ORDER NO. MD0703021CE
A6

Service Manual

CD Stereo System

COMPACT disc DIGITAL AUDIO

SC-EN37P

Colour

(K)... Black Type

System

SC-EN37P-K

Main Unit: SA-EN37P-K

Speakers: SB-EN37AP-K (L) & SB-EN37P-K (R)

Specifications

n AMPLIFIER SECTION

FTC OUTPUT POWER both channel driven simultaneously

10% total harmonic distortion (THD)

1 kHz 2.8 W per channel

RMS OUTPUT POWER both channel driven simultaneously

10% total harmonic distortion (THD)

1 kHz 3 W per channel

Output impedance

HEADPHONE 16 W to 32 W

MUSIC PORT 12 kW

Phone Jack

Terminal 3.5 mm stereo

Music Port Jack

Terminal 3.5 mm stereo

n TUNER SECTION

Frequency range

FM 87.9 MHz to 107.9 MHz (200 kHz)
87.5 MHz to 108.0 MHz (100 kHz)

AM 520 kHz to 1710 kHz (10 kHz)

n CD SECTION

Disc played [8cm (3") or 12cm (5")]

(1) CD-Audio (CD-DA)

(2) CD-R/RW (CD-DA, MP3)

(3) MP3

Sampling frequency

CD 44.1 kHz

MP3 32 kHz, 44.1 kHz, 48 kHz

Bit rate

MP3 32 kbps to 384 kbps

Decoding 16/20/24 bit linear

Pick up

Wavelength 785 nm

Laser power CLASS 1

Audio Output (Disc)

Number of channels 2 channel

Frequency response 20 Hz to 20 kHz (+1, -2 dB)

Wow and flutter Below measurement limit

Digital filter 8

D/A converter MASH (1 bit DAC)

n GENERAL

Power supply AC 120 V, 60 Hz

Power consumption 30 W

Dimension (W x H X D) 220mm x 236mm x 146 mm
(8 21/32" x 9 9/32" x 5 3/4")

Mass

With speakers 3.965 kg (8.75 lbs)

Without speakers 1.75 kg (3.86 lbs)

n SPEAKER SECTION

Panasonic®

SC-EN37P

Type	1 Way, 1 speaker system
Speaker(s)	8 cm (5 1/2") cone type 6 Ω
Impedance	6 Ω
Input power	3 (MAX)
Dimension (W x H x D)	121 mm x 236 mm x 146 mm (4 3/4" x 9 9/32" x 5 3/4")

Power consumption in standby mode: 2.0 W (appx.)

Notes:

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

⚠ WARNING

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

CONTENTS

1 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, ensure that all the protective devices such as insulation barriers and insulation papers shields are properly installed.
3. After servicing, check for leakage current checks to prevent from being exposed to shock hazards.

(This “Safety Precaution” is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer’s recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Using an ohmmeter measure the resistance value, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

1.1.2. Leakage Current Hot Check (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15µF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. Should the measurement is out of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

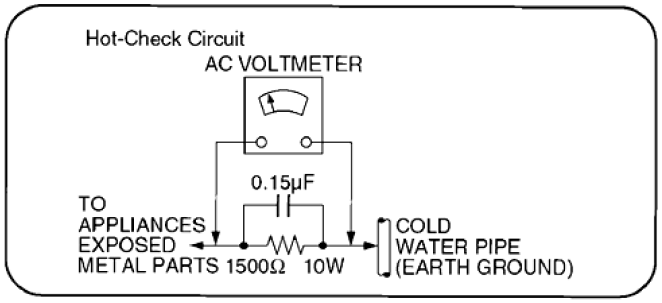


Fig. 1

1.2. Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: Littlefuse Inc., Type: 233, 2A. 125V)

(For Canadian French)
ATTENTION:

Utiliser un fusible de rechange de même type:
(Fabricant: Littlefuse Inc., Type: 233, 2A. 125V)

1.3. Before repair and adjustment

Disconnect AC power, discharge Power Capacitors C611 and C616 through a 10W, 1W resistor to ground.

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 120V, 60 Hz in NO SIGNAL mode (volume min at CD mode) should be ~ 135mA.

1.4. 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.
- Sound stops 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 systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines 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.

1.5. Safety Parts Information

Safety Parts List:

There are special components used in this equipment which are important for safety.
These parts are marked by ⚠ in the Schematic Diagrams & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Table 1

Reference No.	Part No.	Part Name & Description	Remarks
A2	K2CB2CB00018	AC CORD	[M] ⚠
F901	K5D202APA008	FUSE	[M] ⚠
IP601	K5G302AA0002	FUSE PROTECTOR	[M] ⚠
IP602	K5G251A00008	FUSE PROTECTOR	[M] ⚠
JK901	K2AB2B000007	FUSE	[M] ⚠
L901	ELF15N035AN	LINE FILTER	[M] ⚠
T901	G4C5ABD00006	TRANSFORMER	[M] ⚠

2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by 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-equiped 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 reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up 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 remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge 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, aluminium 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 body 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).

3 Precaution of laser diode

CAUTION:

This unit utilizes a class 1 laser diode in the optical pickup unit .

Invisible laser radiation is emitted from the optical pickup lens.

Wavelength: 780nm

When the unit is turned on:

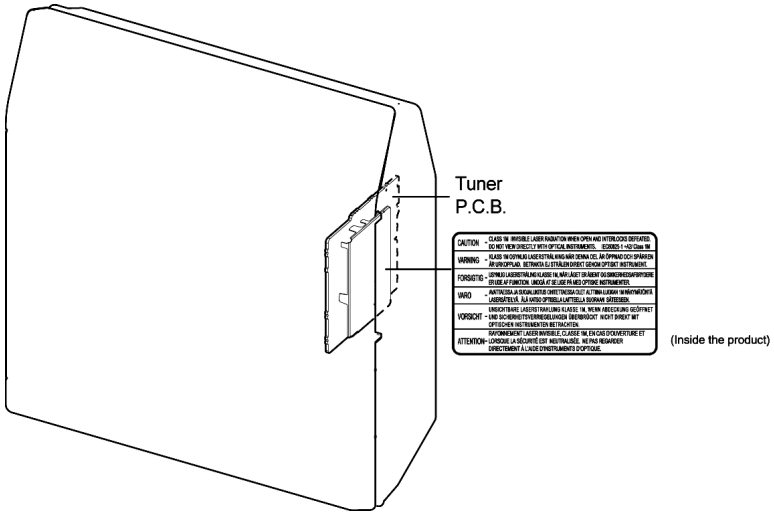
1. Do not look directly into the optical pickup lens.
2. Do not use optical instruments to look at the optical pickup lens.
3. Do not adjust the preset variable resistor on the optical pickup lens.
4. Do not disassemble the optical optical pickup unit.
5. If the optical pickup is replaced, use the manufacturer's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

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 (Except for U.S.A.)



4 Handling Precautions For Traverse Unit

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by the static electricity of clothes or our human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

· Way of handling the 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 the flexible board (FFC board). (Fig. 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. (Fig. 2)

   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding. (Fig. 2)

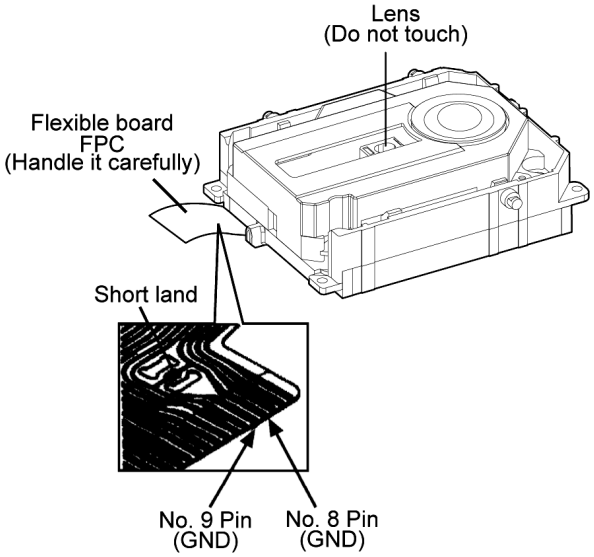
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is place, and ground the sheet.

Caution :

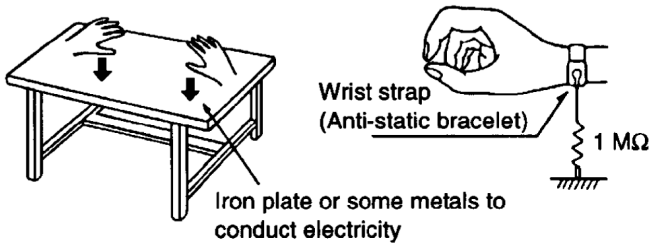
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

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.



(Fig. 1)



(Fig.2)

5 About Lead Free Solder (PbF)

5.1. Service caution based on legal restrictions

5.1.1. General description about Lead Free Solder (PbF)

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

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

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

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

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.
  (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

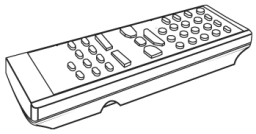
Recommended Lead Free Solder (Service Parts Route.)

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

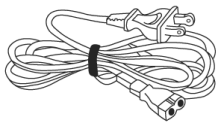
Note

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

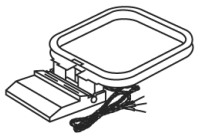
6 Accessories



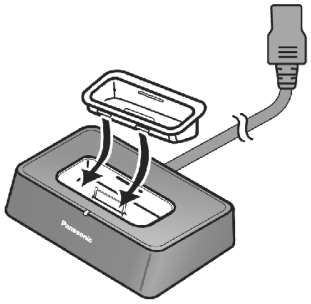
Remote Control



AC Cord



FM/AM Antenna

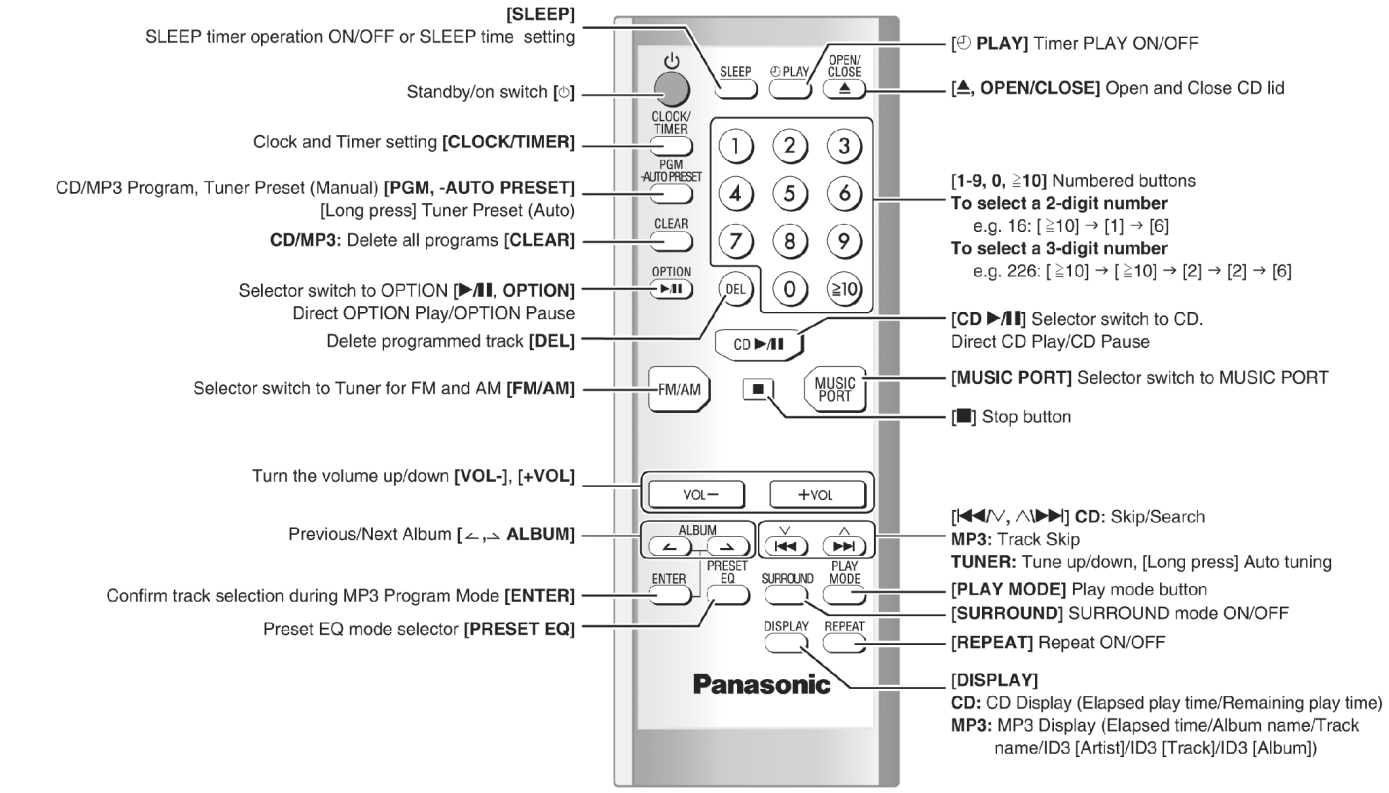


I-Pod cradle

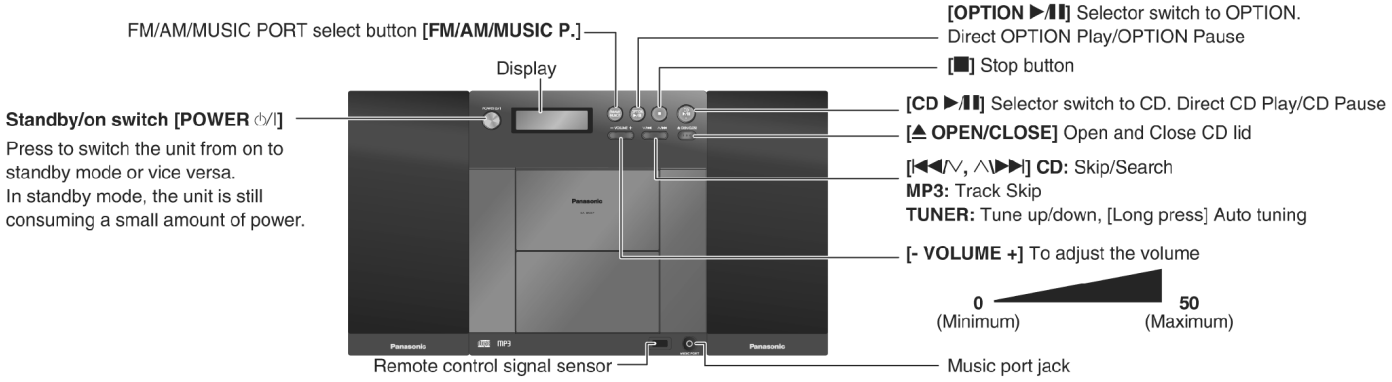
7 Operation Procedures

7.1. Remote Control Key Buttons Operations

Control guide



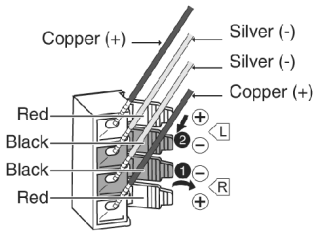
7.2. Main Unit Key Buttons Operations



7.3. Connection

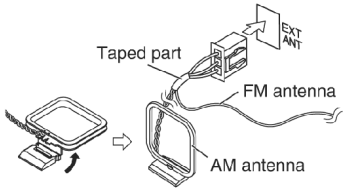
Connections

1. Speakers



2. FM/AM antenna

Stand the antenna up on its base.



Unplug the antenna connector by holding the taped part.

3. iPod connection

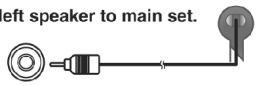
Proceed to step 4 if you are not connecting an iPod to the main unit.

Connect the Universal Dock for iPod to OPTION port.

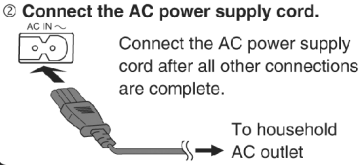
➡ Refer to page 5 for further information.

4. AC power supply cord

① **Connect the DC in cord cable from left speaker to main set.**



② **Connect the AC power supply cord.**



Connect the AC power supply cord after all other connections are complete.

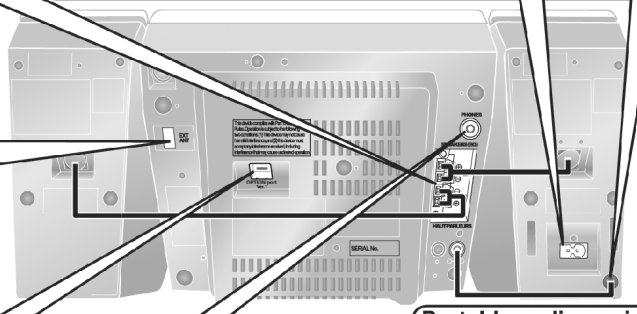
To household AC outlet

Conserving power

The unit consumes 2.0 W even it is turned off with [POWER ⏻/I]. To save power when the unit is not to be used for a long time, unplug it from the household AC outlet. Remember to reset the radio stations and any other memory items before using the unit again.

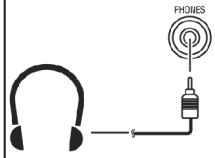
Note

If the unit is left unplugged for longer than approximately two weeks, all settings will revert to the factory settings.



Headphones

(not included)



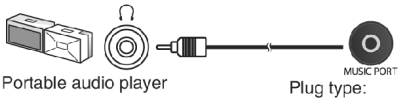
Reduce the volume level and connect the headphones.
Plug type: 3.5 mm (1/8") stereo.

Note

To prevent hearing damage, avoid listening for prolonged periods of time .

Portable audio equipment

(Cords and equipment not included)



Portable audio player

Plug type: 3.5 mm (1/8") stereo

Use

Main unit | REMOTE CONTROL

Start Playback from the Portable audio source.

Note

- Adjust the volume and sound quality of this unit and the other equipment.
- For details, refer to the instruction manual of the other equipment.

8 Self diagnosis and special mode setting

This unit is equipped with features of self-diagnostic & special mode setting for checking the functions & reliability.

8.1. Service Mode Summary Table

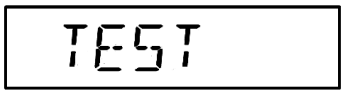
The service mode can be activated by pressing various button combination on the main unit and remote control unit. Below is the summary for the various modes for checking:-

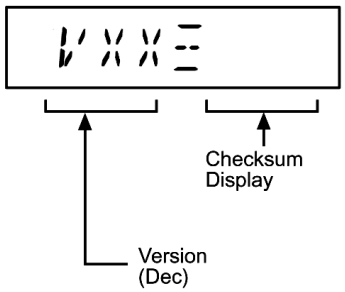
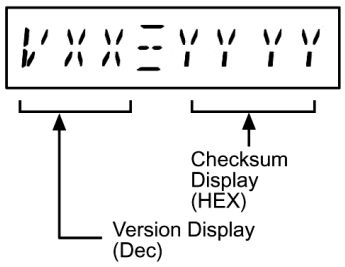
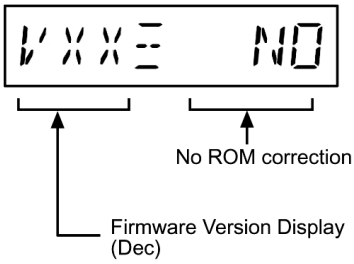
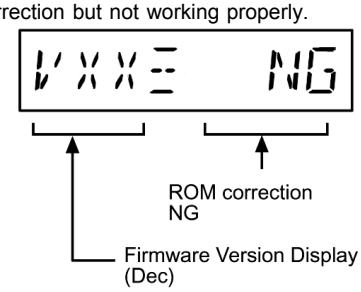
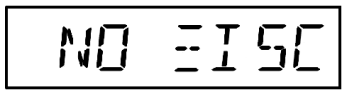
Player buttons	Remote control unit buttons	Application	Note
[■]	[4], [7]	To enter into doctor mode for various item checking.	(Refer to the section 8.2 for more information.)

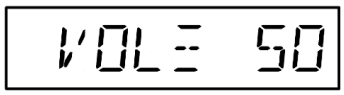
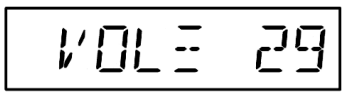
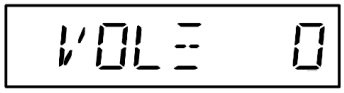
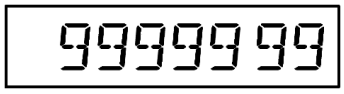
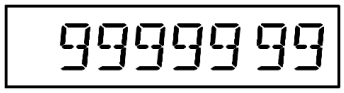
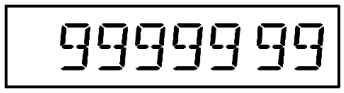
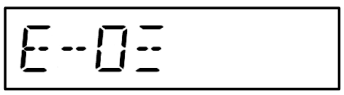
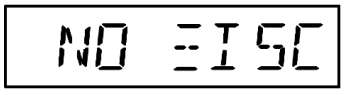
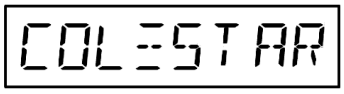
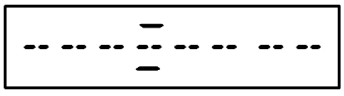
Mode	Remote control unit buttons	Application	Note
Doctor Mode	[DIMMER]	FL ALL Segment inspection	(Refer to the section 8.2 for more information.)
	[7], [8], [9]	Forced VOL setting	(Refer to the section 8.2 for more information.)
	[≧10], [1], [1]	CD Loading Test	(Refer to the section 8.2 for more information.)
	[≧10], [1], [2]	CD Traverse Test	(Refer to the section 8.2 for more information.)
	[≧10], [1], [3]	CD Combination Test	(Refer to the section 8.2 for more information.)
	[≧10], [1], [4]	CD Auto Adjustment Display	(Refer to the section 8.2 for more information.)
	[SLEEP]	Cold Start setting	(Refer to the section 8.2 for more information.)

8.2. Service Mode Table 1

Below is the various special modes for checking:-

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self-Diagnostic Mode	To enter into self diagnostic checking for main unit.		1. Select [CD] for CD mode (Ensure no CD inserted.) 2. Press and hold [■] button for 2 seconds follow by [FF] To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Doctor Mode	To enter into Doctor Mode for checking of various items and displaying EEPROM and firmware version. Note: The micro-processor version as shown is an example. It will be revise when there is an updates. FL Display sequence Display 1 fi 2	DIsplay 1  Checksum (Condition 1) When EEPROM IC detected and has ROM correction.  Checksum (Condition 2) When EEPROM IC is detected and there is no ROM correction.  Checksum (Condition 3) When EEPROM IC is detected and has ROM correction but not working properly.  Display 2  The Check Sum of EEPROM and firmware version will be display for 1 sec. * ROM correction ** Firmware version No:	In any mode: 1. Press [■] button on main unit follow by [4] and [7] on remote control. To exit, press [**POWER** ⏻/I] button on main unit or remote control.
FL Display Test	To check the FL segments display (All segments will light up)	 	In doctor mode: 1. Press [DIMMER] button on remote control. To exit, press [**POWER** ⏻/I] button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Volume Setting Mode	To check for the volume setting of the main unit. The volume will be automatically set to its respective level (in dB). During the mode, trebble/bass/EQ will be set to “0” dB & OFF.		In doctor mode: 1. Press [7] button on remote control.
			2. Press [8] button on remote control.
			3. Press [7] button on remote control. To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.
CD Loading Test Mode	To determine the reliability of CD Loading unit. To check for the Open/Close operation for the CD loading unit. It fails when there is abnormality in opening or closing.	 The counter will increment by 1 until reach 9999999 fl 	In doctor mode: 1. Press [≧10], [1] & [1] button on remote control. To cancel, press [0] button remote control. To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.
CD Traverse Unit Test Mode	To check for the traverse unit operation. In this mode, the first & last track is access & read. (TOC). It fails when TOC is not completed by IOS or the traverse is out of focus.	 The counter will increment by 1 until reach 9999999 fl 	In doctor mode: 1. Press [≧10], [1] & [2] button on remote control. To cancel, press [0] button remote control. To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.
CD Combination Test Mode	A combination of CD loading & traverse unit test.	 The counter will increment by 1 until reach 9999999 fl 	In doctor mode: 1. Press [≧10], [1] & [3] button on remote control. To cancel, press [0] button remote control. To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.
CD Auto Adjustment Display	To display result of self adjustment for CD. For more information, please refer to Section 8.2.1.	 The [NO DISC] display will appear after 3s, 	In doctor mode: 1. Press [≧10], [1] & [4] button on remote control. To cancel, press [0] button remote control. To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.
Cold Start	To activate cold start upon next AC power up.	 fl 	In doctor mode: 1. Press [SLEEP] button on remote control. To exit, press [**POWER** ⏻/⏽] button on main unit or remote control.

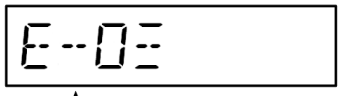
8.2.1. CD Self-Adjustment (AJST) Result Display

Purpose: To display result of self-adjustment for CD.

Below is the procedures for this mode.

Step 1: Enter into Doctor mode (For more information refer to section 8.2 on key operation to enter into this mode).

Step 2: When [≧10], [1] & [4] are pressed at the doctor mode, the following shall be displayed for 3s. The result shall correspond to the condition met as shown in the table below:



Display of auto adjustment result (refer to the following table

Status Condition \ Error Code	0	1	2	4	6	8	A	C	E	F
AOC1/AOC2	O	□	O	O	O	O	O	O	O	-
ABC1/ABC1	O	-	X	O	X	O	X	O	X	-
2nd AOC1	O	-	O	X	X	O	O	X	X	-
FAGC/TAGC	O	-	O	O	O	X	X	X	X	-
AGC2	O	-	O	O	O	O	O	O	O	△

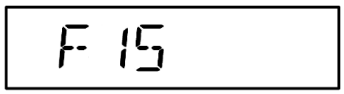
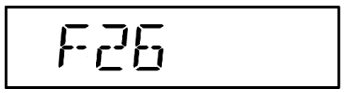
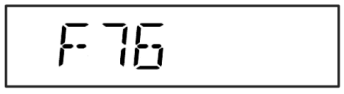
O : OK
X : NG (In case that time out happens.)
□ : Either one of FO AOC, TR AOC and FO coarce AGC is NG
△ : If the AGC is NG (other don't care).

8.3. Error Code Table 1

8.3.1. Mechanism Error Code Table

Self-Diagnosis Function provides information on any problems occuring for the unit and its respective components by displaying error codes. These error code such as U**, H** and F** are stored in memory and held unless it is cleared.

The error code is automatically display after entering into self-diagnostic mode.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F15	CD REST SW abnormal	CD traverse position initial setting operation failsafe counter (1000ms) waiting for REST SW to turn on. Error no. shall be clear by force or during cold start.		For CD unit.(For traverse). Press [■] on main unit for next error.
F26	Communication between CD servo LSI and micro-p abnormal.	CD function DTMS command, after system setting, if SENSE = "L" cannot be detected. Memory shall contain F26code. After power on, CD function shall continue, error display shall be "NO DISC". Error no. shall be clear by force or cold start.		For CD unit.(For traverse). Press [■] on main unit for next error.
F76	Abnormality in the output voltage of stabilized power supply.	In normal operation when "DCDET" is detected "L" (IOIO) for two consecutive times, this error code will be displayed for 2s & after PCONT will be turned to "L" (Low).		Press [■] on main unit for next error.

9 Assembling and Disassembling

9.1. Caution

“ATTENTION SERVICER”

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures.
   Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Refer to the Parts No. on the page of “Parts Location and Replacement Parts List” (Section 21), if necessary.

Warning :-

This product uses a laser diode. Refer to caution statement Precaution of Laser Diode.

