board) (Figure 1).
3. Take care not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible.
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

• Grounding for electrostatic breakdown prevention

1. Human body grounding (Figure 2)

Use the anti-static wrist strap to discharge the static electricity from your body.

2. Work table grounding (Figure 2)

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is place, and ground the sheet.

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 pickup).

Caution when replacing the Traverse Deck

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.

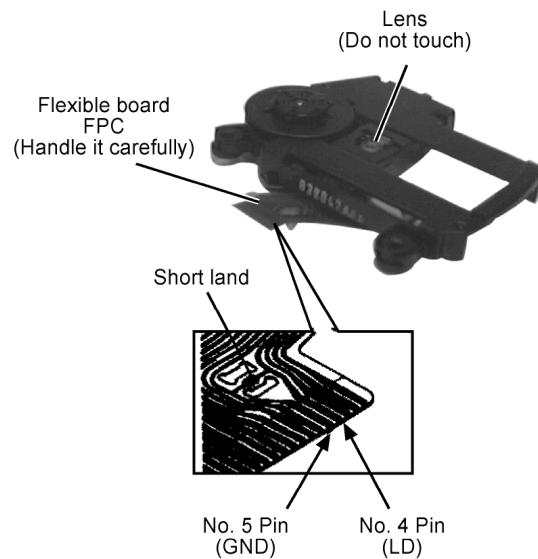


Figure 1

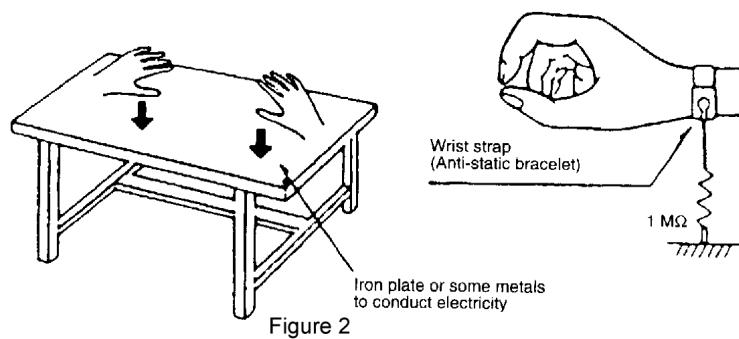


Figure 2

5 Precaution of Laser Diode

Caution :

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

Wavelength : 780 nm

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

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

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

ACHTUNG :

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

Wellenlänge : 780nm

Maximale Strahlungsleistung der Lasereinheit :100 µW/VDE

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

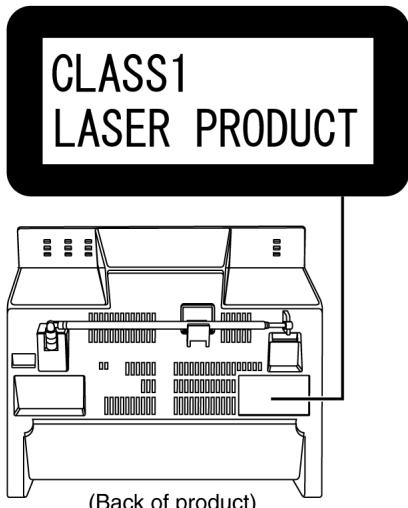
ADVARSEL: I dette a apparat anvendes laser.

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.

n Use of caution label



(Inside of product)

6 Prevention of Electro Static Discharge (ESD) To Electrostatically (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES Devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, Which should be removed for potential shock reson prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal devices. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices.(Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

7 Handling the Lead-free Solder

7.1. About lead free solder (PbF)

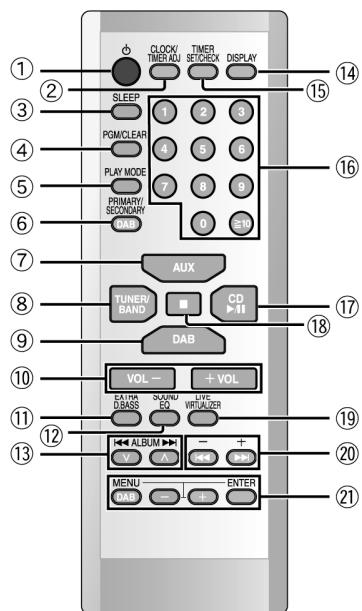
Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

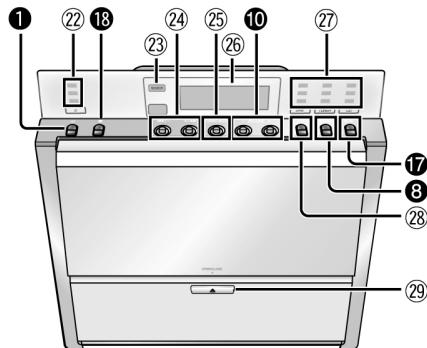
Caution

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50-70°F (30 - 40°C) higher.Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tent to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins and solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

8 Control Guide



The shaded buttons, such as ①, function in the same way as the buttons on the remote control.



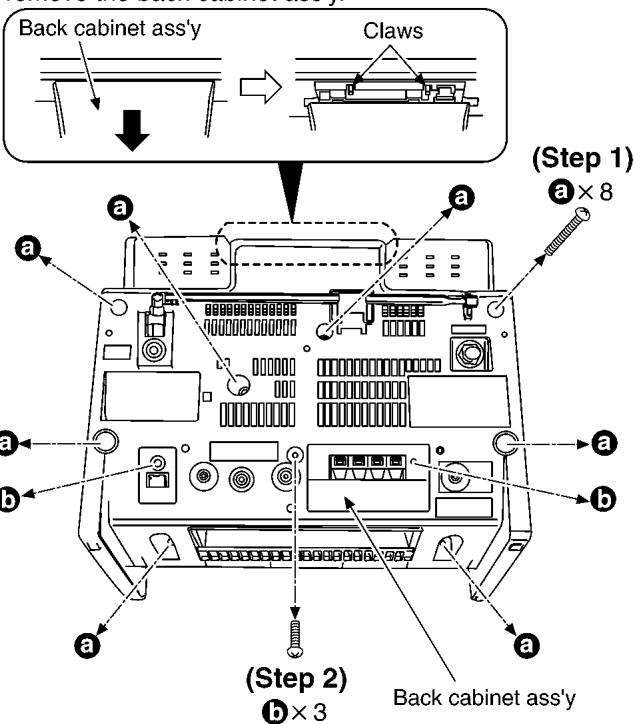
9 Operation Checks and Component Replacement Procedures

9.1. SA-EN29

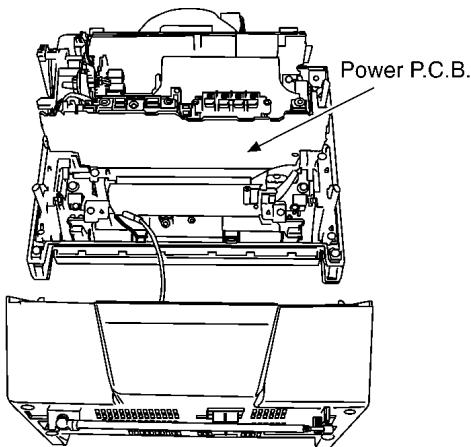
9.1.1. Checking for the power P.C.B.

(Step 3)

Release the 2 claws, and then remove the back cabinet ass'y.

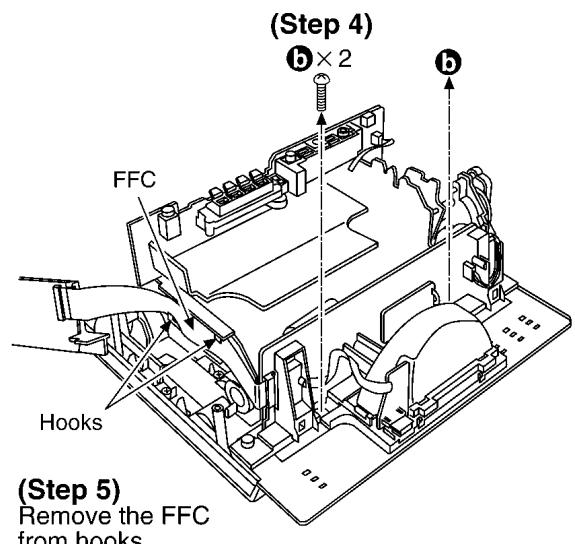
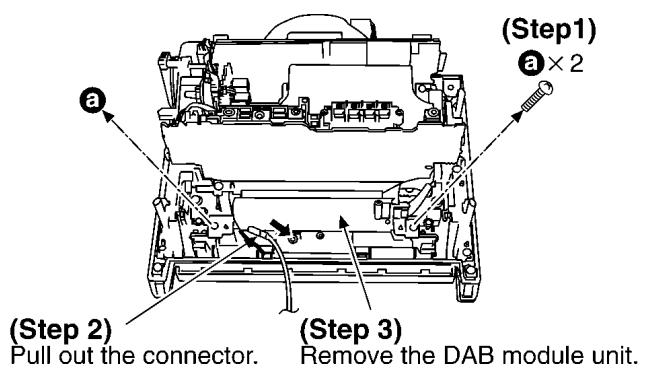


- Check the power P.C.B. as shown below.



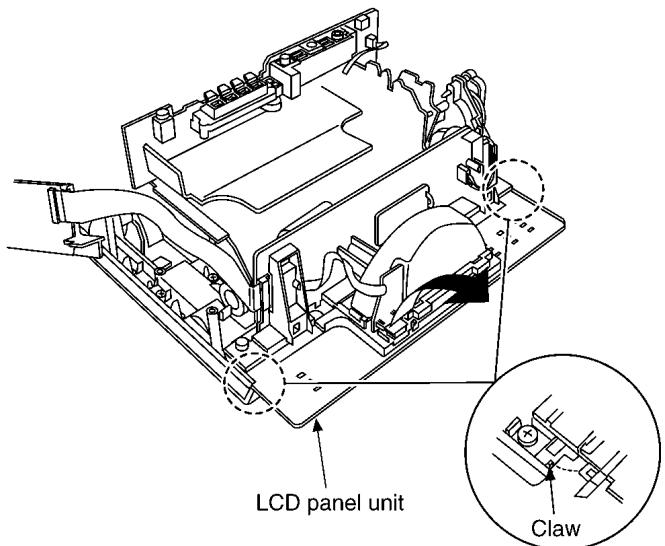
9.1.2. Checking for the LCD P.C.B.

- Follow the (Step1) - (Step3) of item 9.1.1.

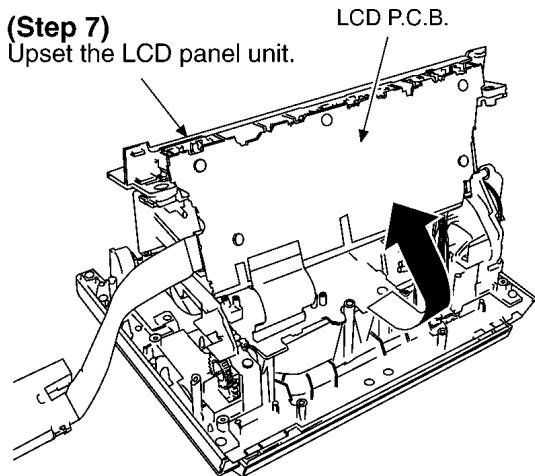


(Step 6)

Release the 2 claws, and then remove the LCD panel unit in the direction of arrow.

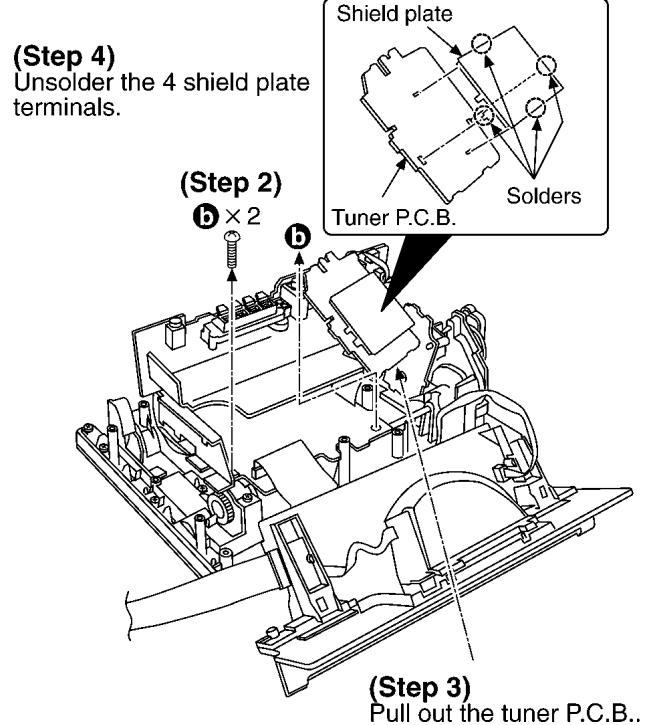
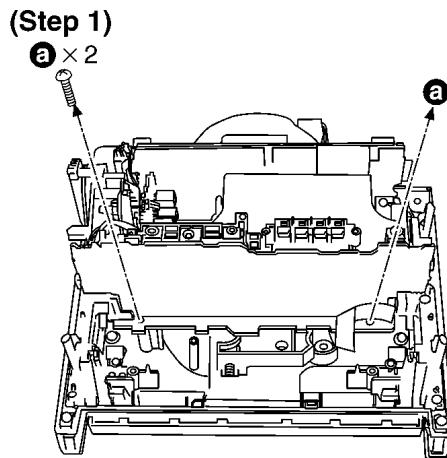


- Check the LCD P.C.B. as shown below.



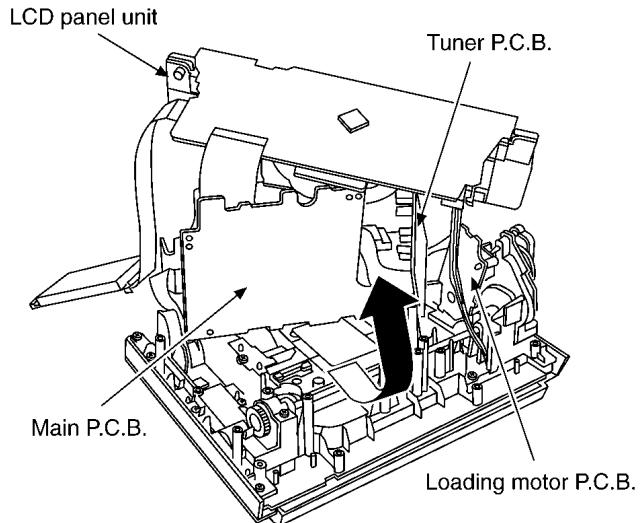
9.1.3. Checking for the main P.C.B., tuner P.C.B. and loading motor P.C.B.

- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.



- Check the main P.C.B., tuner P.C.B. and loading motor P.C.B. as shown below.

(Step 5)
Upset the LCD panel unit and main P.C.B..

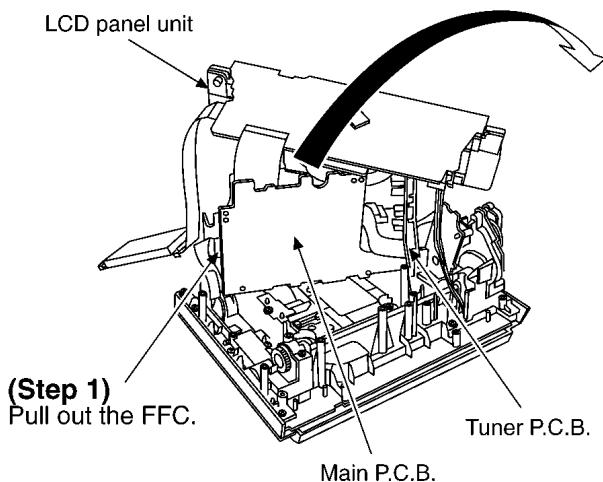


9.1.4. Checking for the CD servo P.C.B.

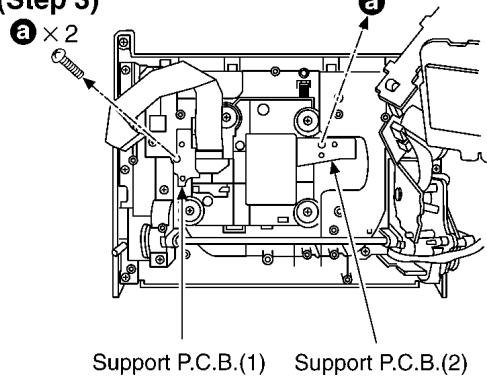
- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.

(Step 2)

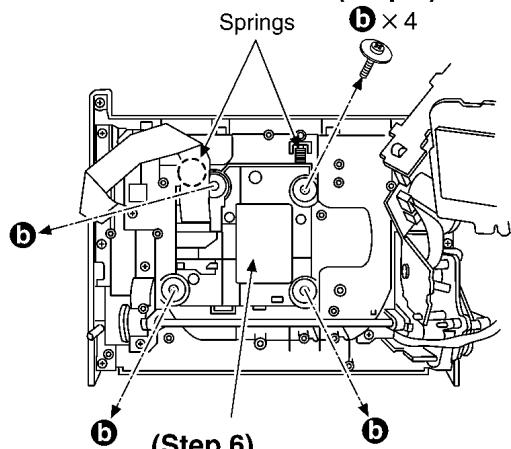
Move the LCD panel unit, main P.C.B. and tuner P.C.B. in the direction of arrow.

**(Step 4)**

Remove the support P.C.B.(1) and support P.C.B.(2).

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

b × 4

**(Step 6)**

Remove the traverse deck ass'y.

NOTE:

- While installing the traverse deck ass'y, insert the traverse deck ass'y into the depression by holding down the spring. Make sure that the spring does not pop out from the depression.

(Step 7)

Traverse deck ass'y

C × 3

(Step 8)

d × 2

Claw

C

d

Claw

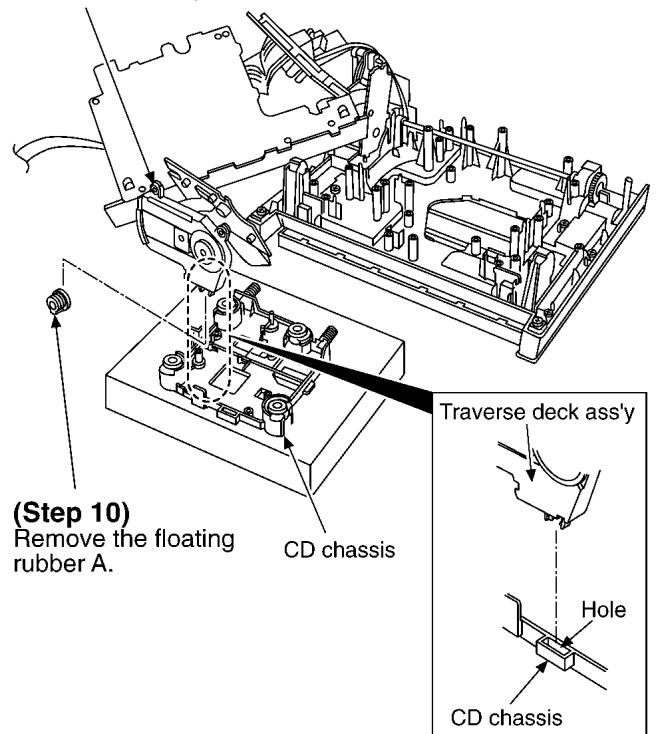
CD servo P.C.B.

Claw

(Step 9)

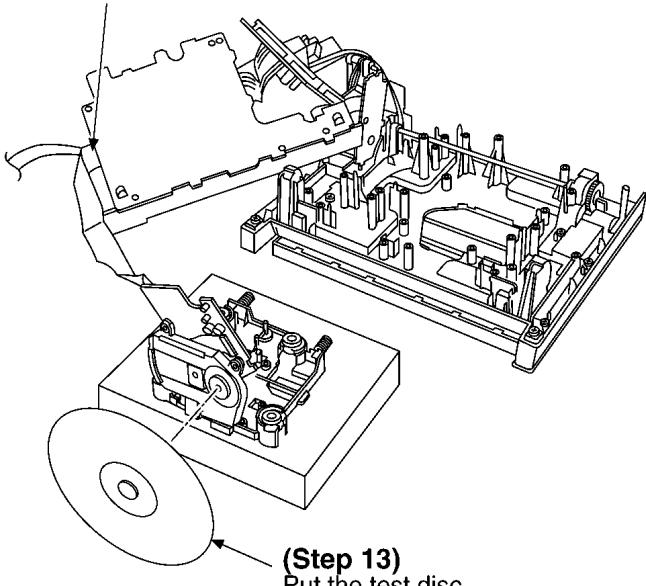
Release the 2 claws, and then remove the traverse deck ass'y and CD servo P.C.B..

Traverse deck ass'y

**(Step 11)**

Stand the traverse deck ass'y inserting the hole of CD chassis.

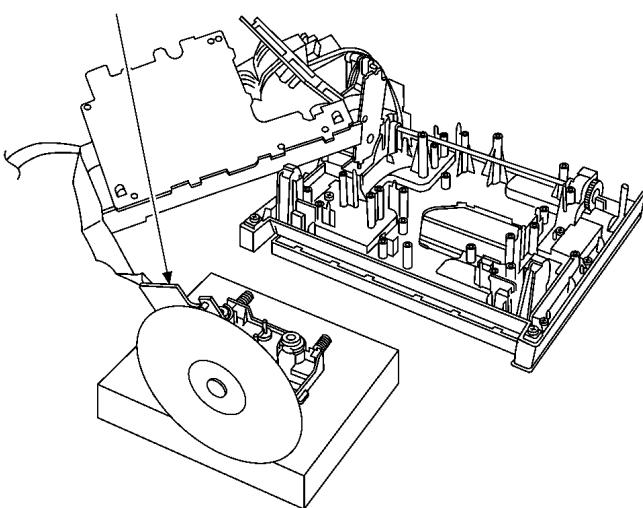
(Step 12)
Connect the FFC.



(Step 13)
Put the test disc .

- Checking the CD servo P.C.B. as shown below.

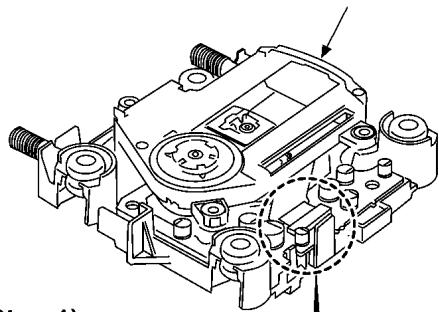
CD servo P.C.B.



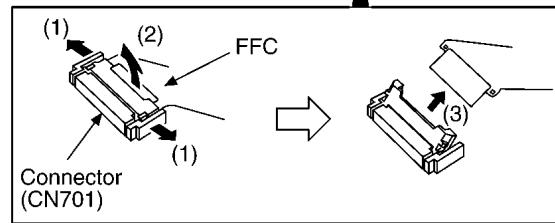
9.1.5. Replacement for the traverse motor

- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.
- Follow the (Step1) - (Step7) of item 9.1.4.

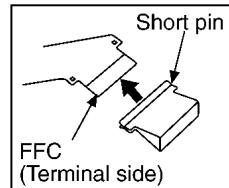
(Step 2)
Remove the traverse deck ass'y.



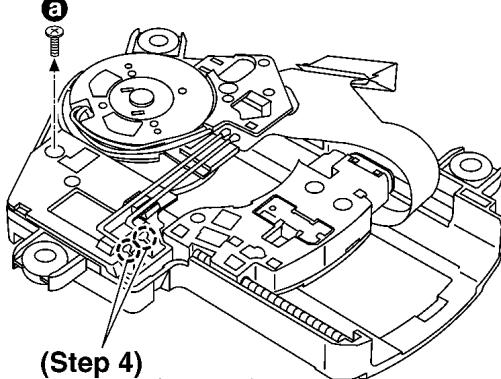
(Step 1)
Pull out the FFC from connector (CN701).



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

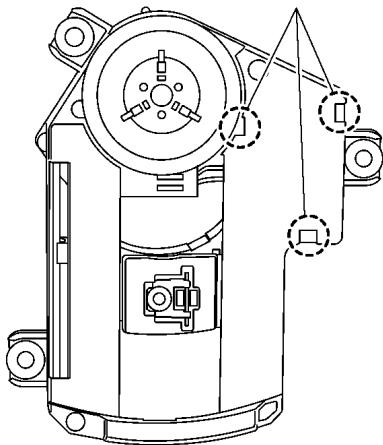


(Step 3)

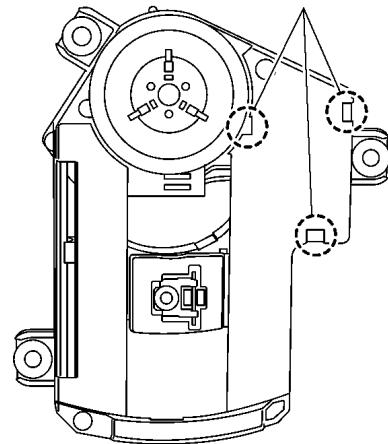


(Step 4)
Unsolder. (2 points)

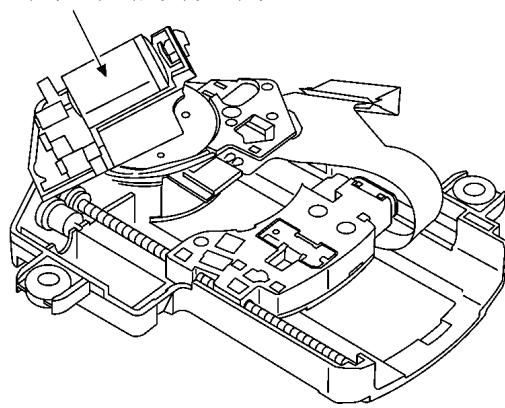
(Step 5)
Release the 3 claws.



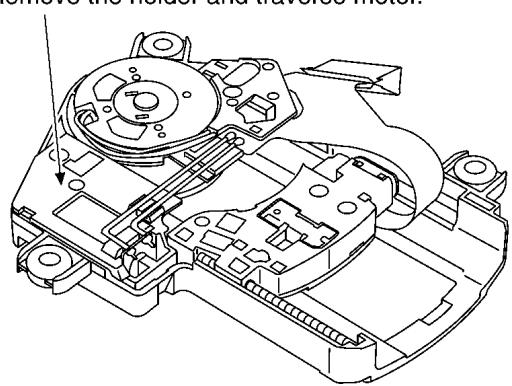
(Step 2)
Release the 3 claws.



(Step 6)
Remove the traverse motor.



