PSG1603030CE
A6

# Service Manual

## Music Server

**Model No. ST-G30E**
**ST-G30PP**
**ST-G30LE**
**ST-G30LPP**

ST-G30

Product Color: (S)...Silver Type

**⚠ WARNING**

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

**IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and 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.

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# 1 Safety Precautions

## 1.1. General Guidelines

1. **IMPORTANT SAFETY NOTICE**
   There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.
2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. 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.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer 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. Measure the resistance value, with an ohmmeter, 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

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 capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1-1.
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. In case a measurement is outside 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.

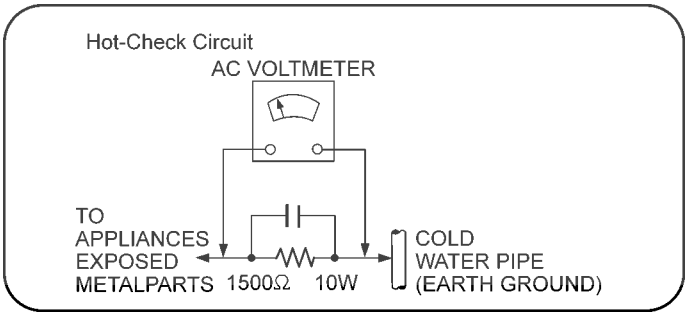



Figure 1-1

## 1.2. Before Repair and Adjustment

Disconnect AC power to discharge AC Capacitors (C1700, C1701, C1702, C1703, C1704, C1706, C1714) through a 10 Ω, 10 W resistor to ground.

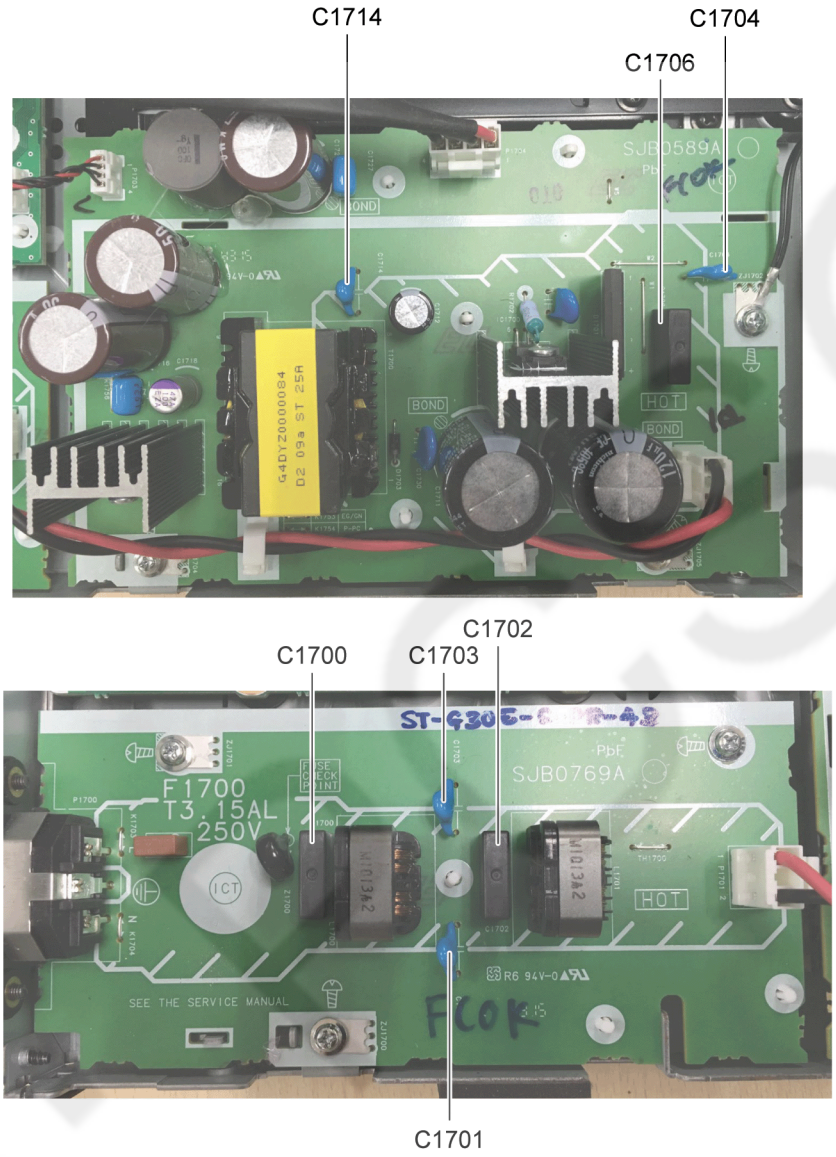



Figure 1-1

**Caution:**

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 220V - 240V, during power on (Network Standby OFF) should be ~0.30W. (E/LE)
- Current consumption at AC 120V, during power on (Network Standby OFF) should be ~0.30W. (PP/LPP)

## 1.3. 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.

## 1.4. Caution For AC Cord (For EB)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark Ψ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

**CAUTION!**
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.
If in any doubt please consult a qualified electrician.

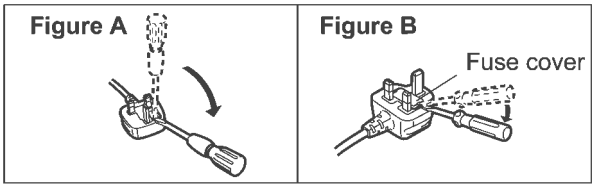
**IMPORTANT**
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

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

**THIS PLUG IS NOT WATERPROOF—KEEP DRY.**

**Before use**
Remove the connector cover.

**How to replace the fuse**
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.
1. Open the fuse cover with a screwdriver.




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

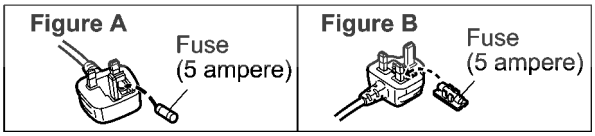



Figure 1-3

# 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, Exploded View & 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.

| Safety | Ref No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|---|
| ⚠ | 14 | RGR0482B-A1 | REAR PANEL | E |
| ⚠ | 14 | RGR0482B-C | REAR PANEL | PP |
| ⚠ | 14 | RGR0482B-D | REAR PANEL | LE |
| ⚠ | 14 | RGR0428B-F | REAR PANEL | LPP |
| ⚠ | 15 | RYP2153-S | SIDE AL PANEL R UNIT | |
| ⚠ | 19 | TTFA0307 | TOP CABINET UNIT | |
| ⚠ | 20 | TTPA0617 | FRONT PANEL SUB ASS'Y | |
| ⚠ | 64 | RYP2154-S | SIDE AL PANEL L UNIT | |
| ⚠ | 65 | SXY0026 | CD DRIVE UNIT | |
| ⚠ | A1 | K2CG3YY00191 | AC CORD | PP |
| ⚠ | A1 | K2CM3YY00041 | AC CORD | E |
| ⚠ | A1 | K2CS3YY00033 | AC CORD | E |
| ⚠ | A2 | SQT1219 | O/I BOOK (En) | E |
| ⚠ | A2 | SQT1220 | O/I BOOK (Ge/Fr/It/Du) | E |
| ⚠ | A2 | SQT1221 | O/I BOOK (Sp/Sw/Da/Fi) | E |
| ⚠ | A2 | SQT1342 | O/I BOOK (En) | LE |
| ⚠ | A2 | SQT1343 | O/I BOOK(Ge/Fr/It/Du) | LE |
| ⚠ | A2 | SQT1344 | O/I BOOK (Sp/Sw/Da/Fi) | LE |
| ⚠ | A2 | SQT1222 | O/I BOOK (En/Cf) | PP |
| ⚠ | A2 | SQT1345 | O/I BOOK (En/Cf) | LPP |
| ⚠ | PCB5 | SEP0589AA | SMPS P.C.B | |
| ⚠ | PCB7 | SEP0769AA | AC INLET P.C.B | |
| ⚠ | F1700 | K5G312Y00007 | FUSE | |
| ⚠ | F1701 | K5G202Y00006 | FUSE | |

# 2 Warning

## 2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices.

Examples of typical ES devices are IC (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 electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   **CAUTION:**
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

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## 2.2. Caution for Lithium Battery

(English)
**Caution**
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.
**Changing the battery**
Replace the completed circuit board.
Do not replace only the battery.

(Canadian French)
**Mise en garde**
Danger díexplosion si la batterie níest pas remplacèe correctement.
Remplacez-la uniquement par une batterie identique ou de type èquivalent.
**Changement de la batterie**
Remplacez la carte de circuits imprimès en entier.
Ne remplacez pas seulement la batterie.

## 2.3. Precaution of Laser Diode

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

**Caution:**

This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.
Wavelength: 790 nm (CD)
Maximum output radiation power from pickup: 100 μW/VDE
Laser radiation from the pickup unit is safety level, but be sure the followings:

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

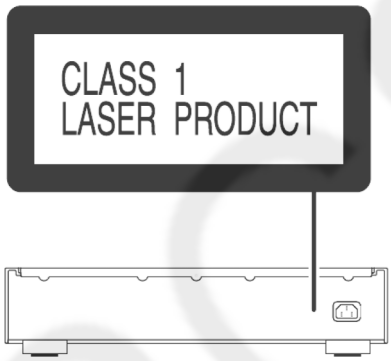



Figure 2-1

## 2.4. 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.<br><br>(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%

## 2.5. Handling Precautions for Traverse Ass'y

The laser diode in the optical pickup unit may break down due to static electricity of clothes or human body. Special care must be taken avoid caution to electrostatic breakdown when servicing and handling the laser diode in the traverse unit.

### 2.5.1. Cautions to Be Taken in Handling the Optical Pickup Unit (OPU)

The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.
2. To prevent the laser diode from the electrostatic discharge damage, the flexible cable of the optical pickup unit removed should be short-circuited with a short pin or a clip.
3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the flexible cable.
4. The antistatic FFC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the flexible cable, cut off the antistatic FFC.

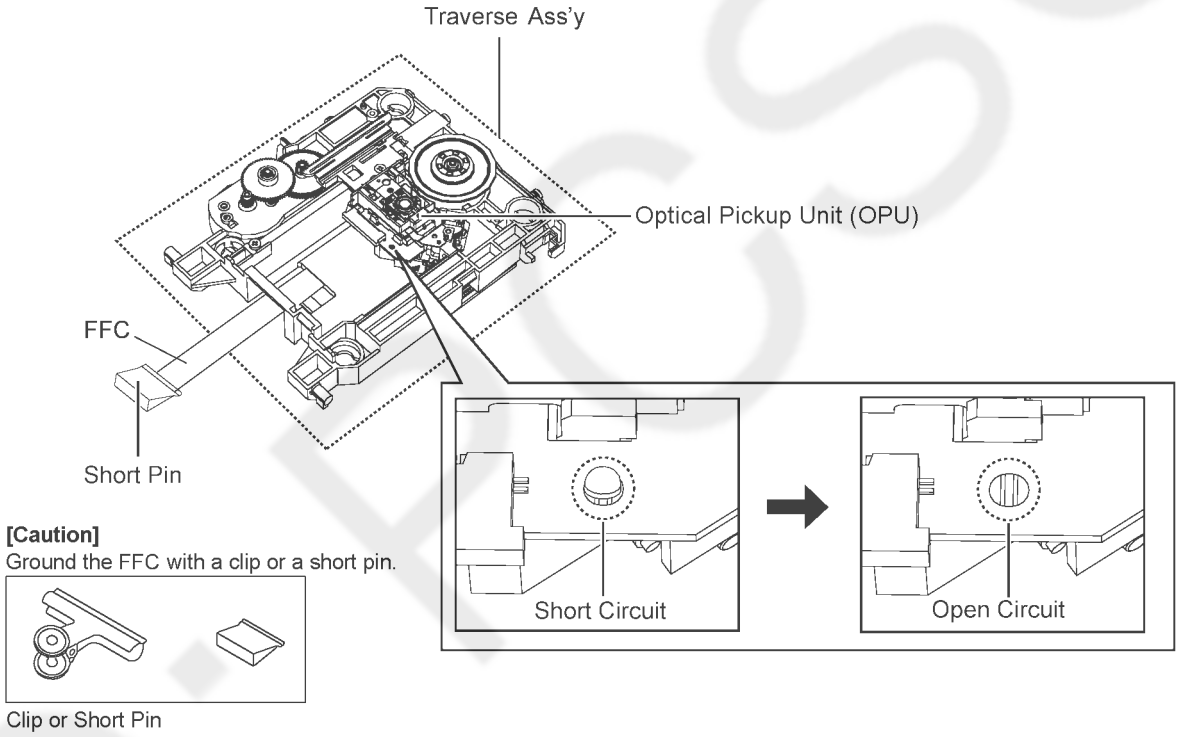



Figure 2-2

## 2.6. Grounding for electrostatic breakdown prevention

• As for parts that use optical pick-up (laser diode), the optical pick-up is destroyed by the static electricity of the working environment.
Repair in the working environment that is grounded.

### 2.6.1. Worktable grounding

• Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed and ground the sheet.

## 2.6.2. Human body grounding

• Use the anti-static wrist strap to discharge the static electricity form your body Figure 2-3.

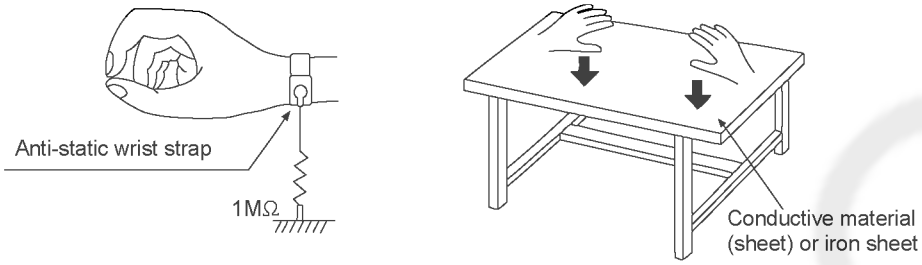



Figure 2-3

# 3 Service Navigation

## 3.1. ST-G30 controller

ST-G30 not has remote control. Please download app from internet and install for operation and setting ST-G30.

- Install “Technics Music App” on your tablet or smartphone to make the operations and the settings of ST-G30.
- This user guide is for ST-G30.