Caution Note:
Please use original screw & at correction locations

Below is the list of disassembly sections

- **Disassembly of Rear Cabinet**
- **Disassembly of D-Port P.C.B.**
- **Disassembly of Panel P.C.B. & LCD P.C.B.**
- **Disassembly of Main P.C.B., Sensor P.C.B., Tuner P.C.B.**
- **Disassembly of CD Servo P.C.B. & Switch P.C.B.**
- **Disassembly of Power Switch P.C.B. & Tact Switch P.C.B.**
- **Replacement of Traverse Cover**
- **Disassembly of CD Servo P.C.B.**
- **Disassembly of Motor Unit & Motor P.C.B.**
- **Disassembly of CD Block & CD Lid**
- **Disassembly of Speaker**

Below shown is part no. of different screws types used:

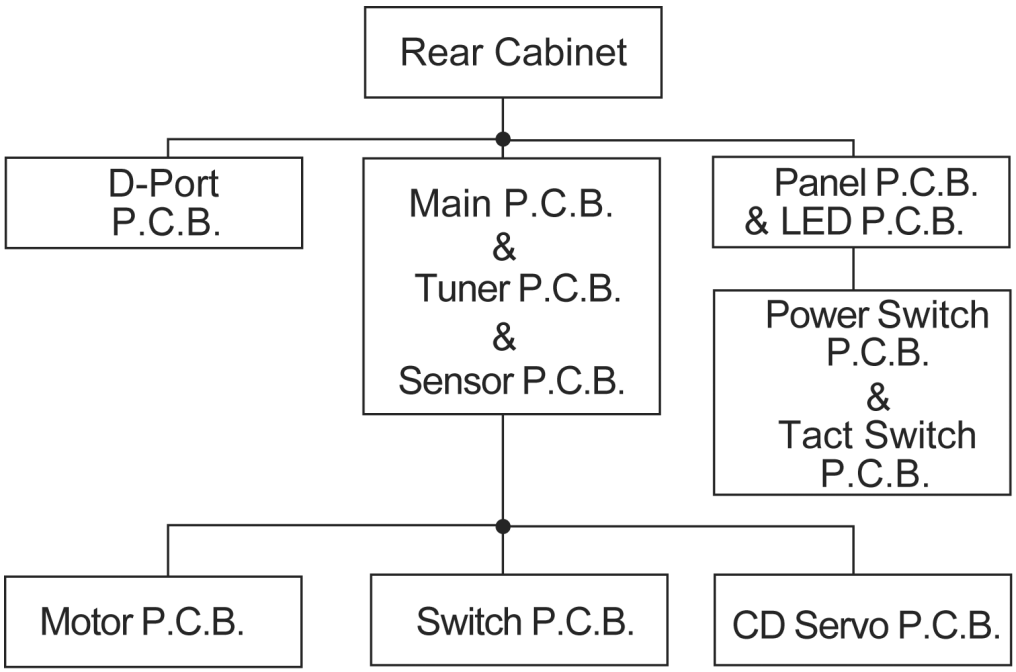
Screw Type	Part No.
ⓐ	XTV3+12GFJK
ⓑ	RHD26046-L
ⓒ	XVN26+C6FJ
ⓓ	XTV3+12GFJ-M
ⓔ	XTN2+6GFJ
ⓕ	XTV3+6FFJ

9.2. Disassembly flow chart

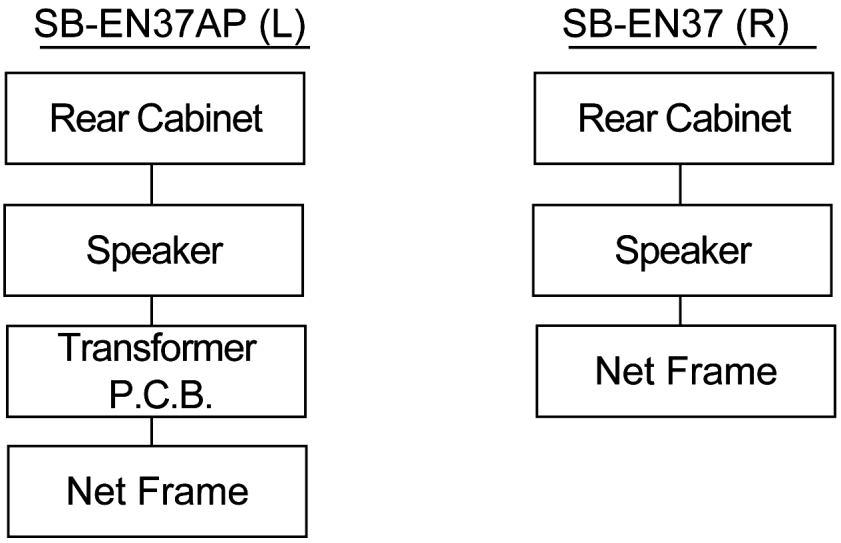
The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart as below.

9.2.1. For Main unit

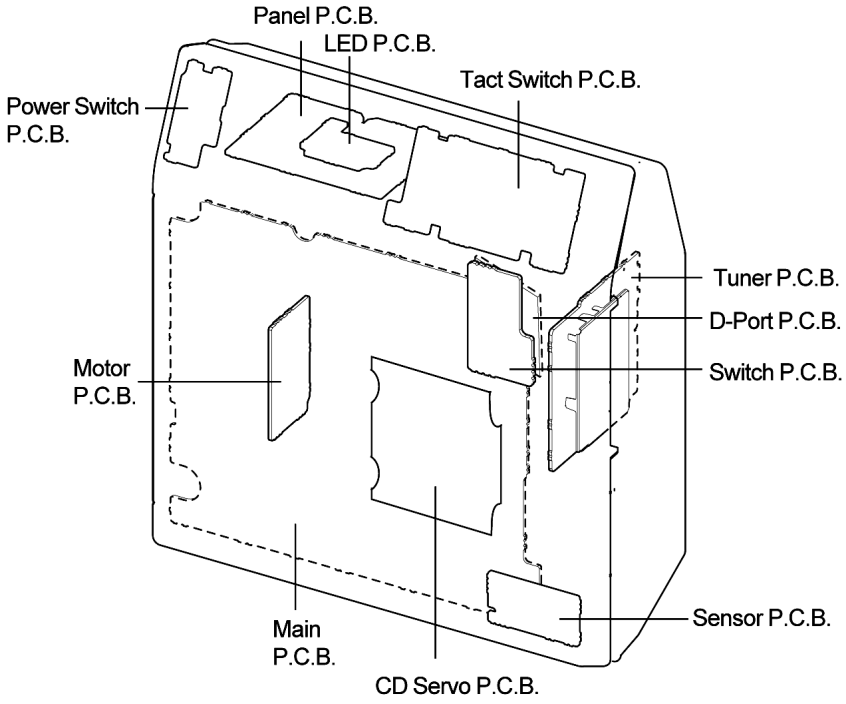


9.2.2. For Speaker unit

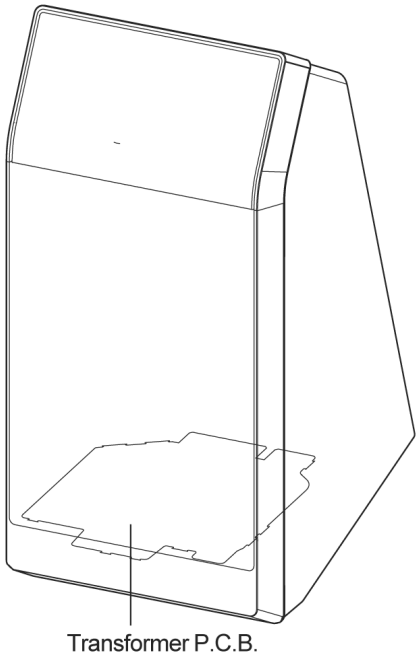


9.3. Main Components & P.C.B. Locations

9.3.1. Main Parts Locations

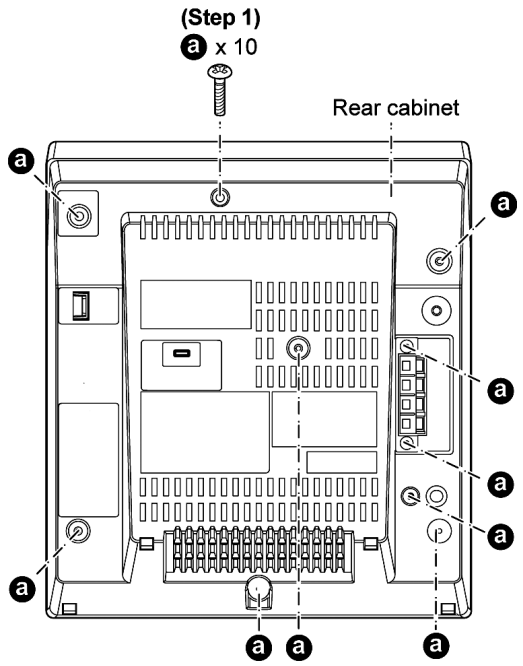


9.3.2. Speaker Unit Parts Location (For SB-EN37A only)



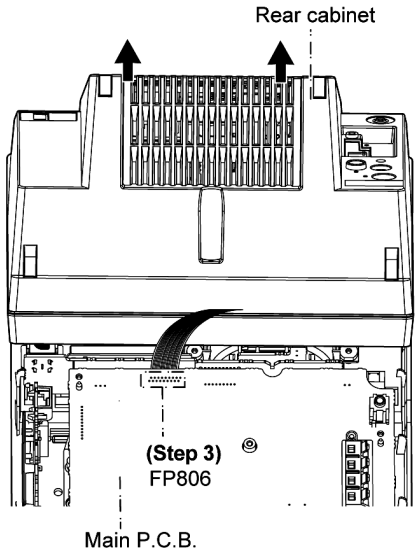
9.4. Disassembly of rear cabinet

Step 1 Remove 10 screws.



Step 2 Lift up the rear cabinet.

Step 3 Detach cable (FP806) on Main P.C.B. and remove the rear cabinet as arrow shown.

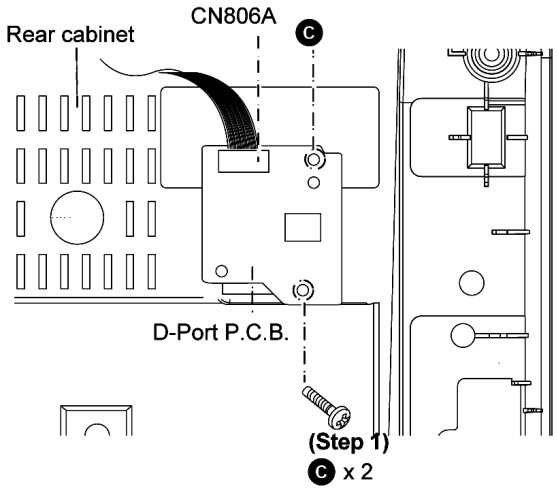


9.5. Disassembly of D-Port P.C.B.

・Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet

Step 1 Remove 2 screws.

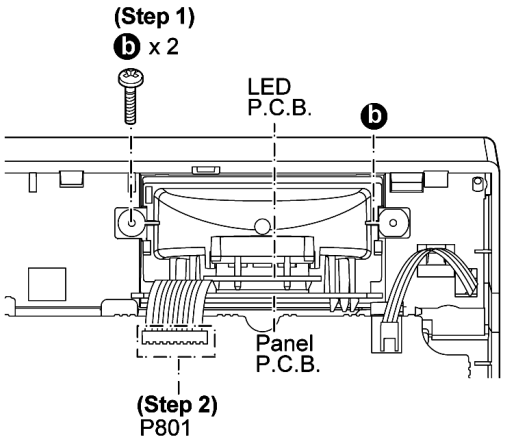
Step 2 Remove D-Port P.C.B..



9.6. Disassembly of Panel P.C.B. & LED P.C.B.

・Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet

Step 1 Remove 2 screws on the LCD Holder unit.

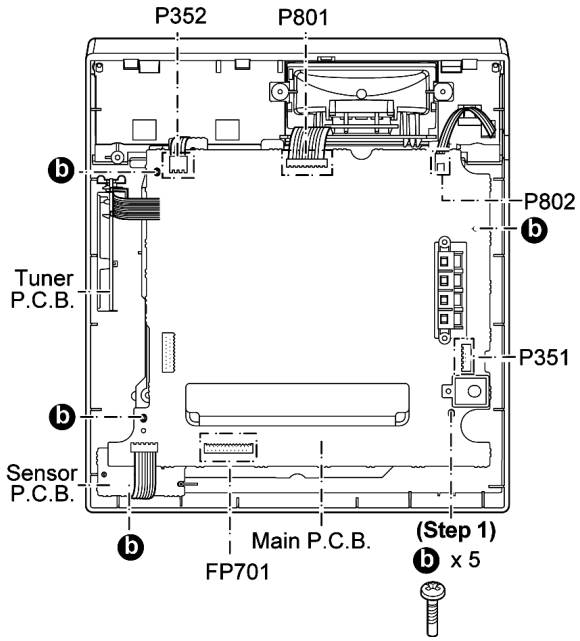


Step 2 Detach cable (P801).

9.7. Disassembly of Main P.C.B., Sensor P.C.B. & Tuner P.C.B.

・Follow the (Step 1) - (Step 2) of Item 9.4 - Disassembly of rear cabinet

Step 1 Remove 5 screws.



Step 2 Detach cables (P352, P351 ,FP701 ,P801 & P802) on Main P.C.B. .

Step 3 Lift up the Main P.C.B. Sensor P.C.B. and Tuner P.C.B.

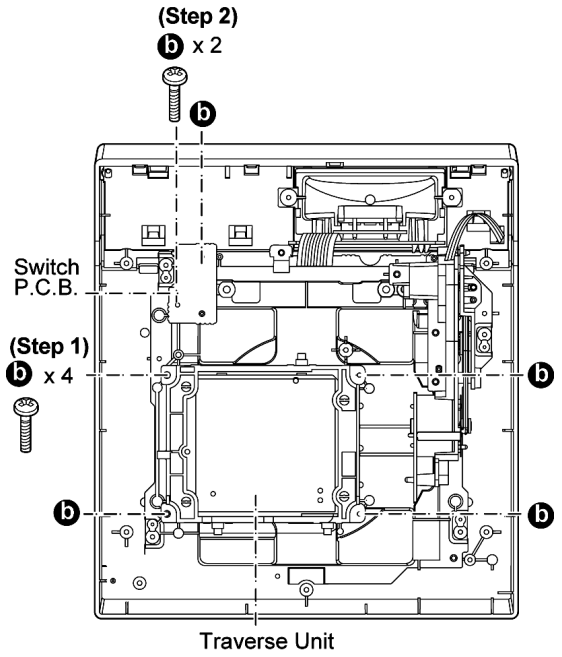
9.8. Disassembly of Switch P.C.B. & Traverse Unit

・Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet

・Follow the (Step 1) - (Step 3) of Item 9.7 - Disassembly of Main P.C.B., Sensor P.C.B. & Tuner P.C.B.

Step 1 Remove 4 screws.

Step 2 Remove 2 screws on Switch P.C.B..

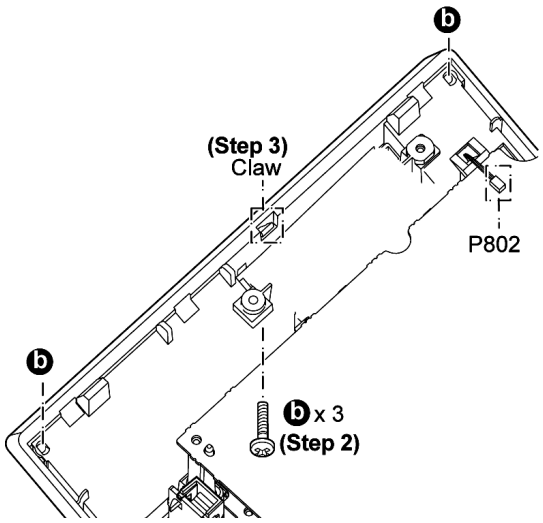


9.9. Disassembly of Power Switch P.C.B. & Tact Switch P.C.B.

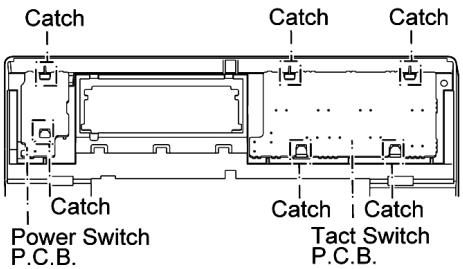
- Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet
- Follow the (Step 1) - (Step 2) of Item 9.6 - Disassembly of Panel P.C.B. & LED P.C.B.

Step 1 Detach cable (P802) on Main P.C.B.

Step 2 Remove 3 screws.

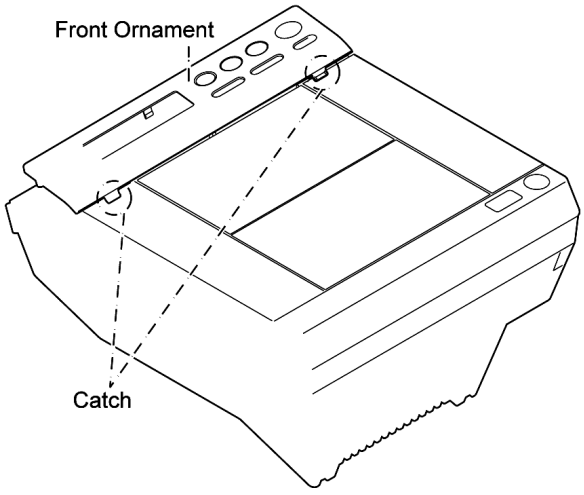


Step 3 Release 1 claw to remove front ornament.



Step 4 Release 6 catches to remove Power P.C.B. & Tact Switch P.C.B..

- **Assemble of Front Ornament into slot.**

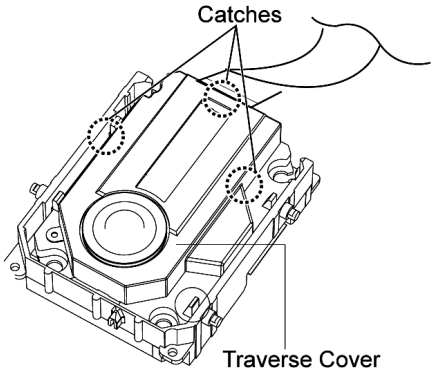


Ensure front ornament fully insert to front cabinet.

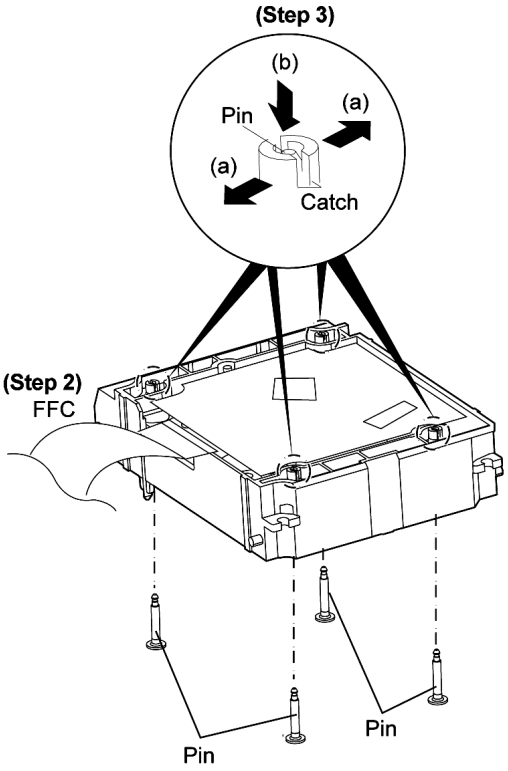
9.10. Replacement of Traverse Cover

- Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet
- Follow the (Step 1) - (Step 2) of Item 9.7 - Disassembly of Main P.C.B. , Sensor P.C.B. & Tuner P.C.B.
- Follow the (Step 1) of Item 9.8 - Disassembly of Switch P.C.B. & Traverse Unit

Step 1 Release 3 catches and remove the Traverse Cover.

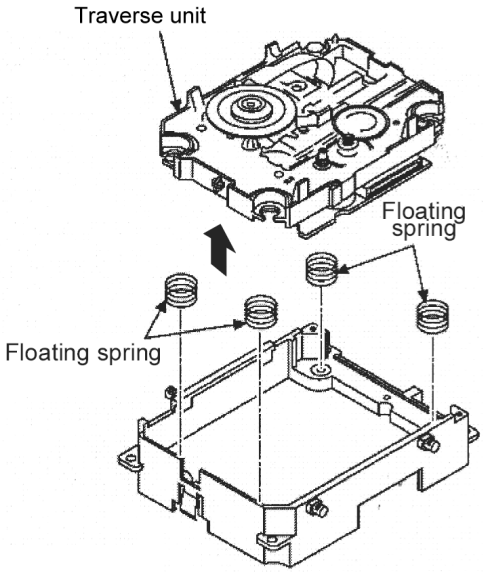


Step 2 Pull out FFC.



Step 3 Widening the catch, push the fixed pin in. (a) fi (b)

Step 4 Lift up the traverse unit to remove it.



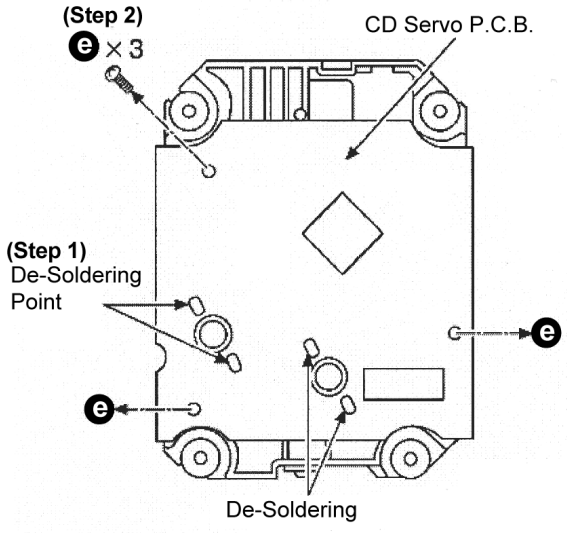
Caution:

Keep the floating springs (x 4) in safe place & avoid losing them.

9.11. Disassembly of CD Servo P.C.B.

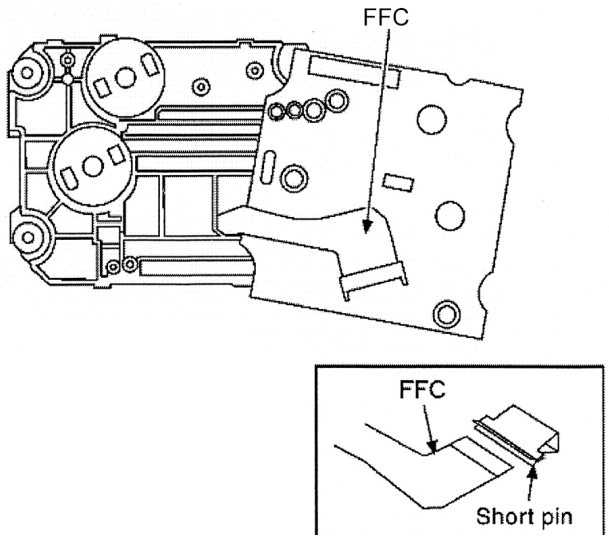
- Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet
- Follow the (Step 1) - (Step 2) of Item 9.7 - Disassembly of Main P.C.B. , Sensor P.C.B. & Tuner P.C.B.
- Follow the (Step 1) of Item 9.8 - Disassembly of Switch P.C.B. & Traverse Unit
- Follow the (Step 1) - (Step 4) of Item 9.9 - Disassembly of Power Switch P.C.B. & Tact Switch P.C.B.

Step 1 Desolder the terminal.



Step 2 Remove 3 screws.

Step 3 Flip the CD Servo P.C.B. over to one side.



Step 4 Detach FFC out from the connector.

Step 5 Attach a short pin to the unit.

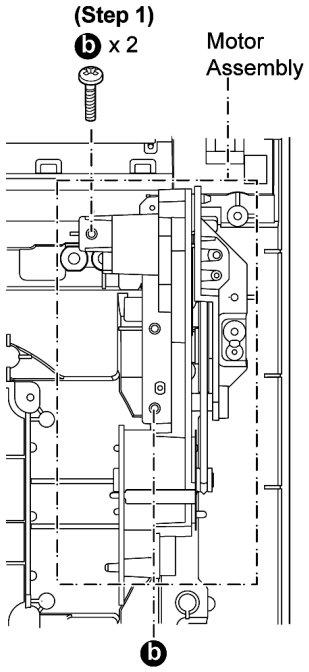
Caution:

Insert a short pin into FFC of the optical pickup. [See “Handling Precautions for traverse unit”].

9.12. Disassembly of Motor Unit & Motor P.C.B.

- Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet
- Follow the (Step 1) - (Step 2) of Item 9.7 - Disassembly of Main P.C.B. , Sensor P.C.B. & Tuner P.C.B.

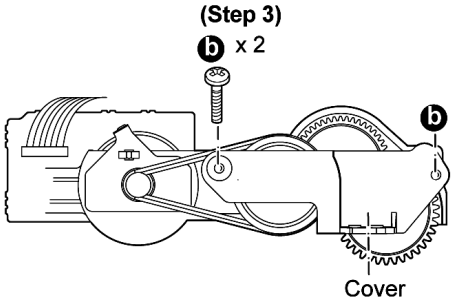
Step 1 Remove 2 screws.



- Disassembly of motor assembly (gears & belt)

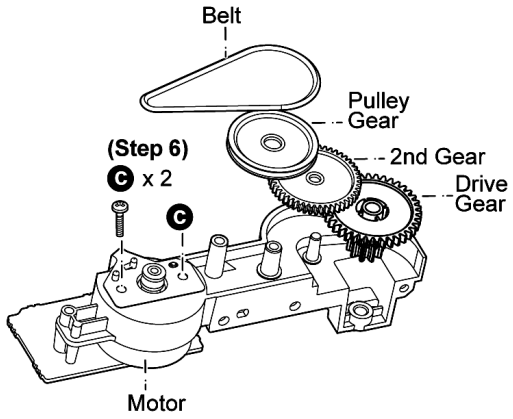
Step 2 Remove motor assembly.

Step 3 Remove 2 screws.



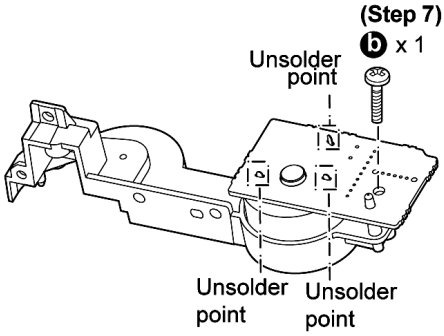
Step 4 Remove the belt.

Step 5 Remove pulley gear, 2nd gear and drive gear.



Step 6 Remove 2 screws at motor unit.

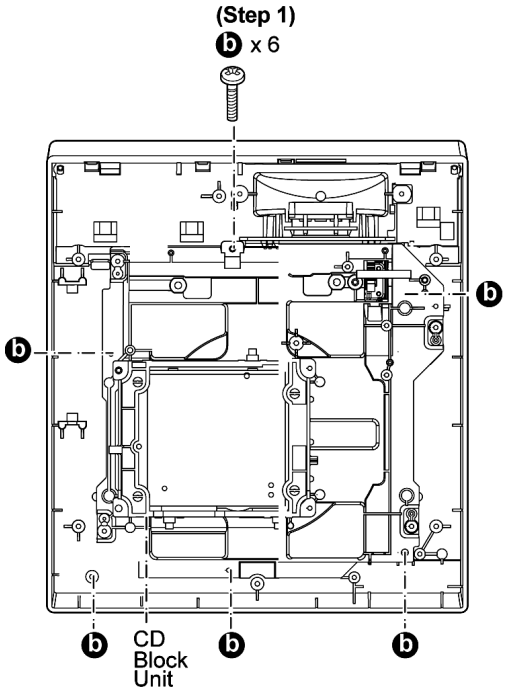
Step 7 Remove 1 screw and unsolder 3 points at gear base.