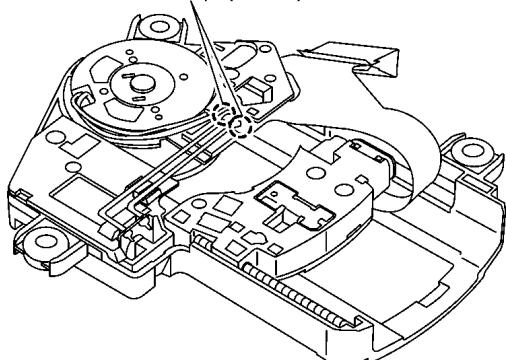
(Step 3)
Remove the holder and traverse motor.



9.1.6. Replacement for the optical pick-up

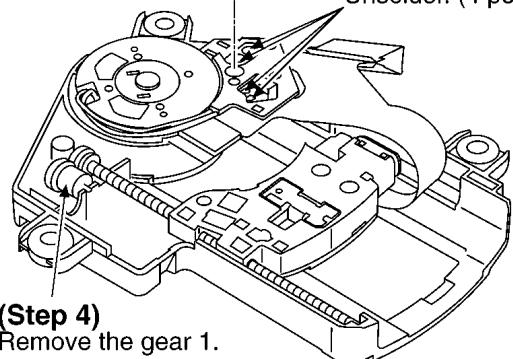
- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.
- Follow the (Step1) - (Step7) of item 9.1.4.
- Follow the (Step1) - (Step3) of item 9.1.5.

(Step 1)
Unsolder. (2 points)



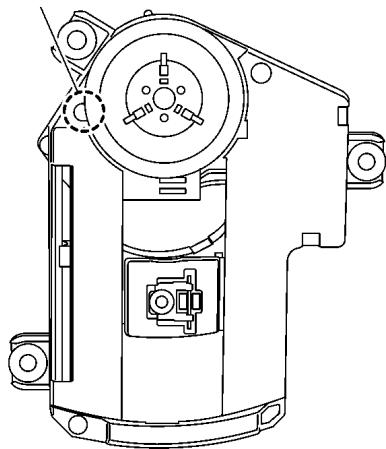
(Step 6)

a
(Step 5)
Unsolder. (4 points)

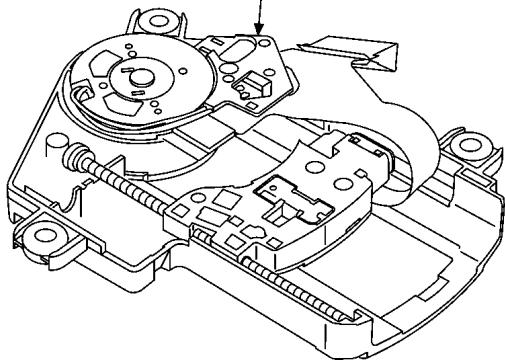


(Step 4)
Remove the gear 1.

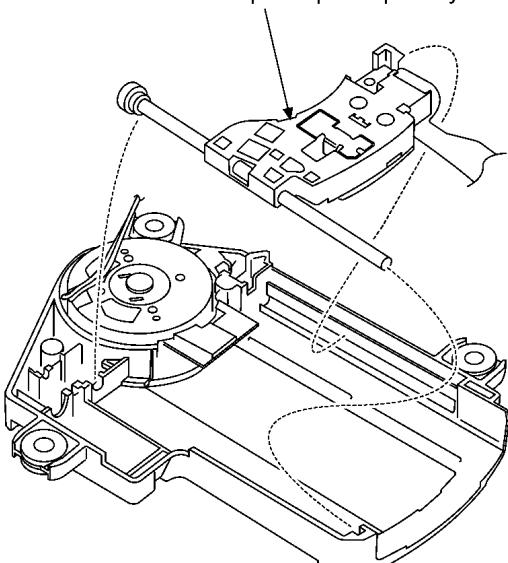
(Step 7)
Release the claw.



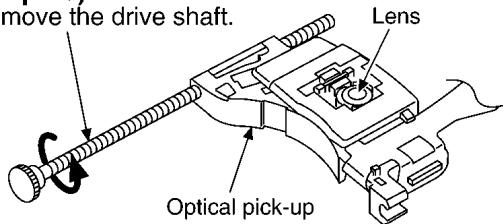
(Step 8)
Remove the FFC holder.



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



(Step 10)
Remove the drive shaft.



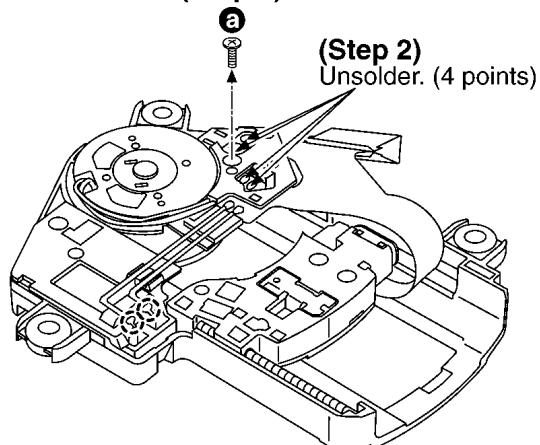
NOTE:

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.

9.1.7. Replacement for the rest switch

- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.
- Follow the (Step1) - (Step7) of item 9.1.4.
- Follow the (Step1), (Step2) of item 9.1.5.

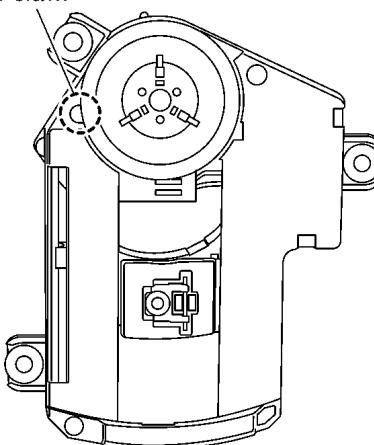
(Step 1)

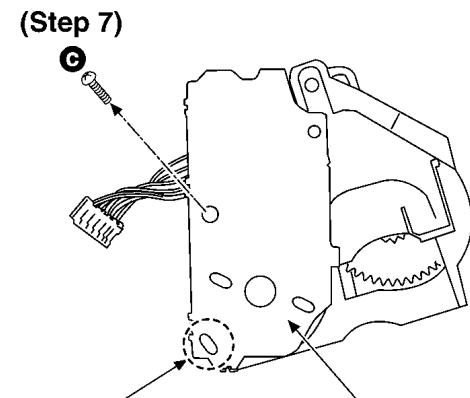
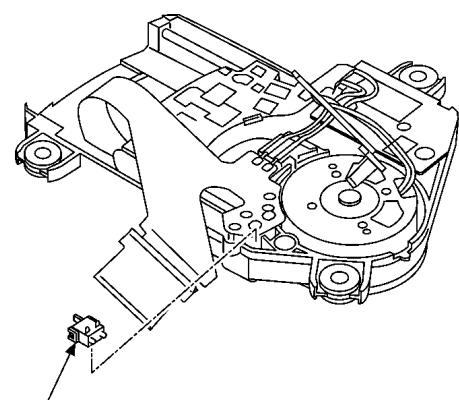
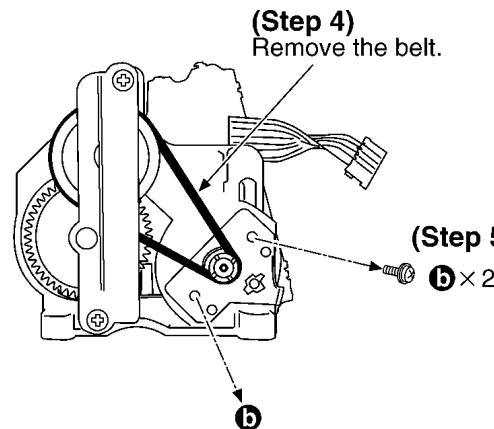
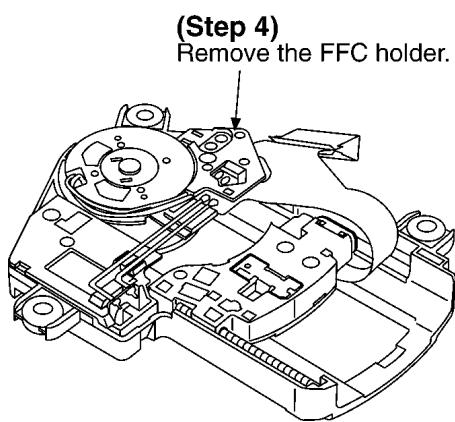


(Step 2)

Unsolder. (4 points)

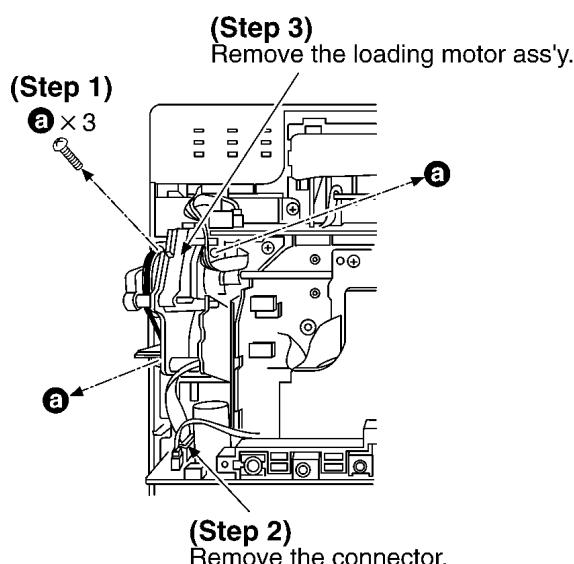
(Step 3)
Release the claw.



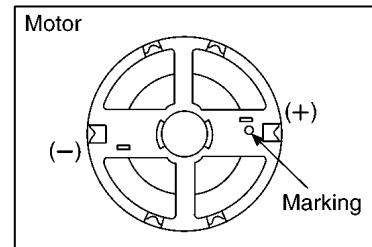
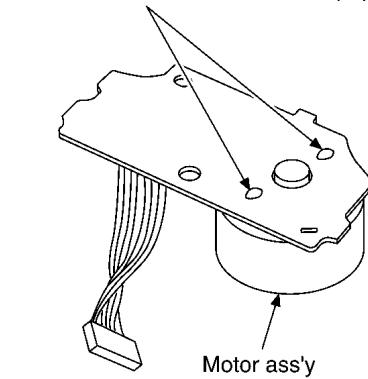


9.1.8. Replacement for the motor

- Follow the (Step1) - (Step3) of item 9.1.1.



(Step 9)
Unsolder the motor terminals (2 points).



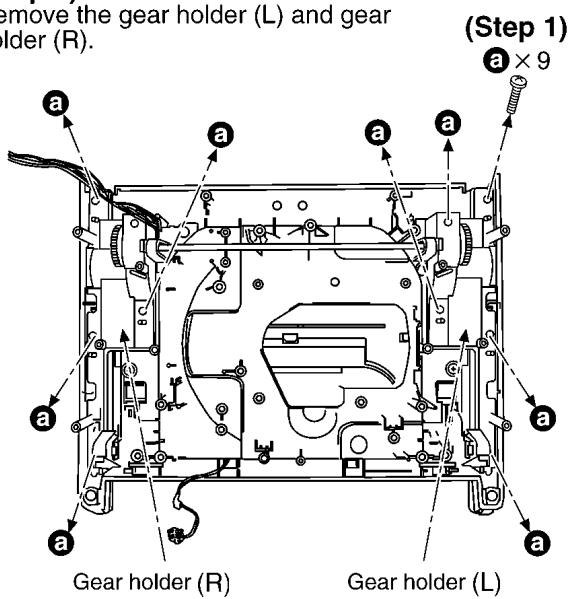
9.1.9. Replacement for the gear holder, gear A ass'y, gear B and rack

- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.

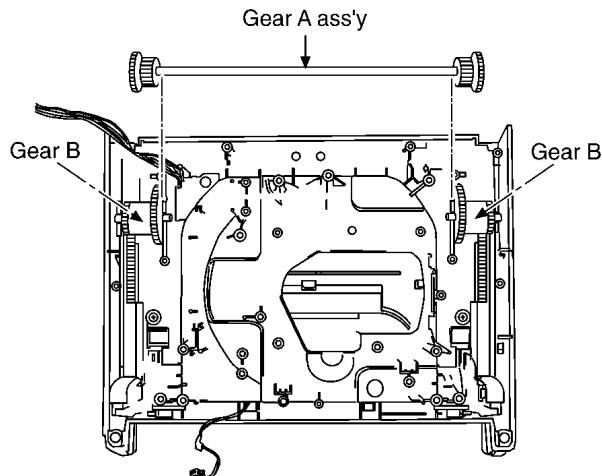
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.
- Follow the (Step1) - (Step7) of item 9.1.4.

(Step 2)

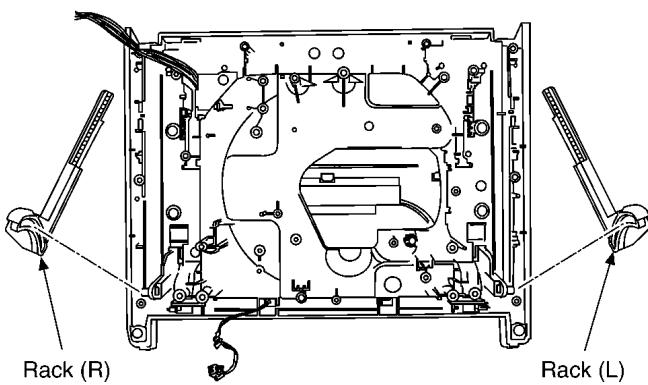
Remove the gear holder (L) and gear holder (R).

**(Step 3)**

Remove the gear A ass'y and two gears B.

**(Step 4)**

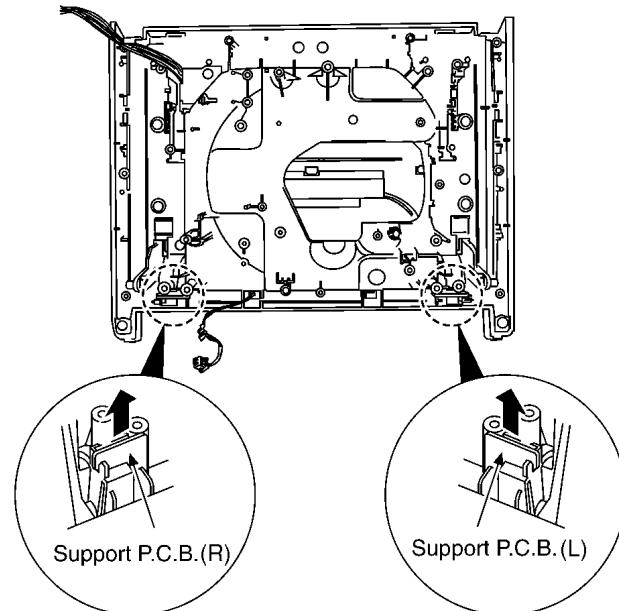
Remove the rack (L) and rack (R).

**9.1.10. Replacement for the CD lid unit and CD eject P.C.B.**

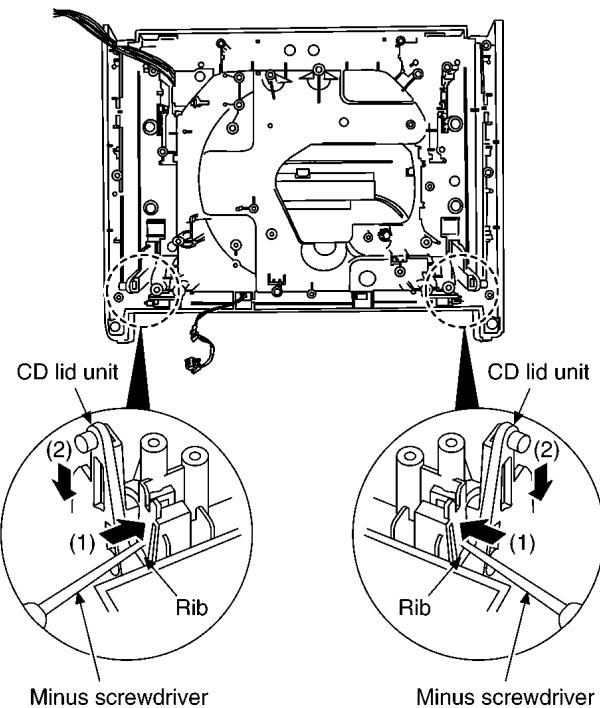
- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.
- Follow the (Step1) - (Step6) of item 9.1.4.
- Follow the (Step1) - (Step4) of item 9.1.9.

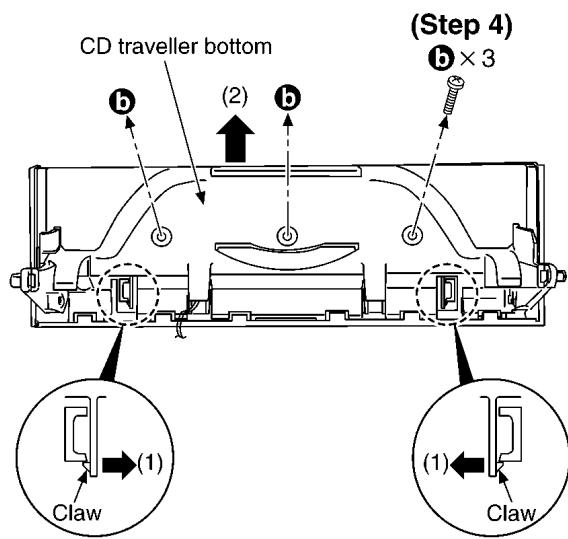
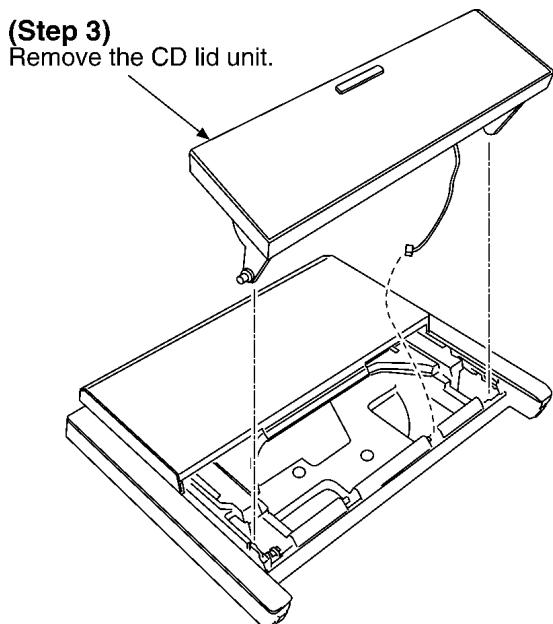
(Step 1)

Pull out the support P.C.B. (L) and support P.C.B. (R).

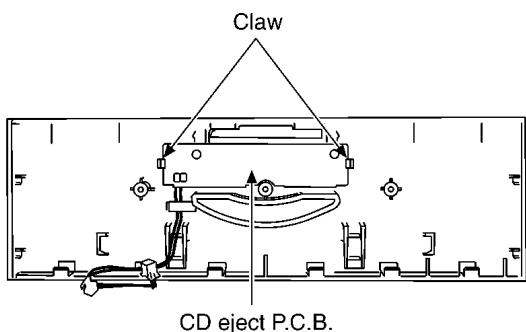
**(Step 2)**

With pressing the rib in the direction of arrow (1), remove the CD lid unit in the direction of arrow (2).





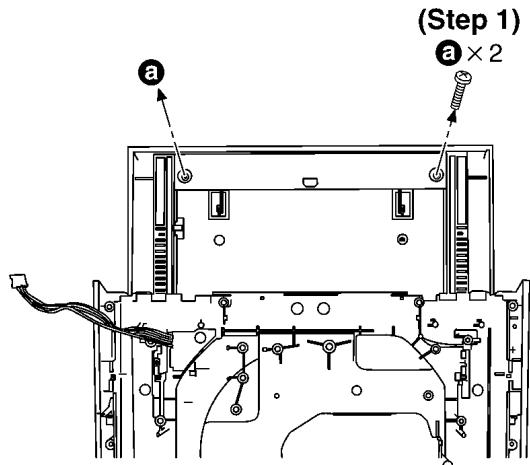
(Step 5)
With pressing the claw in the direction of arrow (1), remove the CD traveller bottom in the direction of arrow (2).



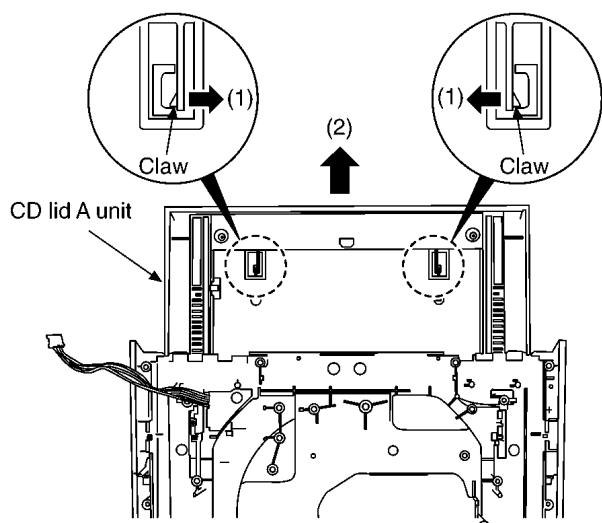
(Step 6)
Release the 2 claws, and then remove the CD eject P.C.B..

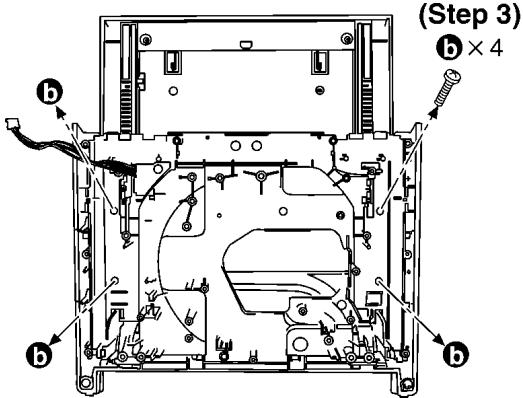
9.1.11. Replacement for the CD traveller holder and CD traveller upper

- Follow the (Step1) - (Step3) of item 9.1.1.
- Follow the (Step1) - (Step6) of item 9.1.2.
- Follow the (Step1) - (Step3), (Step5) of item 9.1.3.
- Follow the (Step1) - (Step7) of item 9.1.4.
- Follow the (Step1) - (Step4) of item 9.1.9.



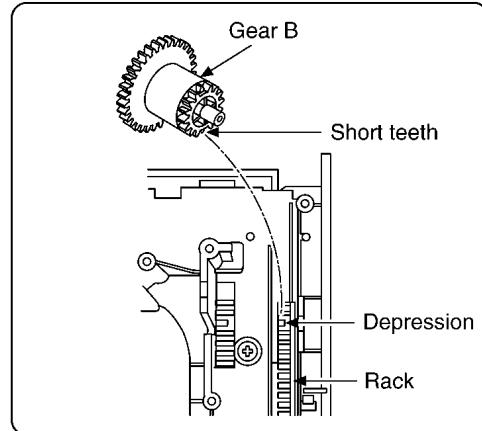
(Step 2)
With pressing the claw in the direction of arrow (1), remove the CD lid A unit in the direction of arrow (2).





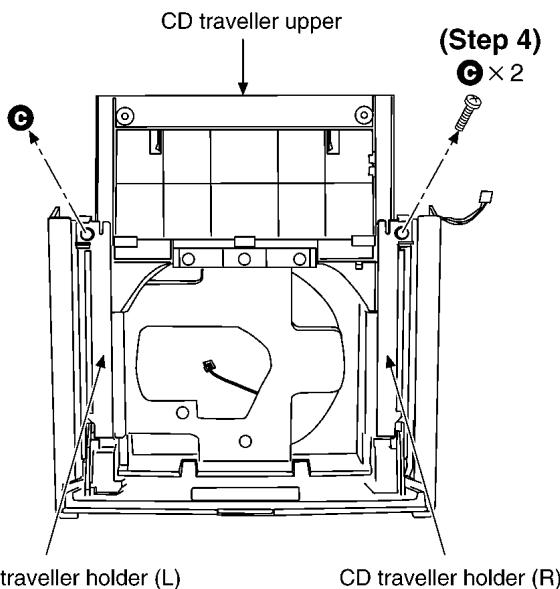
Notice for installation of gear B

- Install the gear B by engaging the short teeth of gear B and the depression of rack.

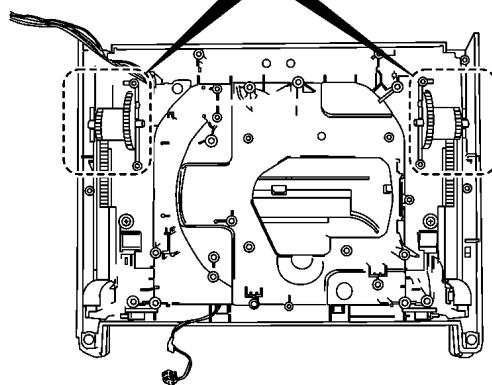


(Step 5)

Remove the CD traveller holder (L), CD traveller holder (R) and CD traveller upper.