  Also see the following website.
  - For iOS:

    http://www.technics.com/support/downloads/sp-app/data/UserGuide/TechnicsMusicApp_UserGuide(iOS).pdf
  - For Android:

    http://www.technics.com/support/downloads/sp-app/data/UserGuide/TechnicsMusicApp_UserGuide(Android).pdf

# What is Technics Music App?

Technics

Music App

This application is designed for making the operations and the settings of ST-G30. It is also designed as a simple, user-friendly music playback app that enables you to perform tasks such as selecting an audio source and playback device and creating a playlist on your tablet or smartphone.

- Operating environment:

  iPad / iPhone / iPod touch with iOS 7 or later

  Android device with Android 4.1 or later

More detail, please refer Technics Music App user guide,

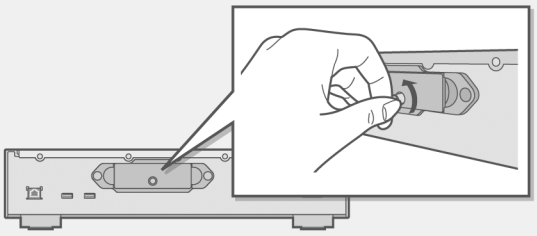
## 3.2. Install SSD (For ST-G30E/PP Only)

You can replace the built-in SSD of this unit. Pull out the SSD tray from this unit to replace the SSD.

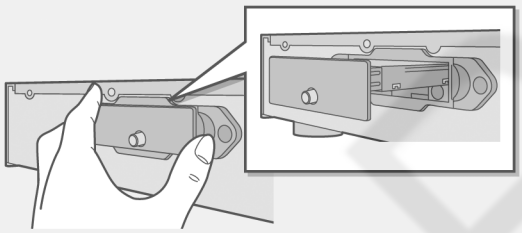
- For information on the handling of the SSD, refer to "About SSD".
- Before installing or removing the SSD, be sure to turn off this unit and pull out the mains plug from the outlet. Not doing so may cause malfunctions.
- We recommend creating a backup of your important data to prevent its loss before replacing the SSD.

Follow the steps below to replace the SSD.

1 After pulling out the main plug from the mains outlet, rotate the fixing screw on the back of this unit to loosen it.

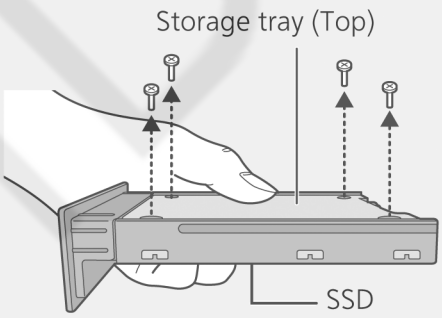


2 Hold both ends of the storage tray to pull it out straight.



3 Remove all the screws (M3 × 4, Silver), and take out the SSD.

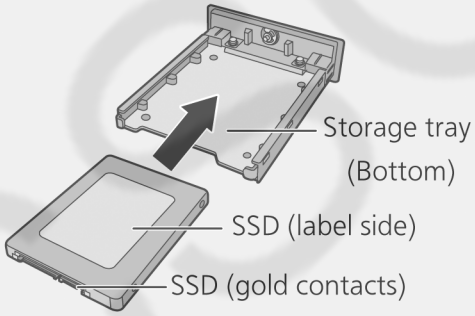
- Use a cross-slot screwdriver to remove the screws. Choose a cross-slot screwdriver that matches the size of the screws.
- Do not tighten the screws with excessive force. Doing so will strip their threads, making it impossible to use the screws again.




Hold the SSD with one hand to prevent it from falling.

4 Turn the storage tray over with the bottom side facing up, and attach the new SSD.

- Be careful about the orientation of the SSD and storage tray.

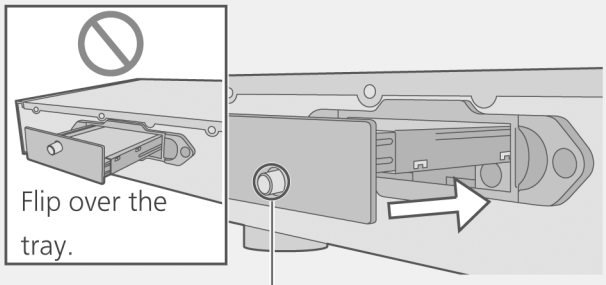



5 Turn the storage tray over with the top side facing up, and tighten the screws (M3 × 4, Silver).

- In the same way as in Step 3, hold the SSD with one hand to prevent it from falling.

6 Insert the storage tray into this unit, and tighten the fixing screw.

- After inserting the storage tray, tighten the fixing screw firmly until the tray is secure.




7 Format the SSD with "Technics Music App".

For details, refer to the user guide for "Technics Music App".

Note

- Be careful not to touch the gold contacts on the SSD.

### 3.2.1. About SSD

## ■ SSD (Solid State Drive)

**SSD is a precision device sensitive to vibrations, shocks, and dust.**

Depending on the installation environment or handling of the SSD, it may sustain partial damage, or in the worst case, lose its importing and transmission capabilities.

In particular, do not expose the SSD to vibrations and shocks or remove the storage tray while this unit is in operation. Please also keep in mind that an accidental event such as a power failure may cause damage to the content being imported or transmitted.

**SSD is for temporary storage.**

Use the SSD of this unit for temporary storage of music files. We recommend that you regularly back up the music files that are important to you.＊ Panasonic is not liable for any losses of or damage to music files arising out of any defects.

**Make a backup if anything seems wrong with the SSD.**

Defects in the SSD may cause abnormal noise continuously while importing, transmission or a backup is in progress, or noise in the audio. Continued use of the SSD in such conditions may deteriorate its performance and eventually make it impossible to use it again.

If you encounter such problems, back up your data to a USB device as soon as possible, and request a repair.

- **It is not possible to recover content (data) imported on a malfunctioning SSD.**

＊ For details, refer to the user guide for “Technics Music App”.

## ■ Replacement SSD

- Use a recommended replacement SSD. You can check our latest catalogues or website for information on our recommended SSDs. www.technics.com
- Panasonic cannot provide information about the compatibility of SSDs and recommended SSDs except for those recommended by Panasonic.

## ■ Notes on the installation and removal of the SSD

- Panasonic cannot be held liable for malfunction or damage resulting from the use of a non-recommended SSD or improper installation or removal. Check the type of the SSD and the instructions for installing and removing it in advance, and attach it correctly.
- Please note that sound quality may change even if you replace the SSD with one that is recommended by Panasonic according to the instructions provided by Panasonic.
- Panasonic cannot be held liable for the loss of data resulting from malfunctions or for compensation for data, losses or any direct or indirect damage resulting from improper installation. Please also note that this provision also applies when the SSD is sent in for repair.
- We recommend creating a backup before replacing the SSD.

## ■ Notes on handling

**Condensation**

If, for example, condensation forms on the SSD after it is suddenly brought into a warm room, leave it without installing it to the main unit until it adjusts to the ambient temperature of the room (about 2 to 3 hours).

**Storage location**

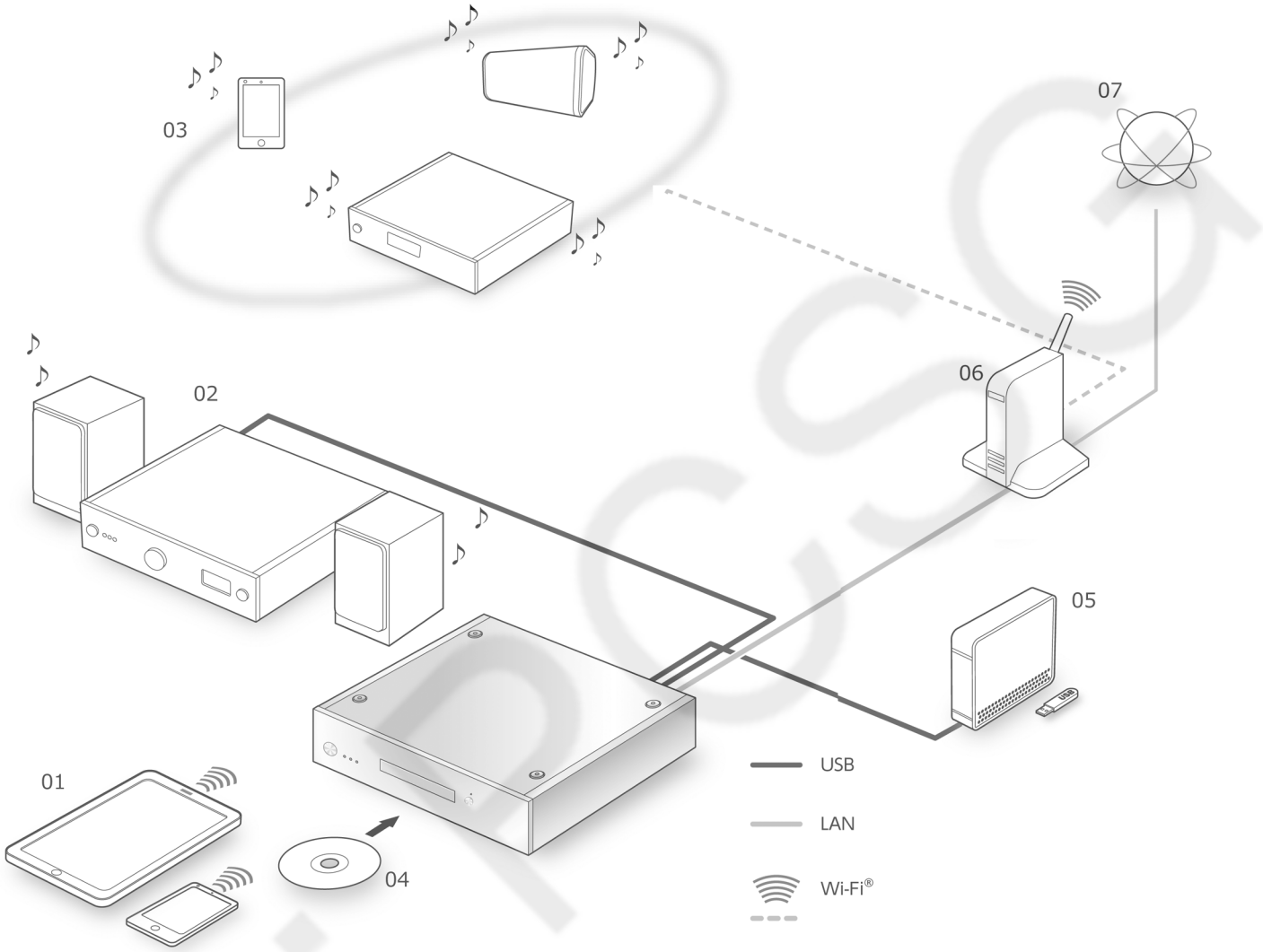
Do not place or store in the following locations:

- Dusty locations
- Hot locations
- Locations with drastic temperature changes
- Humid locations
- Locations exposed to direct sunlight
- Locations where static electricity or electromagnetic waves are generated (these may damage the imported content that is important to you)

### 3.2.2. Recommended SSD (Commercial products)

SSD can be used commercial producs. Please check below web site for information on recommended products.
www.technics.com

## 3.3. Connection with the music server




**01 Smartphone/Tablet**

Download the “Technics Music App” to operate this unit.

**02 Device with a built-in USB-DAC**

Connect an amplifier/DA converter with a USB cable to output music data stored on this unit.

**03 Network player/smartphone/ wireless speaker**

Connect with DLNA to output music data stored on this unit.

**04 CD**

**05 USB devices**

Music on USB devices can be saved to the SSD of this unit. You can also back up music stored on the SSD to USB devices.

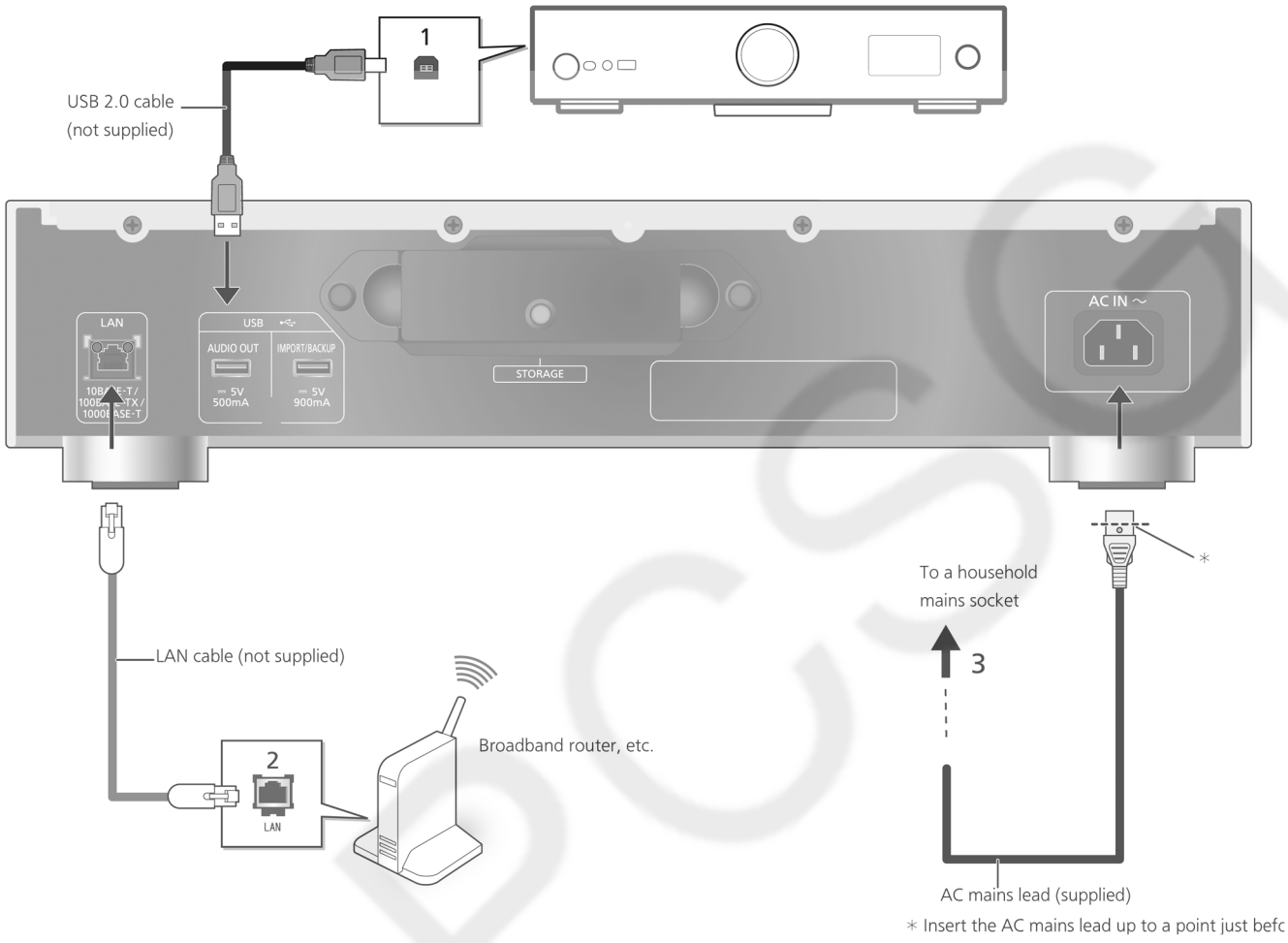
**06 Broadband router**

Connect to this unit with a LAN cable.