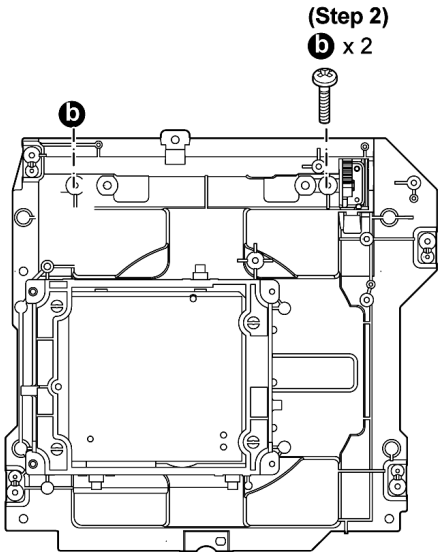
9.13. Disassembly of CD Block & CD Lid

- Follow the (Step 1) - (Step 3) of Item 9.4 - Disassembly of rear cabinet
- Follow the (Step 1) - (Step 2) of Item 9.7 - Disassembly of Main P.C.B. , Sensor P.C.B. & Tuner P.C.B.
- Follow the (Step 2) of Item 9.8 - Disassembly of CD Servo P.C.B. & Switch P.C.B.
- Follow the (Step 1) of Item 9.11 - Disassembly of Motor Unit & Motor P.C.B.

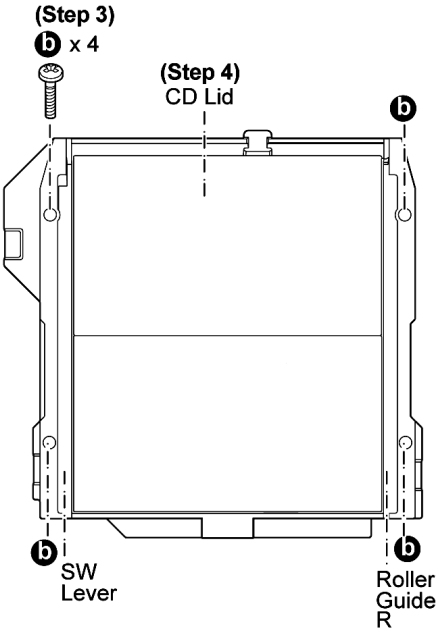
Step 1 Remove 6 screws to remove CD Block Unit.



Step 2 Remove 2 screws.



Step 3 Remove 4 screws, remove sw lever (left) and roller guide (R).

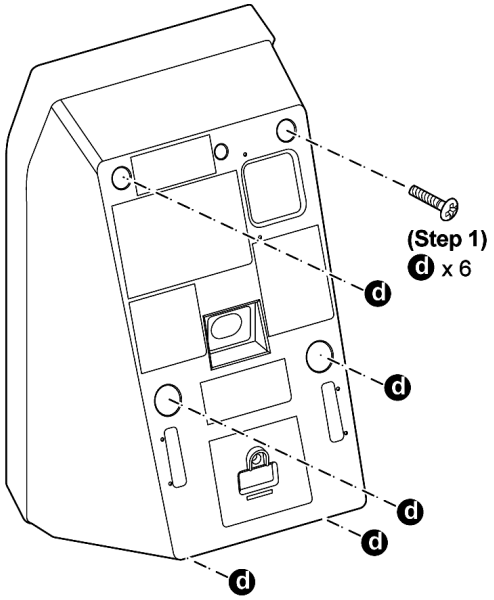


Step 4 Remove cd lid.

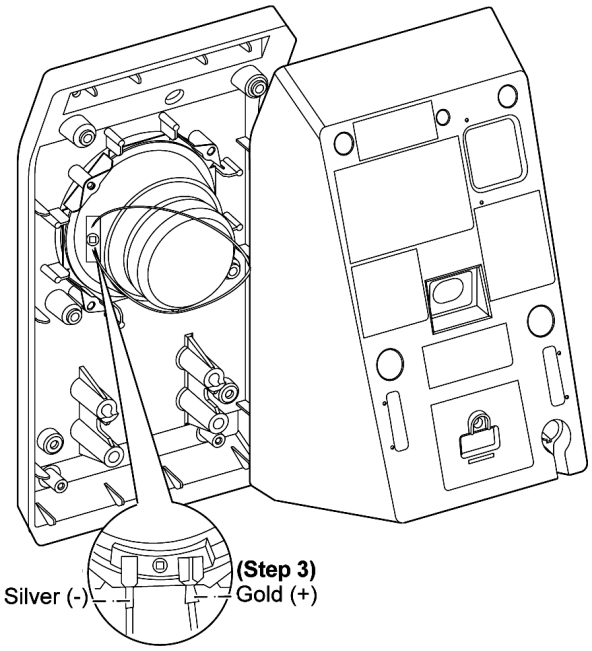
9.14. Disassembly of Speakers

9.14.1. Disassembly of the speaker (SB-EN37) - (R)

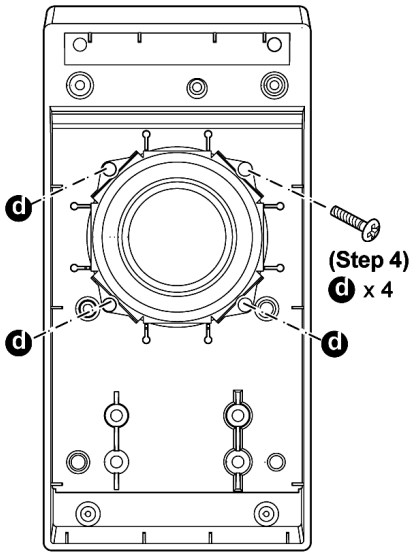
Step 1 Remove 6 screws.



Step 2 Remove the back cabinet ass'y..



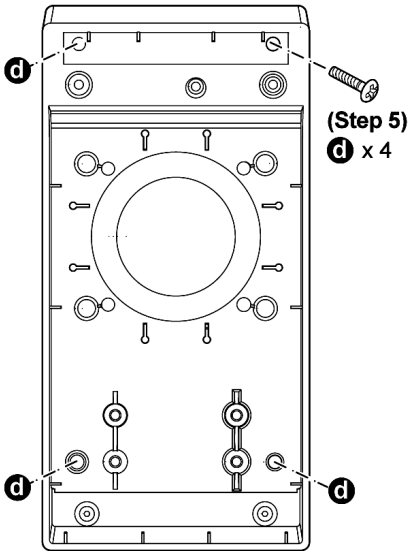
Step 3 Unsolder the lead wires, silver (-) and gold (+).

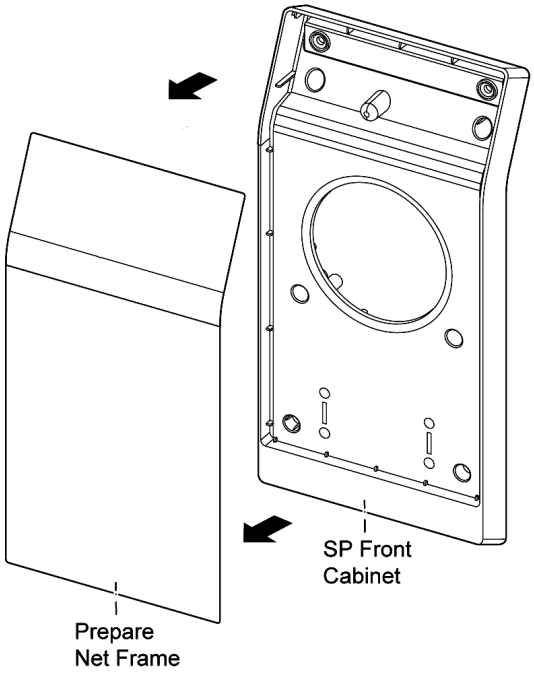


Step 4 Remove 4 screws.

· **Disassembly of net frame ass'y**

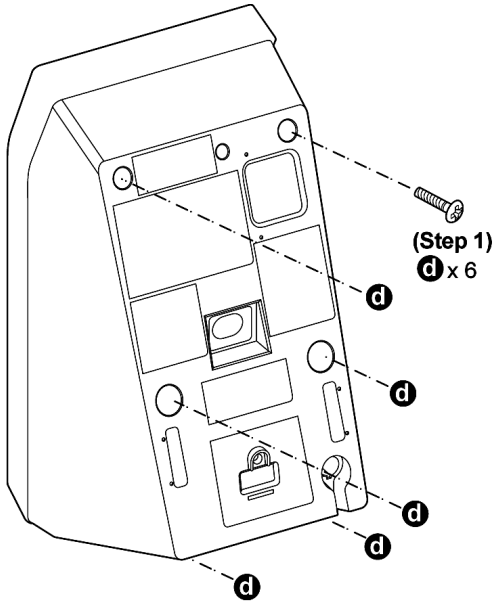
Step 5 Remove 4 screws.



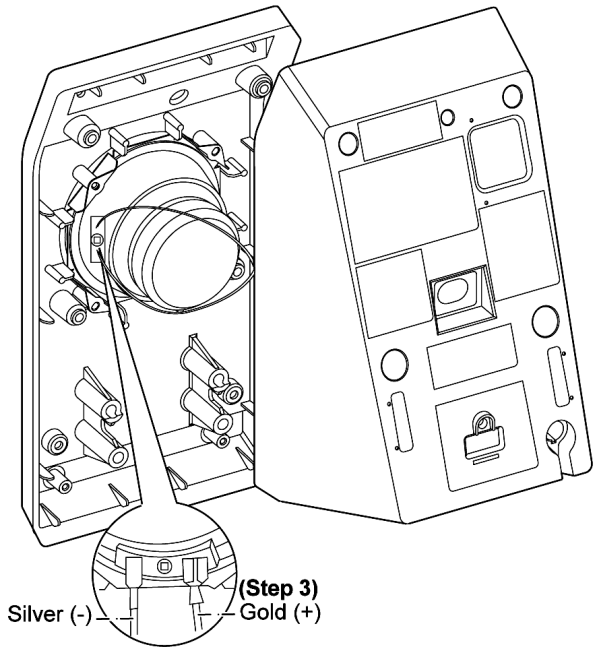


9.14.2. Disassembly of the rear cabinet (SB-EN37A) - (L)

Step 1 Remove 6 screws.

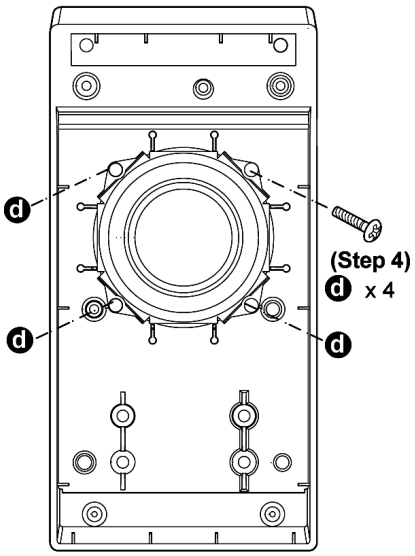


Step 2 Remove the back cabinet ass'y..



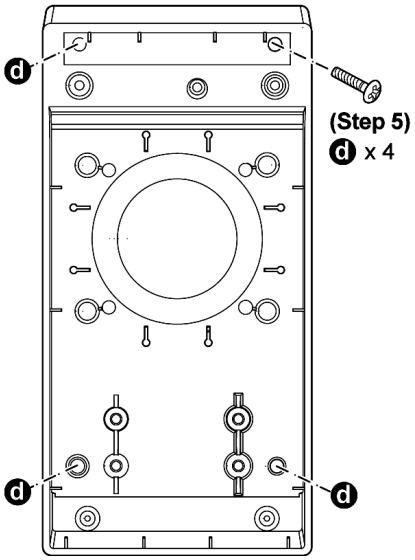
Step 3 Unsolder the lead wires.

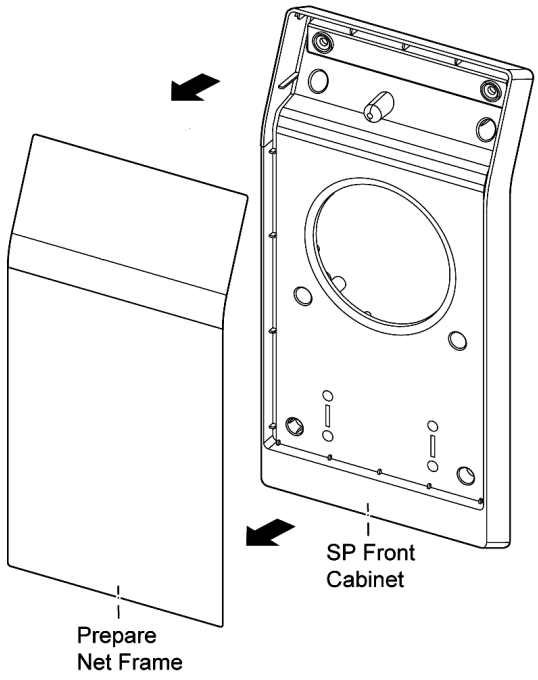
Step 4 Remove 4 screws.



· **Disassembly of net frame ass'y**

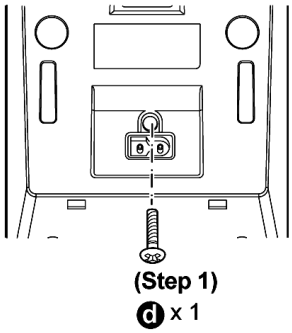
Step 5 Remove 4 screws.





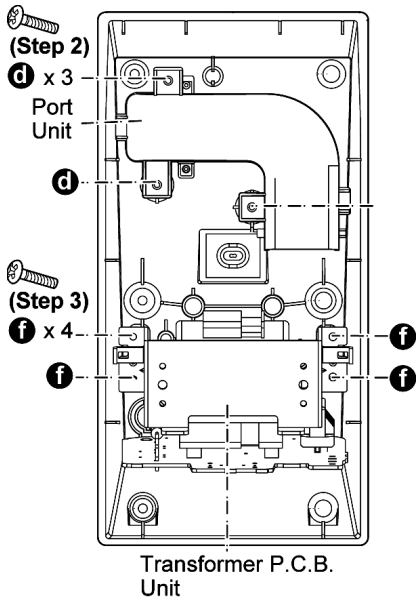
· **Removal of Transformer P.C.B.**

Step 1 Remove 1 screw on back cabinet assy.

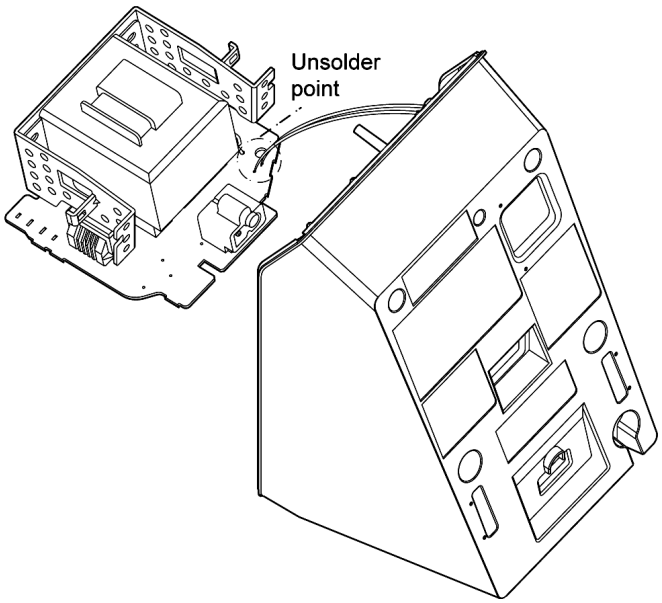


Step 2 Remove 3 screws to remove the port unit.

Step 3 Remove 4 screws on Transformer P.C.B. unit.



Step 4 Unsolder wire and remove Transformer P.C.B..



10 Service Fixture and Tools

Service Tools	
Extension FFC	
(A) CD Servo P.C.B. - Main P.C.B.	REEX0485 (14 Pins)

11 Service Positions

General procedures:

Connect the DC in cord cable from (SB-EN37A) to main set, connect AC power supply cord to speaker to on the set. Load in cd and switch off the set. Proceed to checking.

Note: For description of the disassembly procedures, see the Section 9.

11.1. Check and Repair of CD Servo P.C.B.

1. Remove rear cabinet

- Remove 10 screws
- Disconnect FP806

2. Disassembly of D-Port P.C.B.

- Remove 2 screws

3. Disassembly of Panel P.C.B. & LCD P.C.B.

- Remove 2 screws

4. Disassembly of Main P.C.B., Sensor P.C.B. & Tuner P.C.B.

- Remove 5 screws
- Detach cable P352, P802, P351 & FP701

5. Disassembly of Switch P.C.B.

- Remove 2 screws

6. Disassembly of Power Switch P.C.B. & Tact Switch P.C.B.

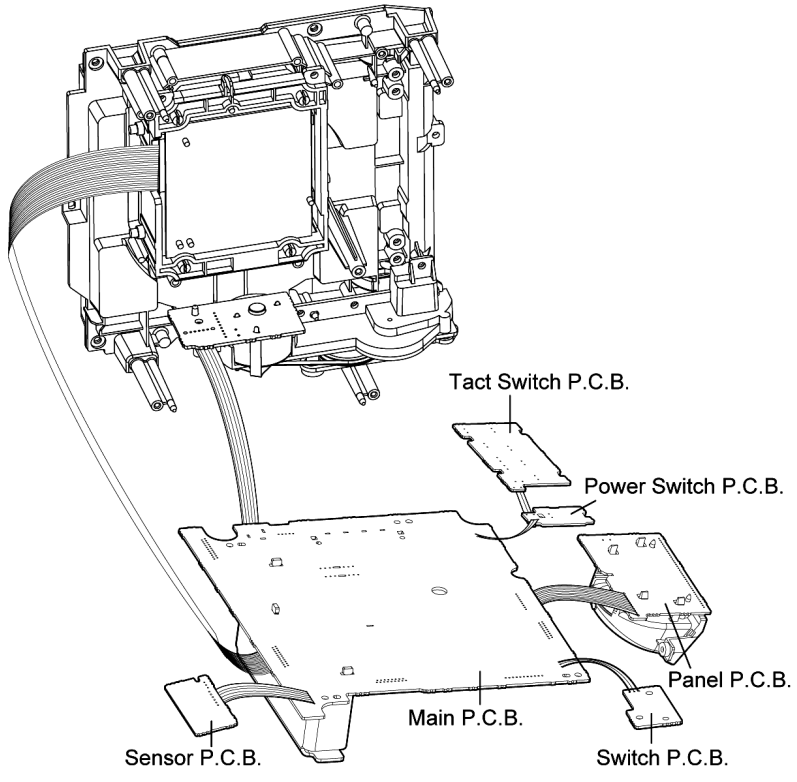
- Remove 3 screws
- Remove 1 claw
- Remove 6 catches

7. Disassembly of CD Block

- Remove 6 screws

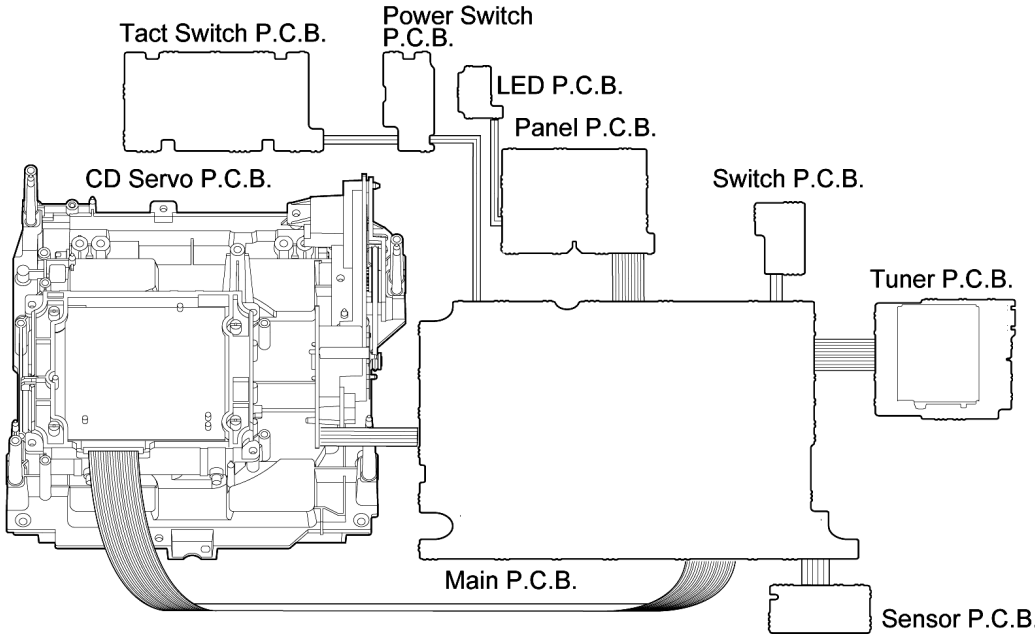
8. Connect D-Port P.C.B., Switch P.C.B., Power P.C.B., CD Servo P.C.B. & Motor P.C.B.

- D-Port P.C.B. - CN806 to FP806
- Switch P.C.B. - JW352 to P352
- Power Switch P.C.B. - JW803 to P802
- Motor P.C.B. - JW351 to P351
- CD Servo P.C.B. - CN7002 to FP701



11.2. Check and repair of Main P.C.B., Sensor P.C.B., Tuner P.C.B., Motor P.C.B., D-Port P.C.B., Panel P.C.B., LED P.C.B., Power Switch P.C.B., Tact Switch P.C.B. & Switch P.C.B.

1. **Remove rear cabinet**
   - Remove 10 screws
   - Disconnect FP806
2. **Disassembly of D-Port P.C.B.**
   - Remove 2 screws
3. **Disassembly of Panel P.C.B. & LED P.C.B.**
   - Remove 2 screws
4. **Disassembly of Main P.C.B., Sensor P.C.B. & Tuner P.C.B.**
   - Remove 5 screws
   - Detach cable P352, P802, P351 & FP701
5. **Disassembly of Switch P.C.B.**
   - Remove 2 screws
6. **Disassembly of Power Switch P.C.B. & Tact Switch P.C.B.**
   - Remove 3 screws
   - Remove 1 claw
   - Remove 6 catches
7. **Disassembly of CD Block**
   - Remove 6 screws
8. **Connect D-Port P.C.B., Switch P.C.B., Power P.C.B., CD Servo P.C.B. & Motor P.C.B.**
   - D-Port P.C.B. - CN806 to FP806
   - Switch P.C.B. - JW352 to P352
   - Power Switch P.C.B. - JW803 to P802
   - Motor P.C.B. - JW351 to P351
   - CD Servo P.C.B. - CN7002 to FP701



12 Voltage and Waveform Chart

Note:

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

12.1. Main P.C.B.

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 PLAY	4.3	4.5	4.3	4.5	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	0	0.1	0	8.5	3.4
STANDBY	4.3	4.5	4.3	4.5	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	1	0.1	1	8.5	3.4
Ref No.	IC301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3								
STANDBY	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3								
Ref No.	IC601															IC602				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14		1	2	3	4	5
CD PLAY	1.5	7.4	-	0	-	1.4	1.4	7.2	10.1	-	7.1	14.4	0	0		3.1	14.4	0	5.4	1.3
STANDBY	1.5	7.5	-	0	-	1.4	1.4	7.4	10.1	-	7.1	14.7	0	10		3.1	14.4	0	5.4	1.3
Ref No.	IC801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.2	3.2	0	0	0.2	0.1	3.2	0	3.3	0	0	1.6	1.5	0	1.4	1.7	3.2	1.8	3.2	3.1
STANDBY	3.2	3.2	0	0	0.1	0.1	3.2	3.2	3.3	0	0	1.6	1.5	1	1.4	1.7	3.2	1.8	3.2	3.1
Ref No.	IC801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	3.2	0	0	3.2	1.4	1.4	1.4	0	0	3.1	2.8	3.1	0.1	0	0.1	1.8	3.3	0	0
STANDBY	0	3.2	0	0	3.2	1.4	1.4	1.4	0	0	3.2	0	3.2	0.1	0	0.1	1.8	3.3	0	0
Ref No.	IC801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	3.2	3.2	3.2	3.2	0	0	0	0	0	1.4	0	0	0	3.3	0	0	0	0	0
STANDBY	0	3.2	3.3	3.2	0.1	0	0	0	0	0	1.4	0	0	0	3.3	0	0	0	0	0
Ref No.	IC801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	3.2	0.1	3.2	0	0	0	0	0	0	0	3.2	3.3	0	0	0	0	0	0	0
STANDBY	0	3.2	0.1	3.2	0	0	0	0	0	0	0	3.2	3.3	0	0	0	0	0	0	0
Ref No.	IC801																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	1.5	0	0	0	0	0	0	0	3.2	0	0	3.2	1.5	1.5	2.3	2.4	3.3	1.4	1.4	3.2
STANDBY	1.4	0	0	0	0	0	0	0	3.2	0	0	3.2	1.5	1.5	2.3	2.4	3.3	1.5	1.5	3.2
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	4.6	4.6	4.6	0	4.6	4.6	4.6	9.2												
STANDBY	0	0	0	0	0	0	0	0												
Ref No.	IC3002																			
MODE	1	2	3	4	5															
CD PLAY	0	0	0	3.3	3.3															
STANDBY	0	0	0	4.4	0															
Ref No.	IC3003																			
MODE	1	2	3	4	5															
CD PLAY	4.9	0	3.3	0	3.3															
STANDBY	4.9	0	3.3	0	3.3															
Ref No.	Q301				Q401				Q501				Q601				Q603			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	3.3	3.3	2.6		0	0	0		0	0	0		0	0	0.7		6.6	3.4	6	
STANDBY	3.3	3.3	2.6		0	0	0.7		0	0	0.7		0	0	0.7		6.7	3.4	6.1	
Ref No.	Q604				Q605				Q606				Q607				Q608			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	2.6	6	3.2		14.3	9.1	13.6		14.4	13.5	14.3		8.3	13.6	8.9		14.5	14.4	13.7	
STANDBY	2.6	6.1	3.2		14.7	9	14		14.7	14	14.7		8.3	14	8.9		14.8	14.7	14	
Ref No.	Q611				Q612				Q613				Q615				Q617			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	7.4	5.7	6.8		2.8	6.8	3.3		4	4	3.4		4.1	14.5	4.7		5.7	3.5	5.7	
STANDBY	7.4	5.7	6.9		2.8	6.9	3.3		4.1	4	3.4		4.1	14.7	4.1		5.7	3.5	5.7	
Ref No.	Q622				Q623				Q801				Q802							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	7.4	5.2	6.8		4.5	6.8	5		0	2.5	0		0	2.5	0					
STANDBY	7.4	5.2	6.8		4.5	6.8	5		0	2.5	0		0	2.4	0					
Ref No.	QR609				QR614				QR618				QR619				QR621			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0.3	2.7		0	0	7.6		0	0.7	0		0	5.7	0		5.7	3.4	5.7	
STANDBY	0	0.3	2.7		0	0	7.6		0	0.7	0		0	5.7	0		5.7	3.4	5.7	
Ref No.	QR803				QR804				Q3001				Q3002				QR3001			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.2	0		3.3	0	3.2		3.2	0	3.3		0	3.2	0		0	0	3.2	
STANDBY	0	3.2	0		3.3	3.2	0		3.3	0	3.3		0	3.2	0		0	0	3.2	
Ref No.	QR3002				QR3003				QR3004											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	0	3.2		0	0	3.2		0	0	3.2									
STANDBY	0	0	3.2		0	0	3.2		0	0	3.2									

SA-EN37 MAIN P.C.B.