CD traveller holder (L) CD traveller holder (R)

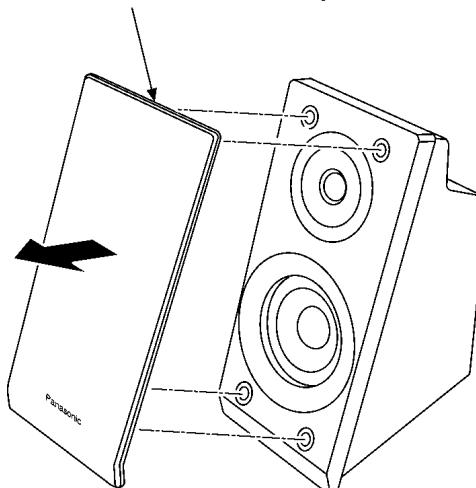


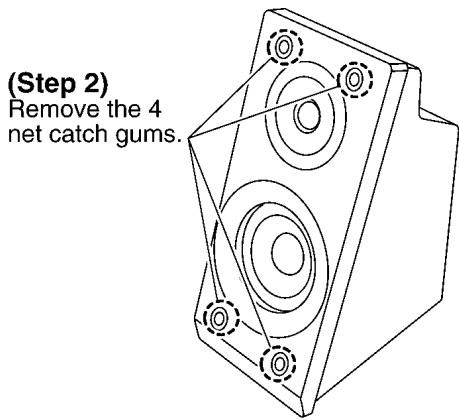
9.2. SB-EN7

9.2.1. Removal of the net catch gum

(Step 1)

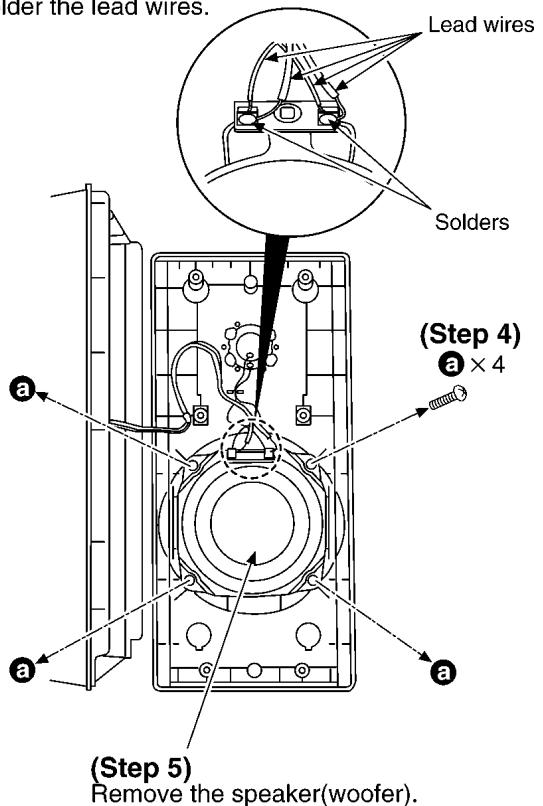
Remove the net frame ass'y.





(Step 2)
Remove the 4 net catch gums.

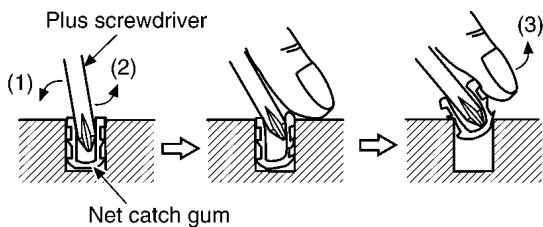
(Step 3)
Unsolder the lead wires.



(Step 4)
 $\textcircled{a} \times 4$

(Step 5)
Remove the speaker(woofer).

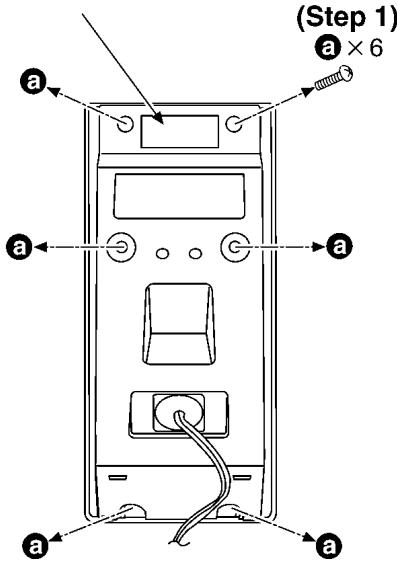
■ Removal of the net catch gum



1. Insert the plus screwdriver or similar tool into net catch gum, push in slightly in the direction of arrow (1) to avoid scratching, the cabinet ass'y and lift in the direction of arrow (2).
2. After lifting the net catch gum, grasp it with your finger and remove in the direction of arrow (3).

9.2.2. Removal of the speaker(Woofe)

(Step 2)
Remove the back cabinet ass'y.

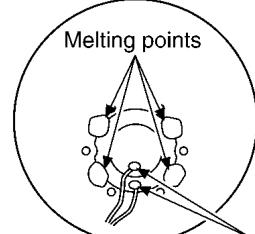


(Step 1)
 $\textcircled{a} \times 6$

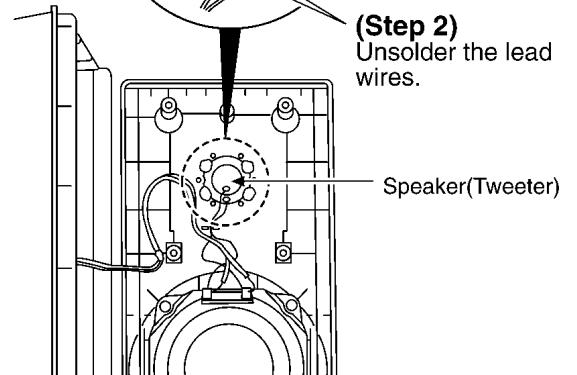
9.2.3. Removal of the speaker(Tweeter)

- Follow the (Step1), (Step2) of item 9.2.2.

(Step 1)
Scratch the melting points (4 points) with cutter.

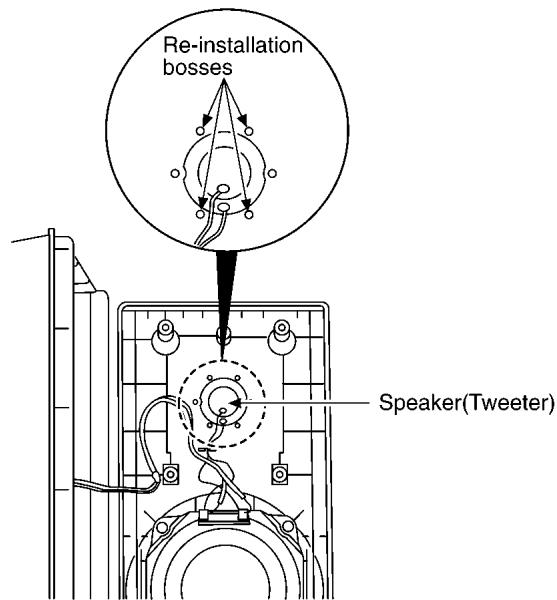


(Step 2)
Unsolder the lead wires.



Notice for installation of speaker(Tweeter)

- After replacement, install the speaker with melting the re-installation bosses (4 points).



10 Self Diagnostic Function

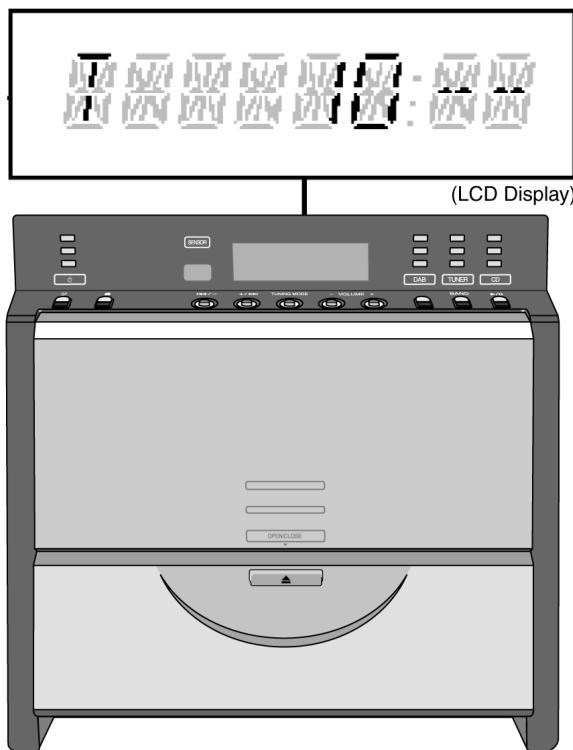
10.1. Setting of self diagnostic Function

10.1.1. Setting of self diagnostic mode

1. To enter into self-diagnostic mode:

- Press & hold n (STOP) key,followed by ►/I/+ key for more than 2 seconds.

2. LCD will show the following display as below:



Note:

Error code is displaying within each function in order of H → P (CD → MD → TAPE)

3. Error during Test:

- Press & hold “TUNING MODE” key (> 2sec) will show blinking error code. If abnormality occurs during test, error code will be displayed.

Example:

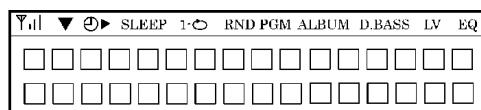


NOTE: Refer to error code table 12.1.

10.1.2. Test Mode Checking

1. Operation keys and all segment display check mode:

- Activate the Self Diagnosis mode before performing the following steps
- Press & hold the CD ►/II key (>2 sec) will enter this mode.
- When the keys of the main set is pressed, the various corresponding key functions shall light up and display that particular function. After all the main set keys were pressed, the LCD shows the following (Including CD LED):



2. CD auto adjustment test mode:

- a. The result of auto adjustment will be show after TOC read.
 • If no error during auto adjustment, the following display will be shown:



- Example:



3. CD lid OPEN/CLOSE aging test mode:

- Press & hold ▲/■ key (>5 sec) will enter this mode.
- This mode counts the number of times the CD lid open/close (MAX is 30000).



4. CD unit (240Z) and CD lid reliability test mode (Combination)

- Press & hold ►I/+ key and CD ►/II key (>2 sec) will enter into this test mode.
- This test is the combination of CD lid operation and the inner and outer disc access operation aging test. The testing process is as follow: TOC read → Play all tracks → CD STOP → CD lid OPEN → Wait for 1sec in OPEN state → CD lid CLOSE → Increment counter (Repeat the whole process).

10.1.3. Exiting from self-diagnostic mode

1. Press the POWER ON/OFF button either on the remote controller or main set to exit from Self-Diagnostic mode.
2. The content of abnormalities (error code) are kept as long as the microcontroller memory is backup.
3. If there is an error detected in RAM check at Reset, the content in the RAM shall be initialised and all the contents of abnormalities shall be cleared.
4. For force clearance, press "STOP" key while in self diagnostic mode.
 "CLEAR" is displayed in upper row of LCD for one second followed by "T is"

10.2. Error Code

| | Error Contents | Error Display |
|---------------|------------------------------------|-----------------|
| Common | PDET power fault | F76 PDET |
| DAB | DAB-PDET power fault | F76 DAB PDET |
| | DAB-LSI communication fault | F26 DAB LSI |
| | DAB-LSI DDOWFIC non-detection | F26 DAB DDOWFIC |
| | DAB-PLL communication fault | F26 DAB PLL |
| | DAB-PLL unlock | F56 DAB PLL |
| FM/AM | | |
| CD | CD support LSI communication fault | F26 CD |
| | CD-REST-SW fault | F15 CD |

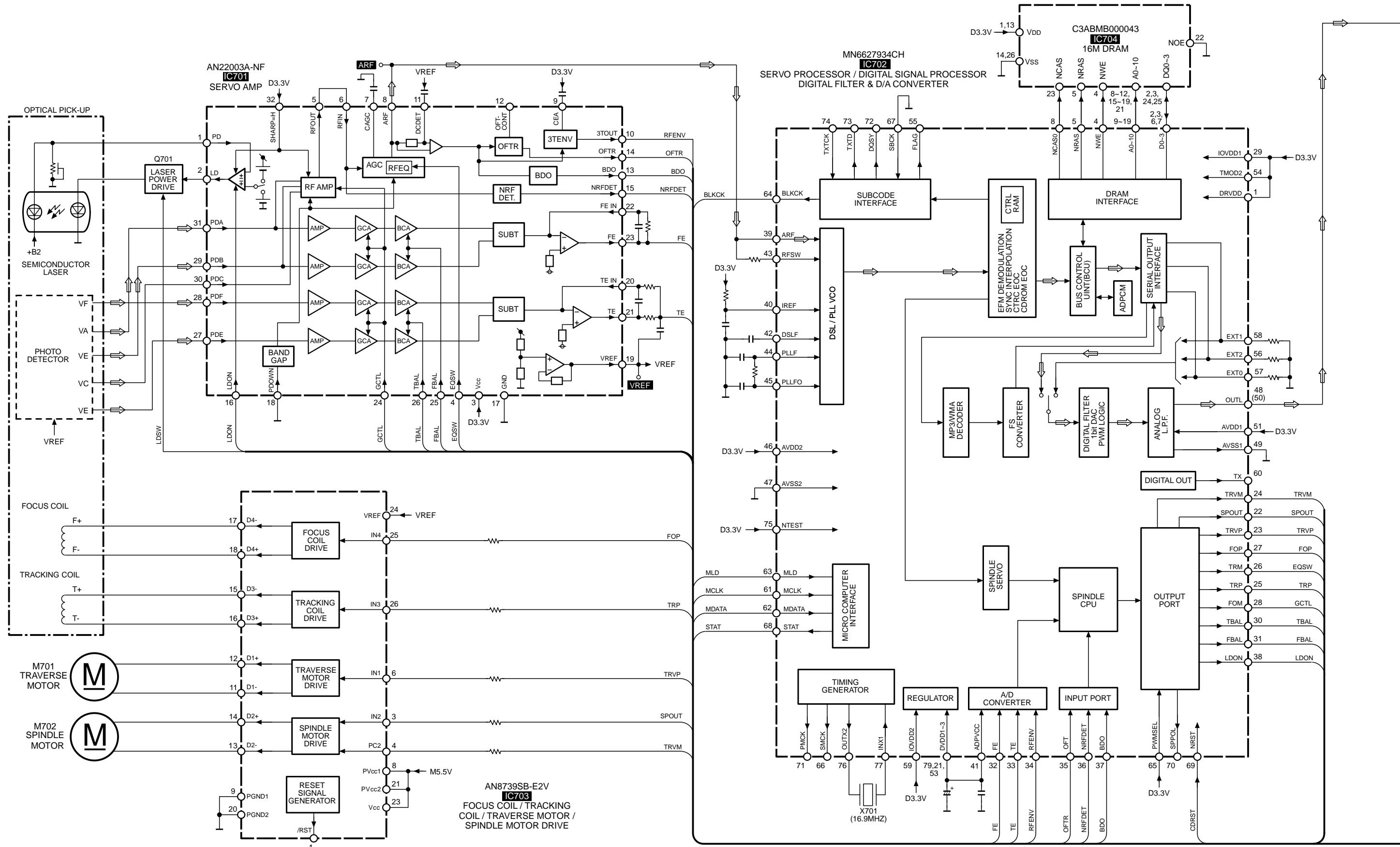
11 Description of Error Code

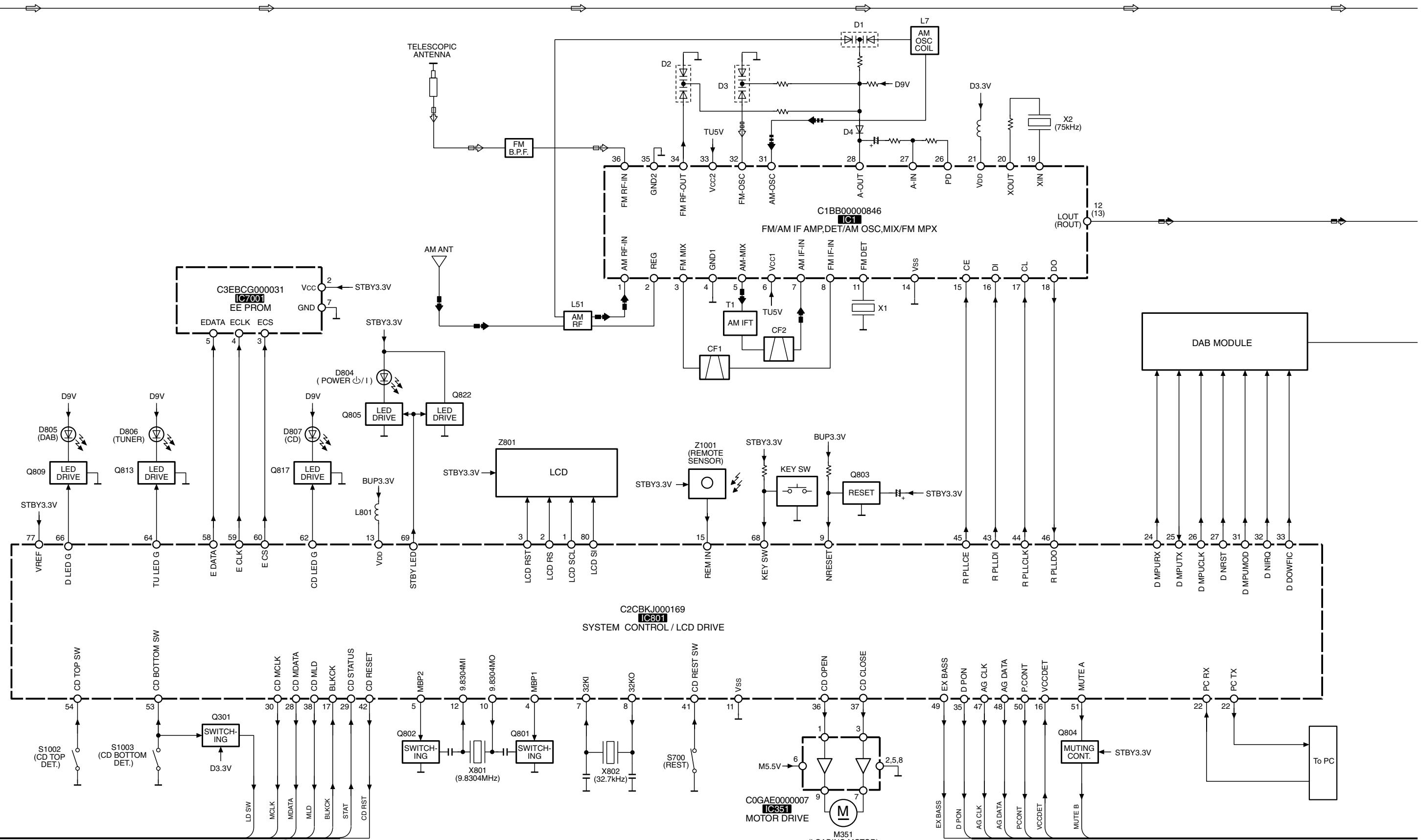
11.1. Error detection for CD Mechanism block

| No. | Error | Error Display | Problem condition |
|-----|----------------------|---------------|---|
| 1 | CD Open Switch Error | H15 | Detect error during opening operation and memorised it as an error. |

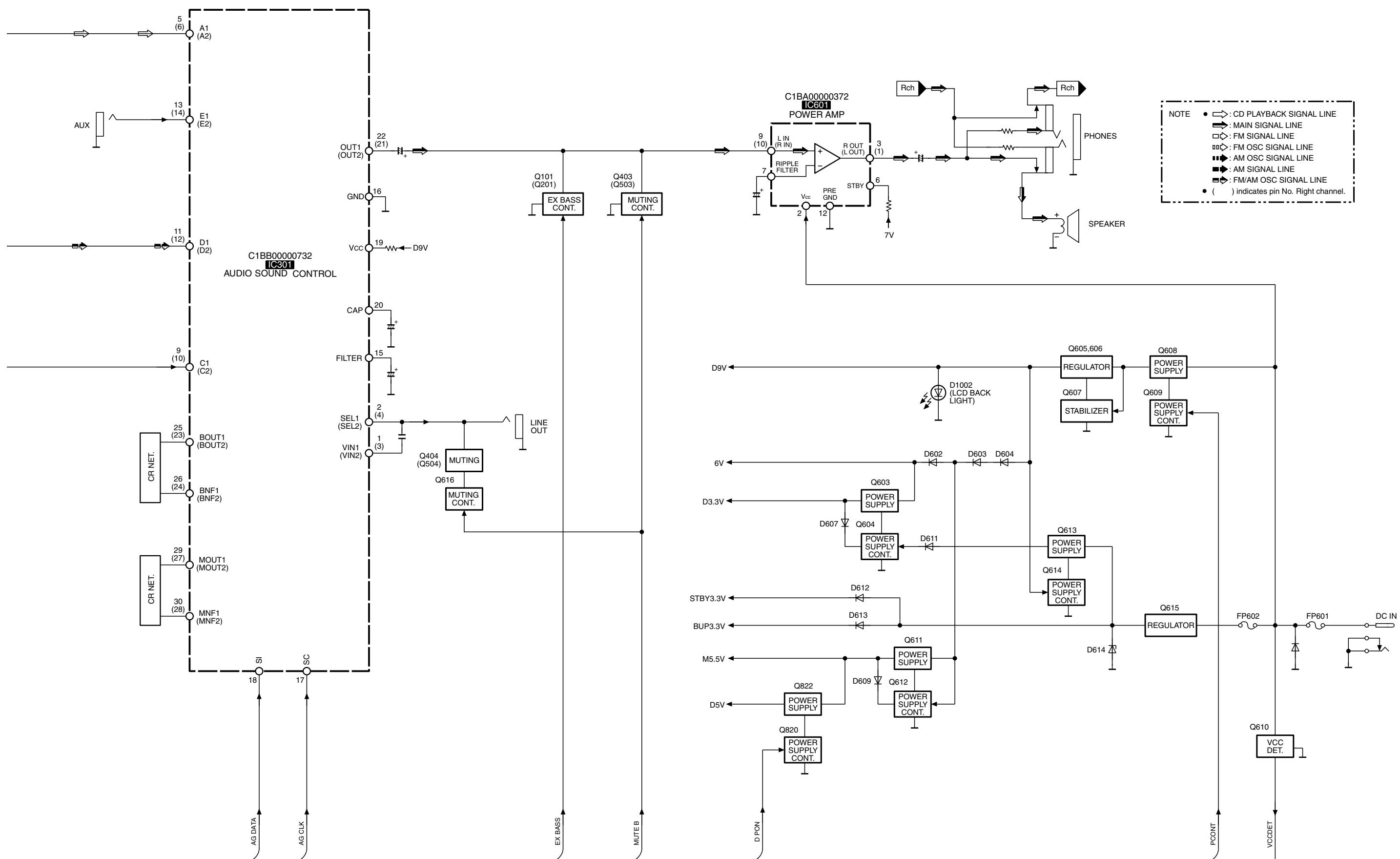
| | | | |
|---|--|-----|---|
| 2 | CD Close Switch (Bottom Sw) Error | H16 | Detect error during closing operation and memorised it as an error. |
| 3 | CD Rest Switch Error | F15 | Under normal operation (Self-Diagnostic Mode inclusive), this error occurs when the Rest_SW ON is not detected within the specified time (10 s) and shall be memorised. |
| 4 | Communication between CD LSI and Micro-P | F26 | This error occurs when communication between CD LSI and Micro-P is abnormal. |
| 5 | Power Supply Error | F76 | This error occurs when PDET (Input for detecting over/under voltage of power supply) voltage level is not in the range between 1.72V and 2.80V. |

12 Block Diagram





SA-EN29(EB) BLOCK DIAGRAM



SA-EN29(EB) BLOCK DIAGRAM

13 Schematic Diagram

13.1. Schematic Diagram Notes

(All schematic diagrams may be modified at any time with the development of new technology.)

Notes:

| | |
|-------|------------------|
| S301 | CD_Eject Switch |
| S801 | CD Switch |
| S802 | Tuner Switch |
| S803 | Dab Switch |
| S804 | Vol + Switch |
| S805 | Vol - Switch |
| S806 | Tun- mode Switch |
| S807 | FWD- Skip Switch |
| S808 | REV- Skip Switch |
| S809 | Stop Switch |
| S810 | Power Switch |
| S1002 | CD Top Switch |
| S1003 | CD Bottom Switch |

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

- Importance 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.

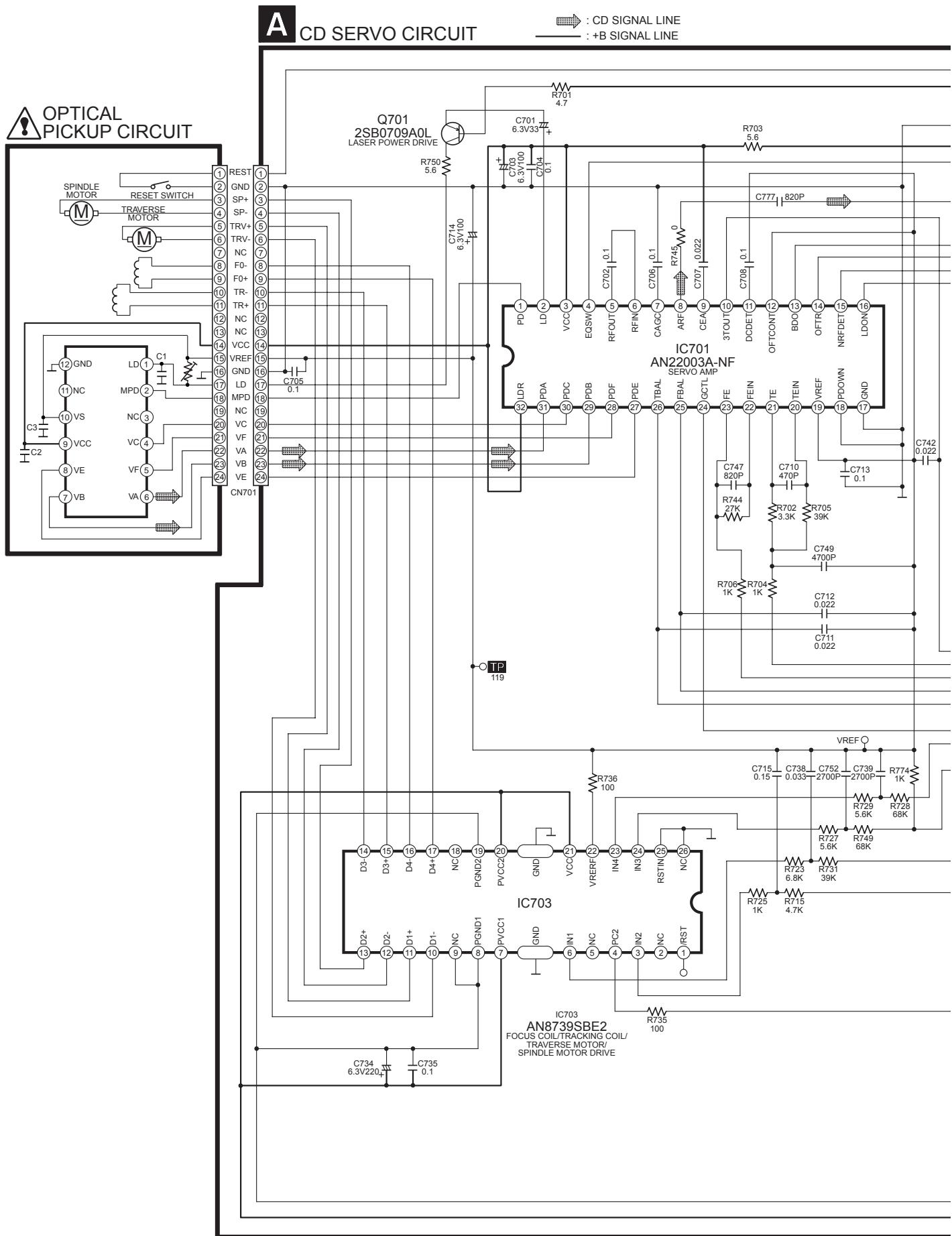
Caution!