**07 Internet**

You can download music tracks from an online high-res music store, or automatically retrieve title information from the Gracenote database.

## 3.4. Devices/AC mains lead, etc




1 **Connect the device with a built-in USB-DAC.**
This unit will output audio signals, allowing you to play back music files.
- See the operating instructions for connected equipment for operational details.
- The USB connection is not required for the playback of music using the DLNA function.

2 **Wired LAN connection**
Normally, just connecting a LAN cable will complete the setup.
- Use category 7 or above straight LAN cables (STP) when connecting to peripheral devices.

3 **AC mains lead connection**
Connect only after all other connections are completed.

**Note**

- This unit consumes a small amount of AC power (⇨ 30) even when the unit is in standby mode. Remove the plug from the main electrical outlet if you will not be using the unit for an extended period of time. Place the unit so the plug can be easily removed.
- While the AC mains lead is disconnected, the LAN cable must be connected or disconnected.
- Inserting any cable other than a LAN cable in the LAN port can damage the unit.

# 4 Specifications

**■ General**

| | |
|---|---|
| **Power supply** | AC 220 V to 240 V, 50/60 Hz (E/LE)<br>AC 120 V, 60 Hz (PP/LPP) |
| **Power consumption** | 29 W (E/LE)<br>28 W (PP/LPP) |
| **Power Consumption in standby mode (Off mode)** | Approx. 0.3 W |
| **Dimensions (W x H x D)** | 430 mm x 98 mm x 391 mm<br>(16 $^{15}/_{16}$" x 3 $^{7}/_{8}$" x 15 $^{13}/_{32}$") |
| **Mass (main unit** | Approx. 11.0 kg (24.3 lbs) |
| **Operating temperature range** | 0 °C to +40 °C<br>(+32 °F to +104 °F) |
| **Operating humidity range** | 35% to 80% RH<br>(no condensation) |

*: At the time of iPod/iPhone/iPad non-charging.

**■ Disc section**

| | |
|---|---|
| **Support Disc** | 8 cm / 12 cm<br>CD, CD-R, CD-RW |
| **Support Format** | CD-DA |
| **Wave Length** | 783 nm (CD) |
| **Laser Power** | CLASS 1 |

**■ Terminals section**

| | |
|---|---|
| **Ethernet interface** | LAN (1000 BASE-T / 100 BASE-TX / 10 BASE-T) |
| **USB**<br>**AUDIO OUT** | USB 2.0 High-speed<br>DC 5 V MAX, 500 mA<br>USB Audio Class 2.0,<br>Asynchronous mode |
| **USB**<br>**IMPORT / BACKUP** | USB 3.0 Super-speed<br>DC 5 V MAX, 900 mA<br>USB Mass Storage class<br>File system<br>FAT12, FAT16, FAT32, NTFS |

**■ SSD section (E/PP)**

| | |
|---|---|
| **Capacity** | 512 GB built in (User data area 460 GB[*1]) |
| **Form factor** | 2.5 inch<br>Thickness 7 mm[*2] |
| **Interface** | Serial ATA 6 Gbps |
| **Input Voltage** | 5 V |

*1 Some portions of the capacity are used for data management. Therefore, the capacity a user can use is less than 512 GB

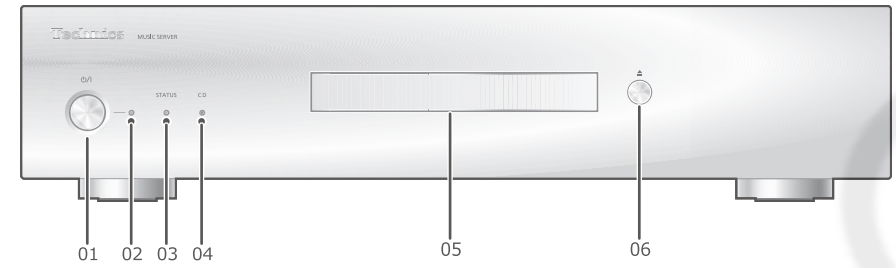
*2 Storage tray supported thickness Max 9.5 mm

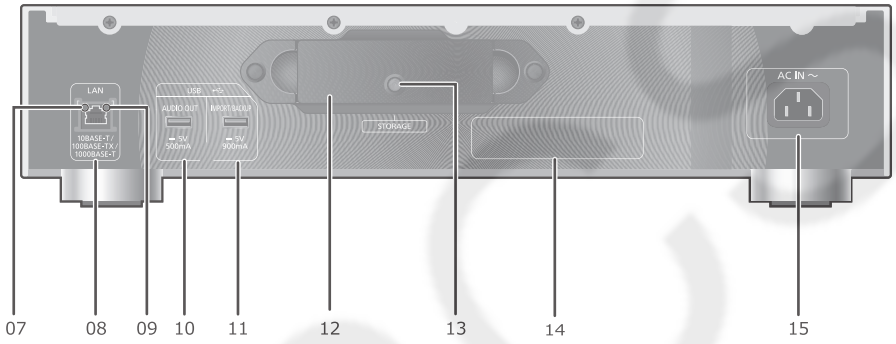
Note:

- Specifications are subject to change without notice. Mass and dimension are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

# 5 Location of Controls and Components

## 5.1. Main Unit Key Button Operation




01 Standby/on switch (⏻/I)

- Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

02 Power indicator

- Blue: The unit is on.

03 STATUS indicator

This is a two-colour LED indicator that shows the SSD status.

- It flashes blue when this unit is on.

| | |
|---|---|
| OFF | Not possible to access SSD |
| Lights up (blue) | Possible to access SSD |
| Lights up (red) | Importing from USB / Downloading from Technics Tracks / Backing up / Restoring |
| Flashing (red) | The SSD is not formatted |

04 CD indicator

This is a two-colour LED indicator that shows the CD status.

- It flashes blue when you insert a CD into this unit.

| | |
|---|---|
| OFF | No CD |
| Lights up (blue) | Possible to access the CD |
| Lights up (red) | Recording CD music |
| Flashing (red) | Incompatible CD |

05 CD tray

06 Opens/closes the CD tray

- The tray opens or closes after the CD indicator flashes.

07 Network connection indicator

| | |
|---|---|
| OFF | Disconnected |
| Lights up (yellow) | Connected |
| Flashing (yellow) | Making a connection |

08 LAN terminal

09 Network communication speed indicator

| | |
|---|---|
| OFF | Disconnected/10 Mbps connection |
| Lights up (Orange) | 100 Mbps connection |
| Lights up (green) | 1 Gbps connection |

10 USB terminal (⎓ DC 5 V 500 mA AUDIO OUT)

- Connects to a device with a built-in USB-DAC.

11 USB terminal (⎓ DC 5 V 900 mA IMPORT/BACKUP)

- Connects to a USB memory device or USB HDD (Hard Disk Drive).

12 Storage tray (STORAGE)

- You can remove the tray to attach and remove the SSD.

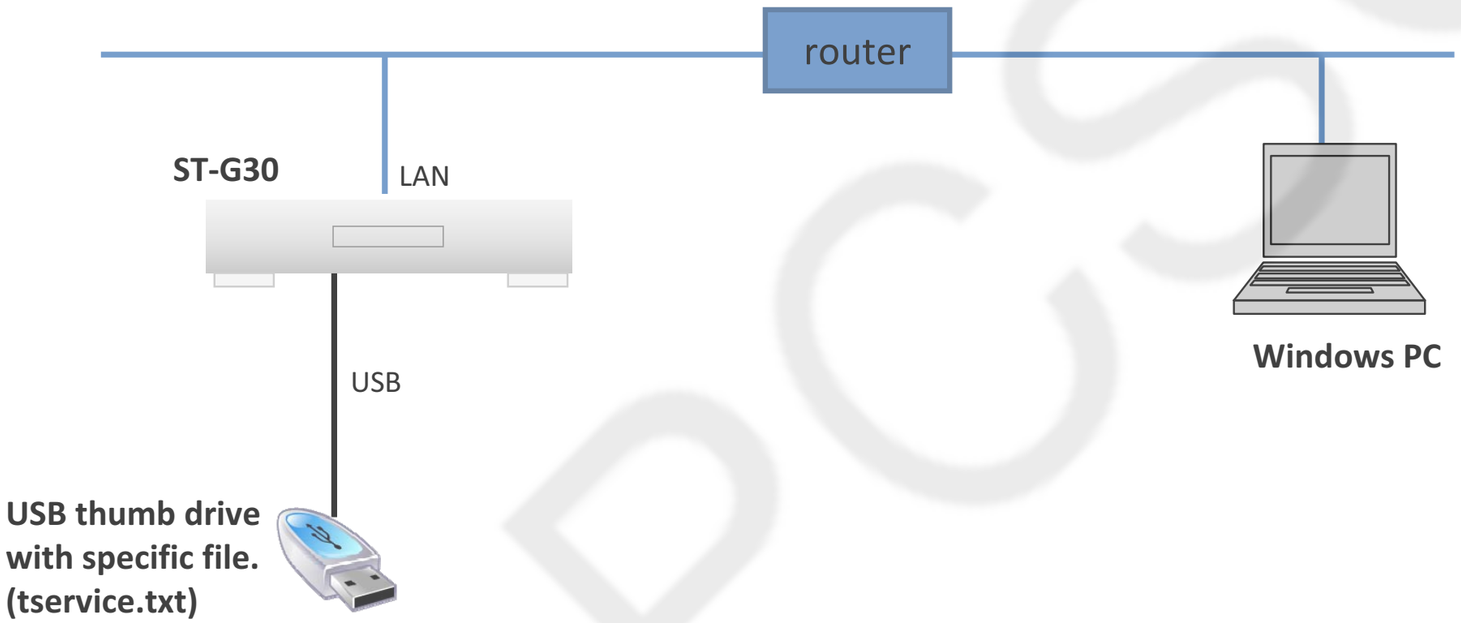
13 Fixing screw

14 Product identification marking

15 AC IN terminal ( ~ )

# 6 Service Mode

## 6.1. Entering Service Mode




■Prepare:
USB Thumb drive included “tservicetxt” file.
Operation PC. (Windos 7/8/8.1 …）

■How to enter service mode:
(1) Insert USB Thumb drive.
(2) Power ON.
(3) Execute PC application “Technics_ST-G30.exe”.
(4) Chose which ST-G30 to operate. (if necessary)
(5) Chose “Service mode”, then display Service mode menu:

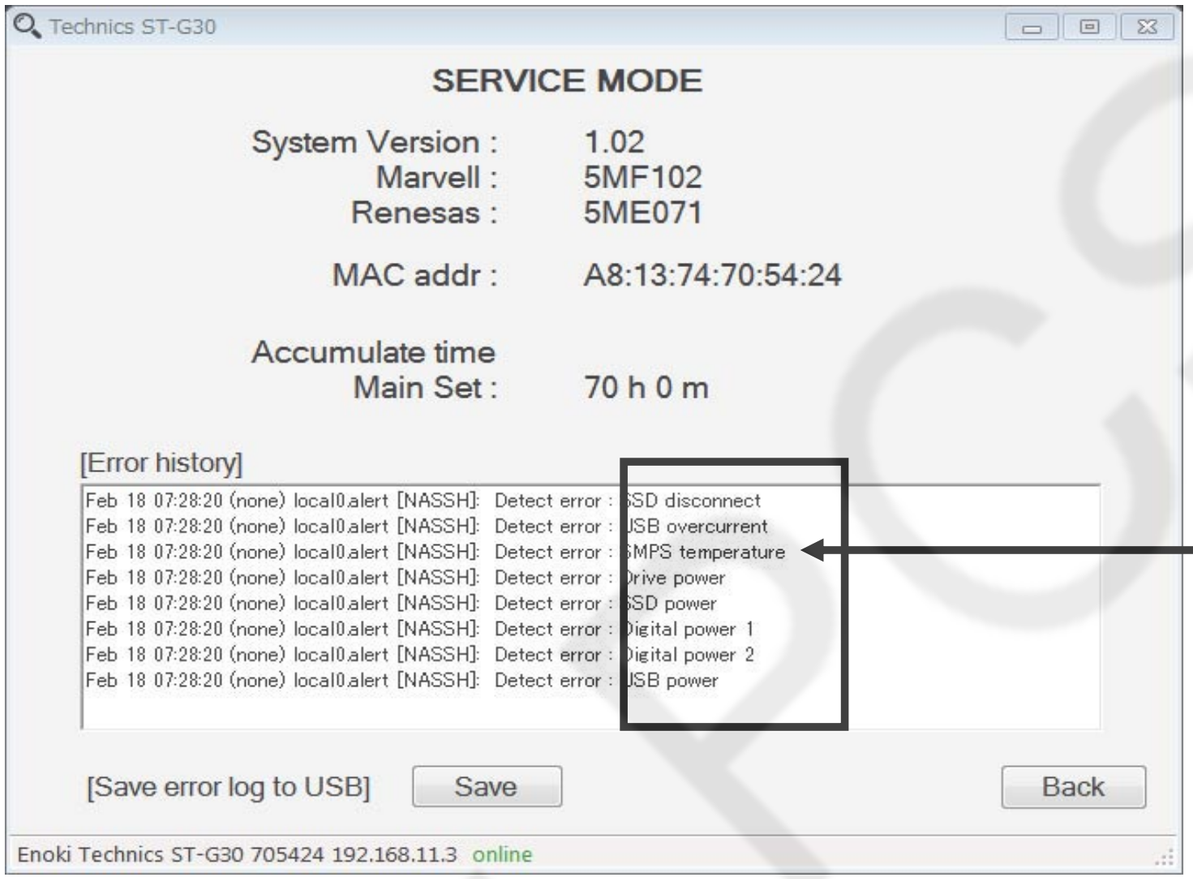
■Service mode menu:
System version : XXXXX
Marvell : XXXXX
Renesas : XXXXX