12.2. CD Servo P.C.B.

Ref No.	IC7001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0	1.6	1.6	1.8	0	3.2	1.5	3.2	3.2	0	1.6	1.6	0	0	1.9	1.9	0	1.7	1.7
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	2.4	1.7	1.9	1	0	3.2	1.2	0	1.2	1.6	1.6	0.9	1.4	1.5	1.5	0	3.2	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.2						3	3	3	2.9	0	3.2	0	1.6	0	1.6	3.2	0	3.2	1.6
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	1.6	1.6	0	0	0	0	0	0	0	0	0	0	3.2	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.6	0	1.5	0	0	0	0	0	0	0	1.7	3.2	3.2	3.2	2.8	3.8	3.2	3.2	0	7.1
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7002																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	0	0	0	0	7.1	1.6	1.6	1.6	0	0										
STANDBY	0	0	0	0	0	0	0	0	0	0										
Ref No.	Q7601																			
MODE	E	C	B																	
CD PLAY	3.1	2	2.4																	
STANDBY	0	0.1	0																	

SA-EN37 CD SERVO P.C.B.

12.3. Motor P.C.B.

Ref No.	IC351								
MODE	1	2	3	4	5	6	7	8	9
CD PLAY	0	0	0	-	0	5.7	2	0	1.6
STANDBY	0	0	0	-	1	5.7	2	0	2

SA-EN37 MOTOR P.C.B

12.4. Panel P.C.B.

Ref No.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
STANDBY	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Ref No.	IC1001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.3	3.3
STANDBY	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.3	3.3
Ref No.	IC1001																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	2.1	1.2	0	2.5	3.2	0.1	0.1	0.1												
STANDBY	2.1	1.1	0	2.5	3.2	0.1	0.1	0.2												

SA-EN37 PANEL P.C.B.

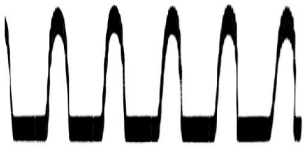
12.5. Tuner P.C.B.

Ref No.	IC1																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.2	2.2	2.2	0	5	5	2.2	4.7	2.2	3.2	3.8	0	2.3	0	0	3.2	3.2	0.1	1.1	0.8
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC1																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
CD PLAY	2.3	2.2	0.9	2	0.9	2	2	0.9	0	1.4	5	5	5	5	0	0				
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Ref No.	Q1				Q2															
MODE	E	C	B		E	C	B													
CD PLAY	0	1.4	0		1.6	0	0.9													
STANDBY	0	0	0		0.4	0	0													

SA-EN37 TUNER P.C.B.

12.6. Waveform Chart

WF No. IC301-21,22 (PLAY)



0.1Vp-p(5msec/div)

WF No. IC601-2,11 (PLAY)

0.1Vp-p(5msec/div)

WF No. IC601-6,7 (PLAY)

0.1Vp-p(5msec/div)

WF No. IC801-12 (PLAY)

3.6Vp-p(50nsec/div)

WF No. IC801-13 (PLAY)

2.1Vp-p(50nsec/div)

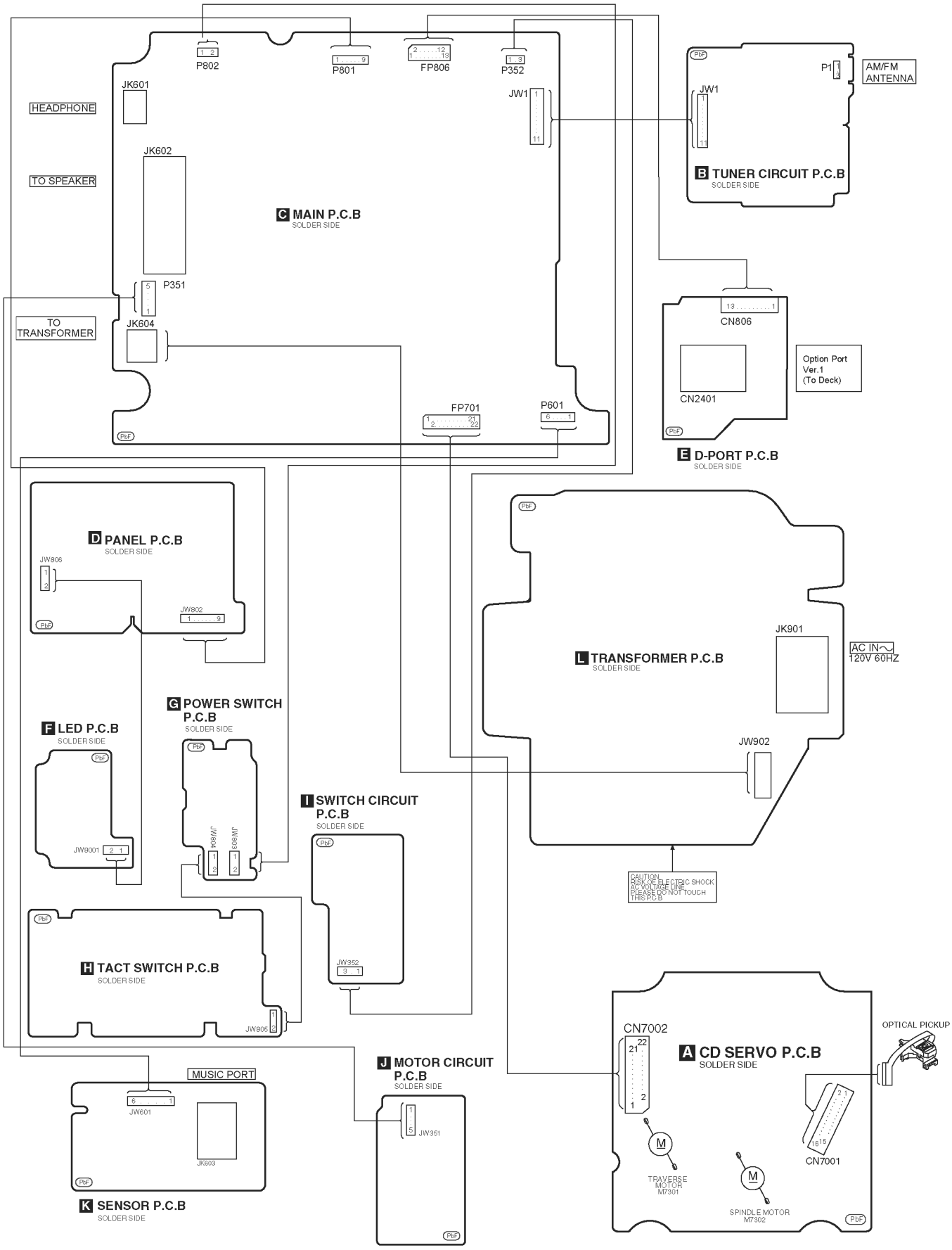
WF No. IC801-15 (PLAY)

3.8Vp-p(10usec/div)

WF No. IC801-16 (PLAY)

3.4Vp-p(10usec/div)

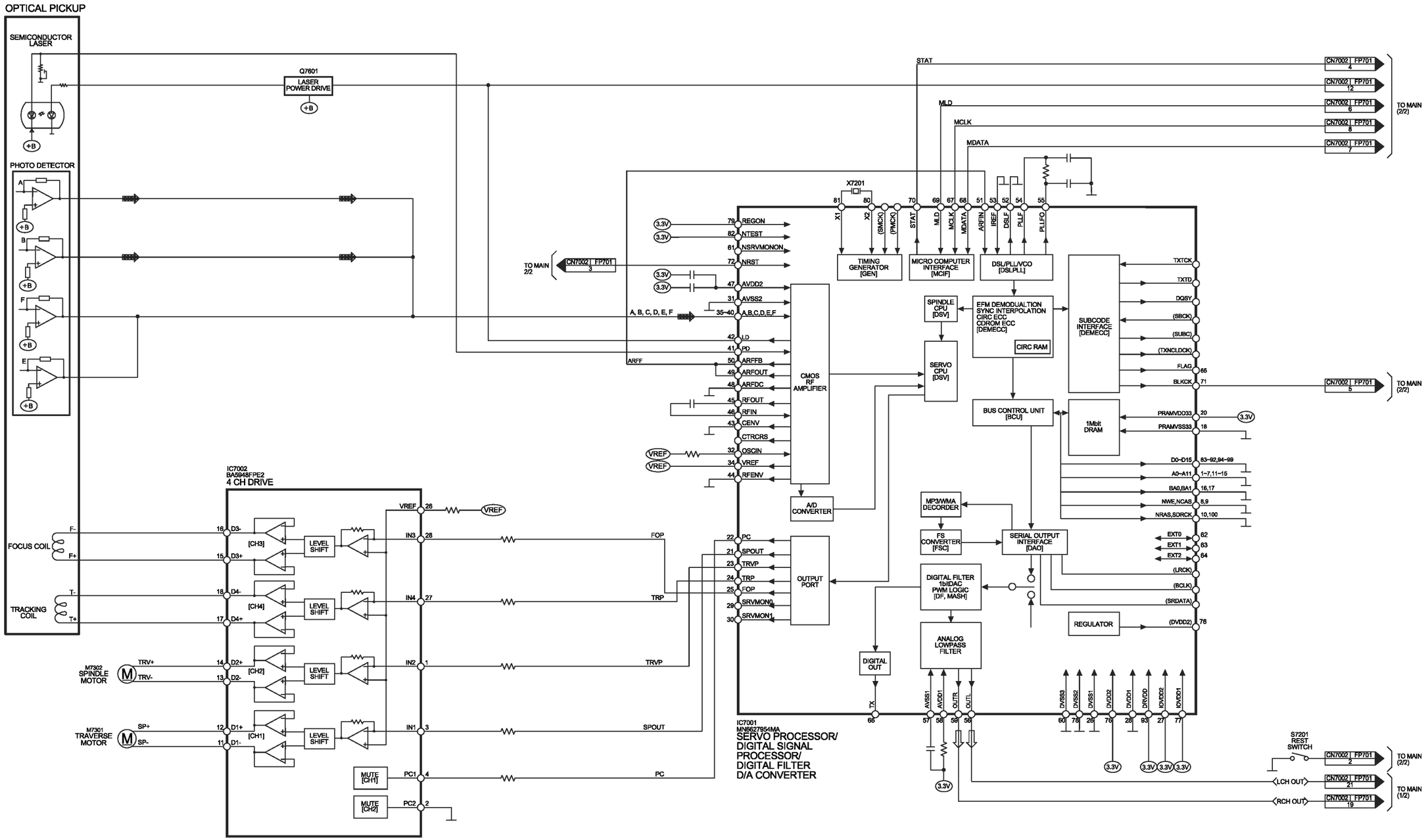
13 Wiring Connection Diagram



SC-EN37P

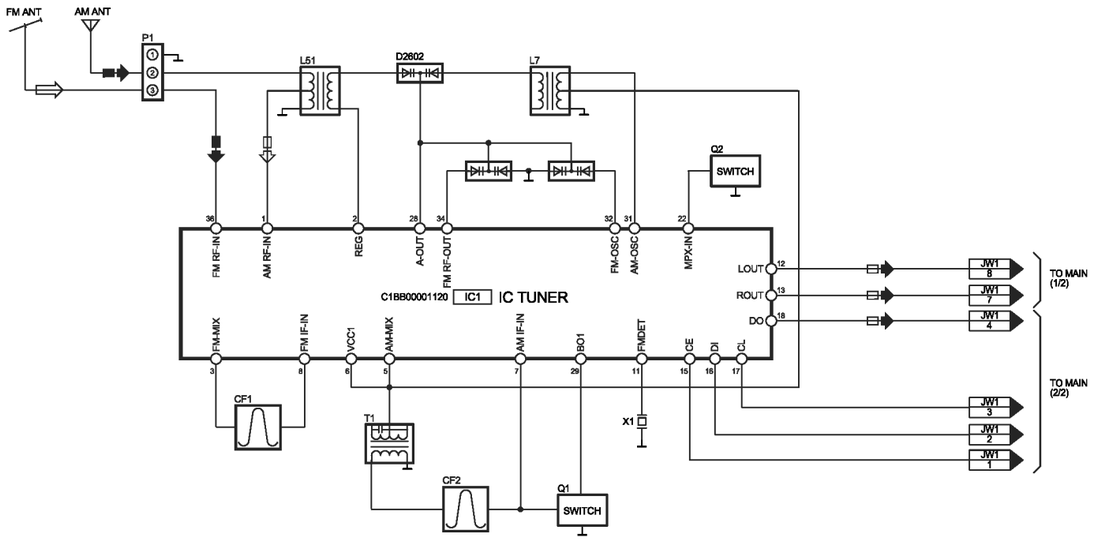
14 Block Diagram

14.1. CD Servo



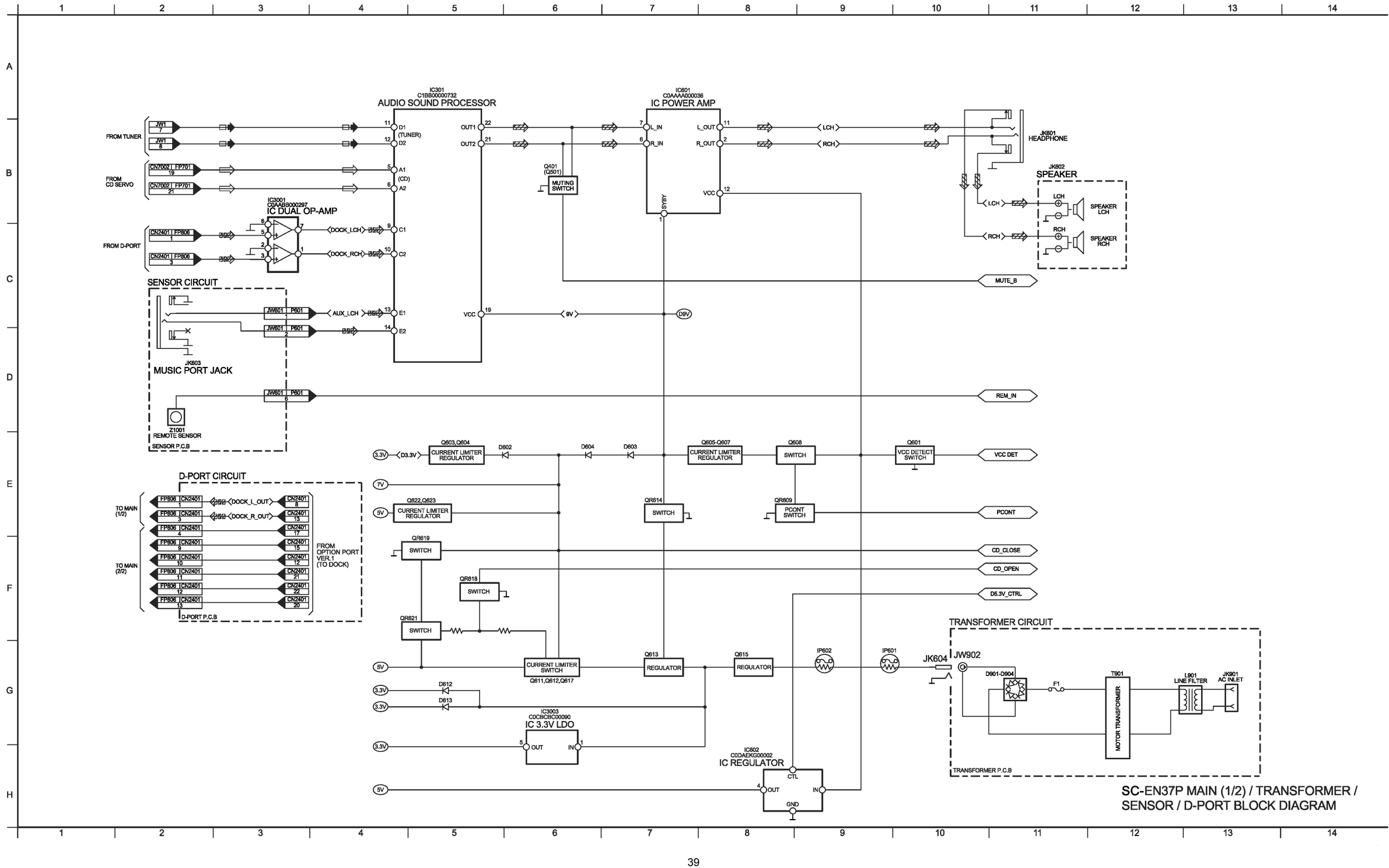
SC-EN37P CD SERVO BLOCK DIAGRAM

14.2. Tuner

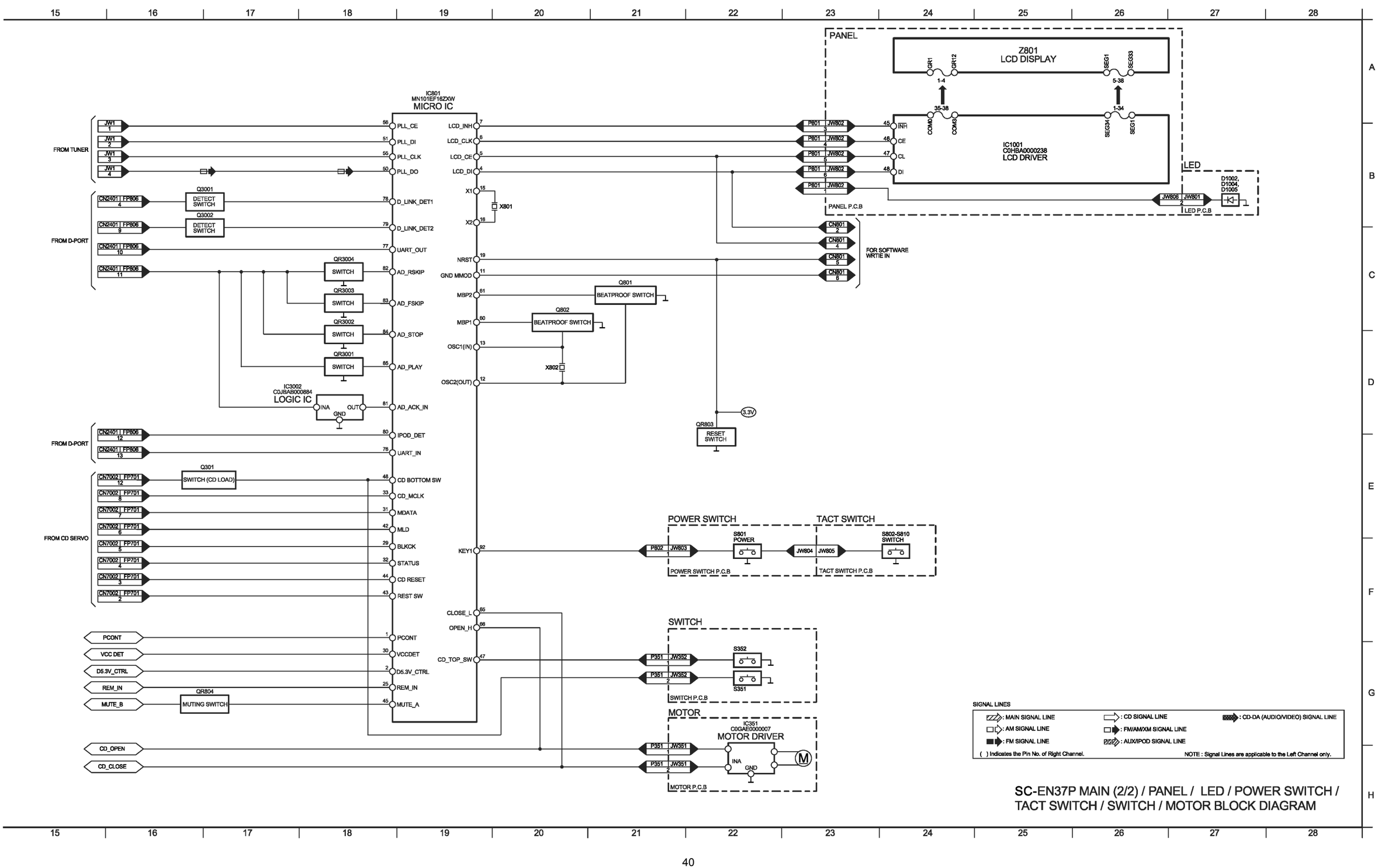


SC-EN37P TUNER BLOCK DIAGRAM

14.3. Main (1/2), Transformer, Sensor & D-Port



14.4. Main (2/2), Panel, LED, Power Switch, Tact Switch, Switch & Motor



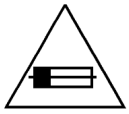
SC-EN37P MAIN (2/2) / PANEL / LED / POWER SWITCH / TACT SWITCH / SWITCH / MOTOR BLOCK DIAGRAM

15 Notes of Schematic Diagrams

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

S351 : CD TOP Switch
S352 : CD BOTTOM Switch
S801 : POWER Switch (**POWER** ⏻/⏽)
S802 : VOL - Switch (**- VOLUME +**)
S803 : VOL + Switch (**- VOLUME +**)
S804 : REV_SKIP Switch (⏮/∨)
S805 : FWD_SKIP Switch (∧/⏭)
S806 : TUNER/XM Switch
S807 : CD Switch (CD ▶/⏸)
S808 : MUSIC_PORT Switch (FM/AM/MUSIC PORT)
S809 : STOP Switch (■)
S810 : CD_OP/CL Switch (⏏ **OPEN/CLOSE**)
S7201 : REST Switch

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F901, 2A, 125V FUSE.



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

· **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.

· Capacitor values are in microfarad(μF) unless specified otherwise, F=Farad, pF=Pico-Farad

Resistance values are in ohm(Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

· **Voltage and Signal lines:**

 : +B Signal line

 : -B Signal line

 : CD-DA signal line

 : CD signal line

 : Main signal line

 : FM/AM signal line

 : AM signal line

 : FM signal line

 : AUX signal line

16 Schematic Diagram

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

16.1. (A) CD Servo Circuit

SCHEMATIC DIAGRAM - 1

⚠ OPTICAL PICKUP CIRCUIT (FOR REFERENCE ONLY)

A CD SERVO CIRCUIT

——— : + B SIGNAL LINE ⟹ : CD DA SIGNAL LINE ⇨ : CD SIGNAL LINE

LASER DIODE

CN7001 (VCC, F, E, LD, LD GND, GND, A, GND (GUARD), B, VREF, LPD, GND (GUARD), T-, T+, F-, F+)

Q7601 B1ADCF000001 LASER POWER DRIVE

IC7001 MN6627954MA SERVO PROCESSOR/ DIGITAL SIGNAL PROCESSOR/ DIGITAL FILTER D/A CONVERTER

IC7002 BA5948FPE2 4 CH DRIVE IC

CN7002 (22 AGND, 21 LCH OUT, 20 AGND, 19 RCH OUT, 18 DGND, 17 ST_IN, 16 ST_CLK, 15 ST_REQ, 14 3.3V, 13 DGND, 12 LD SW, 11 TX, 10 7.5V, 9 PGND, 8 MCLK, 7 MDATA, 6 MLD, 5 BLKCK, 4 STAT, 3 RST, 2 RESET_SW, 1 LOADING)

TO **C** MAIN CIRCUIT (FP701) IN SCHEMATIC DIAGRAM-3

TRAVERSE MOTOR

SPINDLE MOTOR

X7201 H2B169500005

S7201 REST SW

LB7262-LB7264 D0GBR00JA008

D7650 MAZ80560ML

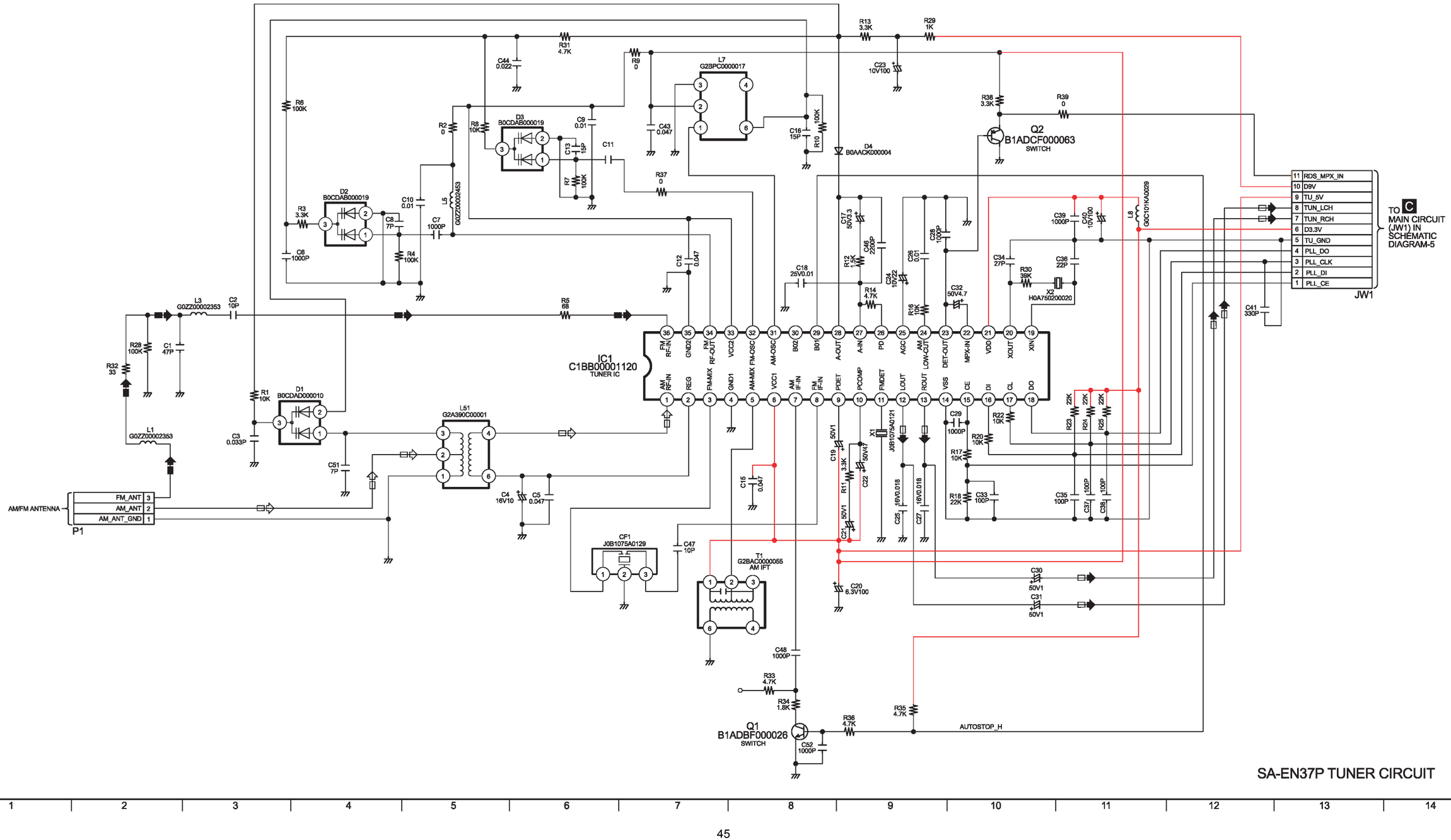
SA-EN37P CD SERVO CIRCUIT

16.2. (B) Tuner Circuit

SCHEMATIC DIAGRAM - 2

B TUNER CIRCUIT

:+B SIGNAL LINE :FM SIGNAL LINE :AM SIGNAL LINE :AM/FM SIGNAL LINE



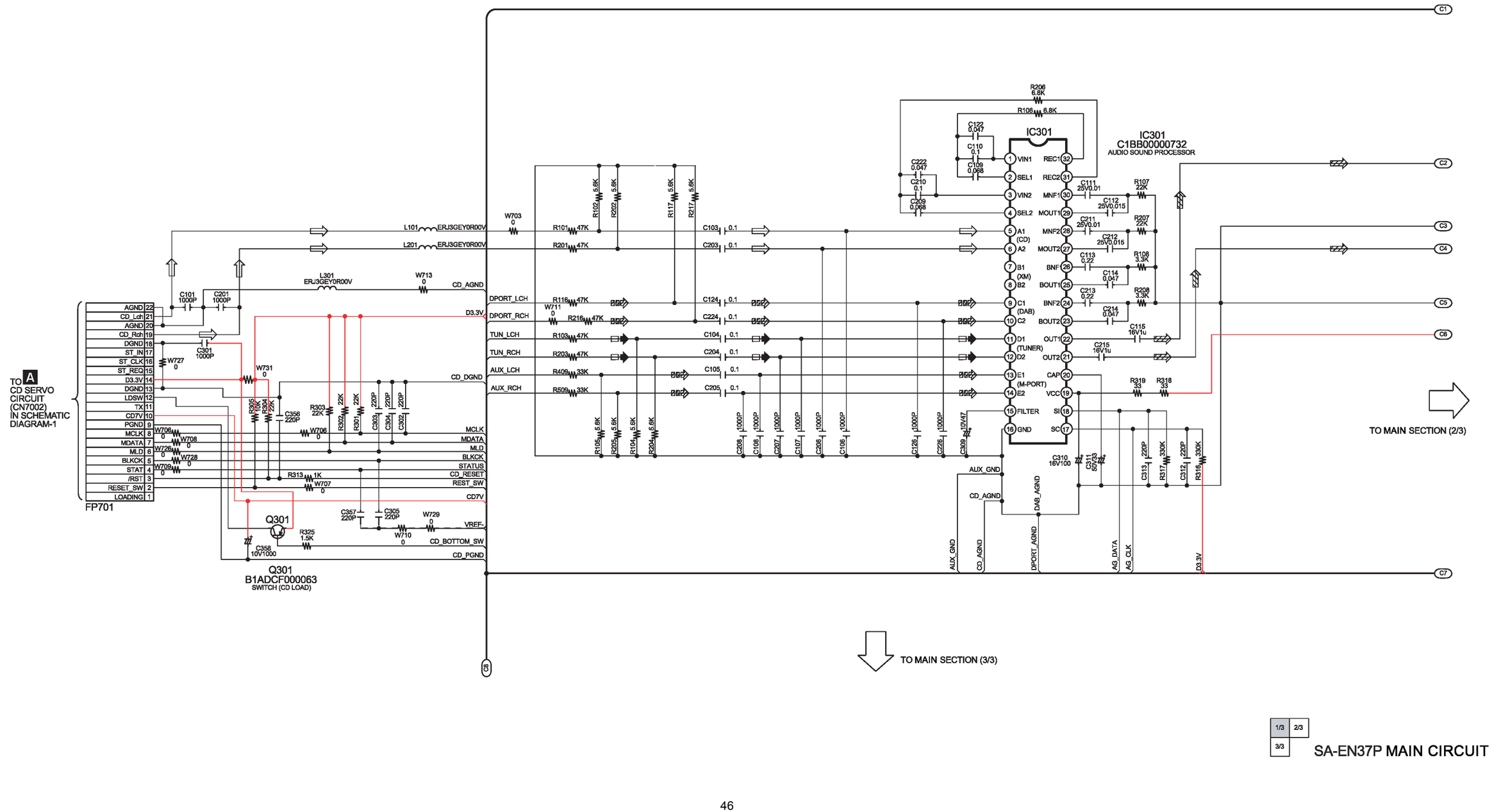
SA-EN37P TUNER CIRCUIT

16.3. (C) Main Circuit

SCHEMATIC DIAGRAM - 3

C MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : CD SIGNAL LINE :FM/AM/XM SIGNAL LINE : AUX/IPOD SIGNAL LINE : MAIN SIGNAL LINE