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

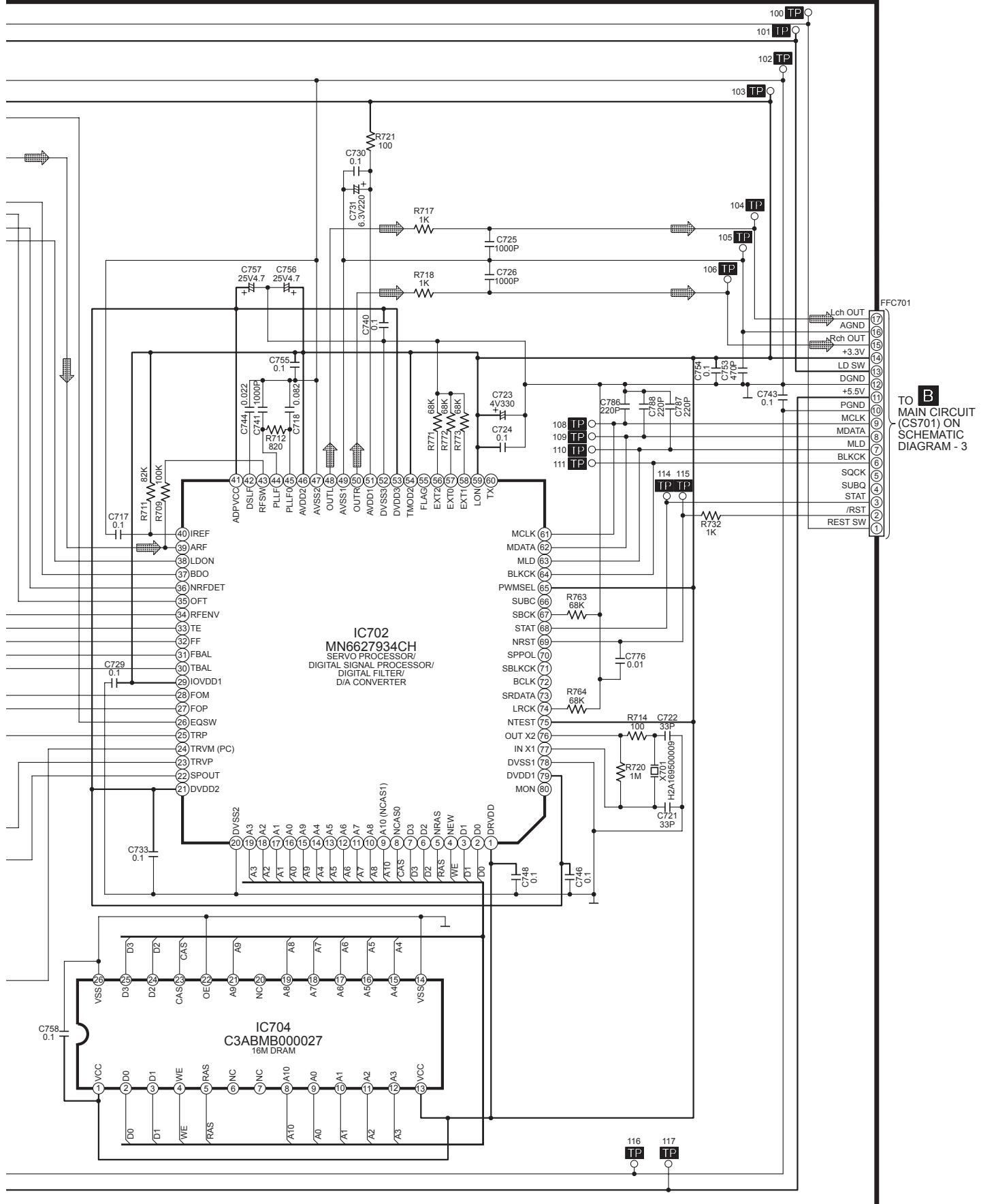
13.2. CD Servo Circuit Diagram



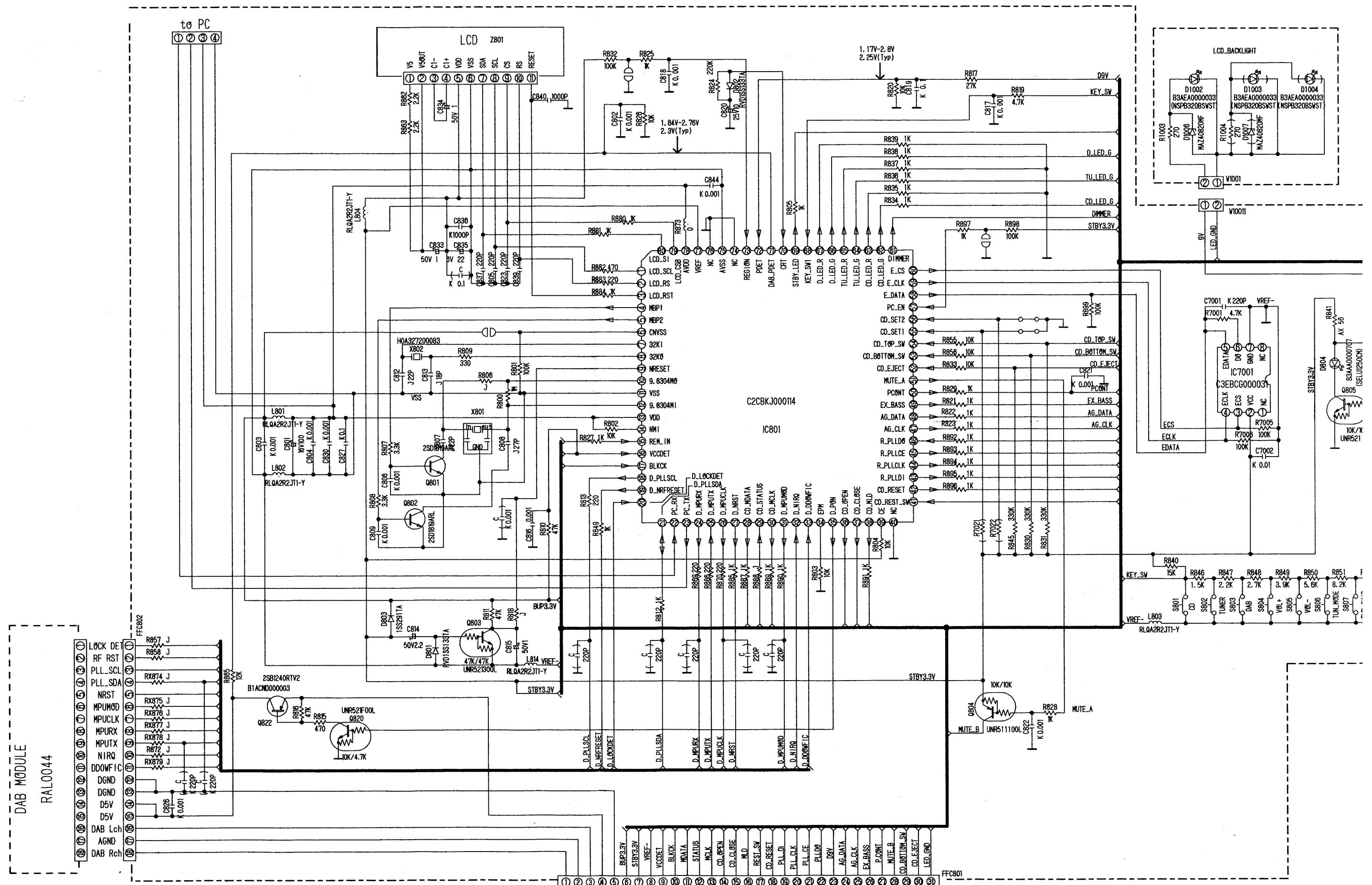
A

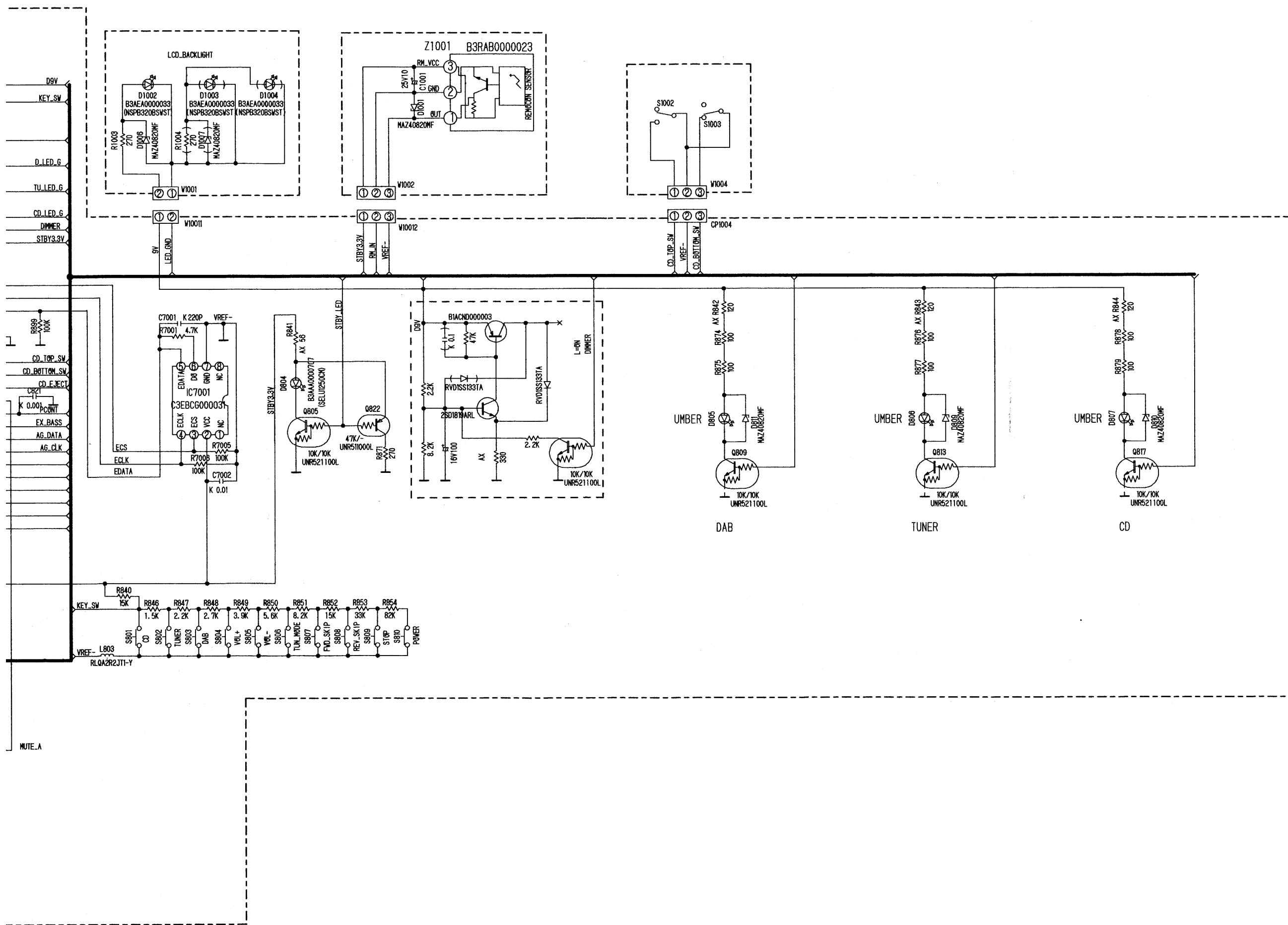
CD SERVO CIRCUIT

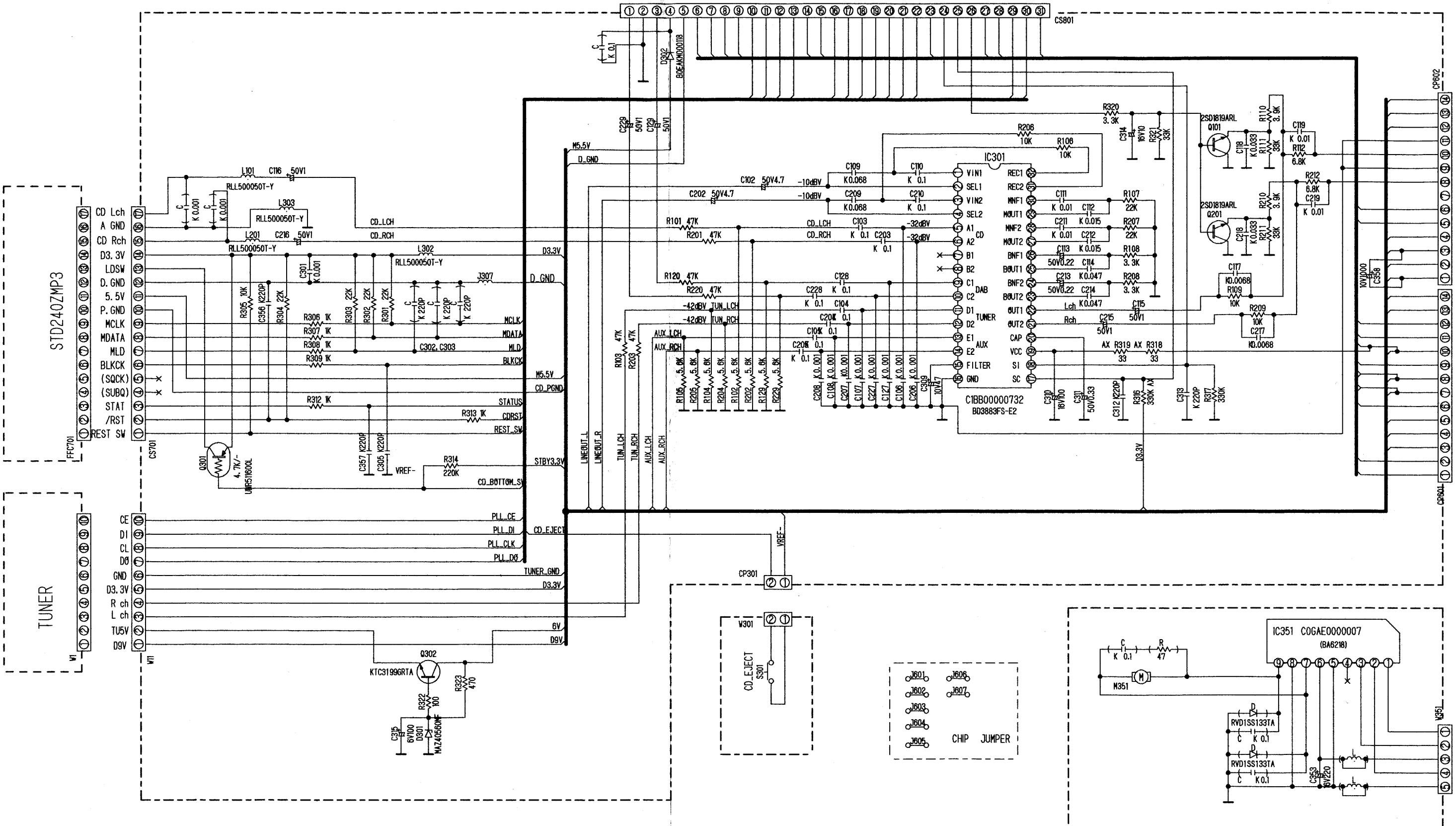
→ : CD SIGNAL LINE
— : +B SIGNAL LINE

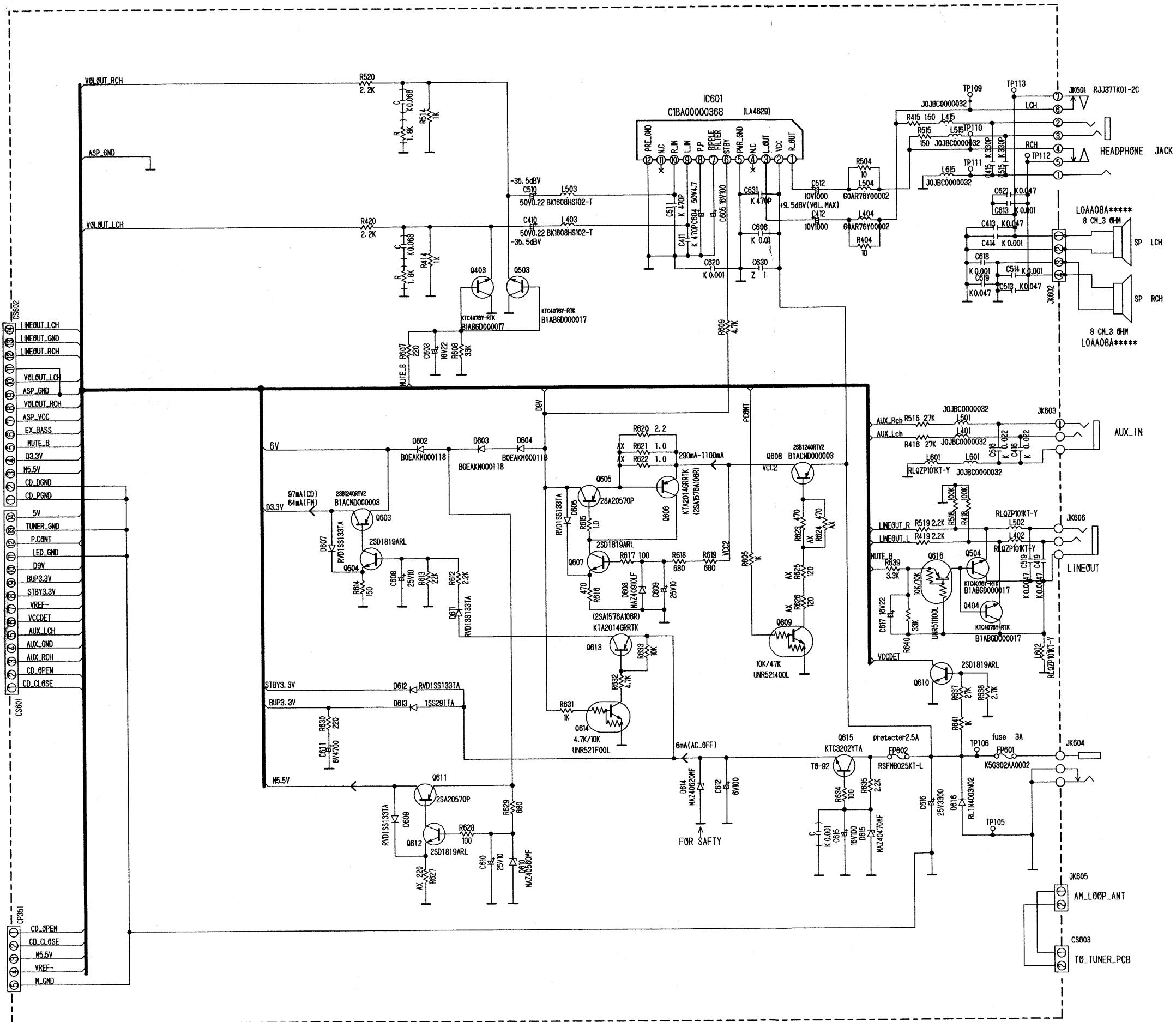


13.3. Main etc. Circuite Diagram

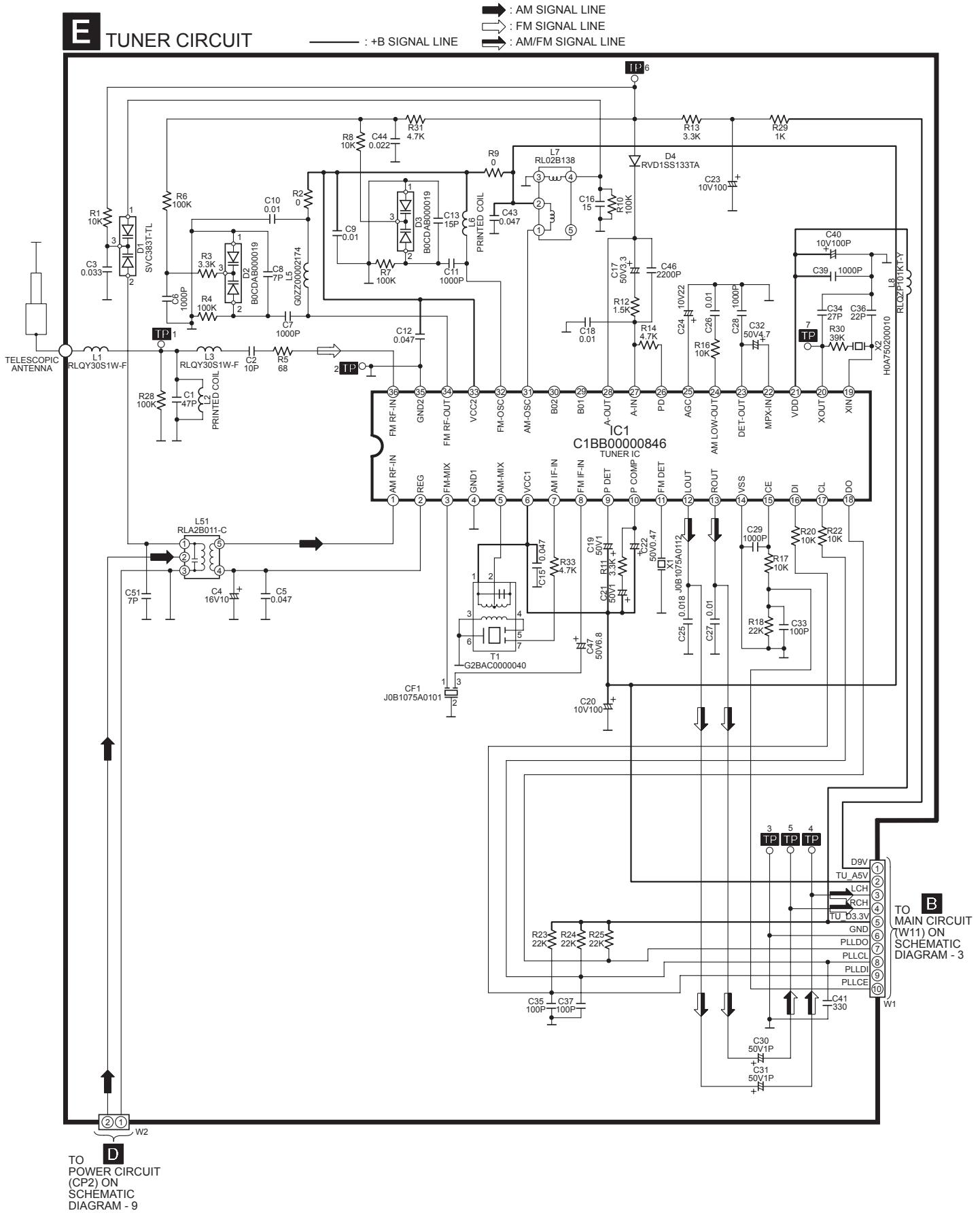




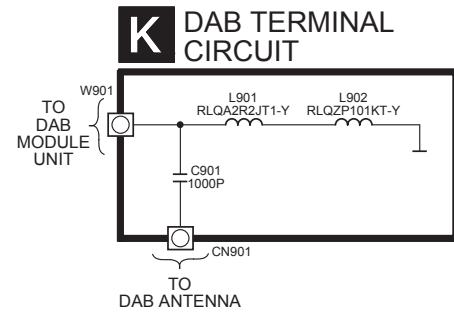




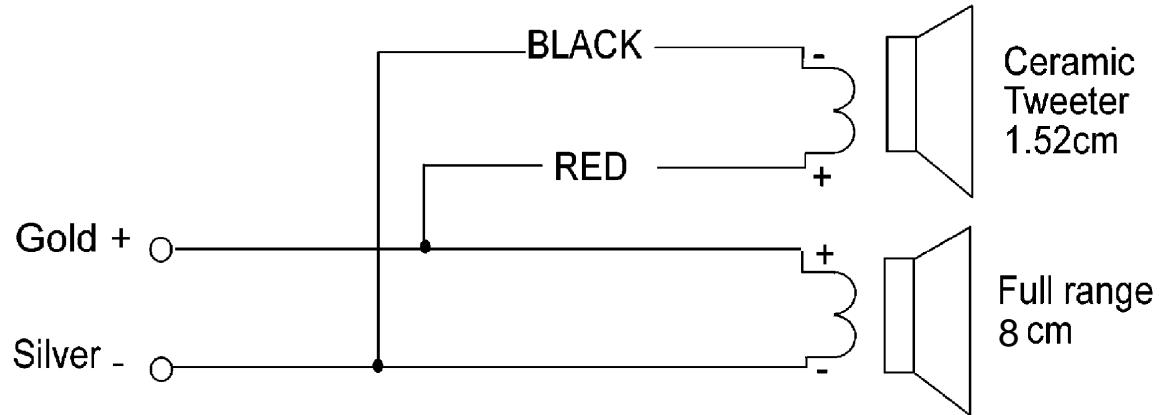
13.4. Tuner Circuit Diagram



13.5. Dab Terminal Circuit Diagram



13.6. Schematic Diagram (SB-EN7)



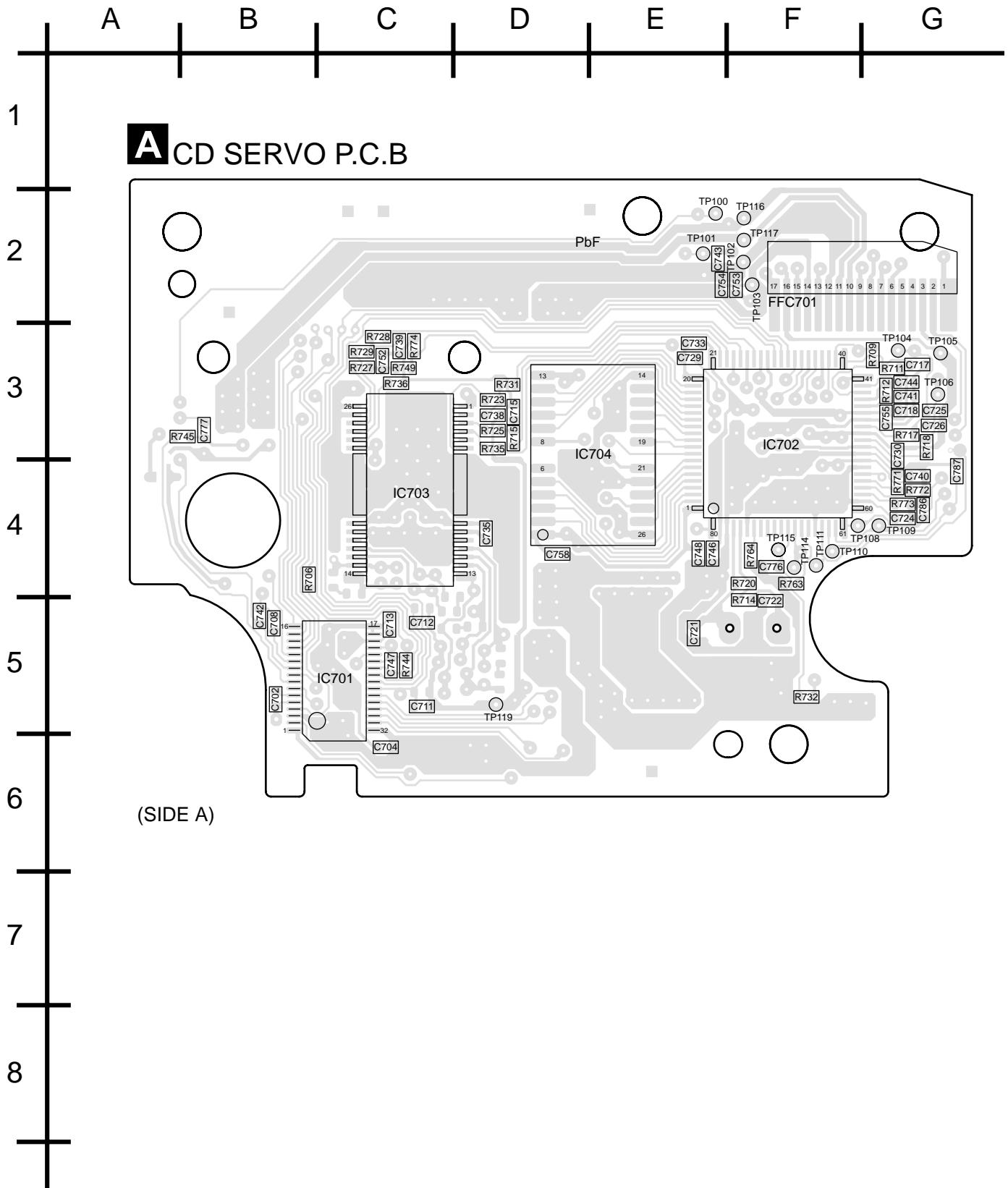
13.7. Voltage Varue

| Ref.No. | | IC1 | | | | | | | | | | | | | | | | | | | |
|---------|--|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| AM | | 2.2 | 2.2 | 2.5 | 0 | 5 | 5 | 2.2 | 2.2 | 4 | 3.7 | 3.4 | 2.2 | 2.2 | 0 | 0 | 3.4 | 3.4 | 3.4 | 1.2 | 1.6 |
| FM | | 2.2 | 2.2 | 2.5 | 0 | 5 | 5 | 2.2 | 2.2 | 4 | 3.9 | 2.8 | 2.2 | 2.2 | 0 | 0 | 3.4 | 3.4 | 3.4 | 1 | 1.6 |
| Ref.No. | | IC1 | | | | | | | | | | | | | | | | | | | |
| Mode | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | | | | |
| AM | | 3.5 | 2.2 | 0.8 | 1.8 | 0.8 | 2.1 | 2.1 | 0.7 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 0 | | | | |
| FM | | 3.5 | 2.2 | 2.1 | 0 | 0.6 | 2.1 | 2.1 | 1.8 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 1 | | | | |
| Ref.No. | | IC301 | | | | | | | | | | | | | | | | | | | |
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD STOP | | 4 | 4.4 | 4 | 4.4 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 4.2 | 4.2 | 0 | 0 | 0 | 8.5 | 3.4 |
| CD PLAY | | 4 | 4.4 | 4 | 4.4 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 4.2 | 4.2 | 0 | 0 | 0 | 8.5 | 3.4 |
| Ref.No. | | IC301 | | | | | | | | | | | | | | | | | | | |
| Mode | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | | | | | | | | |
| CD STOP | | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | | | | | | | | |
| CD PLAY | | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | | | | | | | | |
| Ref.No. | | IC351 | | | | | | | | | | | | | | | | | | | |
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | | | | |
| CD STOP | | 0 | 0 | 0 | 0 | 0 | 5.8 | 0 | 0 | 0 | | | | | | | | | | | |
| CD PLAY | | 0 | 0 | 0 | 0 | 0 | 5.8 | 0 | 0 | 0 | | | | | | | | | | | |
| Ref.No. | | IC601 | | | | | | | | | | | | | | | | | | | |
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | |
| CD STOP | | 6 | 12.8 | 6.2 | 0 | 0 | 2 | 6.2 | 9.1 | 1.4 | 1.3 | 0 | 0 | | | | | | | | |
| CD PLAY | | 6 | 12.8 | 6.2 | 0 | 0 | 2 | 6.3 | 9.1 | 1.4 | 1.3 | 0 | 0 | | | | | | | | |
| Ref.No. | | IC701 | | | | | | | | | | | | | | | | | | | |
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD STOP | | 3.2 | 2.7 | 3.3 | 0 | 0.8 | 2 | 0.6 | 1.6 | 1.7 | 1.5 | 1.5 | 1.5 | 0 | 3.2 | 3.1 | 0 | 0 | 0 | 1.7 | 1.7 |
| CD PLAY | | 3.2 | 2.2 | 3.3 | 0 | 1.5 | 2 | 1.4 | 1.6 | 1.7 | 1.5 | 1.5 | 1.5 | 0 | 0 | 0 | 3.2 | 0 | 0 | 1.7 | 1.7 |
| Ref.No. | | IC701 | | | | | | | | | | | | | | | | | | | |
| Mode | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | | | | | | | | |
| CD STOP | | 1.5 | 1.5 | 1.5 | 0 | 1.7 | 1.5 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 3.3 | | | | | | | |
| CD PLAY | | 1.5 | 1.5 | 1.5 | 0 | 1.9 | 1.7 | 2.3 | 2.3 | 1.9 | 2 | 2 | 3.3 | | | | | | | | |
| Ref.No. | | IC702 | | | | | | | | | | | | | | | | | | | |
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD STOP | | 3.4 | 0 | 0 | 0 | 3.4 | 0 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CD PLAY | | 3.4 | 0 | 0 | 0 | 3.4 | 0 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ref.No. | | IC702 | | | | | | | | | | | | | | | | | | | |
| Mode | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| CD STOP | | 1.1 | 1.1 | 1.3 | 3.2 | 0.1 | 0 | 0 | 0 | 3.4 | 1.5 | 1.5 | 1.5 | 1.5 | 3 | 3 | 0 | 0 | 1.5 | 0.8 | |
| CD PLAY | | 1.4 | 1.7 | 1.3 | 3.2 | 1.7 | 0 | 0 | 0 | 3.4 | 1.7 | 1.7 | 1.7 | 1.7 | 0 | 0 | 0 | 3.4 | 1.7 | 0.8 | |
| Ref.No. | | IC702 | | | | | | | | | | | | | | | | | | | |
| Mode | | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| CD STOP | | 1.5 | 1.6 | 1.6 | 1 | 1 | 3.4 | 0 | 1.5 | 0 | 1.4 | 3 | 0 | 1.4 | 3.2 | 3.2 | 0 | 0 | 0 | 3.2 | 0 |
| CD PLAY | | 1.5 | 1.6 | 1.6 | 1.5 | 1.5 | 3.4 | 0 | 1.5 | 0 | 1.6 | 3 | 0 | 1.4 | 3.2 | 0 | 0 | 0 | 0 | 3.2 | 0 |
| Ref.No. | | IC702 | | | | | | | | | | | | | | | | | | | |
| Mode | | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| CD STOP | | 3.2 | 0.2 | 3 | 0 | 3.2 | 0 | 0 | 0 | 3.2 | 0 | 0 | 0 | 0 | 3.1 | 3.4 | 1.4 | 1.4 | 0 | 1.5 | 3.3 |
| CD PLAY | | 3 | 0.5 | 3.2 | 0.1 | 3.2 | 0 | 0 | 0 | 3.2 | 0 | 0 | 0 | 0 | 3.4 | 0.3 | 3.4 | 1.4 | 1.4 | 0 | 1.5 |
| Ref.No. | | IC703 | | | | | | | | | | | | | | | | | | | |
| Mode | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD STOP | | 0 | 0 | 1.7 | 0 | 0 | 1.2 | 5.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5.7 |
| CD PLAY | | 0 | 0 | 1.7 | 0 | 0 | 1.7 | 5.7 | 0 | 0 | 0.3 | 0.3 | 0.4 | 0.1 | 0.1 | 0.1 | 0.4 | 0.1 | 0 | 0 | 5.7 |
| Ref.No. | | IC703 | | | | | | | | | | | | | | | | | | | |
| Mode | | 21 | 22 | 23 | 24 | 25 | 26 | | | | | | | | | | | | | | |
| CD STOP | | 5.7 | 1.7 | 1.7 | 1.7 | 0 | 0 | | | | | | | | | | | | | | |