MAC addr : XX:XX:XX:XX:XX:XX

Accumulation time
Main Set: XXh XXm
Drive : XXh XXm

[Save error log] ← Save error log to USB

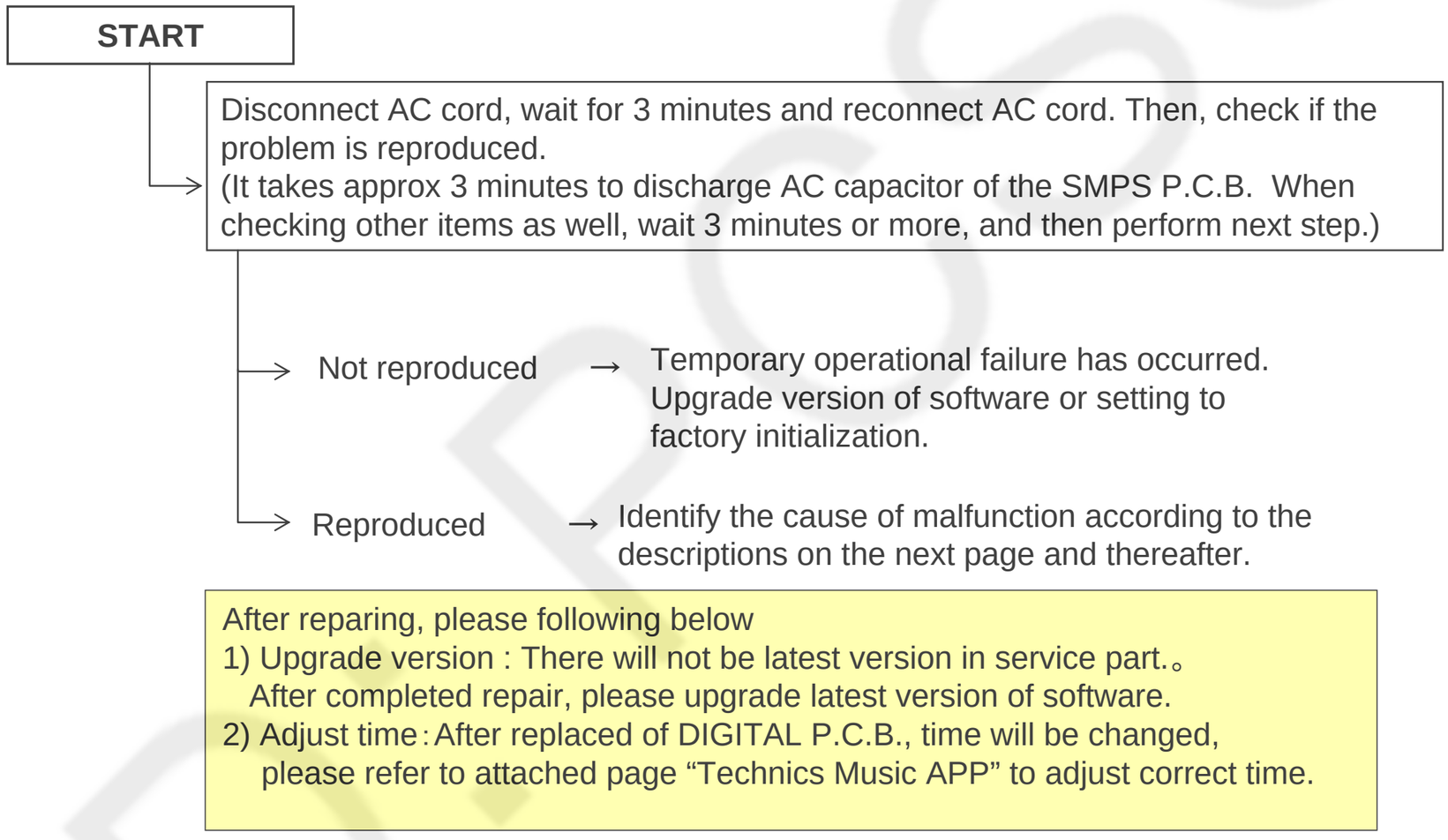
## 6.2. Service Mode Menu



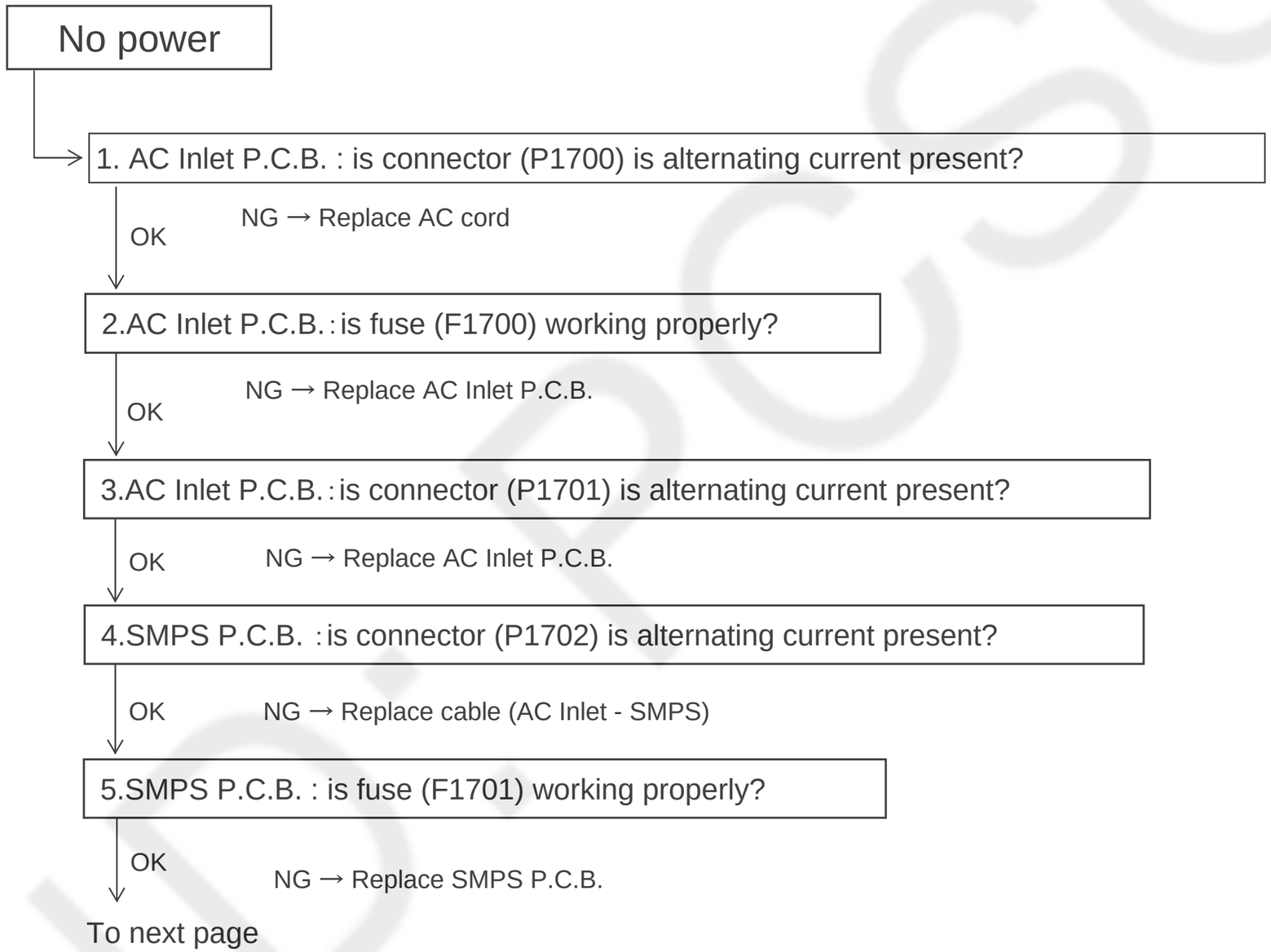

| Error status | Description |
|---|---|
| SSD disconnect | SSD not connection |
| USB overcurrent | USB over current |
| SMPS temperature | SMPS temperature abnormal |
| Drive power | CD Drive power abnormal |
| SSD power | SSD power abnormal |
| Digital power 1 Digital power 2 | Digital power abnormal |
| USB power | USB power abnormal |

# 7 Troubleshooting Guide

## 7.1. Preparation



## 7.2. No Power


No power
1. AC Inlet P.C.B. : is connector (P1700) is alternating current present?
NG → Replace AC cord
OK
2.AC Inlet P.C.B. : is fuse (F1700) working properly?
NG → Replace AC Inlet P.C.B.
OK
3.AC Inlet P.C.B. : is connector (P1701) is alternating current present?
NG → Replace AC Inlet P.C.B.
OK
4.SMPS P.C.B. : is connector (P1702) is alternating current present?
NG → Replace cable (AC Inlet - SMPS)
OK
5.SMPS P.C.B. : is fuse (F1701) working properly?
NG → Replace SMPS P.C.B.
OK
To next page

From previous page

6.SMPS P.C.B. ：is connector (P1704) is alternating current present?
(Does P1704 1pin – 4 pin current 12.5 Vtyp? )

NG：Disconnect cable (SMPS P.C.B.（P1704）- Main P.C.B.（P3008）) and recheck again the voltage.

OK →NG: Replace SMPS P.C.B.

Connect again the cable, check for poor contact of the cable.

OK →NG: Replace cable

Replace Main P.C.B.

OK

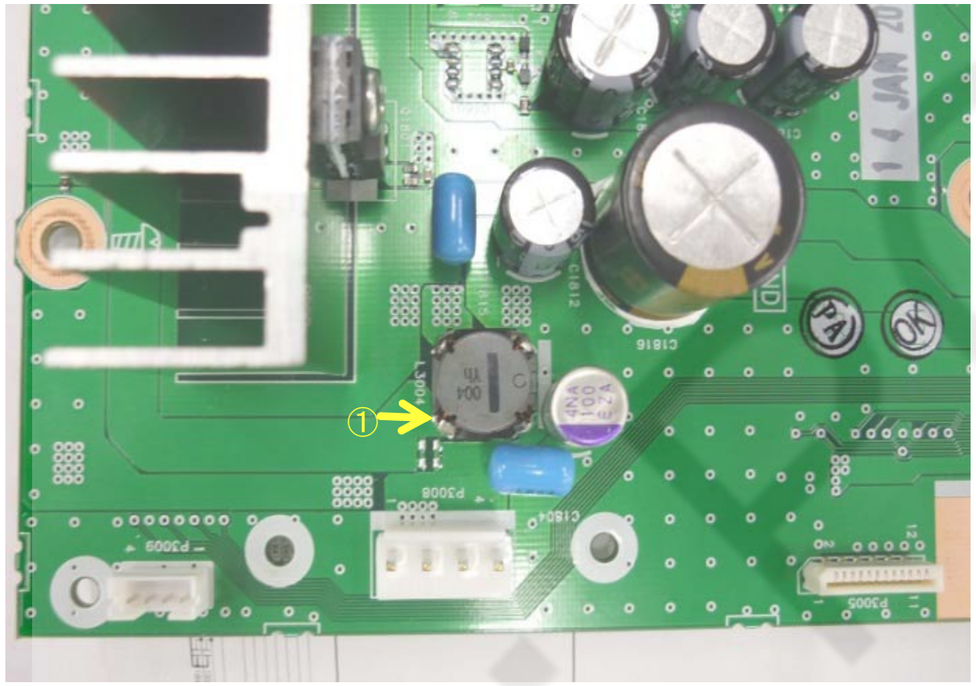
To next page

From previous page →

**7. Check Main 12V voltage**

During connector P3008 connected,
Check ① of coil L3004 output
OK: 12.5V typ

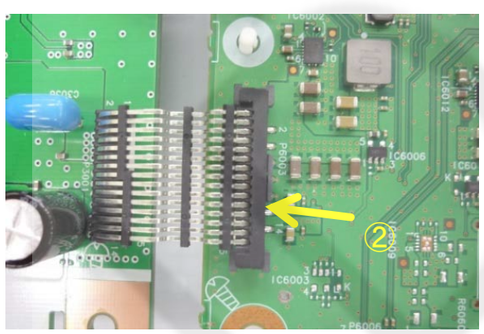
NG: No voltage [Coil L3004 ① be cut]
↓
Replace Main P.C.B.