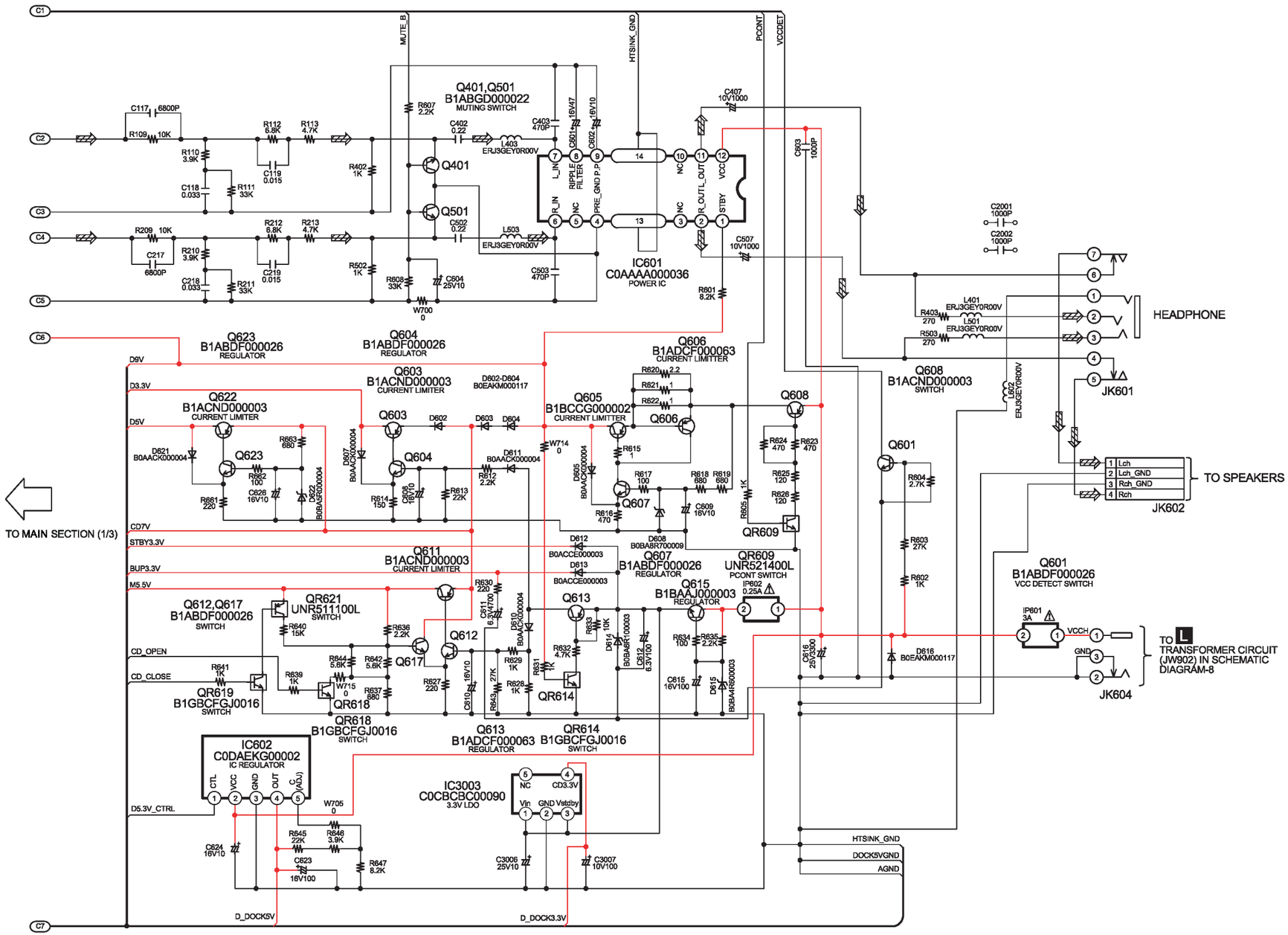
1/3 2/3 3/3

SA-EN37P MAIN CIRCUIT

SCHEMATIC DIAGRAM - 4

C MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

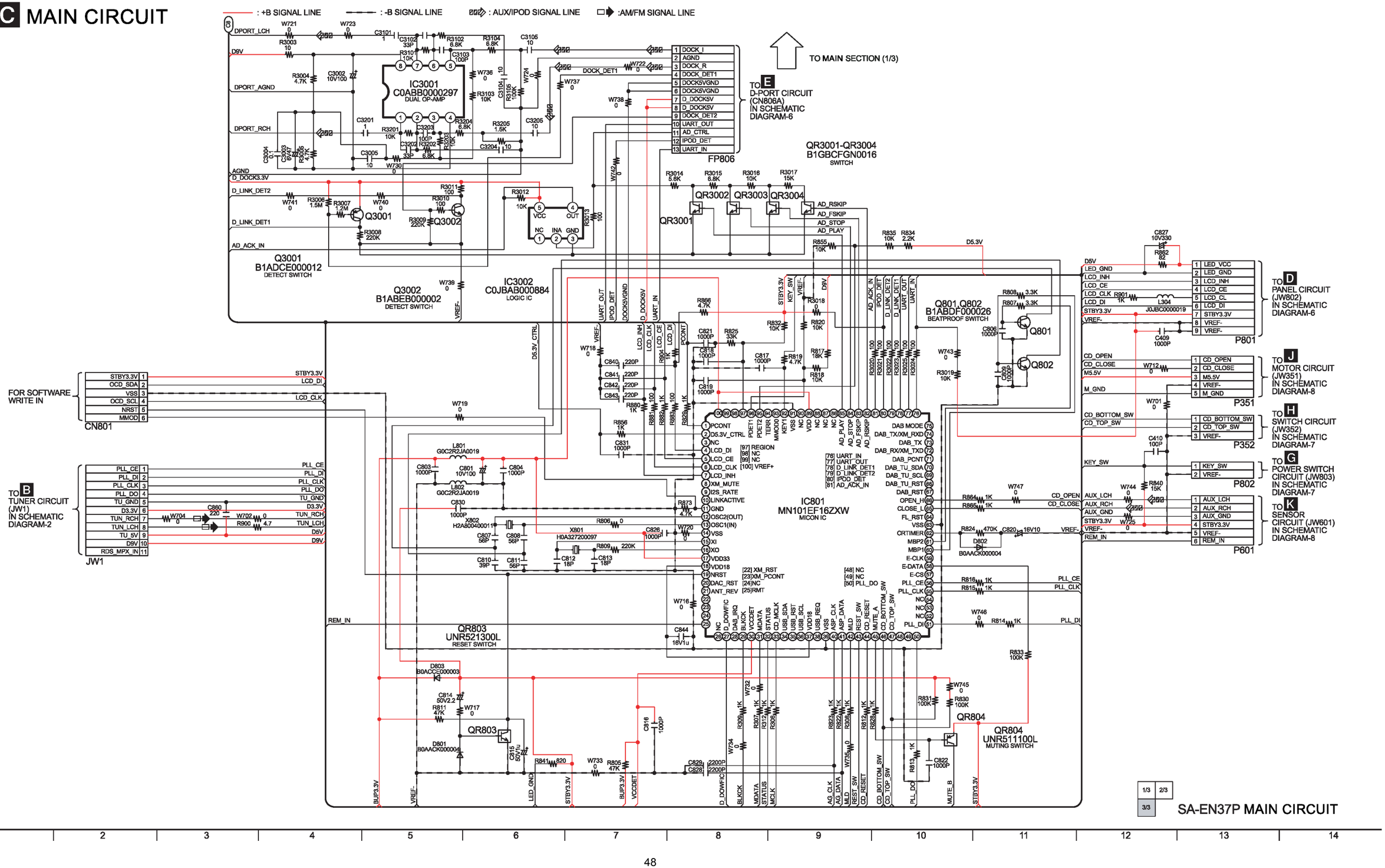


1/3	2/3
3/3	

SA-EN37P MAIN CIRCUIT

SCHEMATIC DIAGRAM - 5

C MAIN CIRCUIT

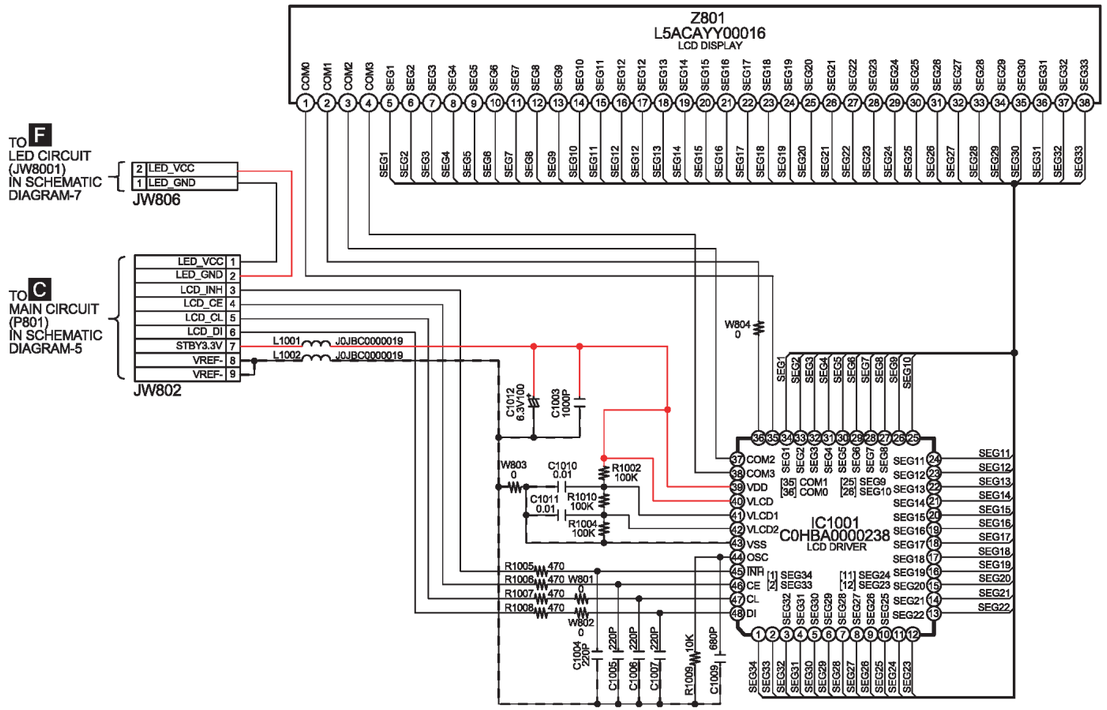


16.4. (D) Panel Circuit & (E) D-Port Circuit

SCHEMATIC DIAGRAM - 6

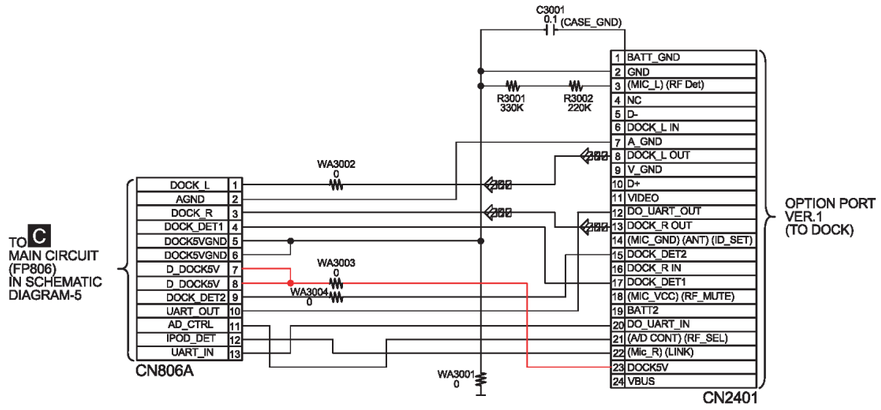
D PANEL CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE



E D-PORT CIRCUIT

: +B SIGNAL LINE : AUX/IPOD SIGNAL LINE



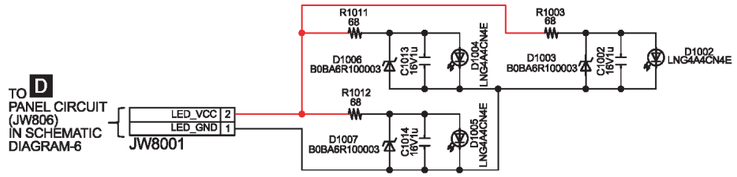
SA-EN37P PANEL/D-PORT CIRCUIT

16.5. (F) LED Circuit, (G) Power Switch Circuit, (H) Tact Switch Circuit & (I) Switch Circuit

SCHEMATIC DIAGRAM - 7

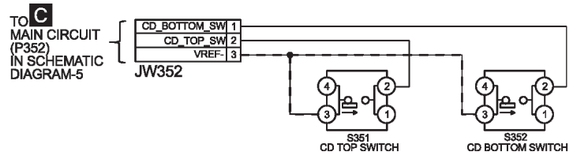
F LED CIRCUIT

: +B SIGNAL LINE



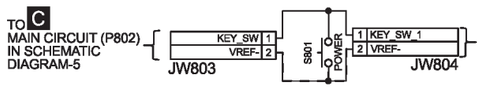
H SWITCH CIRCUIT

: -B SIGNAL LINE



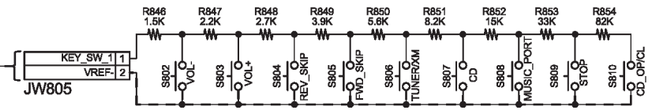
G POWER SWITCH CIRCUIT

: -B SIGNAL LINE



I TACT SWITCH CIRCUIT

: -B SIGNAL LINE

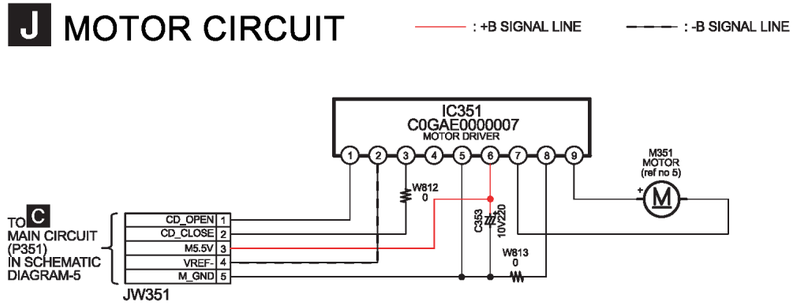


SA-EN37P LED/POWER SWITCH/TACT SWITCH/SWITCH CIRCUIT

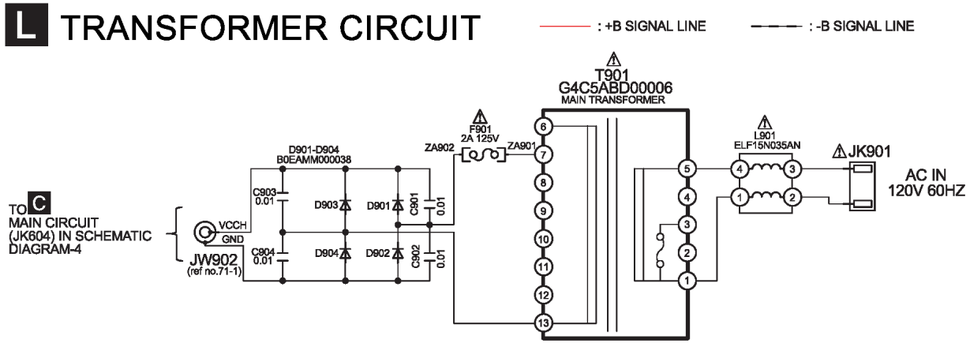
16.6. (J) Motor Circuit, (K) Sensor Circuit & (L) Transformer Circuit

SCHEMATIC DIAGRAM - 8

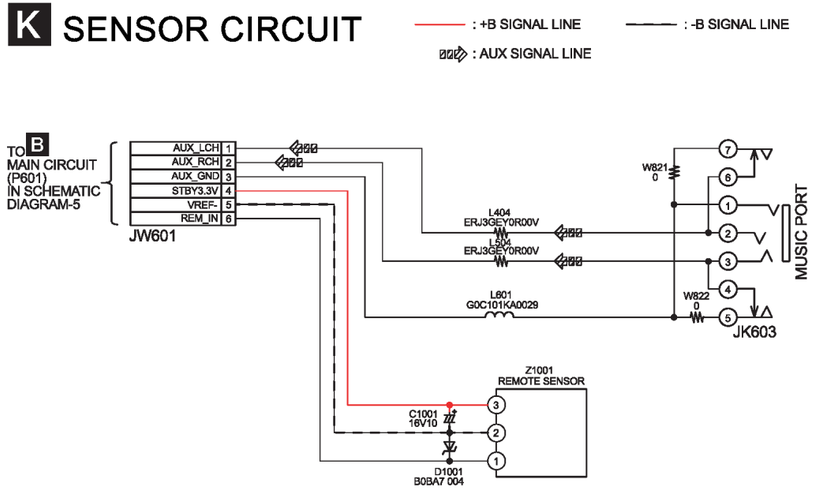
J MOTOR CIRCUIT



L TRANSFORMER CIRCUIT



K SENSOR CIRCUIT



SA-EN37P MOTOR/SENSOR CIRCUIT
SB-EN37AP TRANSFORMER CIRCUIT

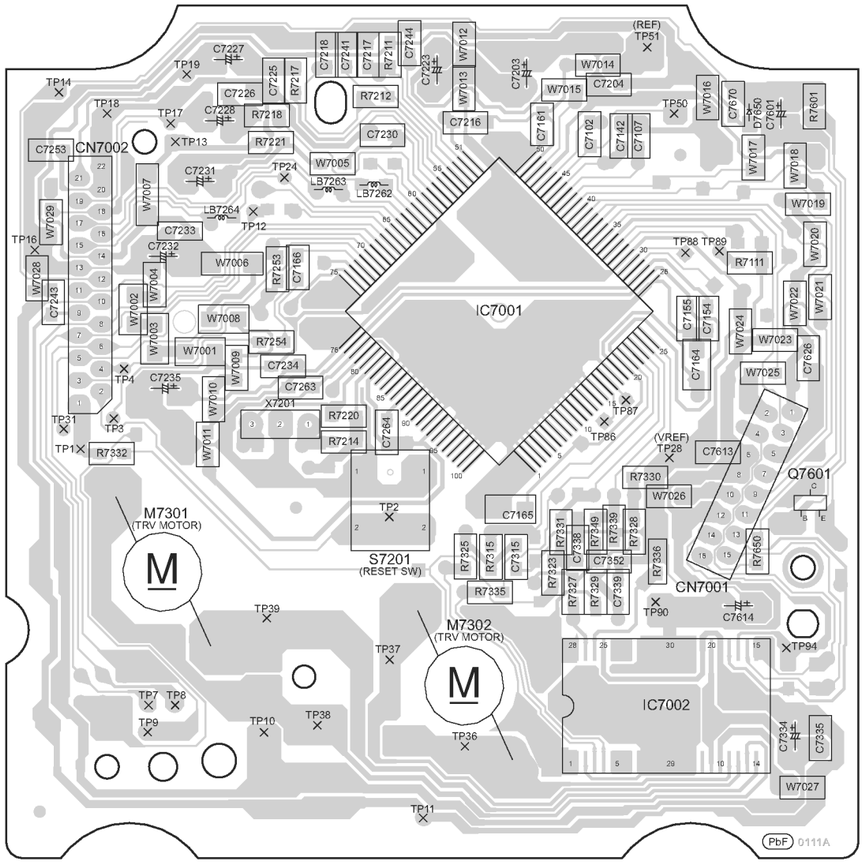
SC-EN37P

17 Printed Circuit Board

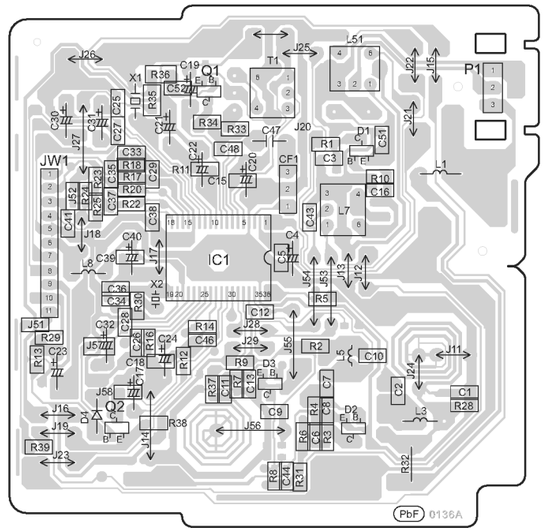
Note: Circuit board diagrams may be modified at any time with the development of new technology.

17.1. (A) CD Servo P.C.B. & (B) Tuner P.C.B.

A CD SERVO P.C.B (REPV0111A)



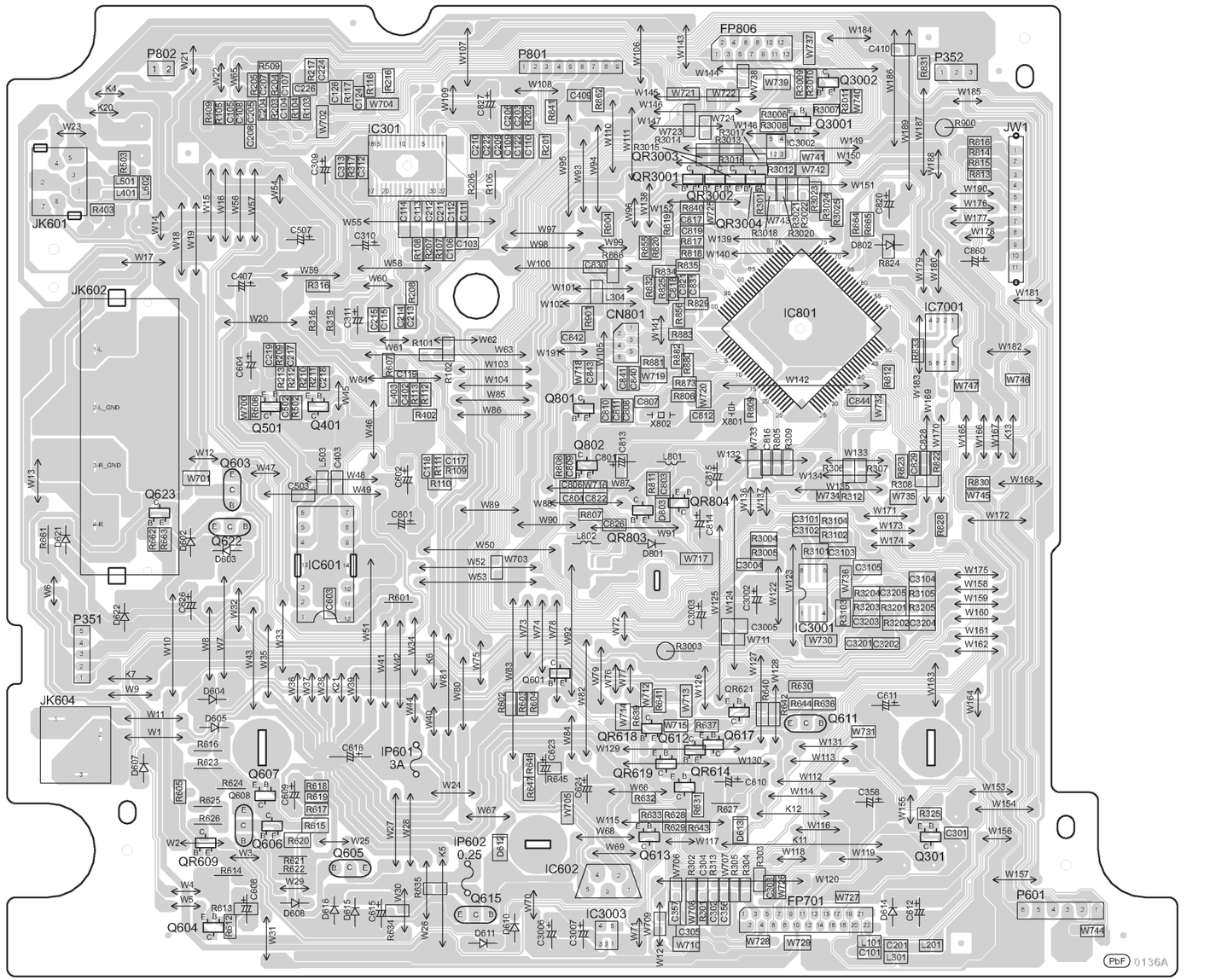
B TUNER P.C.B (REPV0136A)



SA-EN37P
CD SERVO/ TUNER P.C.B

17.2. (C) Main P.C.B.