| CD PLAY | | 5.7 | 1.7 | 1.7 | 1.7 | 0 | 0 | | | | | | | | | | | | | | |

| Ref.No. | | IC704 | | | | | | | | | | | | | | | | | | | | | |
|---------|---------|--------|------|------|-----|-----|------|------|------|-----|-----|------|------|-----|-----|-----|------|------|------|------|-----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | | |
| Mode | CD STOP | 3.4 | 0 | 0 | 0 | 3.4 | 0 | - | 0 | 0 | 0 | 0 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | - | | |
| Mode | CD PLAY | 3.4 | 0 | 0 | 0 | 3.4 | 0 | - | 0 | 0 | 3.4 | 0 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | - | | |
| Ref.No. | | IC704 | | | | | | | | | | | | | | | | | | | | | |
| | | 21 | 22 | 23 | 24 | 25 | 26 | | | | | | | | | | | | | | | | |
| Mode | CD STOP | 0 | 0 | 3.4 | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Mode | CD PLAY | 0 | 0 | 3.4 | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Ref.No. | | IC7001 | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | | | | | | | |
| Mode | CD STOP | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| Mode | CD PLAY | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| Ref.No. | | IC801 | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | | |
| Mode | CD STOP | 3.1 | 1.3 | 3.2 | 0 | 3.1 | 0 | 0.2 | 1 | 3.1 | 1.7 | 0 | 1.7 | 3.2 | 3.2 | 3.1 | 0 | 0 | 0 | 0 | 0 | | |
| Mode | CD PLAY | 3.1 | 1.3 | 3.2 | 0 | 3.1 | 0 | 0.2 | 1 | 3.1 | 1.7 | 0 | 1.5 | 3.2 | 3.2 | 3.1 | 0 | 0.1 | 0 | 0 | 0 | | |
| Ref.No. | | IC801 | | | | | | | | | | | | | | | | | | | | | |
| | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | | |
| Mode | CD STOP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.2 | 3.3 | 0 | | |
| Mode | CD PLAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.2 | 3.3 | 0 | | |
| Ref.No. | | IC801 | | | | | | | | | | | | | | | | | | | | | |
| | | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | | |
| Mode | CD STOP | 3.4 | 3.2 | 3.2 | 3.2 | 0 | 3.3 | 0 | 0 | 0 | 3.2 | 0 | 2.4 | 0 | 2.4 | 0 | 0 | 3 | 0 | 0 | 0 | | |
| Mode | CD PLAY | 3.4 | 3.2 | 3.2 | 3.2 | 0 | 3.3 | 0 | 0 | 0 | 3.2 | 3.2 | 2.4 | 0 | 2.4 | 0 | 0 | 3 | 0 | 0 | 0 | | |
| Ref.No. | | IC801 | | | | | | | | | | | | | | | | | | | | | |
| | | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | | |
| Mode | CD STOP | 0 | 3.2 | 0 | 0 | 3 | 0 | 3 | 3.2 | 0 | 3.2 | 0 | 2.4 | 3 | 0 | 0 | 0 | 3.3 | 3.2 | 2.7 | 0.1 | | |
| Mode | CD PLAY | 0 | 3.2 | 0 | 0 | 3 | 0 | 3 | 3.2 | 0 | 3.2 | 0 | 2.4 | 3 | 0 | 0 | 0 | 3.3 | 3.2 | 2.7 | 0.1 | | |
| Ref.No. | | Q101 | | | | | Q201 | | | | | Q301 | | | | | Q302 | | | Q403 | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 3.4 | 3.4 | 0 | | | 4.8 | 6.7 | 5.5 | | 0 | 0 | |
| Mode | CD PLAY | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 3.4 | 3.1 | 0 | | | 4.8 | 6.7 | 5.5 | | 0 | 0.7 | |
| Ref.No. | | Q404 | | | | | Q503 | | | | | Q504 | | | | | Q603 | | | Q604 | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 0 | 0 | 0.7 | | | 0 | 0 | 0.7 | | | 0 | 0 | 0.7 | | | 6.8 | 3.4 | 6.2 | | 2.7 | 6.2 | 3.2 |
| Mode | CD PLAY | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 6.8 | 3.4 | 6.2 | | 2.7 | 6.2 | 3.2 |
| Ref.No. | | Q605 | | | | | Q606 | | | | | Q607 | | | | | Q608 | | | Q609 | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 12.7 | 9 | 12.1 | | | 12.8 | 12.1 | 12.7 | | | 8.3 | 12.1 | 8.6 | | | 13 | 12.8 | 12.4 | | 0 | 0.2 | 2.7 |
| Mode | CD PLAY | 12.7 | 9 | 12.1 | | | 12.8 | 12.1 | 12.7 | | | 8.3 | 12.1 | 8.6 | | | 12.8 | 12.8 | 12 | | 0 | 0.2 | 2.7 |
| Ref.No. | | Q610 | | | | | Q611 | | | | | Q612 | | | | | Q613 | | | Q614 | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 0 | 0 | 0.6 | | | 7 | 5.8 | 7.5 | | | 5 | 6.7 | 5.5 | | | 4 | 4 | 3.4 | | 0 | 0 | 7.5 |
| Mode | CD PLAY | 0 | 0 | 0.6 | | | 6.8 | 5.7 | 7.5 | | | 5 | 6.7 | 5.5 | | | 4 | 4 | 3.4 | | 0 | 0 | 7.5 |
| Ref.No. | | Q615 | | | | | Q616 | | | | | Q701 | | | | | Q801 | | | Q802 | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 3.9 | 12.8 | 4.6 | | | 1.2 | 0.7 | 0 | | | 3.4 | 1.2 | 2.8 | | | 0 | 0 | 0 | | 0 | 0 | 0.7 |
| Mode | CD PLAY | 3.9 | 12.8 | 4.6 | | | 0 | 0 | 0 | | | 2.8 | 2.1 | 2.1 | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Ref.No. | | Q803 | | | | | Q804 | | | | | Q805 | | | | | Q809 | | | Q813 | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 0 | 2.9 | 0 | | | 3.3 | 3.2 | 0.3 | | | 0 | 1.3 | 0.2 | | | 0 | 7.3 | 0 | | 0 | 7.3 | 0 |
| Mode | CD PLAY | 0 | 2.9 | 0 | | | 3.3 | 0 | 0.3 | | | 0 | 1.3 | 0.2 | | | 0 | 7.3 | 0 | | 0 | 7.3 | 0 |
| Ref.No. | | Q817 | | | | | Q820 | | | | | Q821 | | | | | Q822 | | | | | | |
| | | E | C | B | | | E | C | B | | | E | C | B | | | E | C | B | | | | |
| Mode | CD STOP | 0 | 0.2 | 2.9 | | | 0 | 5.1 | 0 | | | 2.8 | 2.6 | 0.2 | | | 5.4 | 0 | 5.1 | | | | |
| Mode | CD PLAY | 0 | 0.2 | 2.9 | | | 0 | 5.1 | 0 | | | 2.8 | 2.6 | 0.2 | | | 5.4 | 0 | 5.1 | | | | |

14 Printed Circuit Board Diagram

14.1. CD SERVO P.C.B.



A B C D E F G

1

A CD SERVO P.C.B

2

3

4

5

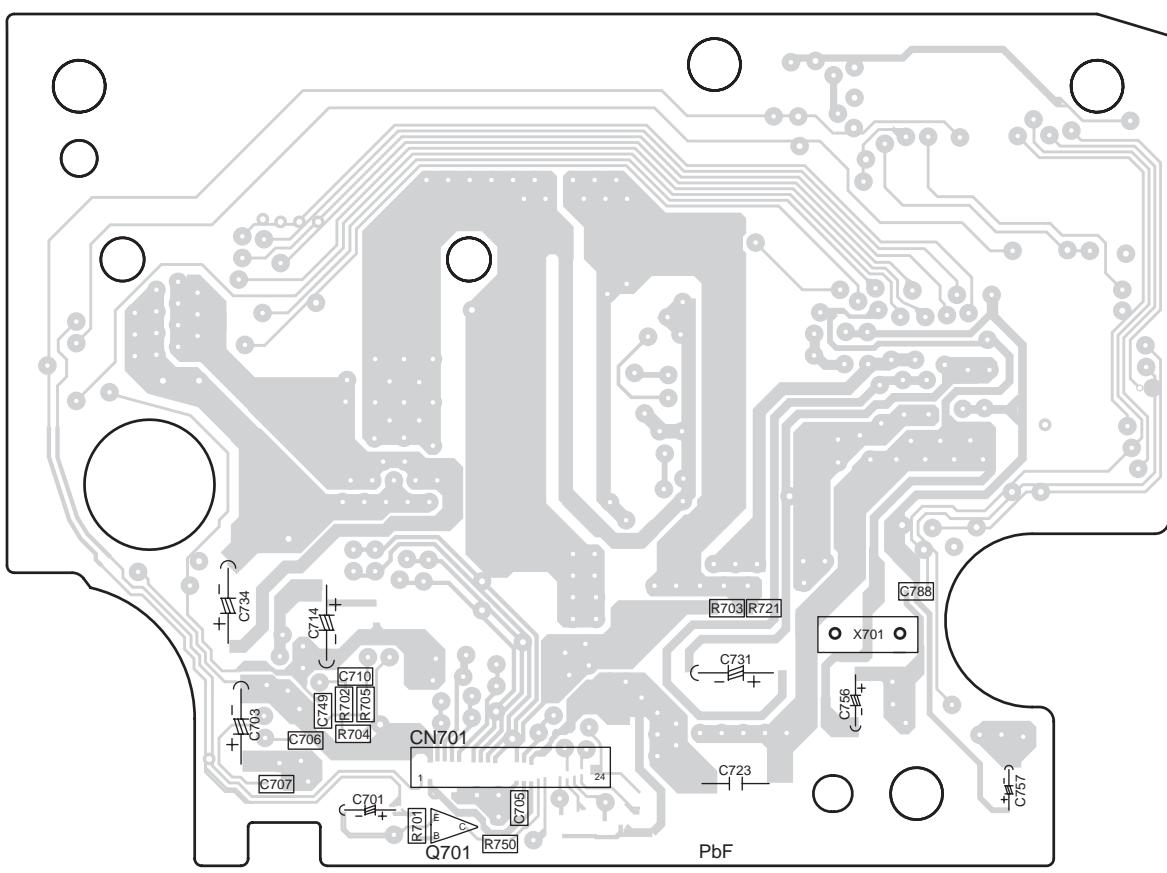
6

7

8

9

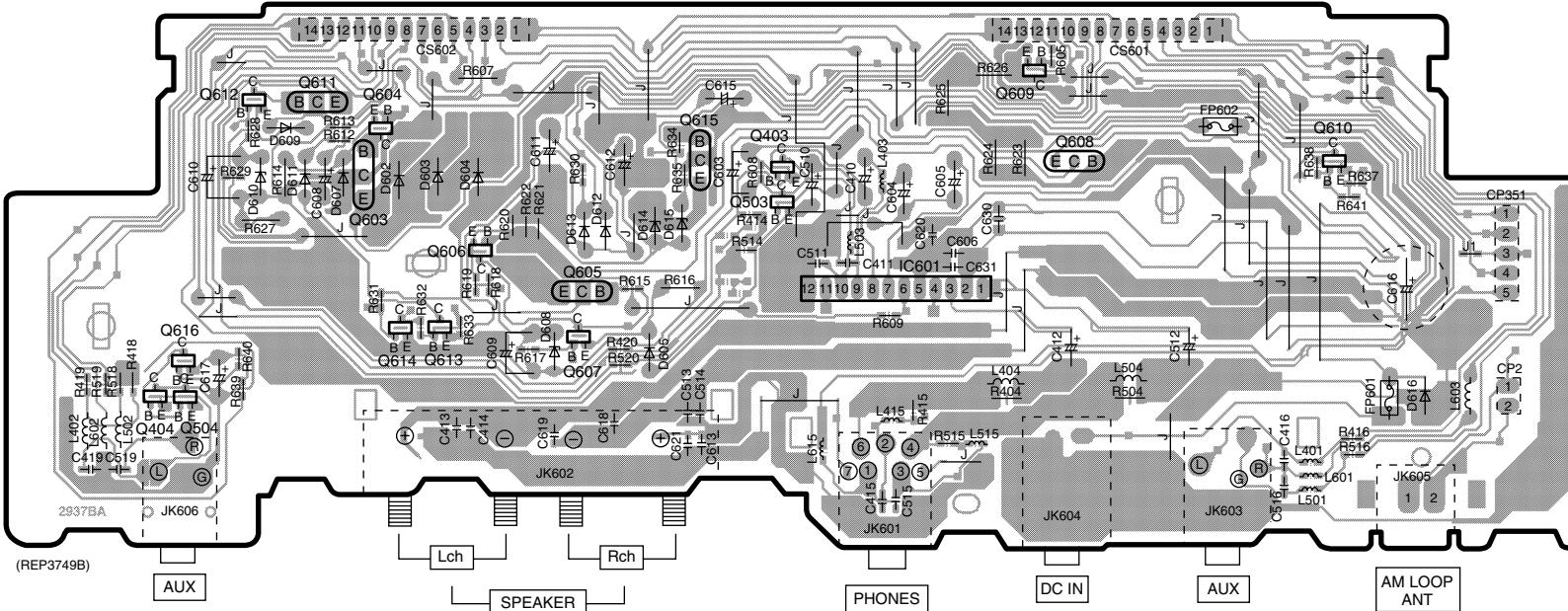
(SIDE B)



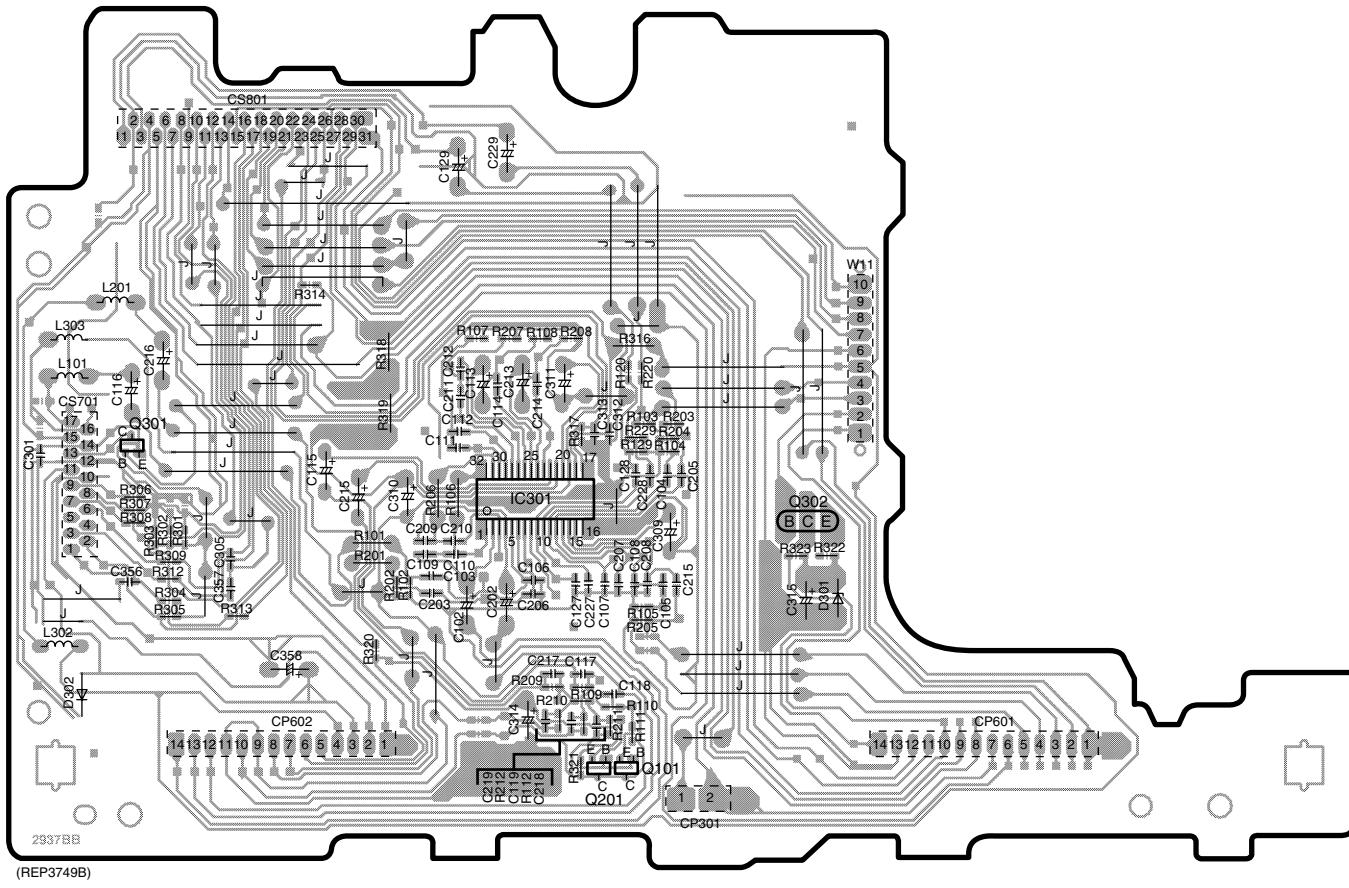
14.2. Printed Circuit Board Diagram

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

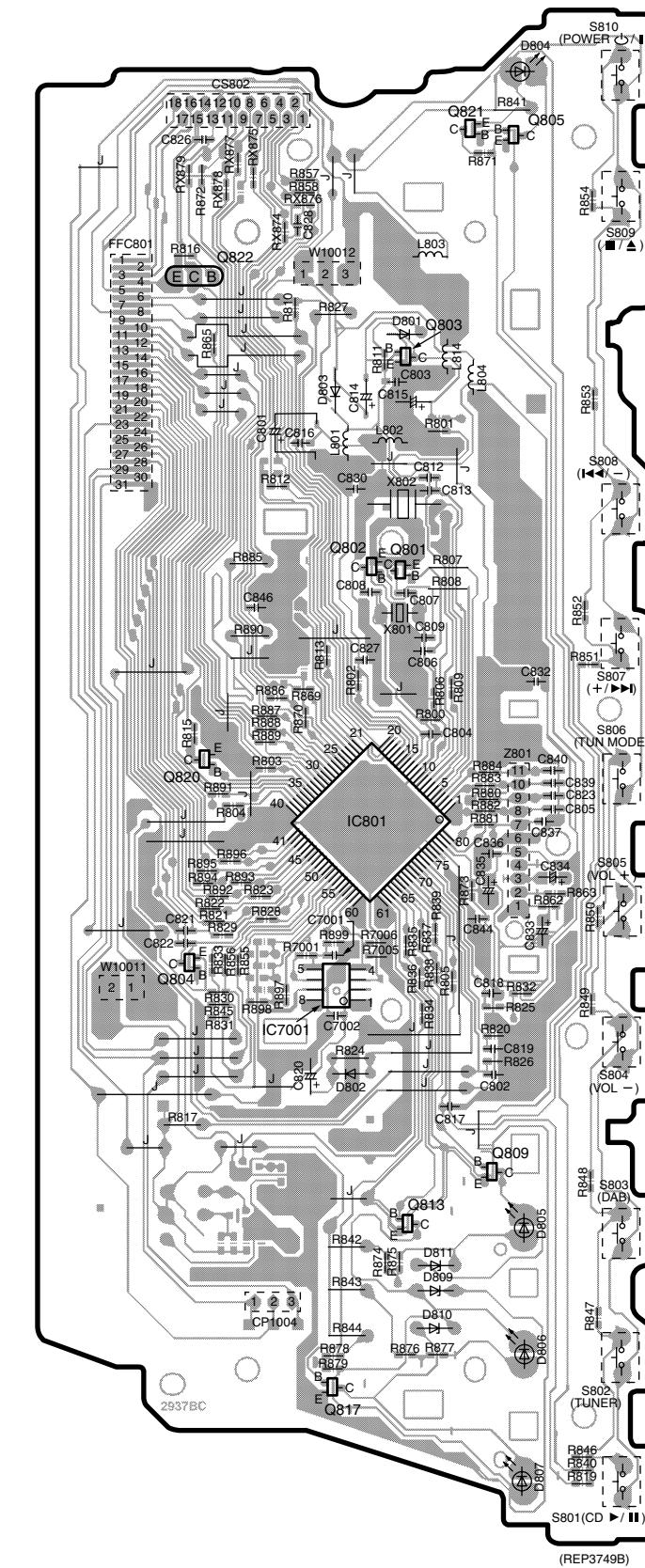
D POWER P.C.B.