**8. Check Micron 3.3V voltage**

At DIGITAL P.C.B., check ② of connector P6003PIN11(NSW+3.3v) - PIN12(GND)
OK:3.3Vtyp

If NG

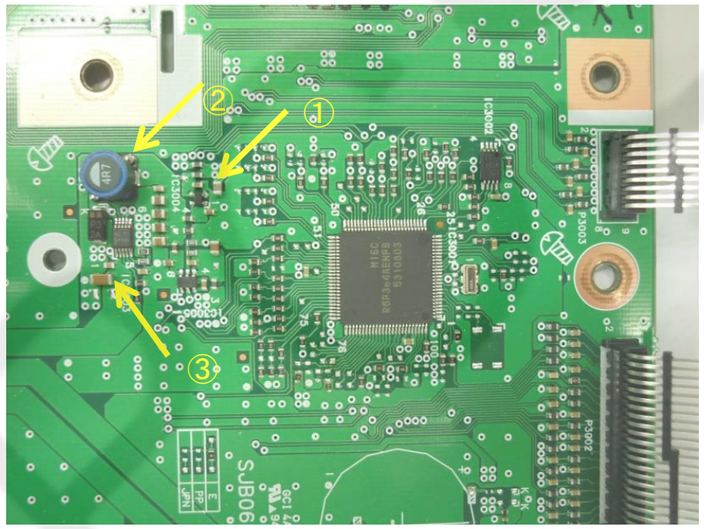



To next page “OK”

To next page “NG”

From previous page “OK”

From previous page “NG”

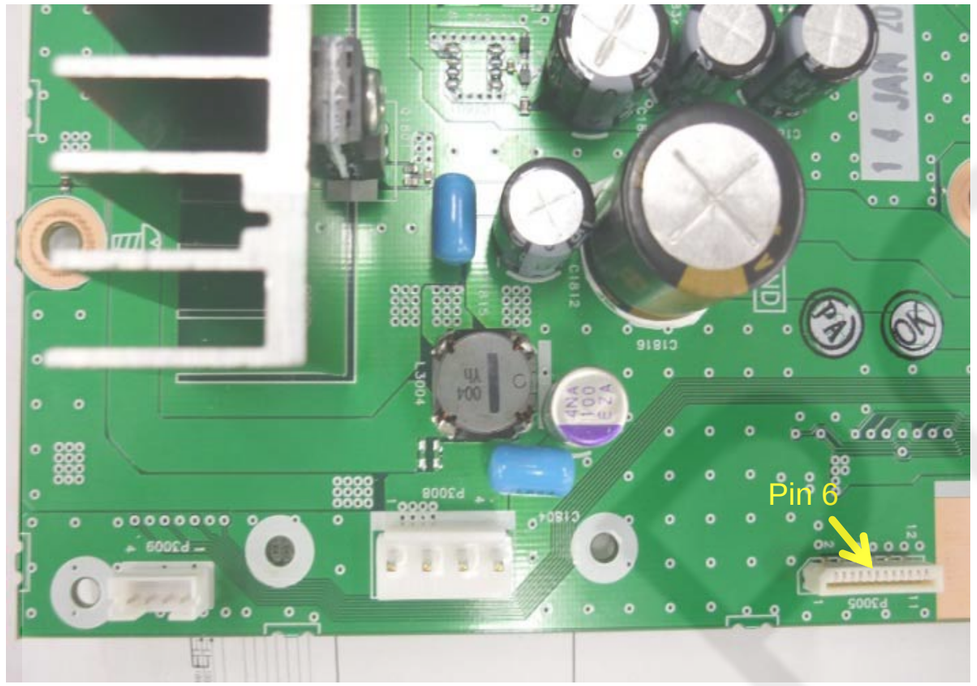



At SSD tray bottom of Main P.C.B.
① 3.3V ② about 6V ③ about 12.5V checking

③ has not come ① and ② no voltage output → Replace Main P.C.B.
② coil output abnormal, DC-DC abnormal → Replace Main P.C.B.
① output 3.3V supply to Digital P.C.B., so that if no voltage in Digital P.C.B., mean
Main P.C.B. cabling abnormal.
Even disconnect P6003, still current present.mean Digital P.C.B. abnormal.

To next page

From previous page




## 9. Checking connection of Power Switch P.C.B

At P3005 Pin6
Checking of Front Panel Power Switch signal
Power Switch
OK OFF（Before press）: 3.3V
ON（After pressing） : 0.6V

NG
No power (Does Power button function normal?)
Implement following confirmation

To next page

**From** previous **page**

## 10. Checking of AC-SYNC

At connecting SMPS status, measure P3009 pin between PIN1(AC_SYNC)-PIN4(GND)

OK: about 2V (0-3.3V 60Hz waveform)

NG

↓

Check cable conduction of P3009 to P1703

↓

NG: No conduction

Replace cable

OK:

Disconnect P3009 Main P,C,B. and measure SMP P.C.B. P1703 PIN1(AC_SYNC)-4(GND)

↓

OK: about 2V (0-3.3V 60Hz waveform)

NG: SMPS P.C.B. AC_SYNC circuit abnormal

↓

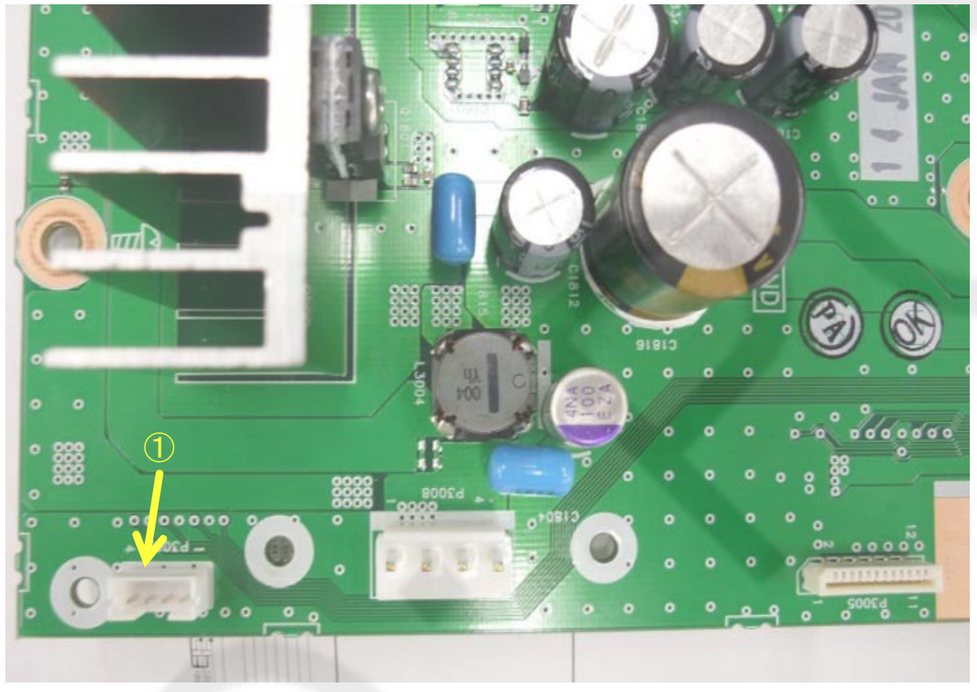
Replace SMPS P.C.B.

AC_SYNC Detection circuit abnormal

Repalce Main P.C.B.

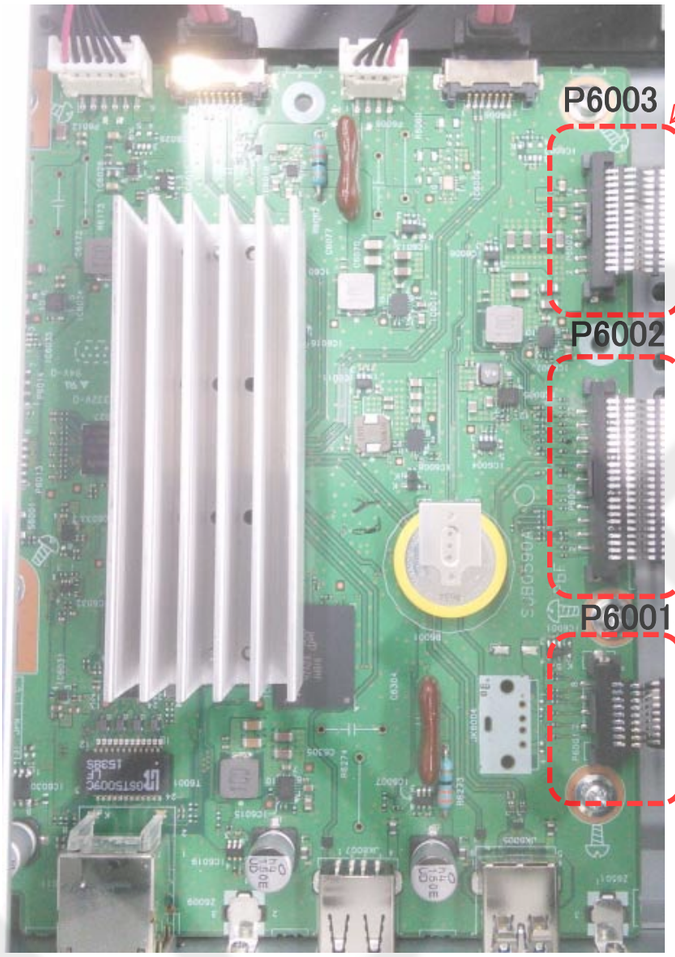
Even without current from Power Switch P.C.B. when point to AC should be operating.

If NG, replace Main P.C.B..



## 7.3. Immediately Power Falls

**Immediately power falls** → **1.Check connection of Digital P.C.B**




Connectors connect Main P.C.B. and Digital P.C.B.

Check connection of P6003,P6002,P6001

- Is it no insert diagonal?
- Is it no connector lifting?
- Unplug the connector and confirm no pin broken ?

OK

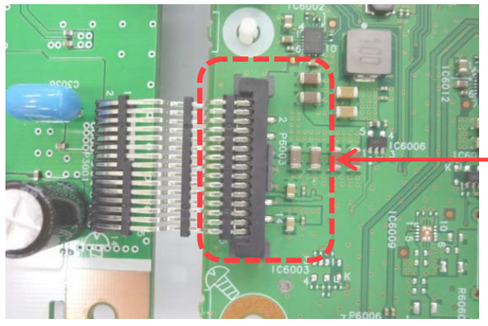
NG

Lifting/ diagonal problem: unplug and plug again the connector.

Pin broken problem: replace Main P.C.B.

To next page

From previous page



## 2. Check Voltage output to Digital P.C.B.

During POWER LED lighting,
Measure voltage P6003 PIN1(12V)–PIN7(GND)
OK : PIN1 12.5V Typ
NG
Go to “No power” item 6 and check

P6003

| Pin No | Signal |
|---|---|
| 1 | DC+12V |
| 2 | DC+12V |
| 3 | DC+12V |
| 4 | DC+12V |
| 5 | DC+12V |
| 6 | DC+12V |
| 7 | GND |
| 8 | GND |
| 9 | GND |
| 10 | GND |
| 11 | NSW+3.3V |
| 12 | GND |
| 13 | CLEAN+5.0V |
| 14 | CLEAN+5.0V |
| 15 | GND |

To next page

From previous page

**3. Check power control signal of Digital P.C.B. (P6002)**

P6002

| Pin No | Signal |
|---|---|
| 1 | DRV_DIRECT |
| 2 | DRV_OC |
| 3 | CDDRV_POWERON |
| 4 | GND |
| 5 | MVL_TX |
| 6 | MVL_RX |
| 7 | GND |
| 8 | NO CONNECTION |
| 9 | NO CONNECTION |
| 10 | NO CONNECTION |
| 11 | NO CONNECTION |
| 12 | GND |
| 13 | MVL_RESET |
| 14 | MVL_GPIO1 |
| 15 | MVL_INT1 |
| 16 | MVL_POWERON SIGNAL |
| 17 | GND |
| 18 | NO CONNECTION |
| 19 | NO CONNECTION |
| 20 | MVL_GPIO2 |
| 21 | MVLPOWERERROR1 |
| 22 | MVLPOWERERROR2 |
| 23 | CDDRV_POWERERROR |

Check voltage between PIN 16 – 17 of P6002

OK: Voltage 3.25V typ

Control only during Power LED lighting discrimination difficult in tester

NG

↓

To next page NG

**If OK**

To next page OK

From previous page OK

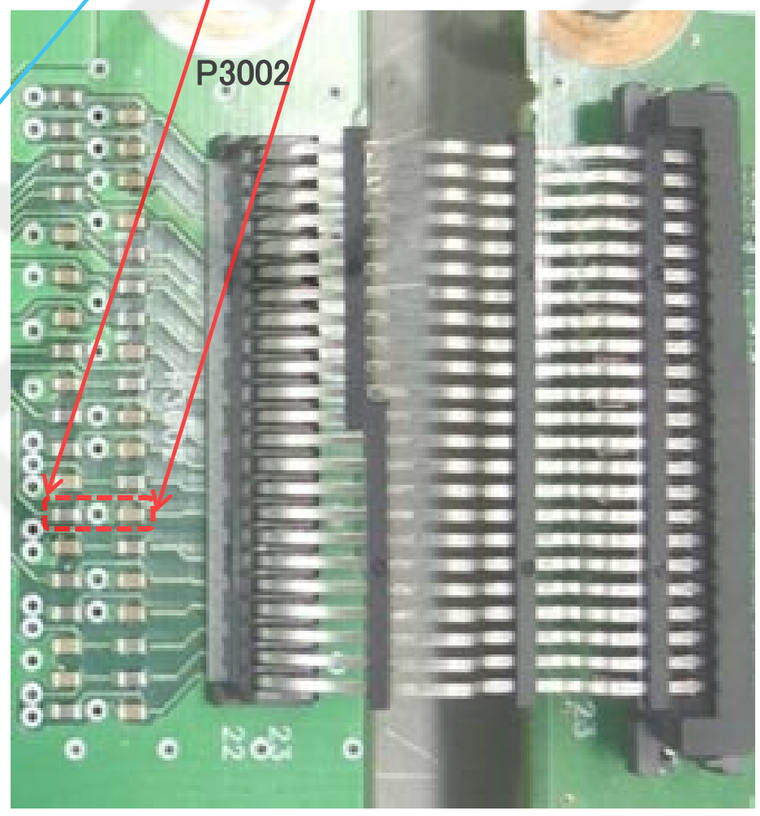
P3002

| Pin No | Signal |
|---|---|
| 1 | DRV_DIRECT |
| 2 | DRV_OC |
| 3 | DRV_PON |
| 4 | GND |
| 5 | MVL_TXD |
| 6 | MVL_RXD |
| 7 | GND |
| 8 | SPI_WDATA(no use) |
| 9 | SPI_CLK(no use) |
| 10 | SPI_RDATA(no use) |
| 11 | MVL_SPI_CS(no use) |
| 12 | GND |
| 13 | MVL_NRST |
| 14 | MVL_GPIO1 |
| 15 | MVL_INT1 |
| 16 | NET_STANBY_H |
| 17 | GND |
| 18 | No use |
| 19 | No use |
| 20 | MVL_GPIO2 |
| 21 | MVL_P_ERR1 |
| 22 | MVL_P_ERR2 |
| 23 | MVL_GPIO3 |

From previous page NG

Check power contorl signal of Main P.C.B.
P3002 PIN16 is signal part
Check installation state of LB3025/C3508
NG：Part floating, diagonal installed etc unstable state

Replace Main P.C.B.