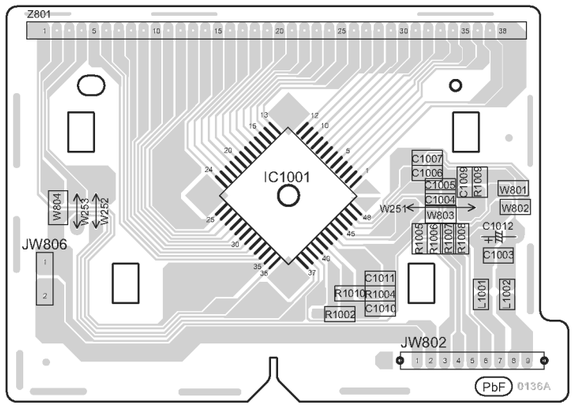
C MAIN P.C.B (REPV0136A)



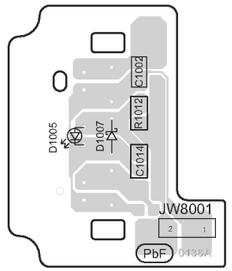
SA-EN37P
MAIN P.C.B

17.3. (D) Panel P.C.B., (E) D-Port P.C.B., (F) LCD P.C.B., (G) Power Switch P.C.B. & (H) Tact Switch P.C.B.

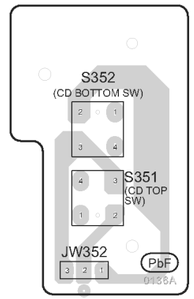
D PANEL P.C.B (REPV0136A)



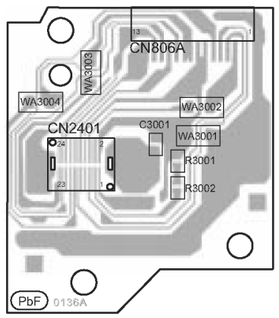
F LED P.C.B (REPV0136A)



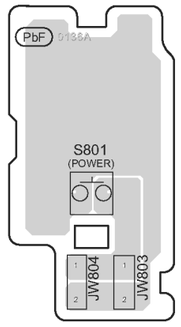
H SWITCH P.C.B (REPV0136A)



E D-PORT P.C.B (REPV0129A)



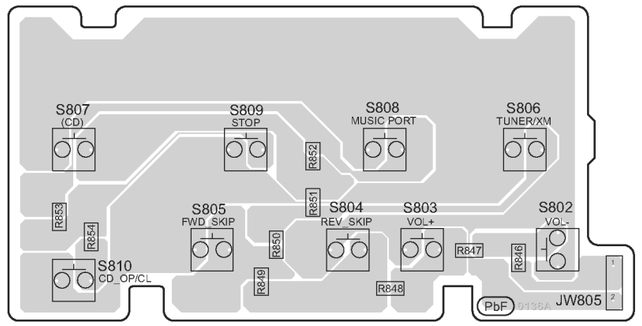
G POWER SWITCH P.C.B (REPV0136A)



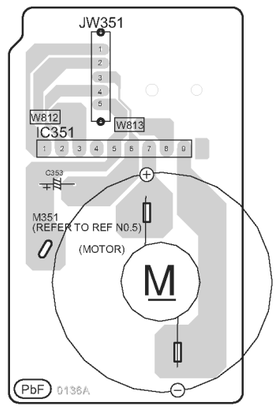
SA-EN37P
PANEL/ D-PORT/ LED/ POWER SWITCH/ TACT SWITCH P.C.B

17.4. (I) Switch Circuit P.C.B., (J) Motor Circuit P.C.B., (K) Sensor Circuit P.C.B. & (L) Transformer P.C.B.

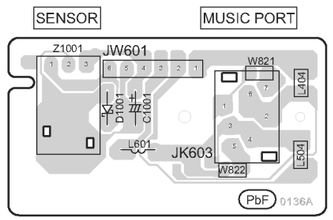
I TACT SWITCH P.C.B (REPV0136A)



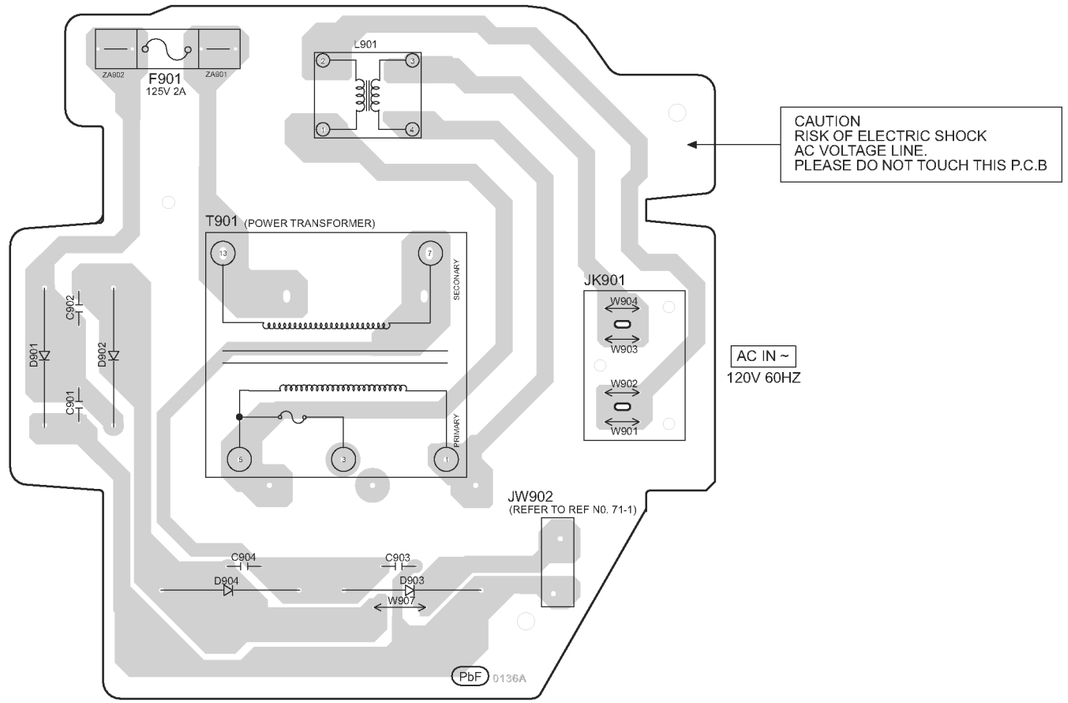
J MOTOR P.C.B (REPV0136A)



K SENSOR P.C.B (REPV0136A)



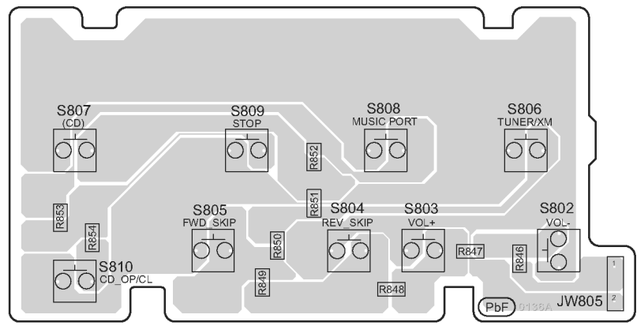
L TRANSFORMER P.C.B (REPV0136A)



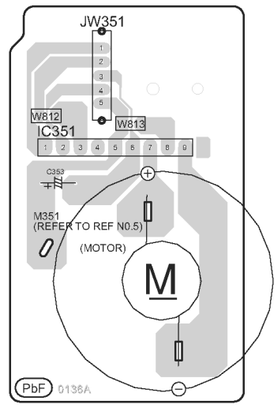
SA-EN37P
SWITCH/ MOTOR/ SENSOR P.C.B
SB-EN37AP
TRANSFORMER P.C.B

17.4. (I) Switch Circuit P.C.B., (J) Motor Circuit P.C.B., (K) Sensor Circuit P.C.B. & (L) Transformer P.C.B.

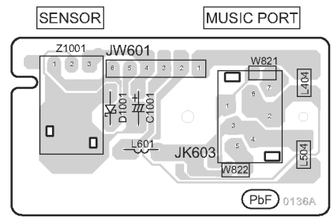
I TACT SWITCH P.C.B (REPV0136A)



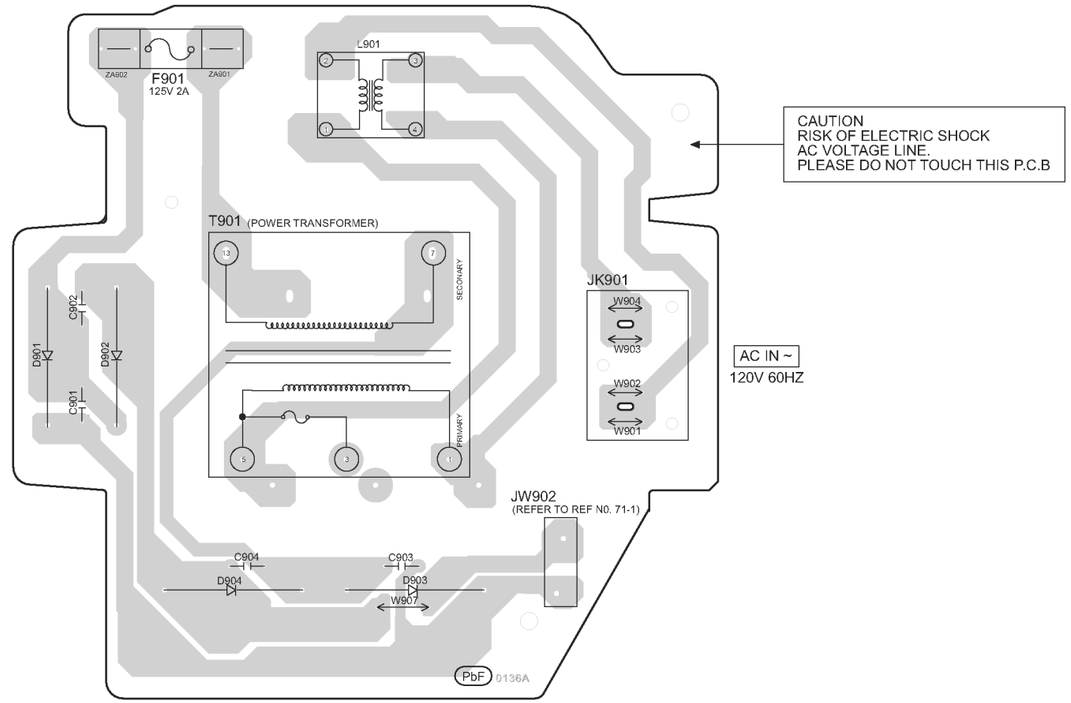
J MOTOR P.C.B (REPV0136A)



K SENSOR P.C.B (REPV0136A)



L TRANSFORMER P.C.B (REPV0136A)

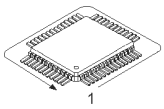


SA-EN37P
SWITCH/ MOTOR/ SENSOR P.C.B
SB-EN37AP
TRANSFORMER P.C.B

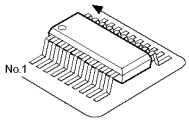
SC-EN37P

18 Illustration of ICs, Transistors and Diodes

C0HBA0000238 (48P)
MN101EF16ZXW (100P)
MN6627954MA (100P)



C1BB00000732 (32P)
C1BB00001120 (36P)



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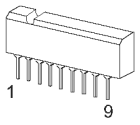

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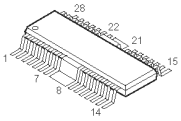

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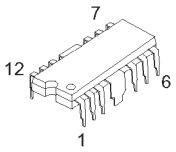

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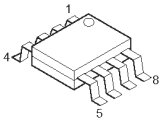

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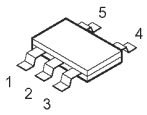

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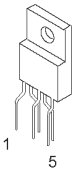

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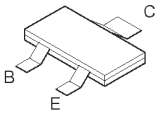
B1GBCFGN0016

UNR511100L
UNR521300L
UNR521400L



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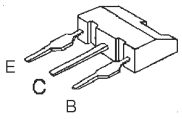

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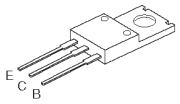

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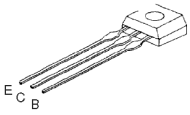

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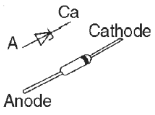
B0BA7R900004
B0BA8R700009



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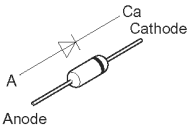

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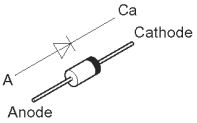

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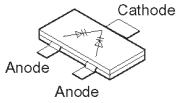

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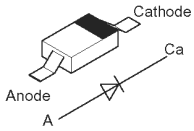
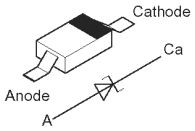


MAZ80560ML



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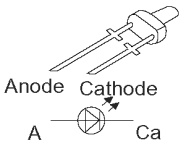


19 Terminal Function of IC's

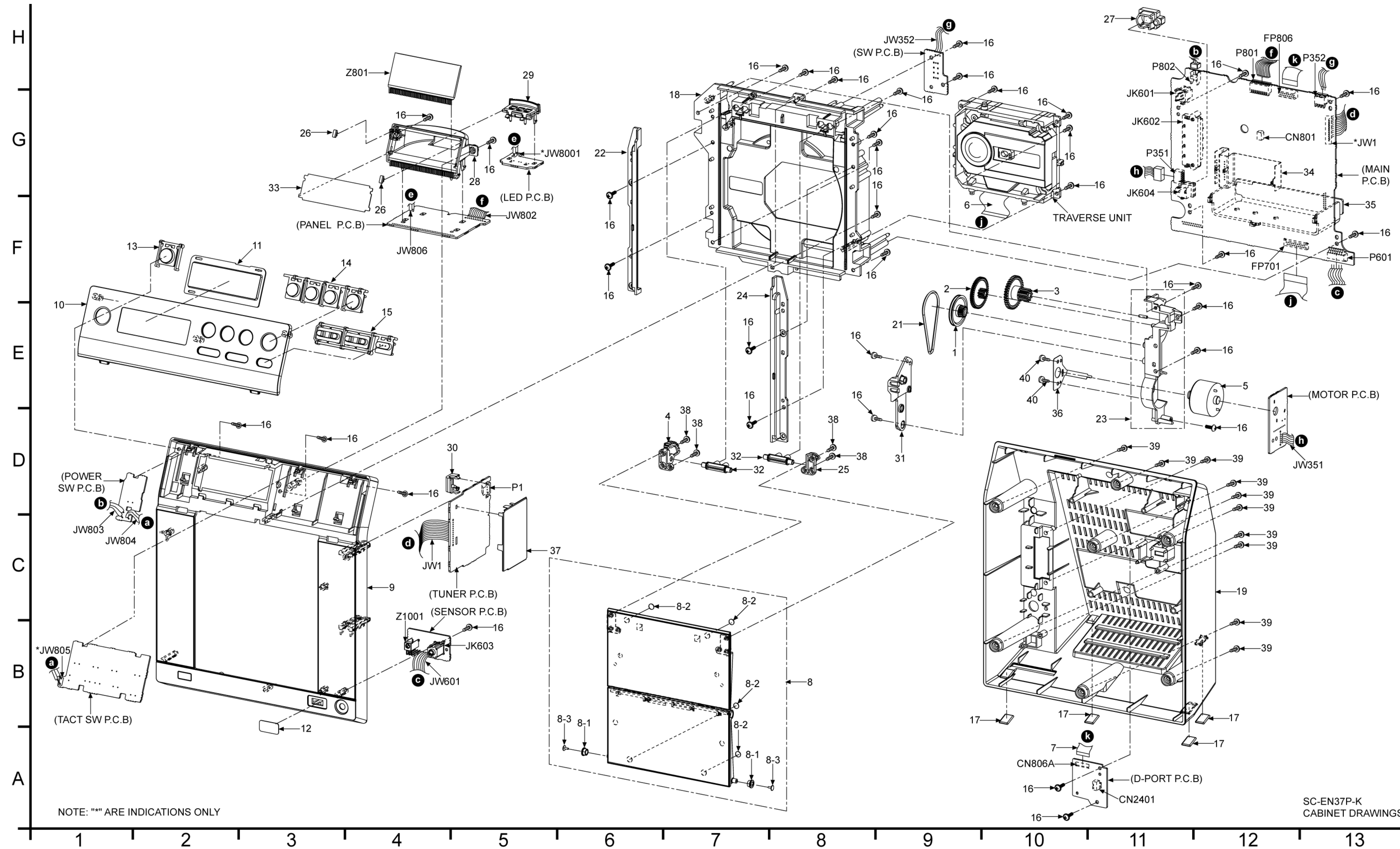
19.1. IC801 (MN101EF16ZXW) Servo Processor,Digital Signal Processor/Digital filter and D/A Converter

Pin No.	Mark	I/O	Function
1	PCONT1	O	Power Control Output (PWR Sply Active HIGH)
2	DPORT_PCONT	O	5.3V Regulator Control
3	N.C.	-	No connection
4	LCD_DI	O	LCD Data Output
5	LCD_CE	O	LCD chip select
6	LCD_CLK	O	LCD CLK Output
7	LCD_INH	O	LCD lighting terminal
8	XM MUTE	-	No Connection
9	I2S_RATE	-	No Connection
10	LINKACTIVE	-	No Connection
11	GND	I	Memory mode selection
12	OSC2 (OUT)	O	Main Oscillator output (8MHz)
13	OSC1 (In)	I	Main Oscillator input (8MHz)
14	VSS	-	Micom GND
15	XI	I	Slow Oscillator input (32KHz)
16	XO	O	Slow Oscillator output (32KHz)
17	VDD33	-	3.3V
18	VDD18	-	Connect to pin 37
19	NRST	I	MICOM RESET IN (L: reset)
20	DAC RESET	-	No Connection
21	ANT_REV	-	No Connection
22	XM_RST	-	No Conenction
23	XM_PCONT	-	No Connection
24	N.C.	-	No connection
25	RMT	I	Remote Control Input
26	N.C.	-	No connection
27	D_DOWFIC	I	DAB LSI 24ms synchronization interrupt
28	DAB_IRQ	-	No Connection
29	BLKCK	I	CD Subcode Block Clock Input
30	VCCDET	I	VCC failure detect (Active low)
31	MDATA	O	CD LSI Command Data
32	STATUS	I	CD LSI Status Input
33	CD_MCLK	O	CD LSI Command Clock
34	USB_SDA	-	No Conenction
35	USB_RST	-	No Connection
36	USB_SCL	-	No Connection
37	VDD18	-	Power supply (1.8V)
38	USB_REQ	-	No Connection
39	VCC	-	Micon GND
40	ASP_CLK	O	ASP Sound Processor Serial Clock Output
41	ASP_DATA	O	APC Sound Processor Serial Data Output
42	MLD	O	CD LSI command load
43	RESET_SW	I	Reset SW (L: Inner)
44	CD_RST	O	CD LSI Reset Output (L: reset)
45	MUTE_A	O	Analog Mute Output (L: Mute on)
46	CD_BOTTOM_SW	I	CD bottom switch
47	CD_TOP_SW	I	CD top switch
48	N.C.	-	No connection
49	N.C.	-	No connection
50	PLL_DO	O	PLL Data Output

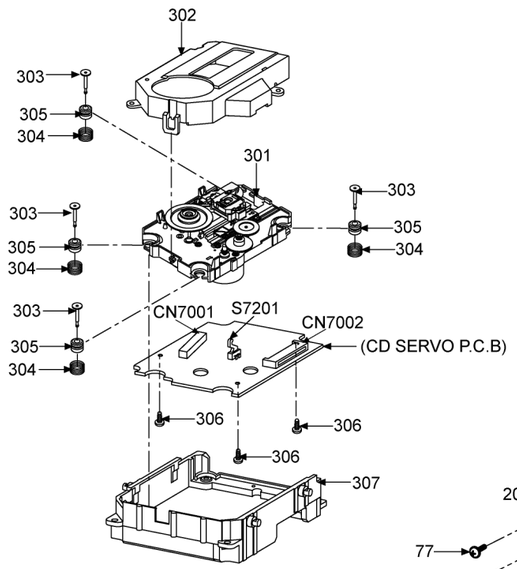
Pin No.	Mark	I/O	Function
51	PLL_DI	O	PLL Data Input
52	N.C.	-	No connection
53	N.C.	-	No connection
54	N.C.	-	No connection
55	PLL_CLK	O	PLL clock
56	PLL_CE	O	PLL chip select
57	E-CS	-	No Connection
58	E_DATA	I/O	EEPROM DATA I/O
59	E_CLK	-	No Connection
60	MBP1	O	Micro-P Beat Proof 1
61	MBP2	O	Micro-P Beat Proof 2
62	CRTIMER	-	CR TIMER
63	VSS	-	Micon GND
64	FL_RST	-	No Connection
65	CD_CLOSE	O	CD Tray Close Control (Active H)
66	CD_OPEN	O	CD Tray Open Control (Active H)
67	DAB_RST	-	No Connection
68	DAB_TU_RST	-	No Connection
69	DAB_TU_SCL	-	No Connection
70	DAB_TU_SDA	-	No Connection
71	DBA_PCNT	-	No Connection
72	DBA_RX/XM_TXD	-	No Connection
73	DAB_TX	-	No Connection
74	DAB_TX/XM_RXD	-	No Connection
75	DAB_MODE	-	No Connection
76	UART_IN	I	Serial communication
77	UART_OUT	O	Serial communiation
78	D_LINK_DET 1	I	Detect connecting unit
79	D_LINK_DET2	I	Detect connecting unit
80	IPOD_DET	I	IPOD detection
81	AD_ACK IN	I	D-Port charging full detection
82	AD_RSKIP	O	Dport AD_CNTL
83	AD_FSKIP	O	Dport AD_CNTL
84	AD_STOP	O	Dport AD_CNTL
85	AD_PLAY	O	Dport AD_CNTL
86	N.C.	-	No connection
87	N.C.	-	No connection
88	N.C.	-	No connection
89	VDD	-	Micon VDD+3.3V
90	N.C.	-	No connection
91	VSS	-	GND
92	KEY1	I	Key 1 Input
93	MM0D0	-	No Connection
94	TERR	-	No Connection
95	PDET2	I	Level detection for 5.3V regulator
96	PDET1	I	DC Level Detection Input
97	REGION	I	Region Setting Input
98	N.C.	-	No connection
99	N.C.	-	No Connection
100	VREF+	-	A/D Converter reference voltage +3.3V