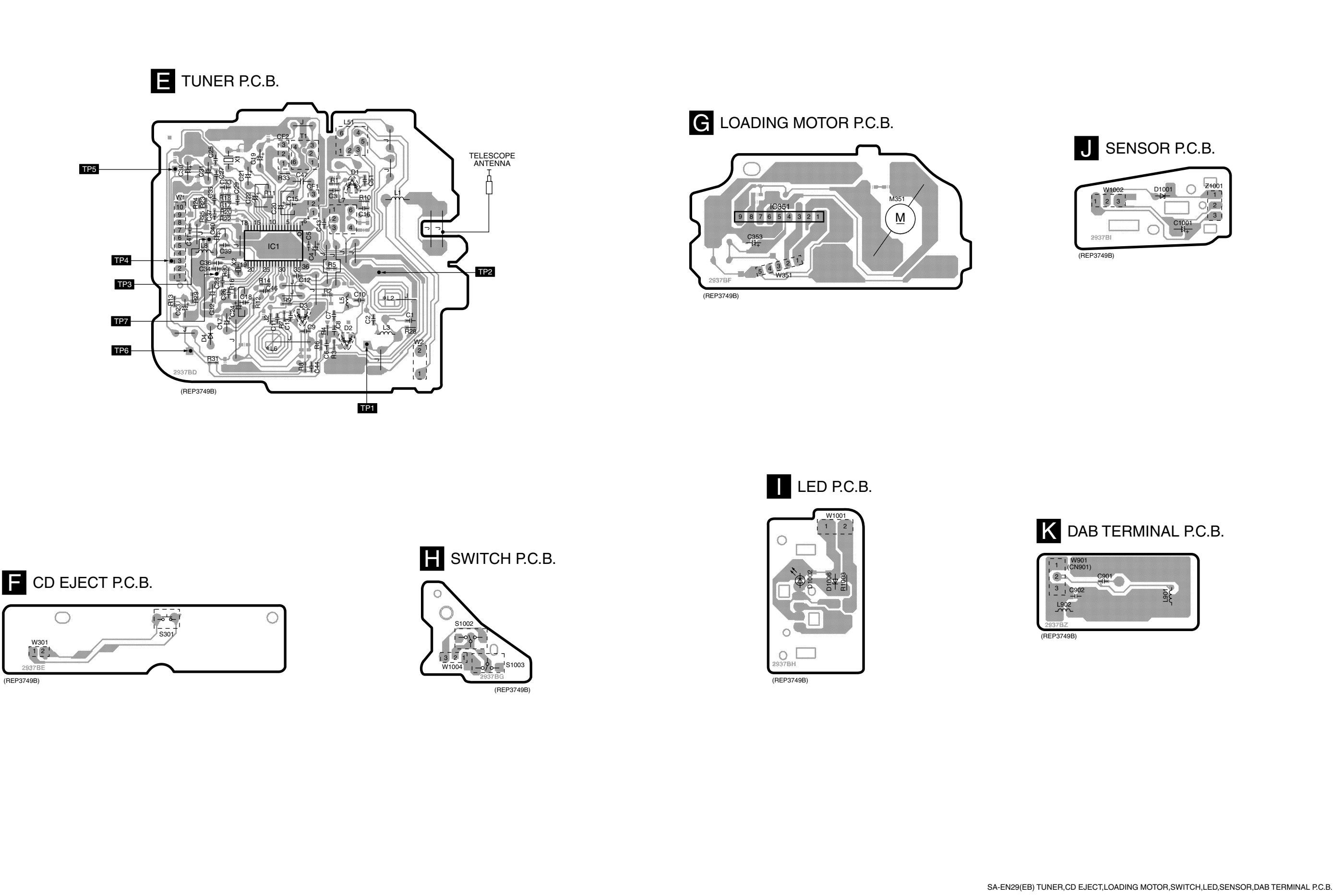
B MAIN P.C.B.



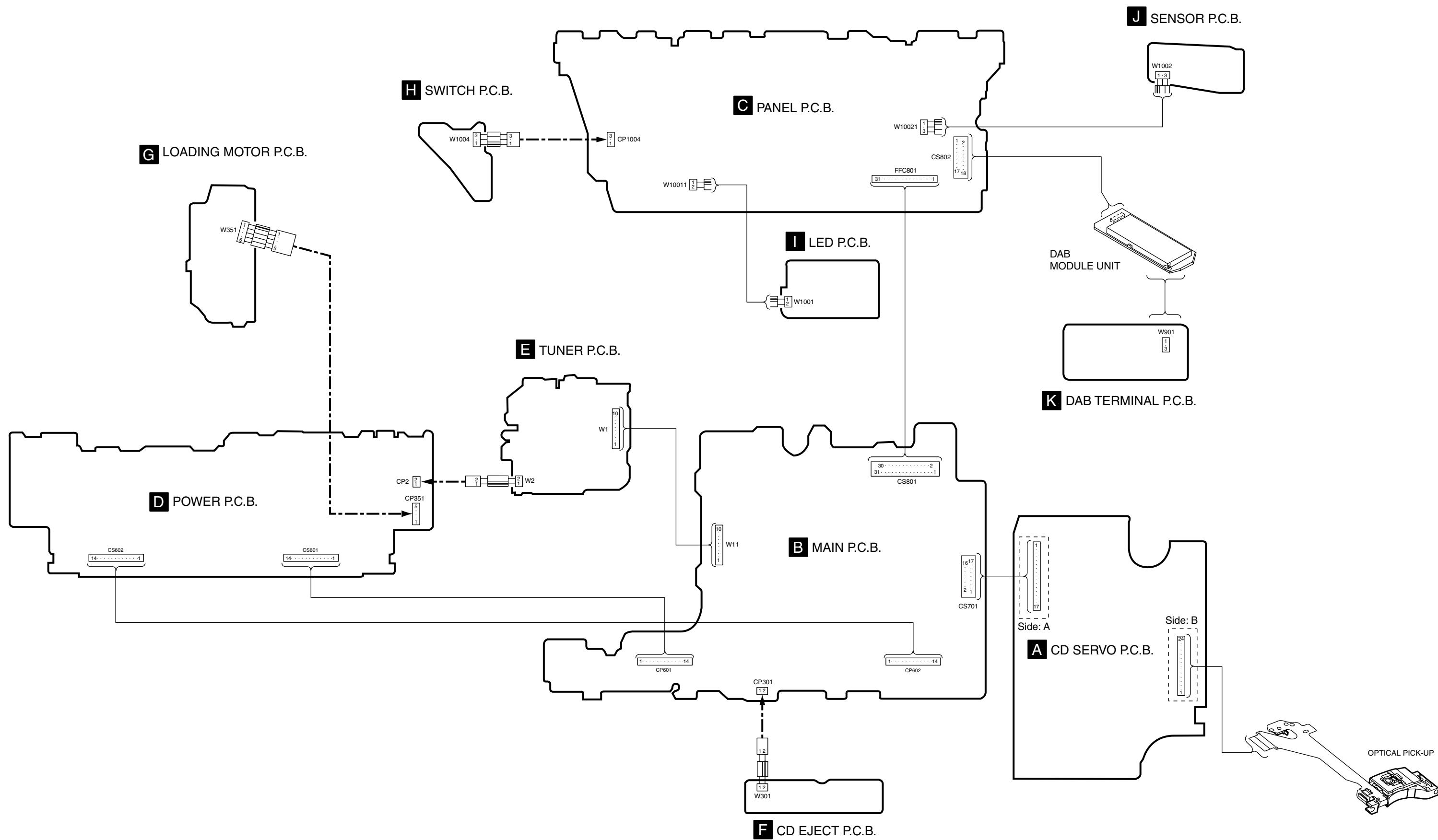
C PANEL P.C.B



SA-EN29(EB) MAIN,PANEL,POWER P.C.B.



15 Wiring Connection Diagram



16 Measurements and Adjustments

16.1. Tuner Adjustment

16.1.1. Required tools and equipment

- Signal generator
- AM loop antenna
- Oscilloscope or electrical voltage meter
- Headphone jig

16.1.2. Preparations for Adjustment

- Apply under [9. Assembling and Disassembling].
- Connect to the power supply (AC230-240V).
- Maximize the volume.

16.1.3. AM RF Adjustment

1. Input AM signal generator output from the AM loop antenna.
2. Connect a measuring instrument to the headphone jack.
3. Tune to the signal (SG 603kHz).
4. Adjust L51 so that the output reaches maximum. (Fig. 1)

16.1.4. AM IF Adjustment

1. Follow the steps 1 and 2 of AM RF Adjustment.
2. Tune to the signal (SG 450kHz).
3. Revolve the T1 core and adjust that the output waveforms reaches maximum. (Fig. 2)

16.1.5. AM VCO Adjustment

1. Input AM single generator output from the AM loop antenna.
2. Set the electrical voltage meter to TP1 - TP3.
3. Tune to the signal (SG 520kHz).
4. Adjust L51 so that the output reaches DC 1.4 ± 0.3 V.

16.1.6. FM RF Adjustment

1. Set the frequency of FM signal generator to 87.9MHz.
2. Input to TP1(RF I/P) - TP2(RF O/P) through FM dummy antenna.
3. Adjust L7 so that the output reaches maximum. (Fig. 1)
4. Take measurement at point 1, point 2 and point 3 (GND). Range from 2.15 ± 0.5 V

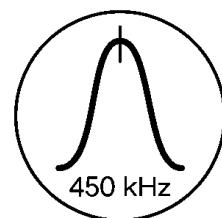
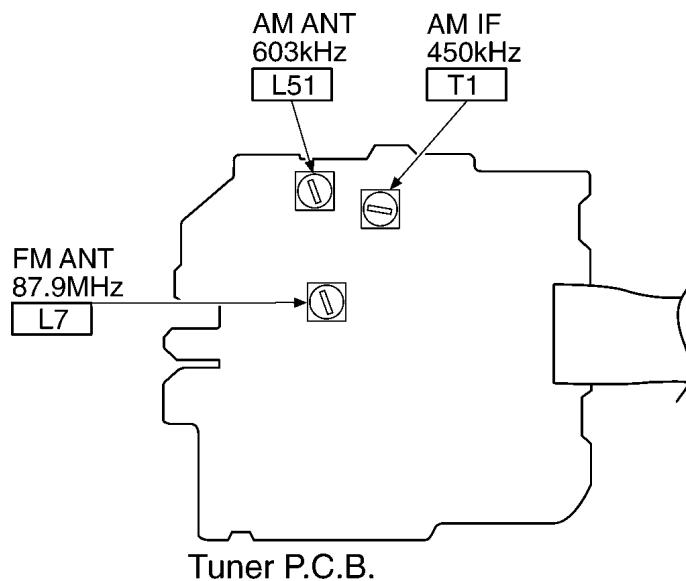


Fig 2

17 Terminal Functions of ICs

• IC801 (C2CBKJ000169) Microprocessor

| Pin No. | Mark | I/O | Function |
|---------|------------|------|---|
| 1 | LCD_SCL | O | LCD Serial Lclock |
| 2 | LCD_RS | O | LCD Register Select (Instruction/Data) |
| 3 | LCD_RST | O | LCD Reset |
| 4 | MBP1 | O | PC Beat Proof MBP 1,2: (H,H)=f L, (L,H)=fm, (LL)= f H |
| 5 | MBP2 | O | (same as above) |
| 6 | CNVSS | I | Flash Writing Mode Switch L: Normal H: Writing Mode |
| 7 | 32KI | - | Sub Clock Input |
| 8 | 32KO | - | Sub Clock Output |
| 9 | NRESET | I | Reset Terminal |
| 10 | 9.8304MO | - | PC Main Clock Input |
| 11 | Vss | - | PC Power VSS |
| 12 | 9.8304MI | - | PC Main Clock Output |
| 13 | VDD | - | PC Power VDD |
| 14 | NMI | I | (Nonmaskable Interruption Inhibit: P/U to VCC by R10k) |
| 15 | REM_IN | I | Remote Control IN (Interruption processing is not used) |
| 16 | VCCDET | I | DCIN Detection (Interruption processing is used) L- power on; H- power off |
| 17 | BLKCK | I | CD Sub Code Data Interrupt Input (Interrupt processing is used) |
| 18 | D_PLL_SCL | O | DAB PLL 2C Clock Output |
| 19 | D_NRFRESET | O | DAB RF Section Reset Output |
| 20 | D_LOCKDET | I | DAB PLL Lock Detection Input L - Lock |
| 21 | D_PLL_SDA | O | DAB PLL 12C Data Input |
| 22 | PC_RX | O(*) | PC Communication UART Reception (for checking) *Switch to I only when PC Communication (when PC-EN is enabled) is in use |
| 23 | PC_TX | O | PC Communication UART Transmission (for checking) *Use O (L/H) when PC Communication |
| 24 | D_MPURX | O | DAB LSI Serial Data Transmission |
| 25 | D_MPUTX | I | DAB LSI Serial Data Reception |
| 26 | D_MPCLK | O | DAB LSI Serial Clock Output |
| 27 | D_NRST | O | DAB LSI Reset Output |
| 28 | CD_MDATA | O | CD Serial Output |
| 29 | CD_STATUS | I | CD Serial Input |
| 30 | CD_MCLK | O | CD Serial Clock |
| 31 | D_MPUMOD | O | DAB LSI Address/ Data Control Output H- Address |
| 32 | D_NIRQ | I | DAB LSI Interrupt Request (Interrupt Handler is Not in Use) |
| 33 | D_DDOWFIC | I | DAB 24ms Synchronous Interruption H- FIC ON (LSI Access Inhibit) |
| 34 | EPM | I | Connect to VSS Flash Writing Mode Setting |
| 35 | D_PON | O | DAB Module Power Supply Control Output |
| 36 | CD_OPEN | O | CD Cover Open Control |
| 37 | CD_CLOSE | O | CD Cover Close Control |
| 38 | CD_MLD | O | CD Load Signal Output L- Output |
| 39 | CE | I | Pull up to VDD by 10k Flash Writing Mode Setting |

| Pin No. | Mark | I/O | Function |
|---------|--------------|-------|---|
| 40 | (NC) | I | Normally GND Connection - 1 Fixed DAB Module Jig Mode at H |
| 41 | CD_REST_SW | I | CD Traverse Limit Detection |
| 42 | CD_RESET | O | CD Module Reset Output L-Reset |
| 43 | R_PLL_DI | O | FM/AM PLL Data Output Unless the power supply is on, H output is used for other functions |
| 44 | R_PLL_CLK | O | FM/AM Clock Output |
| 45 | R_PLL_CE | O | FM/AM Address Select L- Address, H- Data |
| 46 | R_PLL_D0 | I | FM/AM PLL Data Input |
| 47 | AG_CLK | O | ASP Clock |
| 48 | AG_DATA | O | ASP Data |
| 49 | EX_BASS | O | Ex. BASS Control L- Active |
| 50 | PCONT | O | Main Power Supply Control H- On |
| 51 | MUTE_A | O | Analog Mute L-Active (*) When power is off, strictly observe H output |
| 52 | CD_EJECT | I | CD Inject Button Input L- Input On |
| 53 | CD_BOTTOM_SW | I | CD Cover Bottom Corner Detection Input P/U L- Input On |
| 54 | CD_TOP_SW | I | CD Cover Top Corner Detection Input P/U L- Input On |
| 55 | CD_SET1 | O | Undetermined For CD Control |
| 56 | CD_SET2 | I | (Flash Slow Speed Writing H:1920bps) |
| 57 | PC_EN | I | PC Connection enable; Detection Input L...Active: However, detection is only during DAB |
| 58 | E_DATA | I/O | E2PRON (Spare) |
| 59 | E_CLK | O | E2PRON (Spare) |
| 60 | E_CS | O | E2PRON (Spare) |
| 61 | DIMMER | O | LCD Back Light Dimmer Control L- Active |
| 62 | CD_LED_G | O | CD Function Middle Display H- Active |
| 63 | CD_LED_R | O | CD Function Not in Use Display H- Active |
| 64 | TUNER_LED_G | O | FM/AM Function Middle Display H- Active |
| 65 | TUNER_LED_R | O | FM/AM Function Not in Use Display H- Active |
| 66 | DAB_LED_G | O | DAB Function Middle Display H- Active |
| 67 | DAB_LED_R | O | DAB Function Not in use Display H- Active |
| 68 | KEY1 | A/D | Key Input (A/D) |
| 69 | STBY_LED | O | Standby LED |
| 70 | CRT | O/A/D | Power Failure Time Detection CR Timer (O, AD co-used) A/D used only when power is recovered |
| 71 | DAB_PDET | A/D | DAB Power Supply Monitoring (A/D) OK: 5 V ±20%, Input Division 10/(10+12) |

| Pin No. | Mark | I/O | Function |
|----------------|---------------------|------------|---|
| 72 | PDET | A/D | DAB Power Supply Monitoring (A/D) OK: 9V±20%, Input Division 10/ (10+27) |
| 73 | REGION | I | Switch H: UK, L: All Europe |
| 74 | NC | I | GND Connection - 1 Fixed Not to be used for testing |
| 75 | AVSS | - | Analog Power Supply GND |
| 76 | NC | I A/D | Normally GND Connection - 1 fixed (Non test use) When in Jig Mode 10 Key Input Alternate |
| 77 | VREF | - | Reference Input for A/D |
| 78 | AVDD | - | Analog Power Supply Input |
| 79 | LCD_CS _B | O | LCD Chip Select |
| 80 | LCD_SI | O | LCD Serial Data |

18 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 these components, be sure to use only manufacturers's specified parts shown in the parts list.

- The parenthesized indications in the Remarks column specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

- Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode"

- Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads(pF); Farads.

- Resistance values are in ohms, unless specified otherwise, $1\text{K}=1,000(\text{ohms})$.

- 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.

- All parts are supplied by **ASPC**.