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From previous page

**3. Check power control signal of Digital P.C.B.  (P6002)**

P6002

| Pin No | Signal |
|---|---|
| 1 | DRV_DIRECT |
| 2 | DRV_OC |
| 3 | CDDRV_POWERON |
| 4 | GND |
| 5 | MVL_TX |
| 6 | MVL_RX |
| 7 | GND |
| 8 | NO USE |
| 9 | NO USE |
| 10 | NO USE |
| 11 | NO USE |
| 12 | GND |
| 13 | MVL_RESETﾄ |
| 14 | MVL_GPIO1 |
| 15 | MVL_INT1 |
| 16 | MVL_POWERONSIGNAL |
| 17 | GND |
| 18 | NO USE |
| 19 | NO USE |
| 20 | MVL_GPIO2 |
| 21 | MVLPOWERERROR1 |
| 22 | MVLPOWERERROR2 |
| 23 | CDDRV_POWERERROR |

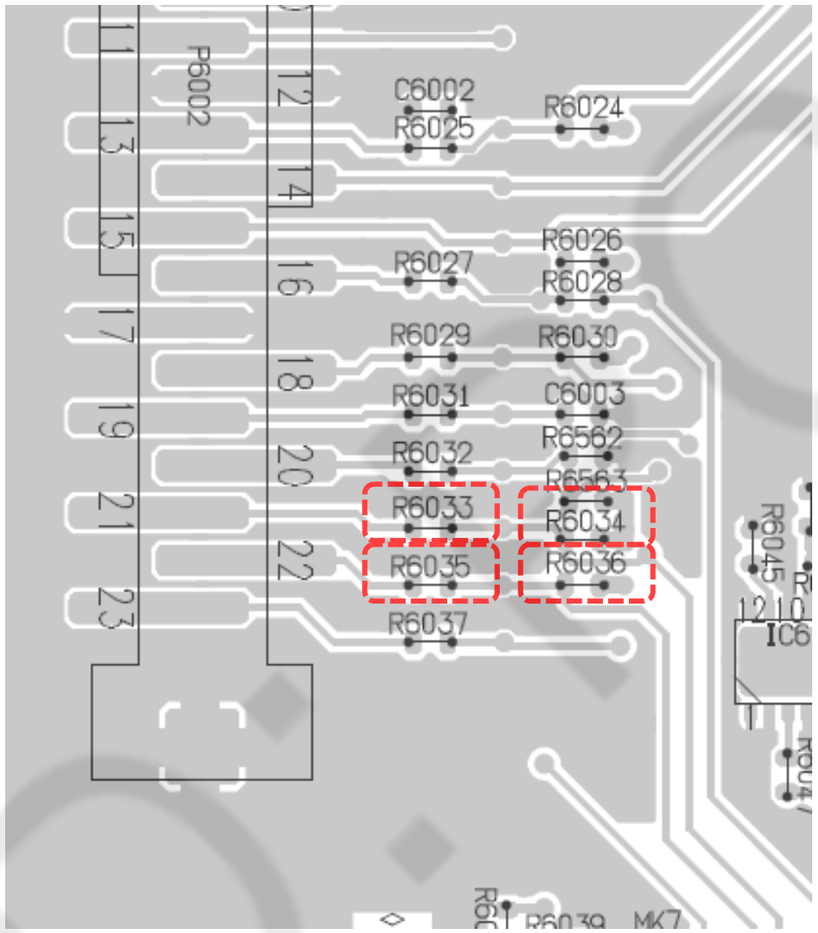
Check voltage between P6002 PIN 21/22 and GND(PIN17 ･･･)
Normally when LED lighting 3.25V typ

NG

To next page ①

To next page ②

①




To next page ③

②

Digital P.C.B. : check R6033/R6035/R6034/R6036

OK

NG : Part floating, diagonal installed etc unstable state

↓

Replace Digital P.C.B.

In Digital P.C.B., check voltage of
IC6025/IC6013/IC6001/IC6006
IC6004/IC6017/IC6001
PIN5 (VOL) – PIN3(GND)

OK

IC6025/6013/6001/6006 : 5.0V typ
IC6004 : 3.3V typ
IC6017 : 1.5V typ
IC6011 : 1.1Vtyp
Only Power LED lighting, measurable

NG : Power IC trouble

Replace Digital P.C.B.
Is it P6002 always unplug and plug?

NG : Reset IC trouble

↓

Replace Digital P.C.B.

③

↓

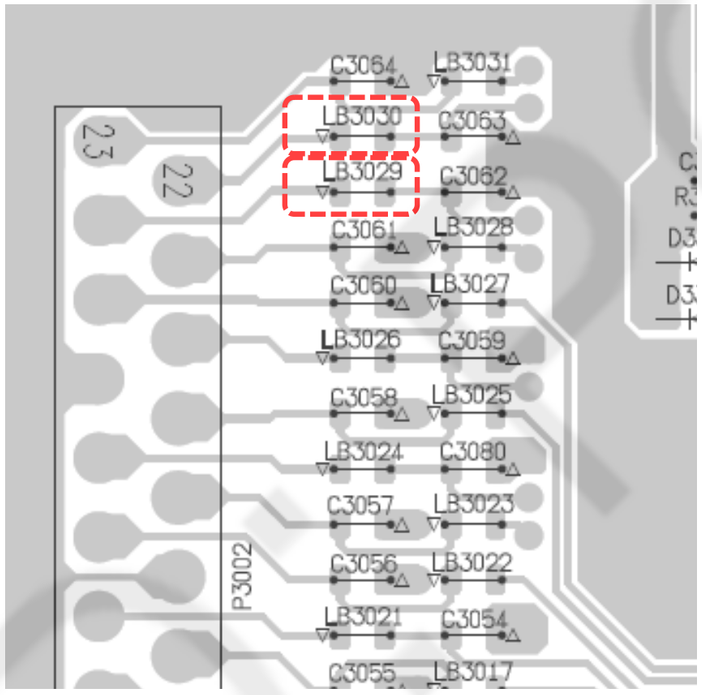
Main P.C.B. : Check LB3029/LB3030

OK

NG: Part floating, diagonal installed etc unstable state

↓

Replace Main P.C.B.

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④

↓

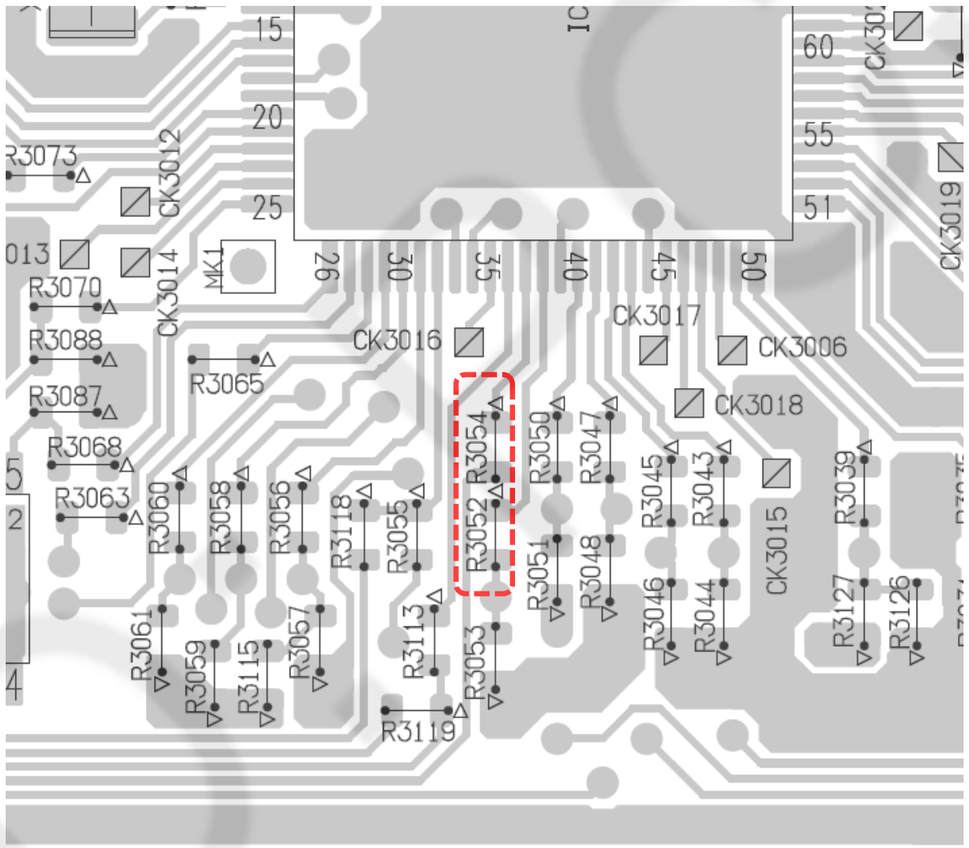
Check R3052/R3054

OK

NG : p[art floating, diagonal installed etc unstable state

↓

Replace Main P.C.B.




IC3001 trouble : Replace Main P.C.B.

## 7.4. Technics Music App No Display

**Technics Music App No display**

**1.Does router power on?**

OK ↓

NG
Power on the router

**2. Does operation terminal（Tablet, Smart Phone etc ）connecting to router(Wifi)？**

OK ↓

NG
Setting router to connect Smart Phone, Tablet
（For detail, refer to Broadband Router Instruction Manual）

**3.Does router and ST-G30 connecting?**

OK ↓

NG
Connect LAN cable to router LAN port and ST-G30 LAN port

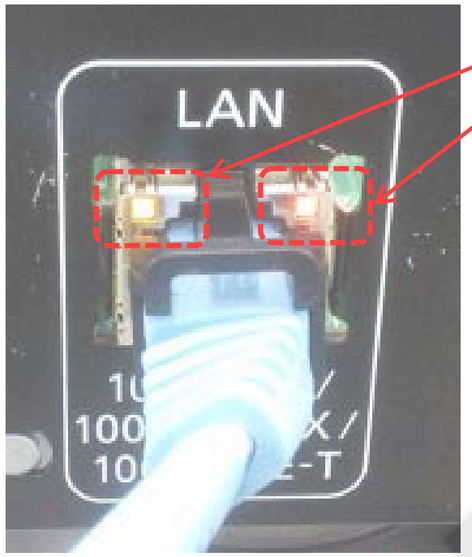
**4. Is it connecting to router LAN port？**

OK ↓

NG
Connector to Router LAN port （no WAN port）

To next page

From previous page




OK

5.Does LAN Port LED lighting？

NG

Initialization of setting

1.Disconnect AC cord

2.Press and hold Power Button, connect AC cord

3.Until STATUS/CD LED flashing, stop press Power buttonす

4. After LED light off, press power button

Check whether above action any effect上

If LED lighting, use MusicApps and checking again

NG: Both not lighting

↓

Check whether LAN cable's connector catch cracks or wire damage?

OK

NG: Replace LAN cable

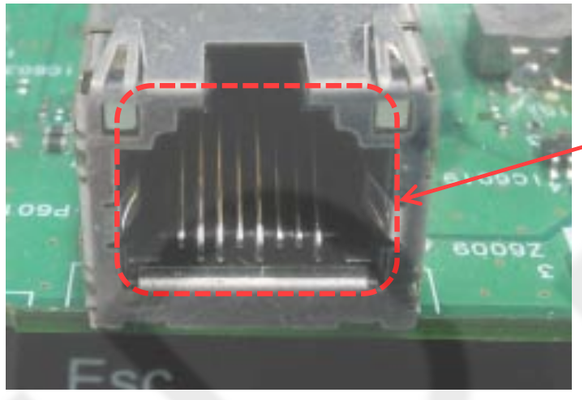
↓

Connect cable to tested router

OK → Router setting problem

NG

↓



Check whether LAN connector pin no broken, bent?

OK

NG

↓

LAN connector damage

LAN circuit trouble

Replace Digital P.C.B.

To next page

LAN LED

・LAN linjk LED: Orange/Green color

1G connection (1000BASE-T) : Green color

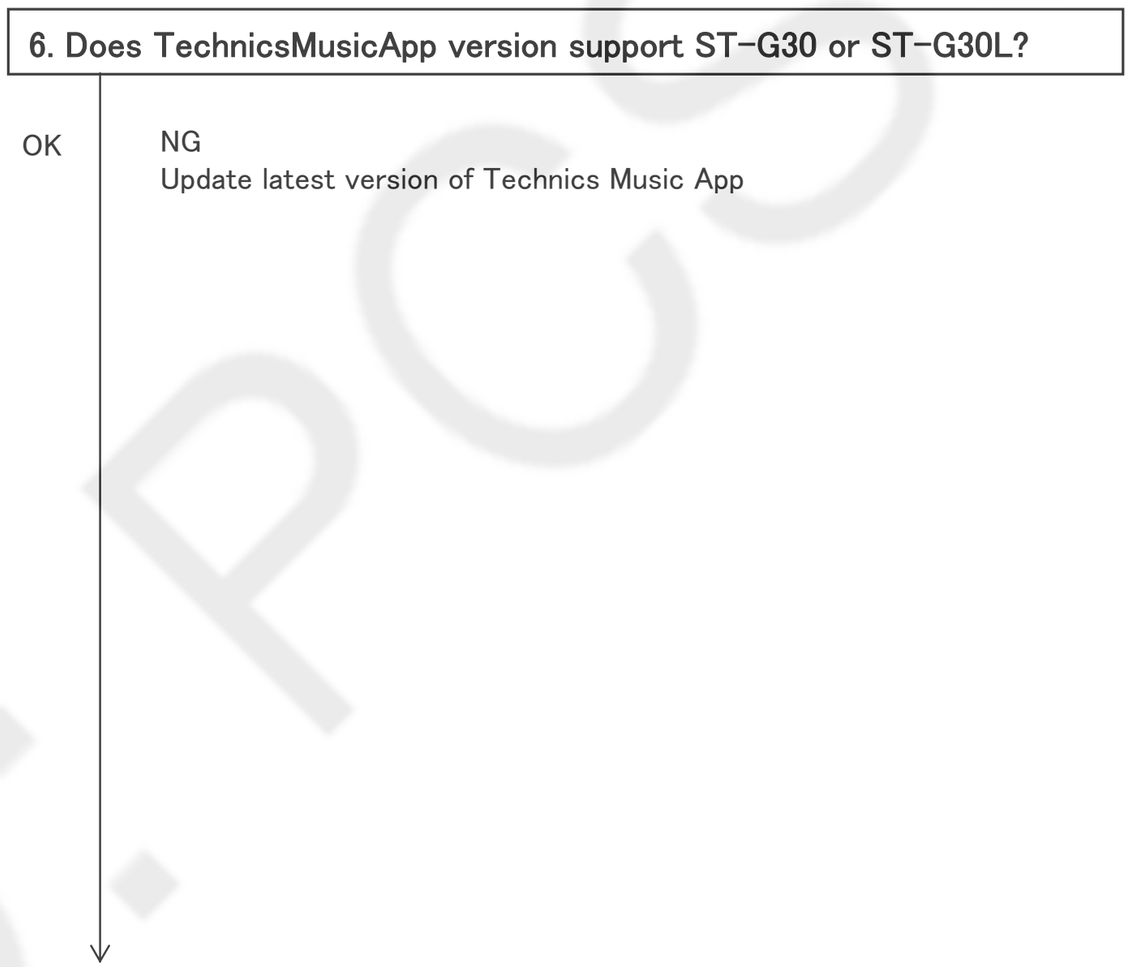
100M connection(100BASE-TX): Orange coloe