20 Exploded Views

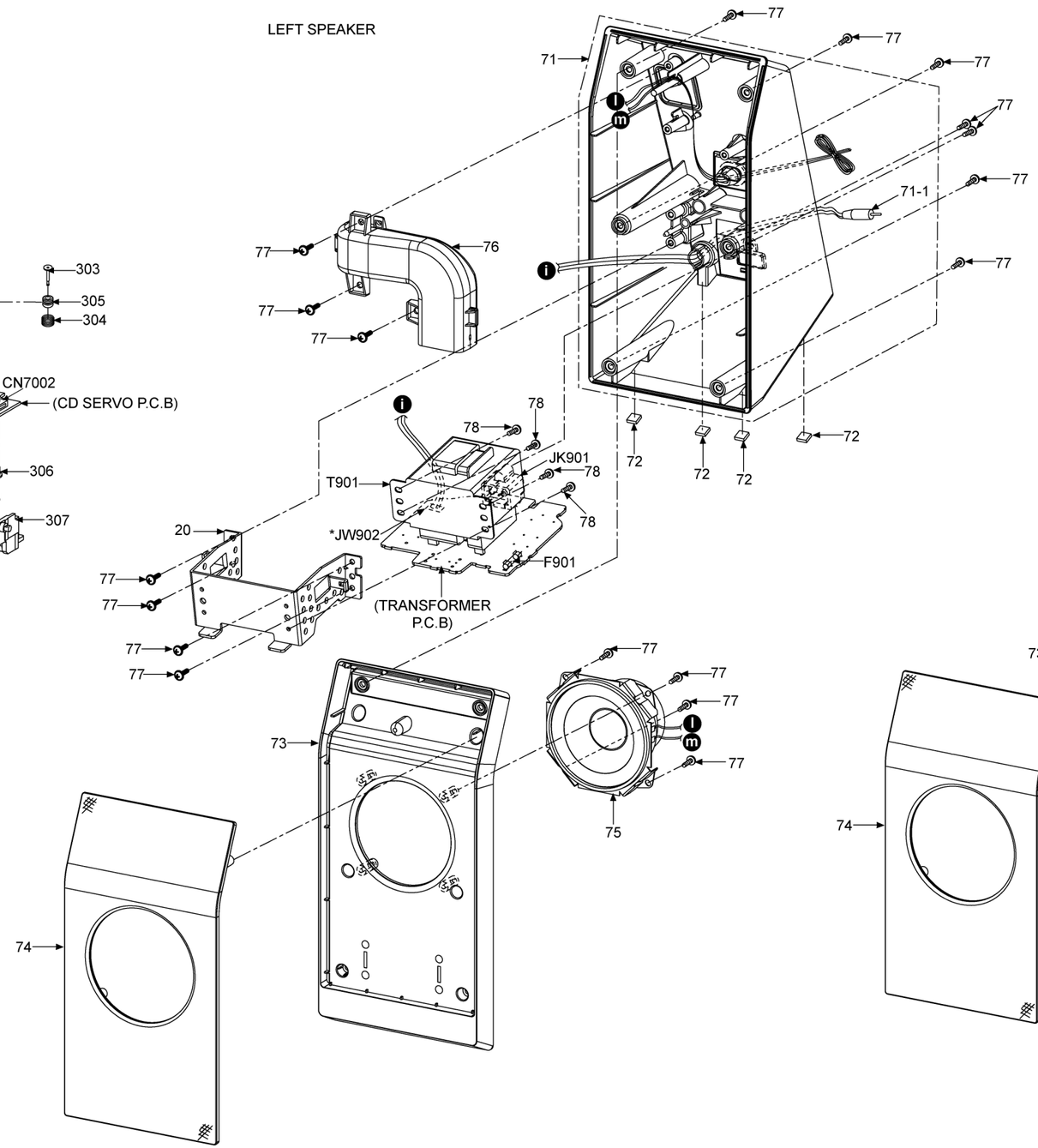
20.1. Cabinet Parts Location



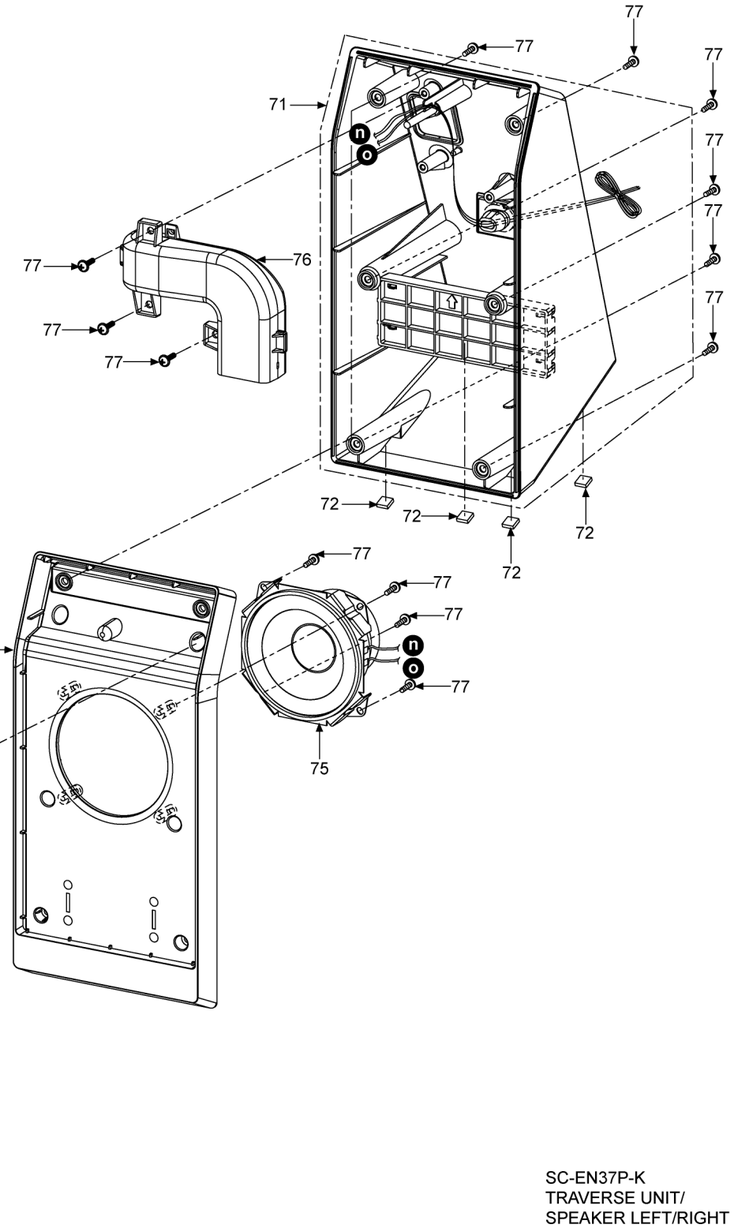
TRAVERSE UNIT



LEFT SPEAKER



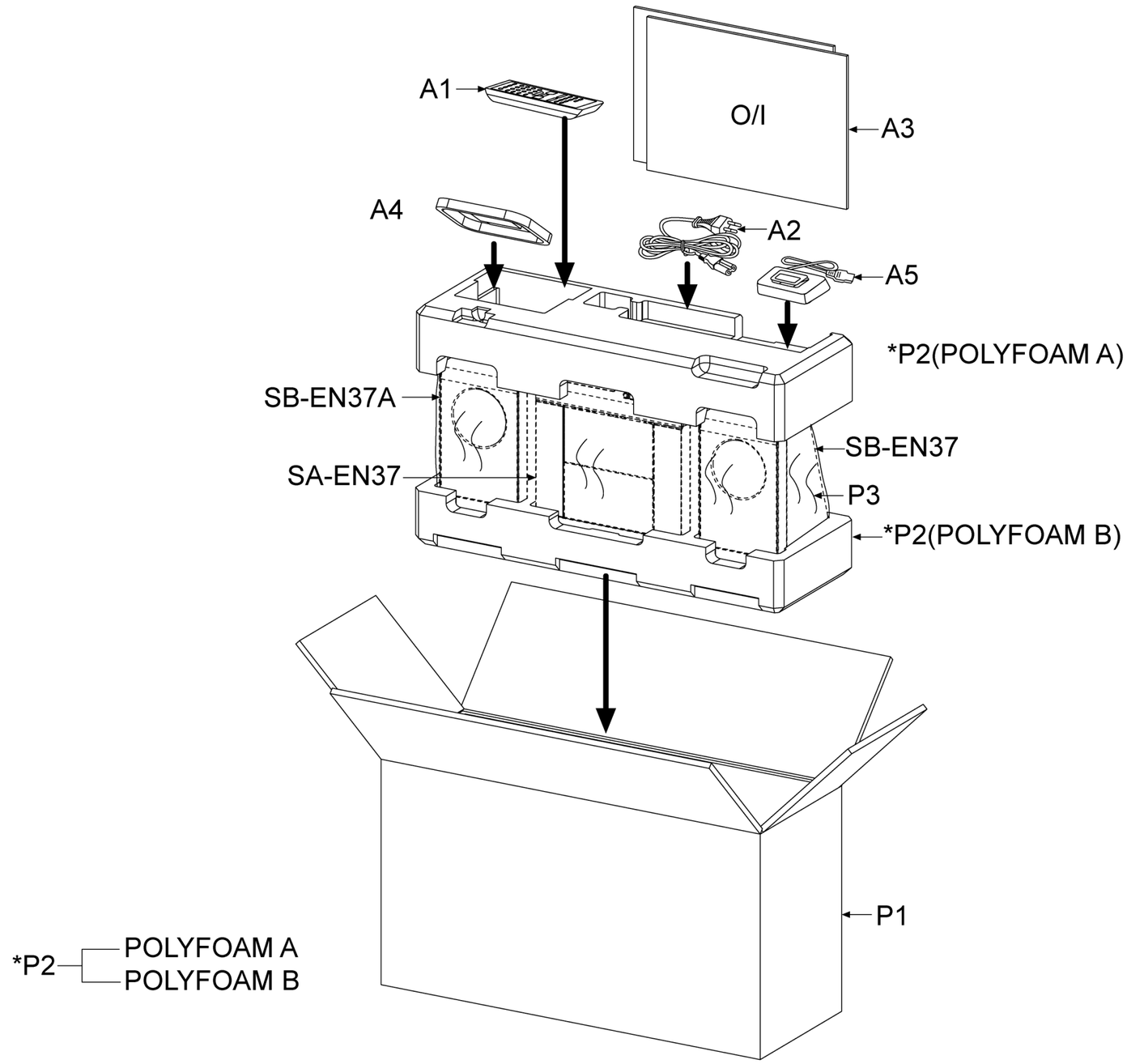
RIGHT SPEAKER



NOTE: "*" ARE INDICATIONS ONLY

SC-EN37P-K
TRAVERSE UNIT/
SPEAKER LEFT/RIGHT
DRAWINGS

20.2. Packaging



SC-EN37P-K
PACKAGING DRAWINGS

SC-EN37P

21 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-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

  When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)

  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 microfarads (μF) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- [M] Indicates in the Remarks columns indicates parts supplied by **PAVCSG.**
- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian	Ur:	Ukraine				

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RDG0612	PULLEY GEAR	[M]
2	RDGV0001	2ND GREAR	[M]
3	RDGV0002	DRIVE GEAR	[M]
4	RDGV0003	LID GEAR	[M]
5	RFKPAEN25PS	MOTOR ASS'Y	[M]
6	REEV0150	CD SERVO FFC (22P)	[M]
7	REEV0180	OPTION PORT FFC	[M]
8	RFKLAEN37P-K	CD LID ASS'Y (A/B)	[M]
8-1	RDPV0001	LID ROLLER	[M]
8-2	RMG0699-KJ	LID CUSHION	[M]
8-3	RHD14136	SCREW	[M]
9	RFKGAEN37P-K	FRONT PANEL ASS'Y	[M]
10	RGKV0165-K	FRONT ORNAMENT	[M]
11	RGPV0093-K	LCD PANEL	[M]
12	RGPV0094-K	SENSOR PANEL	[M]
13	RGUV0173-S	POWER BUTTON	[M]
14	RGUV0174B-S	FUNCTION BUTTON	[M]
15	RGUV0175-K	VOL/SKIP BUTTON	[M]
16	RHD26046-L	SCREW	[M]
17	RKA0162-KJ	LEG RUBBER	[M]
18	RKQV0052-K	CD BASE	[M]
19	RKSV0038G-K	REAR CABINET	[M]
20	RMAV0042	TRANS ANGLE	[M]
21	RMG0268-K1	BELT	[M]
22	RMKV0065	ROLLER GUIDE L	[M]
23	RFKNAEN37P-K	GEAR BASE ASS'Y	[M]
24	RMKV0066	ROLLER GUIDE R	[M]
25	RMLV0001	SW LEVER	[M]
26	RMNV0080	LCD FIX PIECE	[M]
27	RMNV0081	DC JACK HOLDER	[M]
28	RMNV0082	LCD HOLDER	[M]
29	RMNV0083	LED HOLDER	[M]
30	RMNV0084	ANT HOLDER	[M]
31	RMQV0077	GEAR FIXTURE	[M]
32	RMSV0001	LID BEARING	[M]
33	RMXV0032	LCD SPACER SHEET	[M]
34	RMY0362J	IC HEAT SINK	[M]
35	RMYV0067	HEAT SINK	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
36	RSC0732J	EARTH PLATE	[M]
37	RSC0733J	TUNER SHIELD	[M]
38	XTN2+6GFJ	SCREW	[M]
39	XTV3+12GFJK	TOP CAB SCREW	[M]
40	XYN26+C6FJ	SCREW	[M]
		SPEAKERS	
71	RFKHBEN37PKL	SPEAKER CAB. ASS'Y L	[M] SB-EN37A
71	RFKHBEN37PKR	SPEAKER CAB. ASS'Y R	[M] SB-EN37
71-1	K2GY2C000001	DC IN CABLE	[M] SB-EN37A
72	RFAX0011-KJ	LEG FELT	[M]
73	RKPV0048-K	SP FRONT CABINET	[M]
74	RYBV0046	PREPARED NET FRAME	[M]
75	EAS8P198B	SPEAKER	[M]
76	RYTV0003	SP PORT UNIT	[M]
77	XTV3+12GFJ-M	SCREW	[M]
78	XTV3+6FFJ	SCREW	[M] SB-EN37A
		TRAVERSE DECKS	
301	RAE0165T-V	TRAVERSE (W/O CD SERVO P.C.B.)	[M]
302	RMR1396-K	TRV COVER	[M]
303	RMS0757-1	FIXED PIN	[M]
304	RME0109	FLOATING SPRING	[M]
305	RMG0730-G	FLOATING RUBBER	[M]
306	XTN2+6GFJ	SCREW	[M]
307	RMR1395-X	MIDDLE CHASSIS	[M]
		PRINTED CIRCUIT BOARDS	
	REPV0111A	CD SERVO P.C.B.	[M] (RTL)
	REPV0136A	TUNER P.C.B.	[M] (RTL)
	REPV0136A	MAIN P.C.B.	[M] (RTL)
	REPV0136A	PANEL P.C.B.	[M] (RTL)
	REPV0129A	D-PORT P.C.B.	[M] (RTL)