18.1. SA-EN29

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| | | CD P.C.B. ASS'Y | | |
| C701 | EEE0JA330WR | 6.3V 33U | 1 | |
| C702 | F1H1C104A042 | 16V 0.1U | 1 | |
| C703 | EEE0JA101WR | 6.3V 100U | 1 | |
| C704 | F1H1C104A042 | 16V 0.1U | 1 | |
| C705 | ECUV1E104ZVF | 25V 0.1U | 1 | |
| C706 | F1H1C104A042 | 16V 0.1U | 1 | |
| C707 | ECUV1C223KBV | 16V 0.022U | 1 | |
| C708 | F1H1C104A042 | 16V 0.1U | 1 | |
| C710 | ECUV1H471JCV | 50V 470P | 1 | |
| C711 | ECUV1C223KBV | 16V 0.022U | 1 | |
| C712 | ECUV1C223KBV | 16V 0.022U | 1 | |
| C713 | ECUV1E104ZVF | 25V 0.1U | 1 | |
| C714 | EEE0JA101WR | 6.3V 100U | 1 | |
| C715 | ECUVNC154KBV | 16V 0.15U | 1 | |
| C717 | ECUV1E104ZVF | 25V 0.1U | 1 | |
| C718 | ECUV1C823KBV | 16V 0.082U | 1 | |
| C721 | ECUV1H330JCV | 50V 33P | 1 | |
| C722 | ECUV1H330JCV | 50V 33P | 1 | |
| C723 | EEE0GA331WP | 4V 330U | 1 | |
| C724 | F1H1C104A042 | 16V 0.1U | 1 | |
| C725 | ECUV1H102KBV | 50V 1000P | 1 | |
| C726 | ECUV1H102KBV | 50V 1000P | 1 | |
| C729 | F1H1C104A042 | 16V 0.1U | 1 | |
| C730 | F1H1C104A042 | 16V 0.1U | 1 | |
| C731 | EEE0JA221WP | 6.3V 220U | 1 | |
| C733 | ECUV1E104ZVF | 25V 0.1U | 1 | |
| C734 | EEE0JA221WP | 6.3V 220U | 1 | |
| C735 | ECUV1E104ZVF | 25V 0.1U | 1 | |
| C738 | ECUV1C333KBV | 16V 0.033U | 1 | |
| C739 | ECUV1H272KBV | 50V 2700P | 1 | |
| C740 | F1H1C104A042 | 16V 0.1U | 1 | |
| C741 | ECUV1H102KBV | 50V 1000P | 1 | |
| C742 | ECUV1C223KBV | 16V 0.022U | 1 | |
| C743 | ECUV1E104ZVF | 25V 0.1U | 1 | |
| C744 | ECUV1C223KBV | 16V 0.022U | 1 | |
| C746 | F1H1C104A042 | 16V 0.1U | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| C747 | ECUV1H821JCV | 50V 820P | 1 | |
| C748 | F1H1C104A042 | 16V 0.1U | 1 | |
| C749 | ECUV1H472KBV | 50V 4700P | 1 | |
| C752 | ECUV1H272KBV | 50V 2700P | 1 | |
| C753 | ECUV1H471KBV | 50V 470P | 1 | |
| C754 | F1H1C104A042 | 16V 0.1U | 1 | |
| C755 | F1H1C104A042 | 16V 0.1U | 1 | |
| C756 | EEE1EA4R7SR | 25V 4.7U | 1 | |
| C757 | EEE1EA4R7SR | 25V 4.7U | 1 | |
| C758 | F1H1C104A042 | 16V 0.1U | 1 | |
| C776 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C777 | ECUV1H821KBV | 50V 820P | 1 | |
| C786 | ECUV1H221KBV | 50V 220P | 1 | |
| C787 | ECUV1H221KBV | 50V 220P | 1 | |
| C788 | ECUV1H221KBV | 50V 220P | 1 | |
| CN701 | K1MY24BA0106 | CONNECTOR | 1 | |
| FFC701 | REE1368 | CD SERVO FFC | 1 | |
| IC701 | AN22003A-VF | IC | 1 | |
| IC702 | MN6627934CH | IC | 1 | |
| IC703 | AN8739SB-E2V | IC | 1 | |
| IC704 | C3ABMB00043 | IC | 1 | |
| Q701 | 2SB0709A0L | TRANSISTOR | 1 | |
| R701 | ERJ3GEYJ4R7V | 1/10W 4.7 | 1 | |
| R702 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R703 | ERJ3GEYJ5R6V | 1/10W 5.6 | 1 | |
| R704 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R705 | ERJ3GEYJ393V | 1/10W 39K | 1 | |
| R706 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R709 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R711 | ERJ3GEYJ823V | 1/10W 82K | 1 | |
| R712 | ERJ3GEYJ821V | 1/10W 820 | 1 | |
| R714 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R715 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R717 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R718 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R720 | ERJ3GEYJ105V | 1/10W 1M | 1 | |
| R721 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R723 | ERJ3GEYJ682V | 1/10W 6.8K | 1 | |
| R725 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R727 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R728 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R729 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R731 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R732 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R735 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R736 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R744 | ERJ3GEYJ273V | 1/10W 27K | 1 | |
| R745 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R749 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R750 | ERJ3GEYJ5R6V | 1/10W 5.6 | 1 | |
| R763 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R764 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R771 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R772 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R773 | ERJ3GEYJ683V | 1/10W 68K | 1 | |
| R774 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| X701 | H2A169500009 | CRYSTAL | 1 | |
| | | MAIN P.C.B. ASS'Y | | |
| C1 | ECUV1H470JCV | 50V 47P | 1 | |
| C2 | ECUV1H100DCV | 50V 10P | 1 | |
| C3 | ECUV1C333KBV | 16V 0.033U | 1 | |
| C4 | ECEA1CKA100B | 16V 10U | 1 | |
| C5 | ECUV1C473KBV | 16V 0.047U | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| C6 | ECUV1H102KBV | 50V 1000P | 1 | |
| C7 | ECUV1H102KBV | 50V 1000P | 1 | |
| C8 | ECUV1H060DCV | 50V 6P | 1 | |
| C9 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C10 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C11 | ECUV1H102KBV | 50V 1000P | 1 | |
| C12 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C13 | ECUV1H150JCV | 50V 15P | 1 | |
| C15 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C16 | ECUV1H150JCV | 50V 15P | 1 | |
| C17 | ECEA1HKA3R3B | 50V 3.3U | 1 | |
| C18 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C19 | ECEA1HKA010B | 50V 1U | 1 | |
| C20 | ECEA1CKA101B | 16V 100U | 1 | |
| C21 | ECEA1HKA010B | 50V 1U | 1 | |
| C22 | ECEA1HKAR47B | 50V 0.47U | 1 | |
| C23 | ECEA1AKA101B | 10V 100U | 1 | |
| C24 | ECEA1AKA220B | 10V 22U | 1 | |
| C25 | ECUV1C183KBV | 16V 0.018U | 1 | |
| C26 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C27 | ECUV1C183KBV | 16V 0.018U | 1 | |
| C28 | ECUV1H102KBV | 50V 1000P | 1 | |
| C29 | ECUV1H102KBV | 50V 1000P | 1 | |
| C30 | ECEA1HKA010B | 50V 1U | 1 | |
| C31 | ECEA1HKA010B | 50V 1U | 1 | |
| C32 | ECEA1HKA4R7B | 50V 4.7U | 1 | |
| C33 | ECUV1H101KCV | 50V 100P | 1 | |
| C34 | ECUV1H270JCV | 50V 27P | 1 | |
| C35 | ECUV1H101KCV | 50V 100P | 1 | |
| C36 | ECUV1H220JCV | 50V 22P | 1 | |
| C37 | ECUV1H101KCV | 50V 100P | 1 | |
| C39 | ECUV1H102KBV | 50V 1000P | 1 | |
| C40 | ECEA1AKA101B | 10V 100U | 1 | |
| C41 | ECUV1H331KBV | 50V 330P | 1 | |
| C43 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C44 | ECUV1C223KBV | 16V 0.022U | 1 | |
| C46 | ECUV1H222KBV | 50V 2200P | 1 | |
| C47 | F1D1H100A015 | 50V 10P | 1 | |
| C51 | ECUV1H070DCV | 50V 7P | 1 | |
| C102 | ECEA1HKA4R7B | 50V 4.7U | 1 | |
| C103 | F1H1C104A042 | 16V 0.1U | 1 | |
| C104 | F1H1C104A042 | 16V 0.1U | 1 | |
| C105 | F1H1C104A042 | 16V 0.1U | 1 | |
| C106 | ECUV1H102KBV | 50V 1000P | 1 | |
| C107 | ECUV1H102KBV | 50V 1000P | 1 | |
| C108 | ECUV1H102KBV | 50V 1000P | 1 | |
| C109 | ECUV1C683KBV | 16V 0.068U | 1 | |
| C110 | F1H1C104A042 | 16V 0.1U | 1 | |
| C111 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C112 | ECUV1H153KBV | 50V 0.015U | 1 | |
| C113 | ECEA1HKAR22B | 50V 0.22U | 1 | |
| C114 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C115 | ECEA1HKA010B | 50V 1U | 1 | |
| C116 | ECEA1HKA010B | 50V 1U | 1 | |
| C117 | ECUV1H682KBV | 50V 6800P | 1 | |
| C118 | ECUV1C333KBV | 16V 0.033U | 1 | |
| C119 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C127 | ECUV1H102KBV | 50V 1000P | 1 | |
| C128 | F1H1C104A042 | 16V 0.1U | 1 | |
| C129 | ECEA1HKA010B | 50V 1U | 1 | |
| C202 | ECEA1HKA4R7B | 50V 4.7U | 1 | |
| C203 | F1H1C104A042 | 16V 0.1U | 1 | |
| C204 | F1H1C104A042 | 16V 0.1U | 1 | |
| C205 | F1H1C104A042 | 16V 0.1U | 1 | |
| C206 | ECUV1H102KBV | 50V 1000P | 1 | |
| C207 | ECUV1H102KBV | 50V 1000P | 1 | |
| C208 | ECUV1H102KBV | 50V 1000P | 1 | |
| C209 | ECUV1C683KBV | 16V 0.068U | 1 | |
| C210 | F1H1C104A042 | 16V 0.1U | 1 | |
| C211 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C212 | ECUV1H153KBV | 50V 0.015U | 1 | |
| C213 | ECEA1HKAR22B | 50V 0.22U | 1 | |
| C214 | ECUV1C473KBV | 16V 0.047U | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| C215 | ECEA1HKA010B | 50V 1U | 1 | |
| C216 | ECEA1HKA010B | 50V 1U | 1 | |
| C217 | ECUV1H682KBV | 50V 6800P | 1 | |
| C218 | ECUV1C333KBV | 16V 0.033U | 1 | |
| C219 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C227 | ECUV1H102KBV | 50V 1000P | 1 | |
| C228 | F1H1C104A042 | 16V 0.1U | 1 | |
| C229 | ECEA1HKA010B | 50V 1U | 1 | |
| C301 | ECUV1H102KBV | 50V 1000P | 1 | |
| C305 | ECUV1H221KBV | 50V 220P | 1 | |
| C309 | ECEA1AKA470B | 10V 47U | 1 | |
| C310 | ECA1CM101B | 16V 100U | 1 | |
| C311 | ECEA1HKAR33B | 50V 0.33U | 1 | |
| C312 | ECUV1H221KBV | 50V 220P | 1 | |
| C313 | ECUV1H221KBV | 50V 220P | 1 | |
| C314 | ECEA1CKA100B | 16V 10U | 1 | |
| C315 | ECEA0JKA101B | 6.3V 100U | 1 | |
| C353 | ECA1AM221B | 10V 220U | 1 | |
| C356 | ECUV1H221KBV | 50V 220P | 1 | |
| C357 | ECUV1H221KBV | 50V 220P | 1 | |
| C358 | ECA1AM102B | 10V 1000U | 1 | |
| C410 | ECEA1HKAR22B | 50V 0.22U | 1 | |
| C411 | ECUV1H471KBV | 50V 470P | 1 | |
| C412 | ECA1AM102B | 10V 1000U | 1 | |
| C413 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C414 | ECUV1H102KBV | 50V 1000P | 1 | |
| C415 | ECUV1H331KBV | 50V 330P | 1 | |
| C416 | ECUV1H332KBV | 50V 3300P | 1 | |
| C419 | ECUV1H222KBV | 50V 2200P | 1 | |
| C510 | ECEA1HKAR22B | 50V 0.22U | 1 | |
| C511 | ECUV1H471KBV | 50V 470P | 1 | |
| C512 | ECA1AM102B | 10V 1000U | 1 | |
| C513 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C514 | ECUV1H102KBV | 50V 1000P | 1 | |
| C515 | ECUV1H331KBV | 50V 330P | 1 | |
| C516 | ECUV1H332KBV | 50V 3300P | 1 | |
| C519 | ECUV1H222KBV | 50V 2200P | 1 | |
| C603 | ECEA1HKA220B | 10V 22U | 1 | |
| C604 | ECEA1HKA4R7B | 50V 4.7U | 1 | |
| C605 | ECEA1CKA101B | 16V 100U | 1 | |
| C606 | ECUV1E103KBV | 25V 0.01U | 1 | |
| C608 | ECA1EM100B | 25V 10U | 1 | |
| C609 | ECEA1EKA100B | 25V 10U | 1 | |
| C610 | ECA1EM100B | 25V 10U | 1 | |
| C611 | ECA0JM472E | 6.3V 4700U | 1 | |
| C612 | ECEA0JKA101B | 6.3V 100U | 1 | |
| C613 | ECUV1H102KBV | 50V 1000P | 1 | |
| C615 | ECEA1CKA101B | 16V 100U | 1 | |
| C616 | ECA1EM332E | 25V 3300U | 1 | |
| C617 | ECEA1CKA220B | 16V 22U | 1 | |
| C618 | ECUV1H102KBV | 50V 1000P | 1 | |
| C619 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C620 | ECUV1H102KBV | 50V 1000P | 1 | |
| C621 | ECUV1C473KBV | 16V 0.047U | 1 | |
| C630 | ECUV1E105ZFN | 25V 1U | 1 | |
| C631 | ECUV1H471KBV | 50V 470P | 1 | |
| C801 | ECEA0JKA101B | 6.3V 100U | 1 | |
| C802 | ECUV1H102KBV | 50V 1000P | 1 | |
| C803 | ECUV1H102KBV | 50V 1000P | 1 | |
| C804 | ECUV1H102KBV | 50V 1000P | 1 | |
| C805 | ECUV1H221KBV | 50V 220P | 1 | |
| C806 | ECUV1H102KBV | 50V 1000P | 1 | |
| C807 | ECUV1H220JCV | 50V 22P | 1 | |
| C808 | ECUV1H270JCV | 50V 27P | 1 | |
| C809 | ECUV1H102KBV | 50V 1000P | 1 | |
| C812 | ECUV1H150JCV | 50V 15P | 1 | |
| C813 | ECUV1H180JCV | 50V 18P | 1 | |
| C814 | ECA1HM2R2B | 50V 2.2U | 1 | |
| C815 | ECEA1HKA010B | 50V 1U | 1 | |
| C816 | ECUV1H102KBV | 50V 1000P | 1 | |
| C817 | ECUV1H102KBV | 50V 1000P | 1 | |
| C818 | ECUV1H102KBV | 50V 1000P | 1 | |
| C819 | F1H1C104A042 | 16V 0.1U | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| C820 | ECEA1EKA100B | 25V 10U | 1 | |
| C821 | ECUV1H102KBV | 50V 1000P | 1 | |
| C822 | ECUV1H102KBV | 50V 1000P | 1 | |
| C823 | ECUV1H221KBV | 50V 220P | 1 | |
| C826 | ECUV1H102KBV | 50V 1000P | 1 | |
| C827 | F1H1C104A042 | 16V 0.1U | 1 | |
| C830 | ECUV1H102KBV | 50V 1000P | 1 | |
| C832 | F1H1C104A042 | 16V 0.1U | 1 | |
| C833 | F3F1C105A032 | 16V 1U | 1 | |
| C834 | F3F1C105A032 | 16V 1U | 1 | |
| C835 | F3F0J226A055 | 6.3V 22U | 1 | |
| C836 | ECUV1H102KBV | 50V 1000P | 1 | |
| C837 | ECUV1H221KBV | 50V 220P | 1 | |
| C839 | ECUV1H221KBV | 50V 220P | 1 | |
| C840 | ECUV1H102KBV | 50V 1000P | 1 | |
| C844 | ECUV1H102KBV | 50V 1000P | 1 | |
| C901 | ECUV1H102KBN | 50V 1000P | 1 | |
| C902 | ECUV1H102KBN | 50V 1000P | 1 | |
| C1001 | ECEA1CKA100 | 16V 10U | 1 | |
| C7001 | ECUV1H221KBV | 50V 220P | 1 | |
| C7002 | ECUV1E103KBV | 25V 0.01U | 1 | |
| CF1 | J0B1075A0101 | FM CERAMIC FILTER | 1 | |
| CF2 | RLFCFA45914B | AM FILTER | 1 | |
| CN901 | K1QKB1BB0002 | CONNECTOR | 1 | |
| CP2 | K1KA02AA0180 | CONNECTOR | 1 | |
| CP301 | K1KA02BA0061 | CONNECTOR | 1 | |
| CP351 | K1KA05AA0180 | CONNECTOR | 1 | |
| CP601 | K1KA14AA0031 | CONNECTOR | 1 | |
| CP602 | K1KA14AA0031 | CONNECTOR | 1 | |
| CP1004 | K1KA03AA0180 | CONNECTOR | 1 | |
| CS601 | K1KB14B00026 | CONNECTOR | 1 | |
| CS602 | K1KB14B00026 | CONNECTOR | 1 | |
| CS701 | K1MN17B00032 | CONNECTOR | 1 | |
| CS801 | K1MY31AA0055 | CONNECTOR | 1 | |
| CS802 | K1MN18B00013 | CONNECTOR | 1 | |
| D1 | B0CDAD000010 | VARI CAP | 1 | |
| D2 | B0CDAB000019 | DIODE | 1 | |
| D3 | B0CDAB000019 | DIODE | 1 | |
| D4 | RVD1SS133TA | DIODE | 1 | |
| D301 | MAZ40560MF | DIODE | 1 | |
| D302 | B0EAKM000118 | DIODE | 1 | |
| D602 | B0EAKM000118 | DIODE | 1 | |
| D603 | B0EAKM000118 | DIODE | 1 | |
| D604 | B0EAKM000118 | DIODE | 1 | |
| D605 | RVD1SS133TA | DIODE | 1 | |
| D607 | RVD1SS133TA | DIODE | 1 | |
| D608 | MAZ40910LF | DIODE | 1 | |
| D609 | RVD1SS133TA | DIODE | 1 | |
| D610 | MAZ40560MF | DIODE | 1 | |
| D611 | RVD1SS133TA | DIODE | 1 | |
| D612 | RVD1SS133TA | DIODE | 1 | |
| D613 | ISS291TA | DIODE | 1 | |
| D614 | MAZ40620MF | DIODE | 1 | |
| D615 | MAZ40470MF | DIODE | 1 | |
| D616 | B0EAKM000118 | DIODE | 1 | |
| D801 | RVD1SS133TA | DIODE | 1 | |
| D802 | RVD1SS133TA | DIODE | 1 | |
| D803 | ISS291TA | DIODE | 1 | |
| D804 | B3AAA0000707 | RED LED | 1 | |
| D805 | B3ACA0000306 | LED | 1 | |
| D806 | B3ACA0000306 | LED | 1 | |
| D807 | B3ACA0000306 | LED | 1 | |
| D809 | MAZ40820MF | DIODE | 1 | |
| D810 | MAZ40820MF | DIODE | 1 | |
| D811 | MAZ40820MF | DIODE | 1 | |
| D1001 | MAZ40820MF | DIODE | 1 | |
| D1002 | B3AFA0000060 | LED | 1 | |
| D1006 | MAZ40820MF | DIODE | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| | | | | |
| FFC801 | REE1370 | FFC | 1 | |
| FP601 | K5G302AA0002 | FUSE | 1 | |
| FP602 | K5G251A00008 | FUSE PROTECTOR | 1 | |
| | | | | |
| IC1 | C1BB00000846 | IC | 1 | |
| IC301 | C1BB00000732 | IC | 1 | |
| IC351 | C0GAE000007 | IC | 1 | |
| IC601 | C1BA00000372 | IC | 1 | |
| IC801 | C2CBKJ000169 | MICON | 1 | |
| IC7001 | C3EBCG000031 | EEPROM | 1 | |
| | | | | |
| J1 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| J2 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| | | | | |
| JK601 | RJJ37TK09 | HEADPHONE JACK | 1 | |
| JK602 | K4BC04B00055 | SPEAKER JACK | 1 | |
| JK603 | K2HC103B0149 | AUX JACK | 1 | |
| JK604 | K2ED2B00007 | DC JACK | 1 | |
| JK605 | K1KA02BA0125 | CONNECTOR | 1 | |
| JK606 | K2HC103B0149 | AUX JACK | 1 | |
| | | | | |
| L1 | RLQY30S1W-F | COIL | 1 | |
| L3 | RLQY30S1W-F | COIL | 1 | |
| L5 | G0ZZ00002174 | FM COIL | 1 | |
| L7 | G2BPC0000017 | COIL | 1 | |
| L8 | RLQZP101KT-Y | COIL | 1 | |
| L51 | G2A390C00001 | COIL | 1 | |
| L101 | RLL500050T-Y | COIL | 1 | |
| L201 | RLL500050T-Y | COIL | 1 | |
| L302 | RLL500050T-Y | COIL | 1 | |
| L303 | RLL500050T-Y | COIL | 1 | |
| L401 | J0JBC0000032 | COIL | 1 | |
| L402 | RLQZP101KT-Y | COIL | 1 | |
| L403 | J0JBC0000032 | COIL | 1 | |
| L404 | G0AR76Y00002 | COIL | 1 | |
| L415 | J0JBC0000032 | COIL | 1 | |
| L501 | J0JBC0000032 | COIL | 1 | |
| L502 | RLQZP101KT-Y | COIL | 1 | |
| L503 | J0JBC0000032 | COIL | 1 | |
| L504 | G0AR76Y00002 | COIL | 1 | |
| L515 | J0JBC0000032 | COIL | 1 | |
| L601 | J0JBC0000032 | COIL | 1 | |
| L602 | RLQZP101KT-Y | COIL | 1 | |
| L603 | RLQZP101KT-Y | COIL | 1 | |
| L615 | J0JBC0000032 | COIL | 1 | |
| L801 | RLQA2R2JT1-Y | COIL | 1 | |
| L802 | RLQA2R2JT1-Y | COIL | 1 | |
| L803 | RLQA2R2JT1-Y | COIL | 1 | |
| L804 | RLQA2R2JT1-Y | COIL | 1 | |
| L814 | G0C2R2JA0019 | COIL | 1 | |
| L901 | RLQA2R2JT1-Y | COIL | 1 | |
| L902 | RLQZP101KT-Y | COIL | 1 | |
| | | | | |
| Q101 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q201 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q301 | UNR511600L | TRANSISTOR | 1 | |
| Q302 | KTC3199GRTA | TRANSISTOR | 1 | |
| Q403 | B1ABGD000021 | TRANSISTOR | 1 | |
| Q404 | B1ABGD000021 | TRANSISTOR | 1 | |
| Q503 | B1ABGD000021 | TRANSISTOR | 1 | |
| Q504 | B1ABGD000021 | TRANSISTOR | 1 | |
| Q603 | B1ACND000003 | TRANSISTOR | 1 | |
| Q604 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q605 | 2SA20570P | TRANSISTOR | 1 | |
| Q606 | KTA2014GRRTK | TRANSISTOR | 1 | |
| Q607 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q608 | B1ACND000003 | TRANSISTOR | 1 | |
| Q609 | UNR521400L | TRANSISTOR | 1 | |
| Q610 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q611 | 2SA20570P | TRANSISTOR | 1 | |
| Q612 | 2SD1819ARL | TRANSISTOR | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| Q613 | KTA2014GRRTK | TRANSISTOR | 1 | |
| Q614 | UNR521F00L | TRANSISTOR | 1 | |
| Q615 | B1BAAJ000003 | TRANSISTOR | 1 | |
| Q616 | UNR511100L | TRANSISTOR | 1 | |
| Q801 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q802 | 2SD1819ARL | TRANSISTOR | 1 | |
| Q803 | UNR521300L | TRANSISTOR | 1 | |
| Q804 | UNR511100L | TRANSISTOR | 1 | |
| Q805 | UNR521100L | TRANSISTOR | 1 | |
| Q809 | UNR521100L | TRANSISTOR | 1 | |
| Q813 | UNR521100L | TRANSISTOR | 1 | |
| Q817 | UNR521100L | TRANSISTOR | 1 | |
| Q820 | UNR521F00L | TRANSISTOR | 1 | |
| Q821 | UNR511100L | TRANSISTOR | 1 | |
| Q822 | B1ACND000003 | TRANSISTOR | 1 | |
| R1 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R2 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R3 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R4 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R5 | ERJ3GEYJ680V | 1/10W 68 | 1 | |
| R6 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R7 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R8 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R9 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R10 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R11 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R12 | ERJ3GEYJ152V | 1/10W 1.5K | 1 | |
| R13 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R14 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R16 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R17 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R18 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R20 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R22 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R23 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R24 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R25 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R28 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R29 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R30 | ERJ3GEYJ393V | 1/10W 39K | 1 | |
| R31 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R33 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R101 | ERDS2TJ473T | 1/4W 47K | 1 | |
| R102 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R103 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R104 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R105 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R106 | ERDS2TJ103T | 1/4W 10K | 1 | |
| R107 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R108 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R109 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R110 | ERJ3GEYJ392V | 1/10W 3.9K | 1 | |
| R111 | ERJ3GEYJ333V | 1/10W 33K | 1 | |
| R112 | ERJ3GEYJ682V | 1/10W 6.8K | 1 | |
| R120 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R129 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R201 | ERDS2TJ473T | 1/4W 47K | 1 | |
| R202 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R203 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R204 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R205 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R206 | ERDS2TJ103T | 1/4W 10K | 1 | |
| R207 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R208 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R209 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R210 | ERJ3GEYJ392V | 1/10W 3.9K | 1 | |
| R211 | ERJ3GEYJ333V | 1/10W 33K | 1 | |
| R212 | ERJ3GEYJ682V | 1/10W 6.8K | 1 | |
| R220 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R229 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R301 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R302 | ERJ3GEYJ223V | 1/10W 22K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|---------------|-------------------------|-----|---------|
| R303 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R304 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R305 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R306 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R307 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R308 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R309 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R312 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R313 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R314 | ERJ3GEYJ224V | 1/10W 220K | 1 | |
| R316 | ERDS2TJ334T | 1/4W 330K | 1 | |
| R317 | ERJ3GEYJ334V | 1/10W 330K | 1 | |
| R318 | ERDS2TJ330T | 1/4W 33 | 1 | |
| R319 | ERDS2TJ330T | 1/4W 33 | 1 | |
| R320 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R321 | ERJ3GEYJ333V | 1/10W 33K | 1 | |
| R322 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R323 | ERJ3GEYJ471V | 1/10W 470 | 1 | |
| R404 | ERJ8GEYJ100V | 1/4W 10 | 1 | |
| R414 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R415 | ERJ3GEYJ151V | 1/10W 150 | 1 | |
| R416 | ERJ3GEYJ273V | 1/10W 27K | 1 | |
| R418 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R419 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R420 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R504 | ERJ8GEYJ100V | 1/4W 10 | 1 | |
| R514 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R515 | ERJ3GEYJ151V | 1/10W 150 | 1 | |
| R516 | ERJ3GEYJ273V | 1/10W 27K | 1 | |
| R518 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R519 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R520 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R605 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R607 | ERDS2TJ152T | 1/4W 1.5K | 1 | |
| R608 | ERJ3GEYJ333V | 1/10W 33K | 1 | |
| R609 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R612 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R613 | ERJ3GEYJ223V | 1/10W 22K | 1 | |
| R614 | ERDS2TJ151T | 1/4W 150 | 1 | |
| R615 | ERJ3GEYJ1R0V | 1/10W 1 | 1 | |
| R616 | ERDS2TJ471T | 1/4W 470 | 1 | |
| R617 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R618 | ERJ3GEYJ681V | 1/10W 680 | 1 | |
| R619 | ERJ3GEYJ681V | 1/10W 680 | 1 | |
| R620 | ERJ3GEYJ2R2V | 1/10W 2.2 | 1 | |
| R621 | ERDS2TJ1R0T | 1/4W 1 | 1 | |
| R622 | ERDS2TJ1R0T | 1/4W 1 | 1 | |
| R623 | ERDS2TJ471T | 1/4W 470 | 1 | |
| R624 | ERDS2TJ471T | 1/4W 470 | 1 | |
| R625 | ERDS2TJ121T | 1/4W 120 | 1 | |
| R626 | ERDS2TJ121T | 1/4W 120 | 1 | |
| R627 | ERDS2TJ221T | 1/4W 220 | 1 | |
| R628 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R629 | ERJ3GEYJ681V | 1/10W 680 | 1 | |
| R630 | ERJ3GEYJ221V | 1/10W 220 | 1 | |
| R631 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R632 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R633 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R634 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R635 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R637 | ERJ3GEYJ273V | 1/10W 27K | 1 | |
| R638 | ERJ3GEYJ272V | 1/10W 2.7K | 1 | |
| R639 | ERJ3GEYJ332V | 1/10W 3.3K | 1 | |
| R640 | ERJ3GEYJ333V | 1/10W 33K | 1 | |
| R641 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R800 | ERJ3GEYJ105V | 1/10W 1M | 1 | |
| R801 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R802 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R803 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R804 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R805 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R806 | ERJ3GEYJ0R00V | 1/10W 0 | 1 | |
| R807 | ERDS2TJ332T | 1/4W 3.3K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| R808 | ERDS2TJ332T | 1/4W 3.3K | 1 | |
| R809 | ERJ3GEYJ331V | 1/10W 330 | 1 | |
| R810 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R811 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R812 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R813 | ERJ3GEYJ221V | 1/10W 220 | 1 | |
| R815 | ERJ3GEYJ471V | 1/10W 470 | 1 | |
| R816 | ERJ3GEYJ473V | 1/10W 47K | 1 | |
| R817 | ERDS2TJ273T | 1/4W 27K | 1 | |
| R819 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R820 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R821 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R822 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R823 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R824 | ERDS2TJ224T | 1/4W 220K | 1 | |
| R825 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R826 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R827 | ERDS2TJ102T | 1/4W 1K | 1 | |
| R828 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R829 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R830 | ERJ3GEYJ334V | 1/10W 330K | 1 | |
| R831 | ERJ3GEYJ334V | 1/10W 330K | 1 | |
| R832 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R833 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R834 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R835 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R836 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R837 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R838 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R839 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R840 | ERJ3GEYJ153V | 1/10W 15K | 1 | |
| R841 | ERDS2TJ560T | 1/4W 56 | 1 | |
| R842 | ERDS2TJ121T | 1/4W 120 | 1 | |
| R843 | ERDS2TJ121T | 1/4W 120 | 1 | |
| R844 | ERDS2TJ121T | 1/4W 120 | 1 | |
| R845 | ERJ3GEYJ334V | 1/10W 330K | 1 | |
| R846 | ERJ3GEYJ152V | 1/10W 1.5K | 1 | |
| R847 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R848 | ERJ3GEYJ272V | 1/10W 2.7K | 1 | |
| R849 | ERJ3GEYJ392V | 1/10W 3.9K | 1 | |
| R850 | ERJ3GEYJ562V | 1/10W 5.6K | 1 | |
| R851 | ERJ3GEYJ822V | 1/10W 8.2K | 1 | |
| R852 | ERJ3GEYJ153V | 1/10W 15K | 1 | |
| R853 | ERJ3GEYJ333V | 1/10W 33K | 1 | |
| R854 | ERJ3GEYJ823V | 1/10W 82K | 1 | |
| R855 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R856 | ERJ3GEYJ103V | 1/10W 10K | 1 | |
| R857 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R858 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R862 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R863 | ERJ3GEYJ222V | 1/10W 2.2K | 1 | |
| R865 | ERJ3GEYJ123V | 1/10W 12K | 1 | |
| R869 | ERJ3GEYJ221V | 1/10W 220 | 1 | |
| R870 | ERJ3GEYJ221V | 1/10W 220 | 1 | |
| R871 | ERJ3GEYJ271V | 1/10W 270 | 1 | |
| R872 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R873 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R874 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R875 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R876 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R877 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R878 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R879 | ERJ3GEYJ101V | 1/10W 100 | 1 | |
| R880 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R881 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R882 | ERJ3GEYJ471V | 1/10W 470 | 1 | |
| R883 | ERJ3GEYJ221V | 1/10W 220 | 1 | |
| R884 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R885 | ERDS2TJ102T | 1/4W 1K | 1 | |
| R886 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R887 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R888 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| R889 | ERJ3GEYJ102V | 1/10W 1K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| R890 | ERDS2TJ102T | 1/4W 1K | 1 | |
| R891 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R892 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R893 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R894 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R895 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R896 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R897 | ERJ3GEYJ102V | 1/10W 1K | 1 | |
| R898 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R899 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R1003 | ERDS2TJ271T | 1/4W 270 | 1 | |
| R7001 | ERJ3GEYJ472V | 1/10W 4.7K | 1 | |
| R7005 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| R7006 | ERJ3GEYJ104V | 1/10W 100K | 1 | |
| RX874 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| RX875 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| RX876 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| RX877 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| RX878 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| RX879 | ERJ3GEY0R00V | 1/10W 0 | 1 | |
| S301 | EVQ21405R | TACT SWITCH | 1 | |
| S801 | EVQ11G09K | TACT SWITCH | 1 | |
| S802 | EVQ11G09K | TACT SWITCH | 1 | |
| S803 | EVQ11G09K | TACT SWITCH | 1 | |
| S804 | EVQ11G09K | TACT SWITCH | 1 | |
| S805 | EVQ11G09K | TACT SWITCH | 1 | |
| S806 | EVQ11G09K | TACT SWITCH | 1 | |
| S807 | EVQ11G09K | TACT SWITCH | 1 | |
| S808 | EVQ11G09K | TACT SWITCH | 1 | |
| S809 | EVQ11G09K | TACT SWITCH | 1 | |
| S810 | EVQ11G09K | TACT SWITCH | 1 | |
| S1002 | K0L1CA000002 | CD CLOSE DETECT SW | 1 | |
| S1003 | K0L1CA000002 | CD CLOSE DETECT SW | 1 | |
| T1 | G2BAC0000054 | IFT | 1 | |
| W1 | RWJ0210085SS | WIRE | 1 | |
| W2 | REX1188-1 | WIRE | 1 | |
| W301 | REX1189 | WIRE | 1 | |
| W351 | REX1187 | WIRE | 1 | |
| W901 | REX1198-1 | WIRE | 1 | |
| W1001 | RWJ9002045SS | WIRE | 1 | |
| W1002 | RWJ9003100SS | WIRE | 1 | |
| W1004 | REX1190 | WIRE | 1 | |
| X1 | J0B1075A0121 | DISCRIMINATOR | 1 | |
| X2 | H0A750200021 | CRYSTAL OSCILLATOR | 1 | |
| X801 | H2B10050007 | CRYSTAL OSCILLATOR | 1 | |
| X802 | H0A327200097 | CRYSTAL OSCILLATOR | 1 | |
| Z801 | L5ADAGD00001 | FL DISPLAY | 1 | |
| Z1001 | B3RAD0000075 | REMOTE SENSOR | 1 | |
| 1 | RAE0240Z-11X | TRAVERSE ASS'Y | 1 | ⚠ |
| 1-1 | RAF0240A-8X | OPTICAL PICK-UP | 1 | ⚠ |
| 1-2 | RDG0554 | GEAR 1 | 1 | |
| 1-3 | RDG0555 | GEAR 2 | 1 | |
| 1-4 | RMQ1125 | MOTOR HOLDER | 1 | |
| 1-5 | RMS0782-1 | SHAFT | 1 | |
| 1-6 | RMG0648-K | FLOATING RUBBER A | 1 | |
| 1-7 | RMG0648-K | FLOATING RUBBER A | 1 | |
| 1-8 | RMG0648-K | FLOATING RUBBER A | 1 | |
| 1-9 | XQN17+BG45FJ | SCREW | 1 | |
| 1-10 | PKN7EB90A2 | TRAVERSE MOTOR ASS'Y | 1 | |
| 2 | RHD20064-1 | SCREW | 1 | |
| 3 | RHD20064-1 | SCREW | 1 | |
| 4 | RHD20064-1 | SCREW | 1 | |
| 5 | RMG0649-A | FLOATING RUBBER B | 1 | |
| 6 | RMG0649-A | FLOATING RUBBER B | 1 | |
| 7 | RMG0649-A | FLOATING RUBBER B | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| 8 | RMG0649-A | FLOATING RUBBER B | 1 | |
| 9 | RMK0600-1 | CD CHASSIS | 1 | |
| 10 | RMN0784 | SENSOR HOLDER | 1 | |
| 11 | RMN0785 | LED HOLDER | 1 | |
| 12 | RMN0787 | FUN LED HOLDER | 1 | |
| 13 | RMN0788-1 | LCD HOLDER | 1 | |
| 14 | RMN0798 | LCD SUPPORT PIECE | 1 | |
| 15 | RMN0801 | SHEET | 1 | |
| 16 | RMX0281 | LCD SPACER SHEET | 1 | |
| 17 | XTV3+8FFJ | SCREW | 1 | |
| 18 | XTV3+8FFJ | SCREW | 1 | |
| 19 | XTV3+8FFJ | SCREW | 1 | |
| 20 | N1ACF500001 | ROD ANTENNA | 1 | |
| 21 | RAL0044 | DAB MODULE UNIT | 1 | |
| 22 | RDG0578 | PULLEY GEAR | 1 | |
| 23 | RDG0579-1 | TRANSFER GEAR | 1 | |
| 24 | RDG0581 | GEAR B | 1 | |
| 25 | RDG0581 | GEAR B | 1 | |
| 26 | REE1369 | FFC | 1 | |
| 27 | RGK1781-S | TOP ORNAMENT | 1 | |
| 28 | RGK1782-S | FRONT ORNAMENT (L) | 1 | |
| 29 | RGK1783-S | FRONT ORNAMENT (R) | 1 | |
| 30 | RGN2886-K | NAME PLATE | 1 | |
| 31 | RQQ0389-K | CD TRAVELLER UPPER | 1 | |
| 32 | RQQ0390-K | CD TRAVELLER BOTTOM | 1 | |
| 33 | RQQ0391-K | CD TRAVELLER HOLDER (L) | 1 | |
| 34 | RQQ0392-K | CD TRAVELLER HOLDER (R) | 1 | |
| 35 | RHD26044-1 | SCREW | 1 | |
| 36 | RHD26044-1 | SCREW | 1 | |
| 37 | RHD26044-1 | SCREW | 1 | |
| 38 | RHD26044-1 | SCREW | 1 | |
| 39 | RHD26048 | SCREW | 1 | |
| 40 | RHD26048 | SCREW | 1 | |
| 41 | RHD26048 | SCREW | 1 | |
| 42 | RHD26048 | SCREW | 1 | |
| 43 | RHD26048 | SCREW | 1 | |
| 44 | RHDW30003-1 | SCREW | 1 | |
| 45 | RHDW30003-1 | SCREW | 1 | |
| 46 | RHDW30003-1 | SCREW | 1 | |
| 47 | RHN95002 | NUT | 1 | |
| 48 | RKA0160-K | CUSHION RUBBER A | 1 | |
| 49 | RKA0160-K | CUSHION RUBBER A | 1 | |
| 50 | RKA0161-K | CUSHION RUBBER B | 1 | |
| 51 | RKA0161-K | CUSHION RUBBER B | 1 | |
| 52 | RKA0161-K | CUSHION RUBBER B | 1 | |
| 53 | RKA0161-K | CUSHION RUBBER B | 1 | |
| 54 | RKA0162-K | LEG RUBBER | 1 | |
| 55 | RKA0162-K | LEG RUBBER | 1 | |
| 56 | RKA0162-K | LEG RUBBER | 1 | |
| 57 | RKA0162-K | LEG RUBBER | 1 | |
| 58 | RKM0509A-K | FRONT CABINET | 1 | |
| 59 | RKS0394D-K | BACK CABINET | 1 | |
| 60 | RMB0789 | SPRING | 1 | |
| 61 | RMB0789 | SPRING | 1 | |
| 62 | RME0409-2 | R. ANT TERMINAL | 1 | |
| 63 | RMG0268-K1 | BELT | 1 | |
| 64 | RMM0270-1 | RACK L | 1 | |
| 65 | RMM0271-1 | RACK R | 1 | |
| 66 | RMN0203-J | HOLDER | 1 | |
| 67 | RMN0203-J | HOLDER | 1 | |
| 68 | RMN0795 | DAB PIECE L | 1 | |
| 69 | RMN0796 | DAB PIECE R | 1 | |
| 70 | RMN0797 | FFC SUPPORT PIECE | 1 | |
| 71 | RMNX0092-K | JACK HOLDER | 1 | |
| 72 | RMNX0093-W | AM ANTENNA HOLDER | 1 | |
| 73 | RMQ1304 | GEAR HOLDER (L) | 1 | |
| 74 | RMQ1305 | GEAR HOLDER (R) | 1 | |
| 75 | RMQ1306 | GEAR FIXTURE A | 1 | |
| 76 | RMQ1307-1 | GEAR HOLDER | 1 | |
| 77 | RFKNAEN7PC-S | GEAR A ASS'Y | 1 | |
| 78 | RFKPLPD667PB | MOTOR ASS'Y | 1 | |