10M connection (10BASE-T) : no lighting

No linking : no lighting

・LAN state: Yellow color only

From previous page

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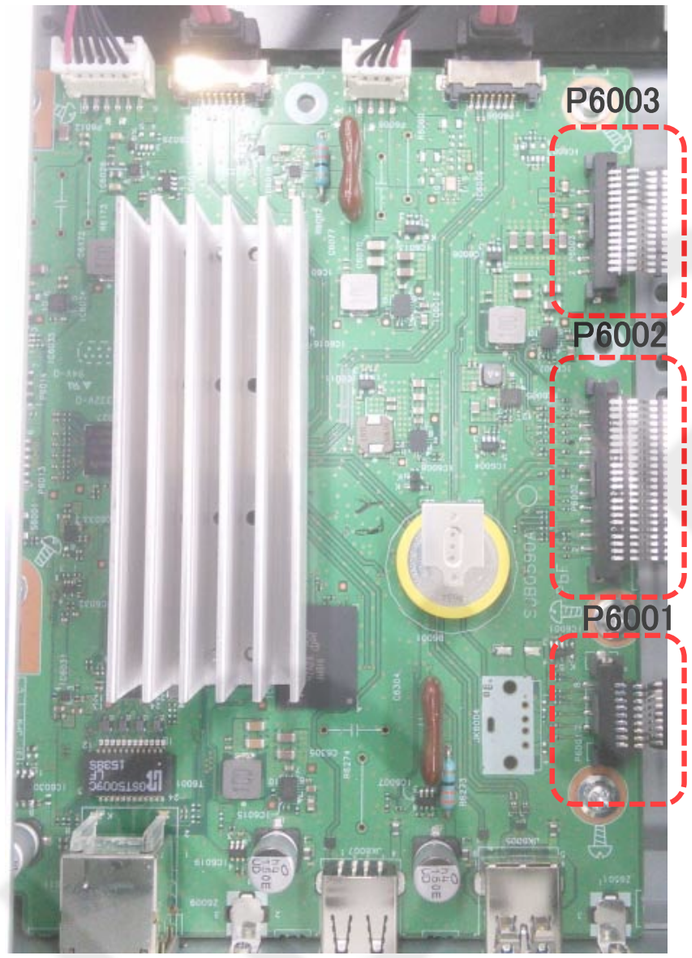



## 7. Check connection of Digital P.C.B.

Connection between Main P.C.B. and Digital P.C.B. connector

Check connection of P6003,P6002,P6001

- Check whether no diagonally inserted
- Check whether no connector floating
- Disconnect and check whether no pin broken.

OK

NG

Floating or diagonal: disconnect and connect again.
If pin broken, replace Main P.C.B.

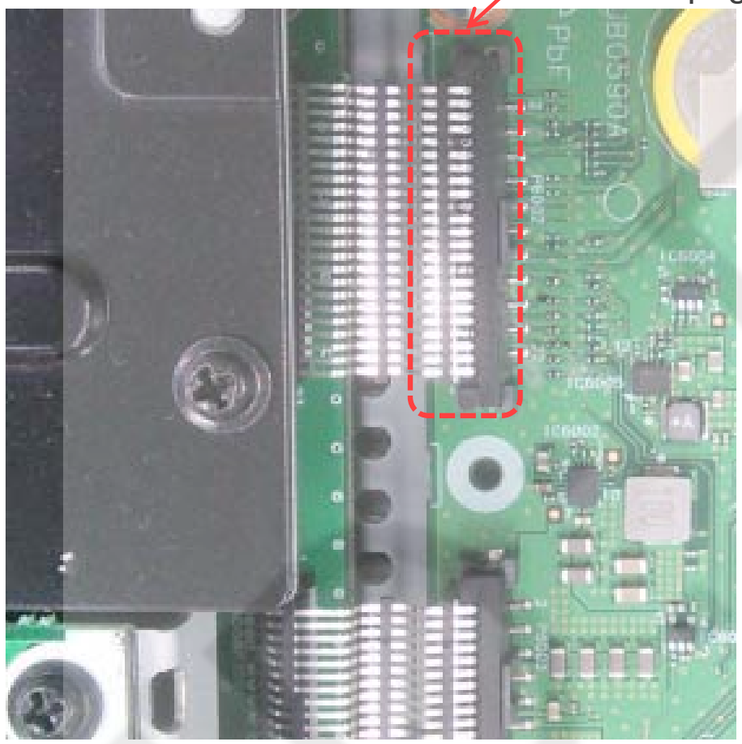
To next page

From previous page

OK

**8.Does signal of Digital P.C.B. P6002 PIN5/6-4 normal?**

To next page ①



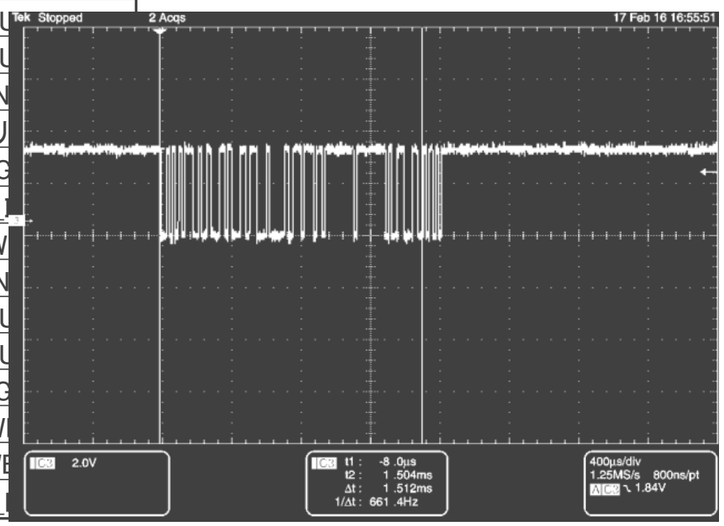
P6002

| Pin No | Signal |
|---|---|
| 1 | DRV_DIRECT |
| 2 | DRV_OC |
| 3 | CDDRV_POWERON |
| 4 | GND |
| 5 | MVL_TX |
| 6 | MVL_RX |
| 7 | GND |
| 8 | NO USE |
| 9 | NO USE |
| 10 | NO U |
| 11 | NO U |
| 12 | GN |
| 13 | MVL_U |
| 14 | MVL_G |
| 15 | MVL_ |
| 16 | MVL_POW |
| 17 | GN |
| 18 | NO U |
| 19 | NO U |
| 20 | MVL_G |
| 21 | MVLPOW |
| 22 | MVLPOWE |
| 23 | CDDRV_ |

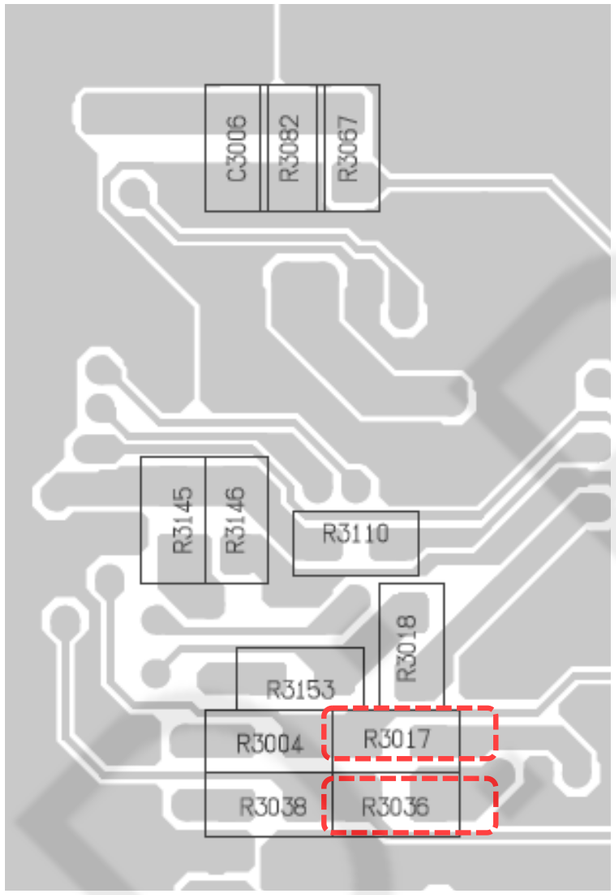
When press OPEN CLOSE button
Is it below signal appear？

NG

To next page ②



①

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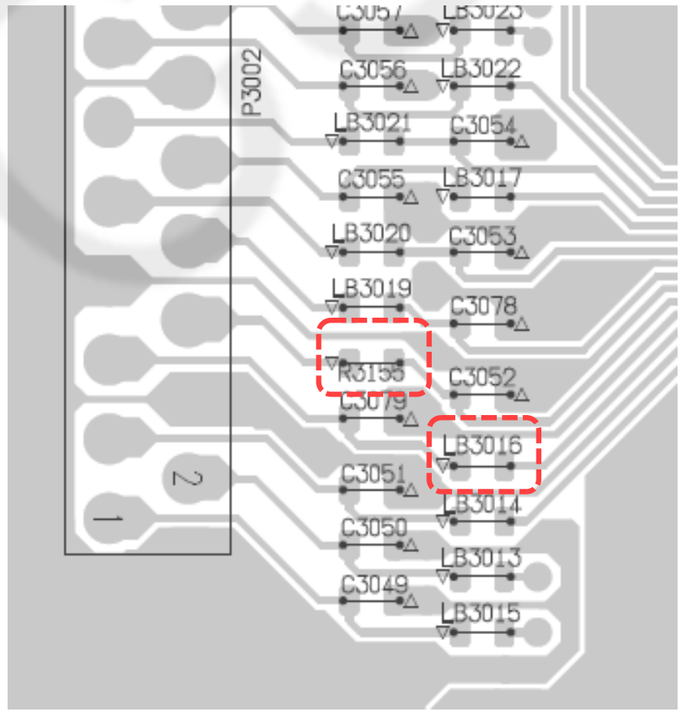
②

Check P3002 connector , LB3016/R3155/R3017(Rear side)/R3036(Rear side) of Main P.C.B.

Whether no part floating, diagonal installed etc unstable state

OK

NG: Replace Main P.C.B.




To next page ④

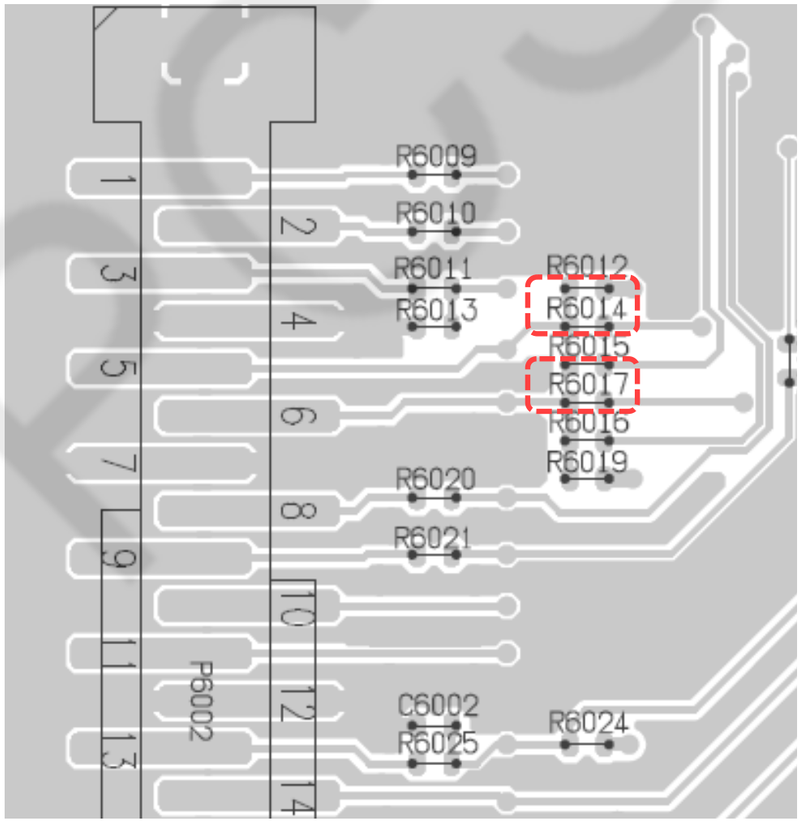
③

To next page ⑤

④

Check P6002 connector R6014/R6017 of Digital P.C.B.
Whether no part floating, diagonal installed etc unstable state
OK

NG: Replace P.C.B.

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⑤

⑥

**8. Does signal of P6002 PIN5/6-4 in Digital P.C.B. normal？**

According to result of pin, P.C.B. replace

Pin5 abnormal : Replace Mian P.C.B.
Pin6 abnormal : Replace Digital P.C.B.