Ref. No.	Part No.	Part Name & Description	Remarks
	REPV0136A	LED P.C.B.	[M] (RTL)
	REPV0136A	POWER SWITCH P.C.B.	[M] (RTL)
	REPV0136A	TACT SWITCH P.C.B.	[M] (RTL)
	REPV0136A	SWITCH P.C.B.	[M] (RTL)
	REPV0136A	MOTOR P.C.B.	[M] (RTL)
	REPV0136A	SENSOR P.C.B.	[M] (RTL)
	REPV0136A	TRANSFORMER P.C.B	[M] (RTL)
		INTEGRATED CIRCUITS	
IC1	C1BB00001120	IC TUNER	[M]
IC301	C1BB00000732	IC AUDIO SOUND PROCESSOR	[M]
IC351	C0GAE0000007	IC MOTOR DRIVER	[M]
IC601	C0AAAA000036	IC POWER	[M]
IC602	C0DAEKG00002	IC REGULATOR	[M]
IC801	MN101EF16ZXW	IC MICON	[M]
IC1001	C0HBA0000238	IC LCD DRIVER	[M]
IC3001	C0ABBB000297	IC DUAL OP-AMP	[M]
IC3002	C0JBAB000884	IC LOGIC	[M]
IC3003	C0CBCBC00090	IC 3.3V LDO	[M]
IC7001	MN6627954MA	IC SERVO PROCESSOR/DIGITAL SIGNAL PROCESSOR/DIGITAL FILTER D/A CONVERTER	[M]
IC7002	BA5948FPE2	IC 4 CH DRIVE	[M]
		TRANSISTORS	
Q1	B1ABDF000026	TRANSISTOR	[M]
Q2	B1ADCF000063	TRANSISTOR	[M]
Q301	B1ADCF000063	TRANSISTOR	[M]
Q401	B1ABGD000022	TRANSISTOR	[M]
Q501	B1ABGD000022	TRANSISTOR	[M]
Q601	B1ABDF000026	TRANSISTOR	[M]
Q603	B1ACND000003	TRANSISTOR	[M]
Q604	B1ABDF000026	TRANSISTOR	[M]
Q605	B1BCCG000002	TRANSISTOR	[M]
Q606	B1ADCF000063	TRANSISTOR	[M]
Q607	B1ABDF000026	TRANSISTOR	[M]
Q608	B1ACND000003	TRANSISTOR	[M]
Q611	B1ACND000003	TRANSISTOR	[M]
Q612	B1ABDF000026	TRANSISTOR	[M]
Q613	B1ADCF000063	TRANSISTOR	[M]
Q615	B1BAAJ000003	TRANSISTOR	[M]
Q617	B1ABDF000026	TRANSISTOR	[M]
Q622	B1ACND000003	TRANSISTOR	[M]
Q623	B1ABDF000026	TRANSISTOR	[M]
Q801	B1ABDF000026	TRANSISTOR	[M]
Q802	B1ABDF000026	TRANSISTOR	[M]
Q3001	B1ADCE000012	TRANSISTOR	[M]
Q3002	B1ABEB000002	TRANSISTOR	[M]
Q7601	B1ADCF000001	TRANSISTOR	[M]
QR609	UNR521400L	TRANSISTOR	[M]
QR614	B1GBCFGJ0016	TRANSISTOR	[M]
QR618	B1GBCFGJ0016	TRANSISTOR	[M]
QR619	B1GBCFGJ0016	TRANSISTOR	[M]
QR621	UNR511100L	TRANSISTOR	[M]
QR803	UNR521300L	TRANSISTOR	[M]
QR804	UNR511100L	TRANSISTOR	[M]
QR3001	B1GBCFGN0016	TRANSISTOR	[M]
QR3002	B1GBCFGN0016	TRANSISTOR	[M]
QR3003	B1GBCFGN0016	TRANSISTOR	[M]
QR3004	B1GBCFGN0016	TRANSISTOR	[M]
		DIODES	
D1	B0CDAD000010	DIODE	[M]
D2	B0CDAB000019	DIODE	[M]
D3	B0CDAB000019	DIODE	[M]
D4	B0AACK000004	DIODE	[M]
D602	B0EAKM000117	DIODE	[M]
D603	B0EAKM000117	DIODE	[M]
D604	B0EAKM000117	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D605	B0AACK000004	DIODE	[M]
D607	B0AACK000004	DIODE	[M]
D608	B0BA8R700009	DIODE	[M]
D610	B0AACK000004	DIODE	[M]
D611	B0AACK000004	DIODE	[M]
D612	B0ACCE000003	DIODE	[M]
D613	B0ACCE000003	DIODE	[M]
D614	B0BA6R100003	DIODE	[M]
D615	B0BA4R600003	DIODE	[M]
D616	B0EAKM000117	DIODE	[M]
D621	B0AACK000004	DIODE	[M]
D622	B0BA5R000004	DIODE	[M]
D801	B0AACK000004	DIODE	[M]
D802	B0AACK000004	DIODE	[M]
D803	B0ACCE000003	DIODE	[M]
D901	B0EAMM000038	DIODE	[M]
D902	B0EAMM000038	DIODE	[M]
D903	B0EAMM000038	DIODE	[M]
D904	B0EAMM000038	DIODE	[M]
D1001	B0BA7R900004	DIODE	[M]
D1005	LNG4A4CN4E	DIODE	[M]
D1007	B0BA6R100003	DIODE	[M]
D7650	MAZ80560ML	DIODE	[M]
		SWITCHES	
S351	K0L1BA000078	SW CD TOP	[M]
S352	K0L1BA000078	SW CD BOTTOM	[M]
S801	EVQ21405RJ	SW POWER	[M]
S802	EVQ21405RJ	SW VOL -	[M]
S803	EVQ21405RJ	SW VOL +	[M]
S804	EVQ21405RJ	SW REV_SKIP	[M]
S805	EVQ21405RJ	SW FWD_SKIP	[M]
S806	EVQ21405RJ	SW TUNER/XM	[M]
S807	EVQ21405RJ	SW CD	[M]
S808	EVQ21405RJ	SW MUSIC_PORT	[M]
S809	EVQ21405RJ	SW STOP	[M]
S810	EVQ21405RJ	SW CD_OP/CL	[M]
S7201	RSH1A048-A	SW RESET	[M]
		CONNECTORS	
CN801	K1MN06A00013	6P FFC CONNECTOR	[M]
CN806A	K1MN13BA0147	13P CONNECTOR	[M]
CN2401	K1FY124DA001	24P CONNECTOR	[M]
CN7001	K1MN16B00154	16P FFC CONNECTOR	[M]
CN7002	K1MN22BA0005	22P CONNECTOR	[M]
FP701	K1MN22B00014	22P FFC CONNECTOR	[M]
FP806	K1KZ13A00001	13P CONNECTOR	[M]
P1	K1KA03BA0125	3P CONNECTOR	[M]
P351	K1MP05B00004	5P CONNECTOR	[M]
P352	K1MP03B00004	3P CONNECTOR	[M]
P601	K1MP06B00009	6P CONNECTOR	[M]
P801	K1MP09B00004	9P CONNECTOR	[M]
P802	K1KA02BA0125	2P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L1	G0ZZ00002353	FM COIL	[M]
L3	G0ZZ00002353	FM COIL	[M]
L5	G0ZZ00002453	FM OSC COIL	[M]
L7	G2BPC0000017	AM OSC COIL	[M]
L8	G0C101KA0029	AXIAL COIL	[M]
L51	G2A390C00001	AM RF-COIL	[M]
L101	ERJ3GEY0R00V	CHIP JUMPER	[M]
L201	ERJ3GEY0R00V	CHIP JUMPER	[M]
L301	ERJ3GEY0R00V	CHIP JUMPER	[M]
L304	J0JBC0000019	CHIP INDUCTOR	[M]
L401	ERJ3GEY0R00V	CHIP JUMPER	[M]
L403	ERJ3GEY0R00V	CHIP JUMPER	[M]
L404	ERJ3GEY0R00V	CHIP JUMPER	[M]
L501	ERJ3GEY0R00V	CHIP JUMPER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
L503	ERJ3GEY0R00V	CHIP JUMPER	[M]
L504	ERJ3GEY0R00V	CHIP JUMPER	[M]
L601	G0C101KA0029	AXIAL COIL	[M]
L602	ERJ3GEY0R00V	CHIP JUMPER	[M]
L801	G0C2R2JA0019	COIL	[M]
L802	G0C2R2JA0019	COIL	[M]
L901	ELF15N035AN	LINE FILTER	[M] ⚠
L1001	J0JBC0000019	CHIP INDUCTOR	[M]
L1002	J0JBC0000019	CHIP INDUCTOR	[M]
LB7262	D0GBR00JA008	CHIP JUMPER	[M]
LB7263	D0GBR00JA008	CHIP JUMPER	[M]
LB7264	D0GBR00JA008	CHIP JUMPER	[M]
T1	G2BAC0000055	AM IFT	[M]
T901	G4C5ABD00006	TRANSFORMER	[M] ⚠
		COMPONENT COMBINATIONS	
Z801	L5ACAYY00016	LCD DISPLAY	[M]
Z1001	B3RAD0000053	REMOTE SENSOR	[M]
ZA901	EYF52BCY	FUSE CLIP	[M]
ZA902	EYF52BCY	FUSE CLIP	[M]
IP601	K5G302AA0002	FUSE PROTECTOR	[M] ⚠
IP602	K5G251A00008	FUSE PROTECTOR	[M] ⚠
		CERAMIC FILTER	
CF1	J0B1075A0129	CERAMIC FILTER	[M]
		OSCILLATORS	
X1	J0B1075A0121	CERAMIC FILTER	[M]
X2	H0A750200020	CRYSTAL OSCILLATOR	[M]
X801	H0A327200097	CRYSTAL OSCILLATOR	[M]
X802	H2A800400011	CRYSTAL OSCILLATOR	[M]
X7201	H2B169500005	CRYSTAL OSCILLATOR	[M]
		FUSE	
F901	K5D202APA008	FUSE	[M] ⚠
		JACKS	
JK601	K2HC103A0031	JK MIC	[M]
JK602	K4AC04B00008	JK SPEAKER TERMINAL	[M]
JK603	K2HC1YYA0002	JK MUSIC PORT	[M]
JK604	K2EZ2A000008	JK DC IN	[M]
JK901	K2AB2B000007	JK AC INLET	[M] ⚠
		CHIP RESISTORS	
W700	ERJ3GEY0R00V	CHIP JUMPER	[M]
W701	ERJ6GEY0R00V	CHIP JUMPER	[M]
W702	ERJ8GEY0R00V	CHIP JUMPER	[M]
W703	ERJ3GEY0R00V	CHIP JUMPER	[M]
W704	ERJ8GEY0R00V	CHIP JUMPER	[M]
W705	ERJ8GEY0R00V	CHIP JUMPER	[M]
W706	ERJ3GEY0R00V	CHIP JUMPER	[M]
W707	ERJ3GEY0R00V	CHIP JUMPER	[M]
W708	ERJ3GEY0R00V	CHIP JUMPER	[M]
W709	ERJ3GEY0R00V	CHIP JUMPER	[M]
W710	ERJ6GEY0R00V	CHIP JUMPER	[M]
W711	ERJ3GEY0R00V	CHIP JUMPER	[M]
W712	ERJ3GEY0R00V	CHIP JUMPER	[M]
W713	ERJ8GEY0R00V	CHIP JUMPER	[M]
W714	ERJ6GEY0R00V	CHIP JUMPER	[M]
W715	ERJ3GEY0R00V	CHIP JUMPER	[M]
W716	ERJ3GEY0R00V	CHIP JUMPER	[M]
W717	ERJ8GEY0R00V	CHIP JUMPER	[M]
W718	ERJ3GEY0R00V	CHIP JUMPER	[M]
W719	ERJ6GEY0R00V	CHIP JUMPER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W720	ERJ6GEY0R00V	CHIP JUMPER	[M]
W721	ERJ8GEY0R00V	CHIP JUMPER	[M]
W722	ERJ8GEY0R00V	CHIP JUMPER	[M]
W723	ERJ8GEY0R00V	CHIP JUMPER	[M]
W724	ERJ3GEY0R00V	CHIP JUMPER	[M]
W725	ERJ3GEY0R00V	CHIP JUMPER	[M]
W726	ERJ3GEY0R00V	CHIP JUMPER	[M]
W727	ERJ3GEY0R00V	CHIP JUMPER	[M]
W728	ERJ3GEY0R00V	CHIP JUMPER	[M]
W729	ERJ6GEY0R00V	CHIP JUMPER	[M]
W730	ERJ8GEY0R00V	CHIP JUMPER	[M]
W731	ERJ3GEY0R00V	CHIP JUMPER	[M]
W732	ERJ6GEY0R00V	CHIP JUMPER	[M]
W733	ERJ6GEY0R00V	CHIP JUMPER	[M]
W734	ERJ3GEY0R00V	CHIP JUMPER	[M]
W735	ERJ6GEY0R00V	CHIP JUMPER	[M]
W736	ERJ8GEY0R00V	CHIP JUMPER	[M]
W737	ERJ8GEY0R00V	CHIP JUMPER	[M]
W738	ERJ3GEY0R00V	CHIP JUMPER	[M]
W739	ERJ6GEY0R00V	CHIP JUMPER	[M]
W740	ERJ3GEY0R00V	CHIP JUMPER	[M]
W741	ERJ3GEY0R00V	CHIP JUMPER	[M]
W742	ERJ8GEY0R00V	CHIP JUMPER	[M]
W743	ERJ6GEY0R00V	CHIP JUMPER	[M]
W744	ERJ3GEY0R00V	CHIP JUMPER	[M]
W745	ERJ3GEY0R00V	CHIP JUMPER	[M]
W746	ERJ3GEY0R00V	CHIP JUMPER	[M]
W747	ERJ3GEY0R00V	CHIP JUMPER	[M]
W801	ERJ3GEY0R00V	CHIP JUMPER	[M]
W802	ERJ3GEY0R00V	CHIP JUMPER	[M]
W803	ERJ6GEY0R00V	CHIP JUMPER	[M]
W804	ERJ6GEY0R00V	CHIP JUMPER	[M]
W812	ERJ3GEY0R00V	CHIP JUMPER	[M]
W813	ERJ3GEY0R00V	CHIP JUMPER	[M]
W821	ERJ3GEY0R00V	CHIP JUMPER	[M]
W822	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7001	D0GDR00JA017	CHIP JUMPER	[M]
W7002	D0GDR00JA017	CHIP JUMPER	[M]
W7003	D0GDR00JA017	CHIP JUMPER	[M]
W7004	D0GBR00JA008	CHIP JUMPER	[M]
W7005	D0GBR00JA008	CHIP JUMPER	[M]
W7006	ERJ8GEY0R00V	CHIP JUMPER	[M]
W7007	ERJ8GEY0R00V	CHIP JUMPER	[M]
W7008	D0GDR00JA017	CHIP JUMPER	[M]
W7009	D0GBR00JA008	CHIP JUMPER	[M]
W7010	D0GBR00JA008	CHIP JUMPER	[M]
W7011	D0GBR00JA008	CHIP JUMPER	[M]
W7012	D0GBR00JA008	CHIP JUMPER	[M]
W7013	D0GBR00JA008	CHIP JUMPER	[M]
W7014	D0GBR00JA008	CHIP JUMPER	[M]
W7015	D0GBR00JA008	CHIP JUMPER	[M]
W7016	D0GBR00JA008	CHIP JUMPER	[M]
W7017	D0GBR00JA008	CHIP JUMPER	[M]
W7018	D0GBR00JA008	CHIP JUMPER	[M]
W7019	D0GBR00JA008	CHIP JUMPER	[M]
W7020	D0GBR00JA008	CHIP JUMPER	[M]
W7021	D0GBR00JA008	CHIP JUMPER	[M]
W7022	D0GBR00JA008	CHIP JUMPER	[M]
W7023	D0GBR00JA008	CHIP JUMPER	[M]
W7024	D0GBR00JA008	CHIP JUMPER	[M]
W7025	D0GBR00JA008	CHIP JUMPER	[M]
W7026	D0GBR00JA008	CHIP JUMPER	[M]
W7027	D0GBR00JA008	CHIP JUMPER	[M]
W7028	D0GBR00JA008	CHIP JUMPER	[M]
W7029	D0GBR00JA008	CHIP JUMPER	[M]
WA3001	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA3002	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA3003	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA3004	ERJ8GEY0R00V	CHIP JUMPER	[M]
JW1	RWJ0211105SS	11P TUNER-MAIN WIRE	[M]
JW351	RWJ0205100SX	5P MOTOR-MAIN WIRE	[M]
JW352	RWJ9003075SX	3P SW-MAIN WIRE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
JW601	RWJ9006080SX	6P SENSOR-MAIN WIRE	[M]
JW802	RWJ0209070SX	9P LCD-MAIN WIRE	[M]
JW803	REXV0076	2P OPE1-MAIN WIRE	[M]
JW804	RWJ9002120SS	2P OPE1-OPE2 WIRE (JW805)	[M]
JW806	RWJ9002070SS	2P LED-LCD WIRE (JW8001)	[M]
		PACKING MATERIALS	
P1	RPGV0396	PACKING CASE	[M]
P2	RPNV0122	POLYFOAM	[M]
P3	RPHV0029	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	N2QAYB000109	REMOTE CONTROL	[M]
A1-1	RKK-HTR0283H	R/C BATTERY COVER	[M]
A2	K2CB2CB00018	AC CORD	[M] ⚠
A3	RQTV0217-P	O/I BOOK (En)	[M]
A3	RQTV0224-P	O/I BOOK (En)	[M]
A4	N1DADYY00003	FM/AM ANTENNA	[M]
A5	RFE0205	I-POD CRADLE	[M]
		RESISTORS	
R1	D0GB103JA008	10K 1/16W	[M]
R2	ERJ3GEY0R00V	0 1/16W	[M]
R3	D0GB332JA008	3.3K 1/16W	[M]
R4	D0GB104JA008	100K 1/16W	[M]
R5	D0GB680JA007	68 1/16W	[M]
R6	D0GB104JA008	100K 1/16W	[M]
R7	D0GB104JA008	100K 1/16W	[M]
R8	D0GB103JA008	10K 1/16W	[M]
R9	ERJ3GEY0R00V	0 1/16W	[M]
R10	D0GB104JA008	100K 1/16W	[M]
R11	D0GB332JA008	3.3K 1/16W	[M]
R12	ERJ3GEYJ152V	1.5K 1/16W	[M]
R13	D0GB332JA008	3.3K 1/16W	[M]
R14	D0GB472JA008	4.7K 1/16W	[M]
R16	D0GB103JA008	10K 1/16W	[M]
R17	D0GB103JA008	10K 1/16W	[M]
R18	D0GB223JA008	22K 1/16W	[M]
R20	D0GB103JA008	10K 1/16W	[M]
R22	D0GB103JA008	10K 1/16W	[M]
R23	D0GB223JA008	22K 1/16W	[M]
R24	D0GB223JA008	22K 1/16W	[M]
R25	D0GB223JA008	22K 1/16W	[M]
R28	D0GB104JA008	100K 1/16W	[M]
R29	D0GB102JA008	1K 1/16W	[M]
R30	D0GB393JA008	39K 1/16W	[M]
R31	D0GB472JA008	4.7K 1/16W	[M]
R32	D0AE330JA178	33 1/4W	[M]
R33	D0GB472JA008	4.7K 1/16W	[M]
R34	ERJ3GEYJ182V	1.8K 1/16W	[M]
R35	D0GB472JA008	4.7K 1/16W	[M]
R36	D0GB472JA008	4.7K 1/16W	[M]
R37	ERJ3GEY0R00V	0 1/16W	[M]
R38	D0GB332JA008	3.3K 1/16W	[M]
R39	ERJ3GEY0R00V	0 1/16W	[M]
R101	D0GB473JA008	47K 1/16W	[M]
R102	D0GB562JA008	5.6K 1/16W	[M]
R103	D0GB473JA008	47K 1/16W	[M]
R104	D0GB562JA008	5.6K 1/16W	[M]
R105	D0GB562JA008	5.6K 1/16W	[M]
R106	D0AE682JA178	6.8K 1/4W	[M]
R107	D0GB223JA008	22K 1/16W	[M]
R108	D0GB332JA008	3.3K 1/16W	[M]
R109	D0GB103JA008	10K 1/16W	[M]
R110	D0GB392JA008	3.9K 1/16W	[M]
R111	D0GB333JA007	33K 1/16W	[M]
R112	D0GB682JA008	6.8K 1/16W	[M]
R113	D0GB472JA008	4.7K 1/16W	[M]
R116	D0GB473JA008	47K 1/16W	[M]
R117	D0GB562JA008	5.6K 1/16W	[M]
R201	D0GB473JA008	47K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R202	D0GB562JA008	5.6K 1/16W	[M]
R203	D0GB473JA008	47K 1/16W	[M]
R204	D0GB562JA008	5.6K 1/16W	[M]
R205	D0GB562JA008	5.6K 1/16W	[M]
R206	D0AE682JA178	6.8K 1/4W	[M]
R207	D0GB223JA008	22K 1/16W	[M]
R208	D0GB332JA008	3.3K 1/16W	[M]
R209	D0GB103JA008	10K 1/16W	[M]
R210	D0GB392JA008	3.9K 1/16W	[M]
R211	D0GB333JA007	33K 1/16W	[M]
R212	D0GB682JA008	6.8K 1/16W	[M]
R213	D0GB472JA008	4.7K 1/16W	[M]
R216	D0GB473JA008	47K 1/16W	[M]
R217	D0GB562JA008	5.6K 1/16W	[M]
R301	D0GB223JA008	22K 1/16W	[M]
R302	D0GB223JA008	22K 1/16W	[M]
R303	D0GB223JA008	22K 1/16W	[M]
R304	D0GB223JA008	22K 1/16W	[M]
R305	D0GB103JA008	10K 1/16W	[M]
R306	D0GB102JA008	1K 1/16W	[M]
R307	D0GB102JA008	1K 1/16W	[M]
R308	D0GB102JA008	1K 1/16W	[M]
R309	D0GB102JA008	1K 1/16W	[M]
R312	D0GB102JA008	1K 1/16W	[M]
R313	D0GB102JA008	1K 1/16W	[M]
R316	D0GB334JA008	330K 1/16W	[M]
R317	D0GB334JA008	330K 1/16W	[M]
R318	D0AE330JA178	33 1/4W	[M]
R319	D0AE330JA178	33 1/4W	[M]
R325	ERJ3GEYJ152V	1.5K 1/16W	[M]
R402	D0GB102JA008	1K 1/16W	[M]
R403	D0GB471JA008	470 1/16W	[M]
R409	D0GB333JA008	33K 1/16W	[M]
R502	D0GB102JA008	1K 1/16W	[M]
R503	D0GB471JA008	470 1/16W	[M]
R509	D0GB333JA008	33K 1/16W	[M]
R601	D0AE822JA178	8.2K 1/4W	[M]
R602	D0GB102JA008	1K 1/16W	[M]
R603	D0GB273JA008	27K 1/16W	[M]
R604	D0GB272JA007	2.7K 1/16W	[M]
R605	D0GB102JA008	1K 1/16W	[M]
R607	D0GB222JA008	2.2K 1/16W	[M]
R608	D0GB333JA007	33K 1/16W	[M]
R612	D0GB222JA008	2.2K 1/16W	[M]
R613	D0GB223JA008	22K 1/16W	[M]
R614	D0AE151JA048	150 1/4W	[M]
R615	ERJ6GEYJ1R0V	1 1/10W	[M]
R616	D0AE471JA048	470 1/4W	[M]
R617	D0GB101JA008	100 1/16W	[M]
R618	D0GB681JA008	680 1/16W	[M]
R619	D0GB681JA008	680 1/16W	[M]
R620	ERJ6GEYJ2R2V	2.2 1/10W	[M]
R621	D0AE1R0JA048	1 1/4W	[M]
R622	D0AE1R0JA048	1 1/4W	[M]
R623	D0AE471JA048	470 1/4W	[M]
R624	D0AE471JA048	470 1/4W	[M]
R625	D0AE121JA048	120 1/4W	[M]
R626	D0AE121JA048	120 1/4W	[M]
R627	D0AE221JA048	220 1/4W	[M]
R628	D0GB102JA008	1K 1/16W	[M]
R629	D0GB102JA008	1K 1/16W	[M]
R630	ERJ3GEYJ221V	220 1/16W	[M]
R631	D0GB102JA008	1K 1/16W	[M]
R632	D0GB472JA008	4.7K 1/16W	[M]
R633	D0GB103JA008	10K 1/16W	[M]
R634	D0GB101JA008	100 1/16W	[M]
R635	D0GB222JA008	2.2K 1/16W	[M]
R636	D0GB222JA008	2.2K 1/16W	[M]
R637	D0GB681JA008	680 1/16W	[M]
R639	D0GB102JA008	1K 1/16W	[M]
R640	ERJ3GEYJ153V	15K 1/16W	[M]
R641	D0GB102JA008	1K 1/16W	[M]
R642	D0GB562JA008	5.6K 1/16W	[M]
R643	D0GB273JA008	27K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R644	D0GB562JA008	5.6K 1/16W	[M]
R645	D0GB223JA008	22K 1/16W	[M]
R646	D0GB392JA008	3.9K 1/16W	[M]
R647	D0GB822JA008	8.2K 1/16W	[M]
R661	D0AE221JA048	220 1/4W	[M]
R662	D0GB101JA008	100 1/16W	[M]
R663	D0GB681JA008	680 1/16W	[M]
R805	D0GB473JA008	47K 1/16W	[M]
R806	ERJ3GEY0R00V	0 1/16W	[M]
R807	D0GB332JA008	3.3K 1/16W	[M]
R808	D0GB332JA008	3.3K 1/16W	[M]
R809	ERJ3GEYJ224V	220K 1/16W	[M]
R811	D0GB473JA008	47K 1/16W	[M]
R812	D0GB102JA008	1K 1/16W	[M]
R813	D0GB102JA008	1K 1/16W	[M]
R814	D0GB102JA008	1K 1/16W	[M]
R815	D0GB102JA008	1K 1/16W	[M]
R816	D0GB102JA008	1K 1/16W	[M]
R817	D0GB183JA008	18K 1/16W	[M]
R818	D0GB103JA008	10K 1/16W	[M]
R819	D0GB472JA008	4.7K 1/16W	[M]
R820	D0GB103JA008	10K 1/16W	[M]
R822	D0GB102JA008	1K 1/16W	[M]
R823	D0GB102JA008	1K 1/16W	[M]
R824	D0GB474JA041	470K 1/16W	[M]
R825	D0GB333JA007	33K 1/16W	[M]
R828	D0GB102JA008	1K 1/16W	[M]
R829	D0GB102JA008	1K 1/16W	[M]
R830	D0GB104JA008	100K 1/16W	[M]
R831	D0GB104JA008	100K 1/16W	[M]
R832	D0GB103JA008	10K 1/16W	[M]
R833	D0GB104JA008	100K 1/16W	[M]
R834	D0GB222JA008	2.2K 1/16W	[M]
R835	D0GB103JA008	10K 1/16W	[M]
R840	ERJ3GEYJ153V	15K 1/16W	[M]
R841	D0GB821JA008	820 1/16W	[M]
R846	ERJ3GEYJ152V	1.5K 1/16W	[M]
R847	D0GB222JA008	2.2K 1/16W	[M]
R848	D0GB272JA007	2.7K 1/16W	[M]
R849	D0GB392JA008	3.9K 1/16W	[M]
R850	D0GB562JA008	5.6K 1/16W	[M]
R851	D0GB822JA008	8.2K 1/16W	[M]
R852	ERJ3GEYJ153V	15K 1/16W	[M]
R853	D0GB333JA007	33K 1/16W	[M]
R854	D0GB823JA008	82K 1/16W	[M]
R855	D0GB103JA008	10K 1/16W	[M]
R856	D0GB102JA008	1K 1/16W	[M]
R862	D0GB820JA008	82 1/16W	[M]
R864	D0GB102JA008	1K 1/16W	[M]
R865	D0GB102JA008	1K 1/16W	[M]
R866	D0GB473JA007	47K 1/16W	[M]
R873	D0GB472JA008	4.7K 1/16W	[M]
R880	D0GB102JA008	1K 1/16W	[M]
R881	D0GB101JA008	100 1/16W	[M]
R882	D0GB102JA008	1K 1/16W	[M]
R883	D0GB101JA008	100 1/16W	[M]
R900	ERD2FCVJ4R7T	4.7 1/4W	[M]
R901	D0GB102JA008	1K 1/16W	[M]
R904	D0GB102JA008	1K 1/16W	[M]
R1002	D0GB104JA008	100K 1/16W	[M]
R1004	D0GB104JA008	100K 1/16W	[M]
R1005	D0GB471JA008	470 1/16W	[M]
R1006	D0GB473JA007	47K 1/16W	[M]
R1007	D0GB471JA008	470 1/16W	[M]
R1008	D0GB471JA008	470 1/16W	[M]
R1009	D0GB103JA008	10K 1/16W	[M]
R1010	D0GB104JA008	100K 1/16W	[M]
R1012	D0GB680JA007	68 1/16W	[M]
R3001	D0GB334JA007	330K 1/16W	[M]
R3002	D0GB224JA007	220K 1/16W	[M]
R3003	D0AF100JA039	10 1/4W	[M]
R3004	ERJ6GEYJ472V	4.7K 1/10W	[M]
R3005	ERJ6GEYJ472V	4.7K 1/10W	[M]
R3006	D0GB155JA007	1.5M 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R3007	D0GB125JA007	1.2M 1/16W	[M]
R3008	ERJ3GEYJ224V	220K 1/16W	[M]
R3009	D0GB224JA007	220K 1/16W	[M]
R3010	D0GB101JA008	100 1/16W	[M]
R3011	D0GB101JA008	100 1/16W	[M]
R3012	D0GB103JA008	10K 1/16W	[M]
R3013	D0GB101JA008	100 1/16W	[M]
R3014	D0GB562JA008	5.6K 1/16W	[M]
R3015	D0GB682JA008	6.8K 1/16W	[M]
R3016	D0GB103JA008	10K 1/16W	[M]
R3017	ERJ3GEYJ153V	15K 1/16W	[M]
R3018	D0GB103JA008	10K 1/16W	[M]
R3019	D0GB103JA008	10K 1/16W	[M]
R3020	D0GB101JA008	100 1/16W	[M]
R3021	D0GB101JA008	100 1/16W	[M]
R3022	D0GB101JA008	100 1/16W	[M]
R3023	D0GB101JA008	100 1/16W	[M]
R3024	D0GB101JA008	100 1/16W	[M]
R3025	D0GB101JA008	100 1/16W	[M]
R3101	ERJ6GEYJ103V	10K 1/10W	[M]
R3102	ERJ6GEYJ682V	6.8K 1/10W	[M]
R3103	ERJ6GEYJ103V	10K 1/10W	[M]
R3104	ERJ6GEYJ682V	6.8K 1/10W	[M]
R3105	ERJ6GEYJ104V	100K 1/10W	[M]
R3201	ERJ6GEYJ103V	10K 1/10W	[M]
R3202	ERJ6GEYJ682V	6.8K 1/10W	[M]
R3203	ERJ6GEYJ103V	10K 1/10W	[M]
R3204	ERJ6GEYJ682V	6.8K 1/10W	[M]
R3205	ERJ6GEYJ104V	100K 1/10W	[M]
R7111	D0GB103JA008	10K 1/16W	[M]
R7211	ERJ3GEYJ823V	82K 1/16W	[M]
R7212	ERJ3GEYJ821V	820 1/16W	[M]
R7214	ERJ3GEYJ471V	470 1/16W	[M]
R7217	D0GB102JA008	1K 1/16W	[M]
R7218	D0GB102JA008	1K 1/16W	[M]
R7220	ERJ3GEYJ105V	1M 1/16W	[M]
R7221	ERJ3GEYJ101V	100 1/16W	[M]
R7253	ERJ3GEYJ100V	10 1/16W	[M]
R7254	D0GB102JA008	1K 1/16W	[M]
R7315	ERJ3GEYJ332V	3.3K 1/16W	[M]
R7323	ERJ3GEYJ332V	3.3K 1/16W	[M]
R7325	ERJ3GEYJ331V	330 1/16W	[M]
R7327	D0GB102JA008	1K 1/16W	[M]
R7328	D0GB103JA008	10K 1/16W	[M]
R7329	D0GB102JA008	1K 1/16W	[M]
R7330	ERJ3GEYJ562V	5.6K 1/16W	[M]
R7331	D0GB223JA008	22K 1/16W	[M]
R7332	D0GB102JA008	1K 1/16W	[M]
R7335	ERJ3GEYJ101V	100 1/16W	[M]
R7336	ERJ3GEYJ100V	10 1/16W	[M]
R7339	D0GB102JA008	1K 1/16W	[M]
R7349	ERJ3GEYJ183V	18K 1/16W	[M]
R7601	ERJ3GEYJ4R7V	4.7 1/16W	[M]
R7650	ERJ3GEYJ5R6V	5.6 1/16W	[M]
		CAPACITORS	
C1	ECJ1VC1H470J	47P 50V	[M]
C2	ECJ1VC1H100D	10 50V	[M]
C3	F1H1C333A071	0.033 16V	[M]
C4	F2A1C100A147	10P 16V	[M]
C5	ECJ1VB1C473K	0.047 16V	[M]
C6	F1H1H102A219	1000P 50V	[M]
C7	F1H1H102A219	1000P 50V	[M]
C8	ECJ2VC1H070D	7P 50V	[M]
C9	F1H1E103A029	0.01 25V	[M]
C10	F1H1E103A029	0.01 25V	[M]
C11	F1H1H102A219	1000P 50V	[M]
C12	ECJ1VB1C473K	0.047 16V	[M]
C13	ECJ1VC1H150J	15P 50V	[M]
C15	ECJ1VB1C473K	0.047 16V	[M]
C16	ECJ1VC1H150J	15P 50V	[M]
C17	F2A1H3R3A145	3.3 50V	[M]
C18	F1H1E103A029	0.01 25V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C19	F2A1H1R0A145	1 50V	[M]
C20	F2A0J101A167	100 6.3V	[M]
C21	F2A1H1R0A145	1.0 50V	[M]
C22	F2A1HR47A013	47 50V	[M]
C23	F2A0J101A167	100 6.3V	[M]
C24	ECEA1AKA220B	22 10V	[M]
C25	ECJ1VB1C183K	0.018 16V	[M]
C26	F1H1E103A029	0.01 25V	[M]
C27	ECJ1VB1C183K	0.018 16V	[M]
C28	F1H1H102A219	1000P 50V	[M]
C29	F1H1H102A219	1000P 50V	[M]
C30	F2A1H1R0A145	1 50V	[M]
C31	F2A1H1R0A145	1 50V	[M]
C32	F2A1H4R7A145	4.7 50V	[M]
C33	F1H1H101A230	100P 50V	[M]
C34	ECJ1VC1H270J	27P 50V	[M]
C35	F1H1H101A230	100P 50V	[M]
C36	ECJ1VC1H220J	22P 50V	[M]
C37	F1H1H101A230	100P 50V	[M]
C38	F1H1H101A230	100P 50V	[M]
C39	F1H1H102A219	1000P 50V	[M]
C40	F2A0J101A167	100 6.3V	[M]
C41	F1H1H331A013	330P 50V	[M]
C43	ECJ1VB1C473K	0.047 16V	[M]
C44	ECJ1VB1H223K	0.022 50V	[M]
C46	F1H1H222A219	2200P 50V	[M]
C47	F1D1H100A015	10P 50V	[M]
C48	F1H1H102A219	1000P 50V	[M]
C51	ECJ2VC1H070D	7P 50V	[M]
C52	F1H1H102A219	1000P 50V	[M]
C101	F1H1H102A219	1000P 50V	[M]
C103	F1H1C104A041	0.1 16V	[M]
C104	F1H1C104A041	0.1 16V	[M]
C105	F1H1C104A041	0.1 16V	[M]
C106	F1H1H102A219	1000P 50V	[M]
C107	F1H1H102A219	1000P 50V	[M]
C108	F1H1H102A219	1000P 50V	[M]
C109	ECJ1VB1C683K	0.068 16V	[M]
C110	F1H1C104A041	0.1 16V	[M]
C111	F1H1E103A029	0.01 25V	[M]
C112	F1H1E1530002	0.015 25V	[M]
C113	ECJ1VB1C224K	0.22 16V	[M]
C114	ECJ1VB1C473K	0.047 16V	[M]
C115	ECJ1VB1C105K	1 16V	[M]
C117	ECJ1VB1H682K	6800P 50V	[M]
C118	F1H1C333A071	0.033 16V	[M]
C119	F1H1E1530002	0.015 25V	[M]
C122	ECJ1VB1C473K	0.047 16V	[M]
C124	F1H1C104A041	0.1 16V	[M]
C126	F1H1H102A219	1000P 50V	[M]
C201	F1H1H102A219	1000P 50V	[M]
C203	F1H1C104A041	0.1 16V	[M]
C204	F1H1C104A041	0.1 16V	[M]
C205	F1H1C104A041	0.1 16V	[M]
C206	F1H1H102A219	1000P 50V	[M]
C207	F1H1H102A219	1000P 50V	[M]
C208	F1H1H102A219	1000P 50V	[M]
C209	ECJ1VB1C683K	0.068 16V	[M]
C210	F1H1C104A041	0.1 16V	[M]
C211	F1H1E103A029	0.01 25V	[M]
C212	F1H1E1530002	0.015 25V	[M]
C213	ECJ1VB1C224K	0.22 16V	[M]
C214	ECJ1VB1C473K	0.047 16V	[M]
C215	ECJ1VB1C105K	1 16V	[M]
C217	ECJ1VB1H682K	6800P 50V	[M]
C218	F1H1C333A071	0.033 16V	[M]
C219	F1H1E1530002	0.015 25V	[M]
C222	ECJ1VB1C473K	0.047 16V	[M]
C224	F1H1C104A041	0.1 16V	[M]
C226	F1H1H102A219	1000P 50V	[M]
C301	F1H1H102A219	1000P 50V	[M]
C302	F1H1H221A748	220P 50V	[M]
C303	F1H1H221A748	220P 50V	[M]
C304	F1H1H221A748	220P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C305	F1H1H221A748	220P 50V	[M]
C309	ECEA1AKA470B	47 10V	[M]
C310	F2A1C101A147	100 16V	[M]
C311	F2A1HR33A234	33 50V	[M]
C312	F1H1H221A748	220P 50V	[M]
C313	F1H1H221A748	220P 50V	[M]
C353	ECA1AM221B	220 10V	[M]
C356	F1H1H221A748	220P 50V	[M]
C357	F1H1H221A748	220P 50V	[M]
C358	F2A1A1020051	1000 10V	[M]
C402	ECJ1VB1C224K	0.22 16V	[M]
C403	F1H1H471A219	470P 50V	[M]
C407	F2A1A1020051	1000 10V	[M]
C409	F1H1H102A219	1000P 50V	[M]
C410	F1H1H101A230	100P 50V	[M]
C502	ECJ1VB1C224K	0.22 16V	[M]
C503	F1H1H471A219	470P 50V	[M]
C507	F2A1A1020051	1000 10V	[M]
C601	F2A1C470A016	47 16V	[M]
C602	F2A1C100A147	10 16V	[M]
C603	F1H1H102A219	1000P 50V	[M]
C604	F2A1C100A147	10 16V	[M]
C608	F2A1C100A147	10 16V	[M]
C609	F2A1C100A147	10 16V	[M]
C610	F2A1C100A147	10 16V	[M]
C611	ECA0JM472E	4700 6.3V	[M]
C612	F2A0J101A167	100 6.3V	[M]
C615	F2A1C101A147	100 16V	[M]
C616	ECA1EM332E	3300 25V	[M]
C623	F2A1C101A147	100 16V	[M]
C624	F2A1C100A147	10 16V	[M]
C626	F2A1C100A147	10 16V	[M]
C801	F2A1A101A159	100 10V	[M]
C803	F1H1H102A219	1000P 50V	[M]
C804	F1H1H102A219	1000P 50V	[M]
C806	F1H1H102A219	1000P 50V	[M]
C807	ECJ1VC1H560J	56P 50V	[M]
C808	ECJ1VC1H560J	56P 50V	[M]
C809	F1H1H102A219	1000P 50V	[M]
C810	ECJ1VC1H390J	39P 50V	[M]
C811	ECJ1VC1H560J	56P 50V	[M]
C812	ECJ1VC1H180J	18P 50V	[M]
C813	ECJ1VC1H180J	18P 50V	[M]
C814	F2A1H2R2A145	2.2 50V	[M]
C815	F2A1H1R0A145	1 50V	[M]
C816	F1H1H102A219	1000P 50V	[M]
C817	F1H1H102A219	1000P 50V	[M]
C818	F1H1H102A219	1000P 50V	[M]
C819	F1H1H102A219	1000P 50V	[M]
C820	F2A1C100A147	10 16V	[M]
C821	F1H1H102A219	1000P 50V	[M]
C822	F1H1H102A219	1000P 50V	[M]
C826	F1H1H102A219	1000P 50V	[M]
C827	ECA1AM331B	330 10V	[M]
C828	F1H1H222A013	2200P 50V	[M]
C829	F1H1H222A013	2200P 50V	[M]
C830	F1H1H102A219	1000P 50V	[M]
C831	F1H1H102A219	1000P 50V	[M]
C840	F1H1H221A748	220P 50V	[M]
C841	F1H1H221A748	220P 50V	[M]
C842	F1H1H221A748	220P 50V	[M]
C843	F1H1H221A748	220P 50V	[M]
C844	ECJ1VB1C105K	1 16V	[M]
C860	F2A0J221A167	220 6.3V	[M]
C901	F1E1H1030001	0.01 50V	[M]
C902	F1E1H1030001	0.01 50V	[M]
C903	F1E1H1030001	0.01 50V	[M]
C904	F1E1H1030001	0.01 50V	[M]
C1001	F2A1C100A147	10 16V	[M]
C1002	ECJ1VB1C105K	1 16V	[M]
C1003	F1H1H102A219	1000P 50V	[M]
C1004	F1H1H221A748	220P 50V	[M]
C1005	F1H1H221A748	220P 50V	[M]
C1006	F1H1H221A748	220P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1007	F1H1H221A748	220P 50V	[M]
C1009	ECJ1VC1H681J	680P 50V	[M]
C1010	F1H1H103A219	0.01 50V	[M]
C1011	F1H1H103A219	0.01 50V	[M]
C1012	F2A0J101A167	100 6.3V	[M]
C1014	ECJ1VB1C105K	1 16V	[M]
C3001	ECJ1VB1H104K	0.1 50V	[M]
C3002	F2A1A101A206	100 10V	[M]
C3003	F2A1A470A204	47 10V	[M]
C3004	F1H1C104A041	0.1 16V	[M]
C3005	ECJ2FB0J106K	10 6.3V	[M]
C3006	F2A1E100A202	10 25V	[M]
C3007	F2A1A101A159	100 10V	[M]
C3101	ECJ1VB0J105K	1 6.3V	[M]
C3102	ECJ1VC1H330J	33P 50V	[M]
C3103	ECJ1VC1H101J	100P 50V	[M]
C3104	ECJ2FB0J106K	10 6.3V	[M]
C3105	ECJ2FB0J106K	10 6.3V	[M]
C3201	ECJ1VB0J105K	1 6.3V	[M]
C3202	ECJ1VC1H330J	33P 50V	[M]
C3203	ECJ1VC1H101J	100P 50V	[M]
C3204	ECJ2FB0J106K	10 6.3V	[M]
C3205	ECJ2FB0J106K	10 6.3V	[M]
C7102	F1H1A474A025	0.47 10V	[M]
C7107	ECJ1VB1H223K	0.022 50V	[M]
C7142	ECJ1VB1H332K	3300P 50V	[M]
C7154	ECJ1VB1C104K	0.1 16V	[M]
C7155	ECJ1VB1C104K	0.1 16V	[M]
C7161	ECJ1VB1C104K	0.1 16V	[M]
C7164	ECJ2FF1A106Z	10 10V	[M]
C7165	ECJ2FF1A106Z	10 10V	[M]
C7166	F1H1H103A219	0.01 50V	[M]
C7203	F2A0J221A200	220 6.3V	[M]
C7204	ECJ1VB1C104K	0.1 16V	[M]
C7216	ECJ1VB1H681K	680P 50V	[M]
C7217	ECJ1VB1C104K	0.1 16V	[M]
C7218	ECJ1VB1C823K	0.082 16V	[M]
C7223	F2A1H4R70037	4.7 50V	[M]
C7225	F1H1H102A219	1000P 50V	[M]
C7226	F1H1H102A219	1000P 50V	[M]
C7227	ECA1HAK010XI	1 50V	[M]
C7228	ECA1HAK010XI	1 50V	[M]
C7230	ECJ1VB1C104K	0.1 16V	[M]
C7231	F2A0J221A200	220 6.3V	[M]
C7232	F2A0J221A200	220 6.3V	[M]
C7233	F1H1C104A008	0.1 16V	[M]
C7234	ECJ1VB1C104K	0.1 16V	[M]
C7235	F2A1C100A133	10 16V	[M]
C7241	F1H1H102A219	1000P 50V	[M]
C7243	F1H1C104A008	0.1 16V	[M]
C7244	ECJ1VB1C153K	0.015 16V	[M]
C7253	F1H1H471A219	470P 50V	[M]
C7263	ECJ1VB1C104K	0.1 16V	[M]
C7264	ECJ1VB1C104K	0.1 16V	[M]
C7315	F1H1A474A025	0.47 10V	[M]
C7334	ECEA1AKA221I	220 10V	[M]
C7335	F1H1C104A008	0.1 16V	[M]
C7338	ECJ1VB1C563K	0.056 16V	[M]
C7339	ECJ1VB1C183K	0.018 16V	[M]
C7352	ECJ1VB1C183K	0.018 16V	[M]
C7601	ECEA0JKA330I	33 6.3V	[M]
C7613	ECJ1VB1C104K	0.1 16V	[M]
C7614	F2A0J101A198	100 6.3V	[M]
C7626	ECJ1VB1C104K	0.1 16V	[M]
C7670	ECJ1VB1C104K	0.1 16V	[M]