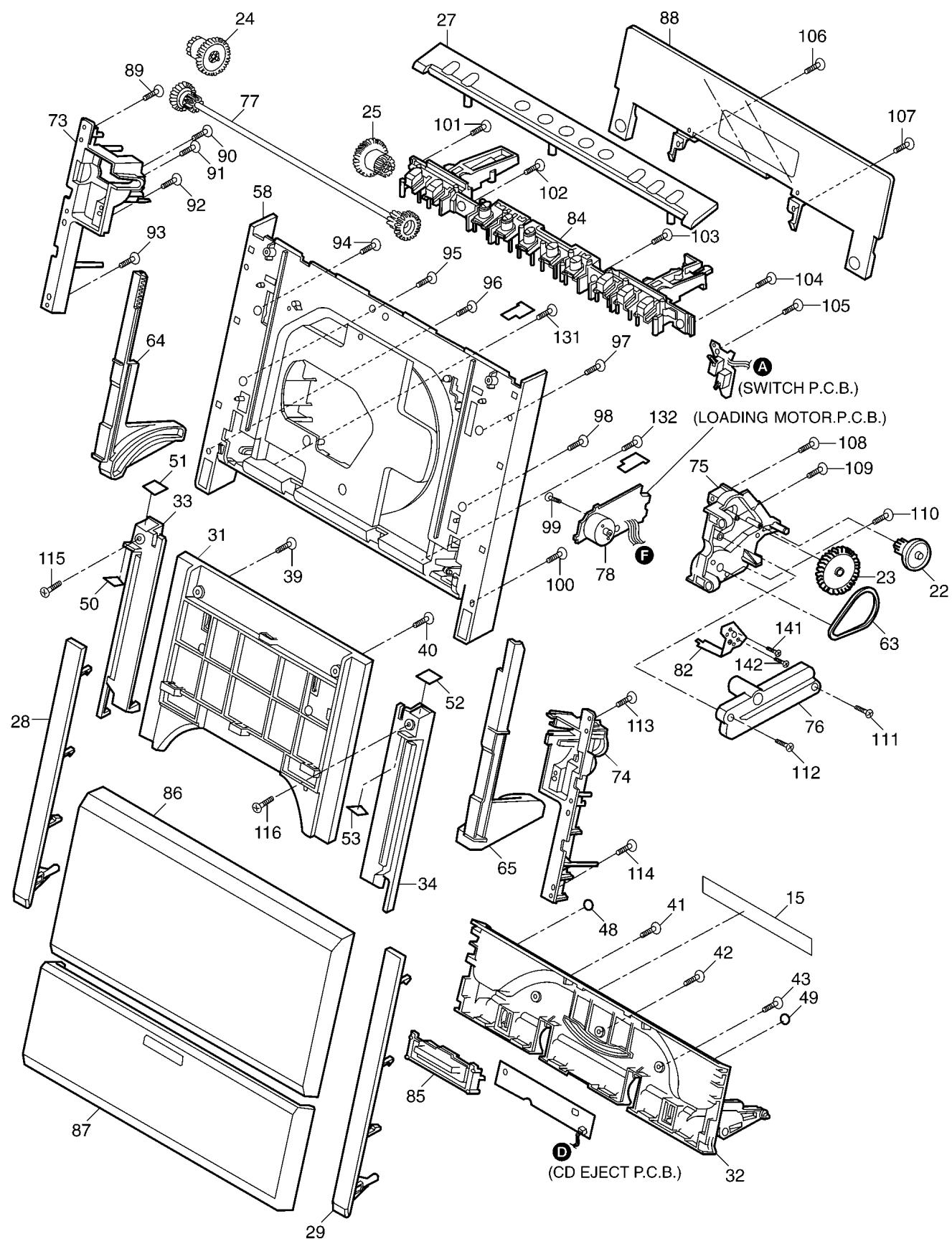
| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| 80 | RQLXS0053 | LASER CAUTION LABEL | 1 | |
| 81 | RQT4389ZAA | CLASS1 LABEL | 1 | |
| 82 | RSC0732 | EARTH PLATE | 1 | |
| 83 | RSC0733 | TUNER SHIELD | 1 | |
| 84 | RYK1373-S | OP BTN CHASSIS UNIT | 1 | |
| 85 | RYQ0490-S | CD OP/CL BTN UNIT | 1 | |
| 86 | RYQ0491C-S | CD LID A UNIT | 1 | |
| 87 | RYQ0492C-S | CD LID B UNIT | 1 | |
| 88 | RYQ0493C-S | LCD PANEL UNIT | 1 | |
| 89 | XTBS26+10GFJ | SCREW | 1 | |
| 90 | XTBS26+10GFJ | SCREW | 1 | |
| 91 | XTBS26+10GFJ | SCREW | 1 | |
| 92 | XTBS26+10GFJ | SCREW | 1 | |
| 93 | XTBS26+10GFJ | SCREW | 1 | |
| 94 | XTBS26+10GFJ | SCREW | 1 | |
| 95 | XTBS26+10GFJ | SCREW | 1 | |
| 96 | XTBS26+10GFJ | SCREW | 1 | |
| 97 | XTBS26+10GFJ | SCREW | 1 | |
| 98 | XTBS26+10GFJ | SCREW | 1 | |
| 99 | XTBS26+10GFJ | SCREW | 1 | |
| 100 | XTBS26+10GFJ | SCREW | 1 | |
| 101 | XTBS26+10GFJ | SCREW | 1 | |
| 102 | XTBS26+10GFJ | SCREW | 1 | |
| 103 | XTBS26+10GFJ | SCREW | 1 | |
| 104 | XTBS26+10GFJ | SCREW | 1 | |
| 105 | XTBS26+10GFJ | SCREW | 1 | |
| 106 | XTBS26+10GFJ | SCREW | 1 | |
| 107 | XTBS26+10GFJ | SCREW | 1 | |
| 108 | XTBS26+10GFJ | SCREW | 1 | |
| 109 | XTBS26+10GFJ | SCREW | 1 | |
| 110 | XTBS26+10GFJ | SCREW | 1 | |
| 111 | XTBS26+10GFJ | SCREW | 1 | |
| 112 | XTBS26+10GFJ | SCREW | 1 | |
| 113 | XTBS26+10GFJ | SCREW | 1 | |
| 114 | XTBS26+10GFJ | SCREW | 1 | |
| 115 | XTBS26+10GFJ | SCREW | 1 | |
| 116 | XTBS26+10GFJ | SCREW | 1 | |
| 117 | XTBS26+10GFJ | SCREW | 1 | |
| 118 | XTBS26+10GFJ | SCREW | 1 | |
| 119 | XTBS26+10GFJ | SCREW | 1 | |
| 120 | XTBS26+10GFJ | SCREW | 1 | |
| 121 | XTBS26+10GFJ | SCREW | 1 | |
| 122 | XTBS26+10GFJ | SCREW | 1 | |
| 123 | XTBS26+10GFJ | SCREW | 1 | |
| 124 | XTBS26+10GFJ | SCREW | 1 | |
| 125 | XTBS26+10GFJ | SCREW | 1 | |
| 126 | XTBS26+10GFJ | SCREW | 1 | |
| 127 | XTBS26+10GFJ | SCREW | 1 | |
| 128 | XTBS26+10GFJ | SCREW | 1 | |
| 129 | XTN2+6JFJ | SCREW | 1 | |
| 130 | XTN2+6JFJ | SCREW | 1 | |
| 131 | XTV3+12GFJ | SCREW | 1 | |
| 132 | XTV3+12GFJ | SCREW | 1 | |
| 133 | XTV3+20GFJ | SCREW | 1 | |
| 134 | XTV3+20GFJ | SCREW | 1 | |
| 135 | XTV3+20GFJ | SCREW | 1 | |
| 136 | XTV3+20GFJ | SCREW | 1 | |
| 137 | XTV3+20GFJ | SCREW | 1 | |
| 138 | XTV3+20GFJ | SCREW | 1 | |
| 139 | XTV3+20GFJ | SCREW | 1 | |
| 140 | XTV3+20GFJ | SCREW | 1 | |
| 141 | XYN26+C6FJ | SCREW | 1 | |
| 142 | XYN26+C6FJ | SCREW | 1 | |
| 143 | XYN3+F12FJ | R. ANT SCREW | 1 | |
| 144 | XTBS26+10GFJ | SCREW | 1 | |
| PCB1 | REP3703B | CD SERVO PCB ASS'Y | 1 | (RTL) |
| PCB2 | REP3749B | MAIN PCB ASS'Y | 1 | (RTL) |
| S1 | K0L1BB00025 | SW, REST DET. | 1 | |

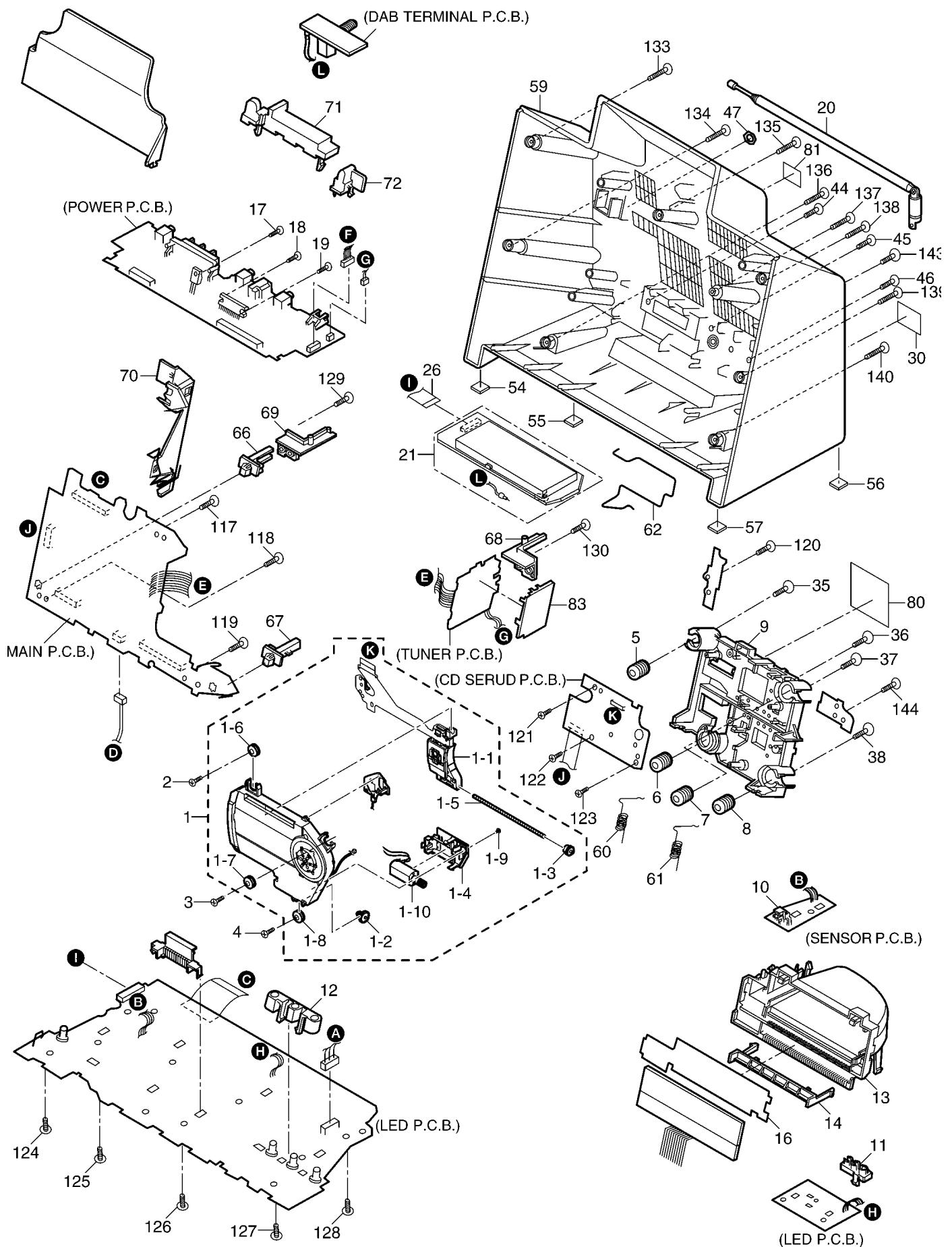
18.2. SB-EN7

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|-------------|--------------|----------------------------|-----|---------|
| 200 | L0AA08A00013 | SPEAKER | 1 | |
| 201 | RFKGBEN7PC-S | SP FRONT CAB ASS'Y | 1 | |
| 201-1 | RMGW0001-H1 | NET CATCH GUM | 1 | |
| 201-2 | RMGW0001-H1 | NET CATCH GUM | 1 | |
| 201-3 | RMGW0001-H1 | NET CATCH GUM | 1 | |
| 201-4 | RMGW0001-H1 | NET CATCH GUM | 1 | |
| 202 | RFKHBEN7PC-S | SP BACK CAB ASS'Y | 1 | |
| 202-1 | RKAX0011-K | LEG FELT | 1 | |
| 202-2 | RKAX0011-K | LEG FELT | 1 | |
| 202-3 | RKAX0011-K | LEG FELT | 1 | |
| 202-4 | RKAX0011-K | LEG FELT | 1 | |
| 203 | RYB0318 | SPEAKER NET FRAME ASS'Y | 1 | |
| 204 | XTV3+12GFJ | SCREW | 1 | |
| 205 | XTV3+12GFJ | SCREW | 1 | |
| 206 | XTV3+12GFJ | SCREW | 1 | |
| 207 | XTV3+12GFJ | SCREW | 1 | |
| 208 | XTV3+12GFJ | SCREW | 1 | |
| 209 | XTV3+12GFJ | SCREW | 1 | |
| 210 | XTV3+12GFJ | SCREW | 1 | |
| 211 | XTV3+12GFJ | SCREW | 1 | |
| 212 | XTV3+12GFJ | SCREW | 1 | |
| 213 | XTV3+12GFJ | SCREW | 1 | |
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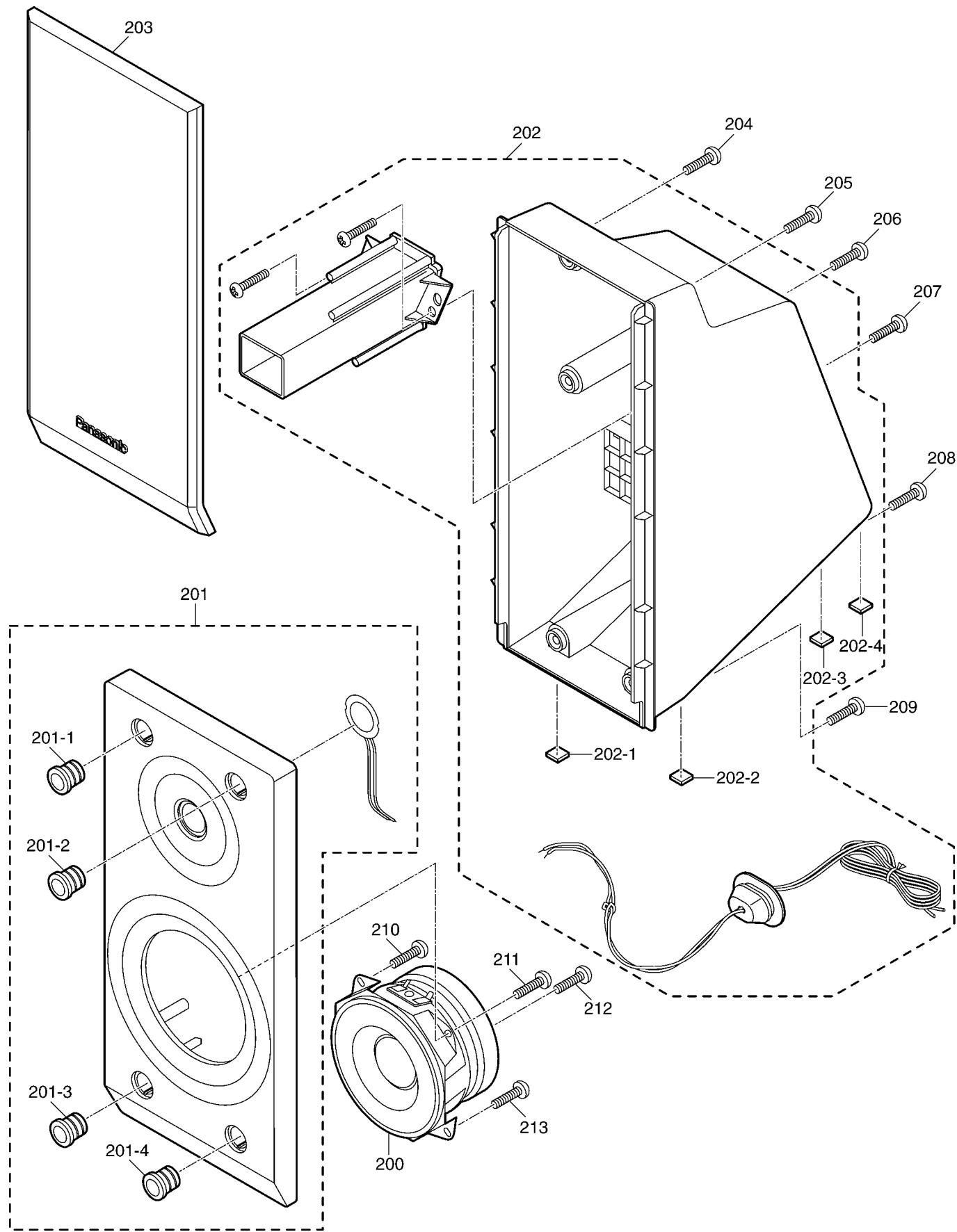
19 Cabinet Parts Location

19.1. SA-EN29





19.2. SB-EN7



20 Packaging