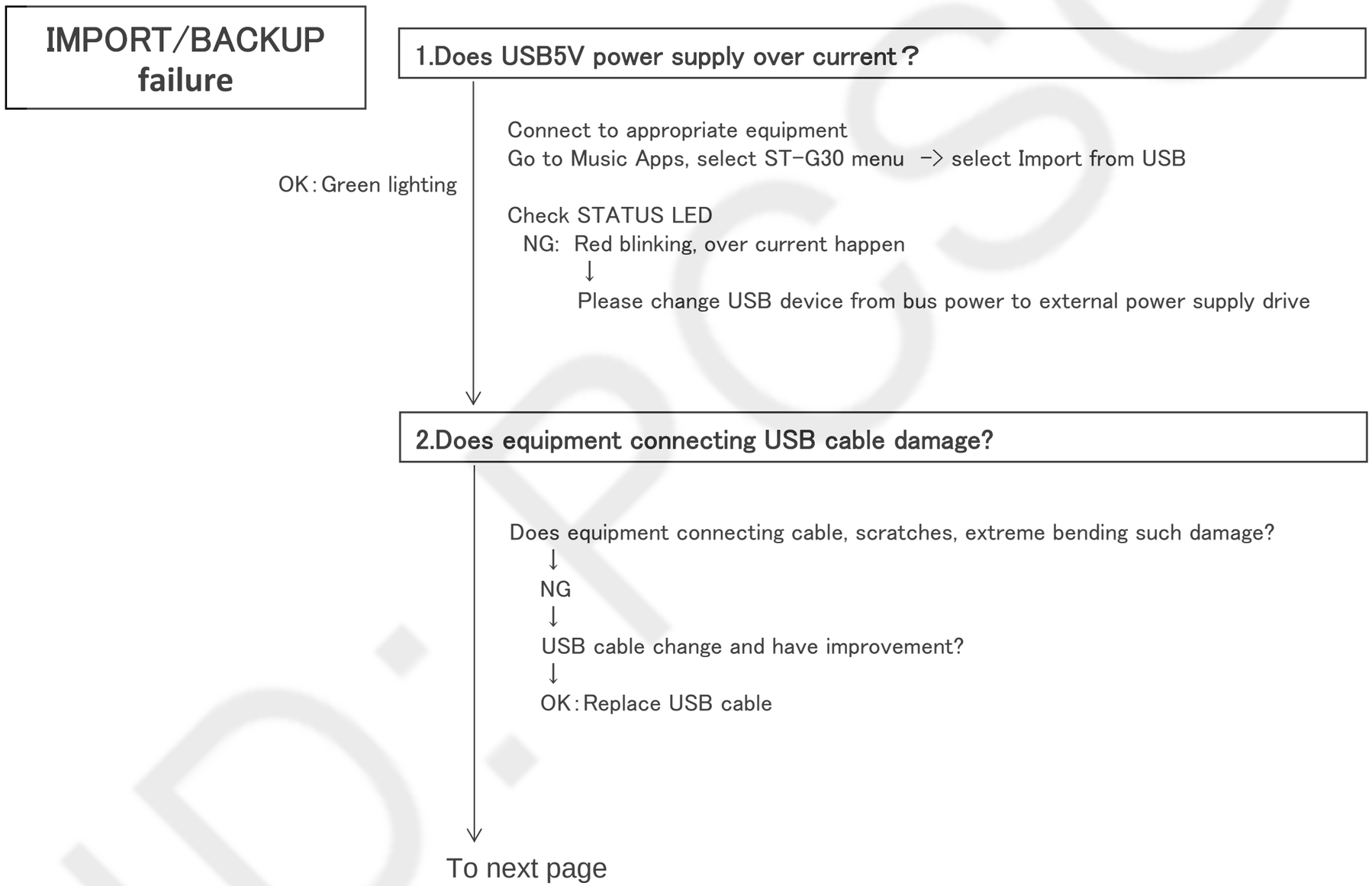
**9. Connect to tested router**

OK: Router setting etc problem
NG: Digital P.C.B problem
Replace Digital P.C.B.

P6002

| Pin No | Signal |
|---|---|
| 1 | DRV_DIRECT |
| 2 | DRV_OC |
| 3 | CDDRV_POWERON |
| 4 | GND |
| 5 | MVL_TX |
| 6 | MVL_RX |
| 7 | GND |
| 8 | NO USE |
| 9 | NO USE |
| 10 | NO USE |
| 11 | NO USE |
| 12 | GND |
| 13 | MVL_RESET |
| 14 | MVL_GPIO1 |
| 15 | MVL_INT1 |
| 16 | MVL_POWERONSIGNAL |
| 17 | GND |
| 18 | NO USE |
| 19 | NO USE |
| 20 | MVL_GPIO2 |
| 21 | MVLPOWERERROR1 |
| 22 | MVLPOWERERROR2 |
| 23 | CDDRV_POWERERROR |

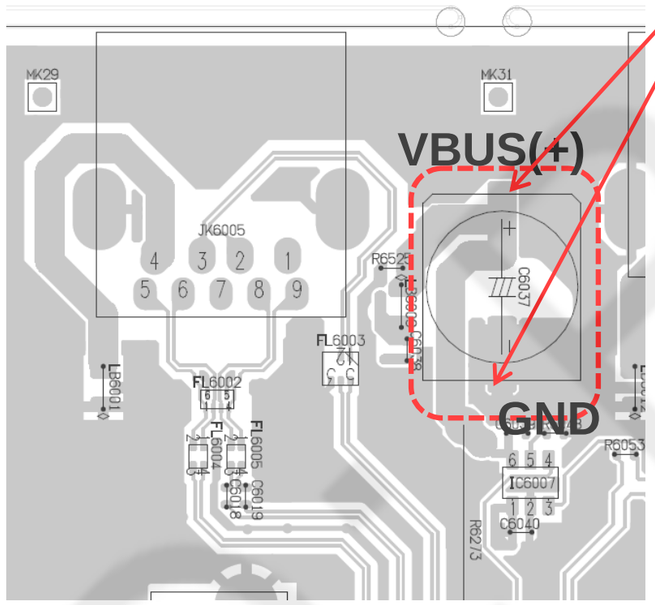
## 7.5. IMPORT/BACKUP Failure



From previous page

**3. Does USB5V power supply?**

At Music Apps, select ST-G30 menu -> select import form USB Digital P.C.B.
Measure terminal voltage of C6037 electrolytic capacitor
If possible, JK6005 PIN1 (VBUS)-4 (GND) also be allowed



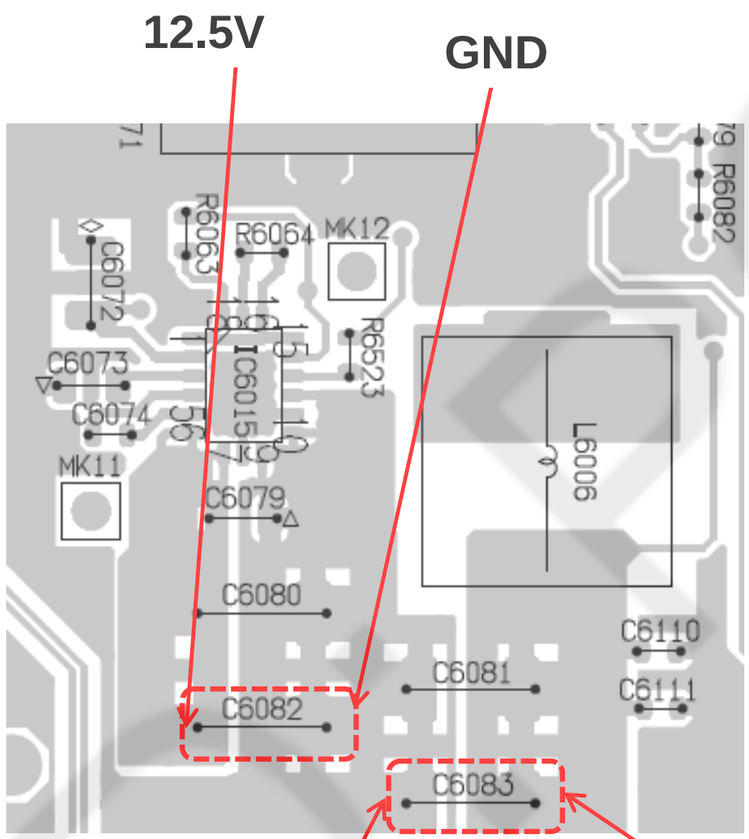

OK **Voltage 5.0v typ**

NG

To next page ②

To next page ①

①




To next page

②

Measure both terminal voltage of C6083

**Voltage 5.0v typ**

OK

NG

Measure both terminal voltage of C6082

**Voltage 12.5.v typ**

OK

NG

Go to title “No power” flow item 6

IC6015 trouble
Replace Digital P.C.B.

IC6007 trouble
Replace Digital P.C.B.

From previous page

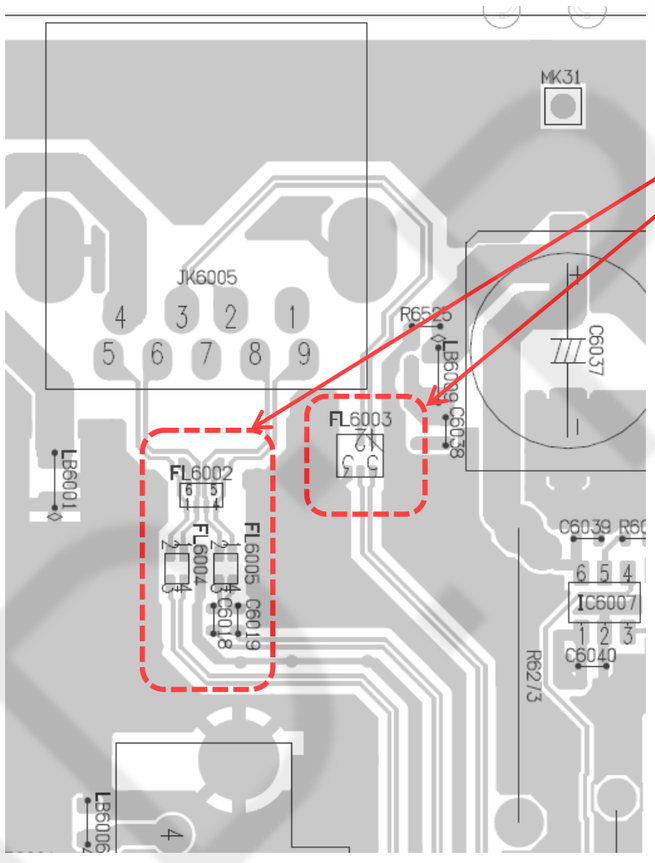
↓

**4. Does IMPORT/BACKUP termail（JK6005）damage？**

OK　　NG → Replace Digital P.C.B.

↓

**5. Does USB signal line no problem?**




OK

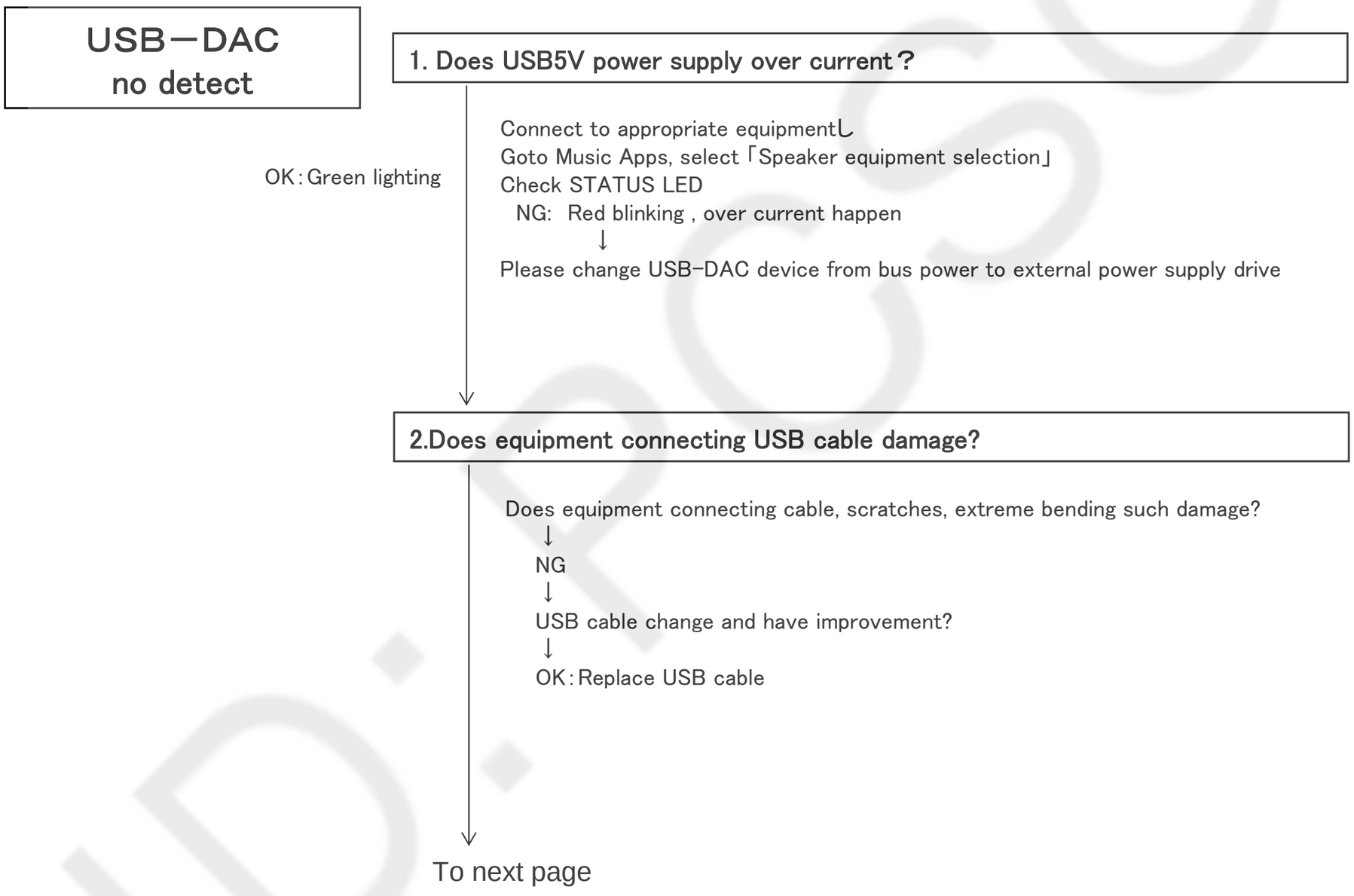
FL6003/FL6002/
FL6005/FL6004
Check installation for part
Does part no floating, no diagonal installed？
NG：Replace Digital P.C.B.

↓

**6. Connecto to other USB equiment**

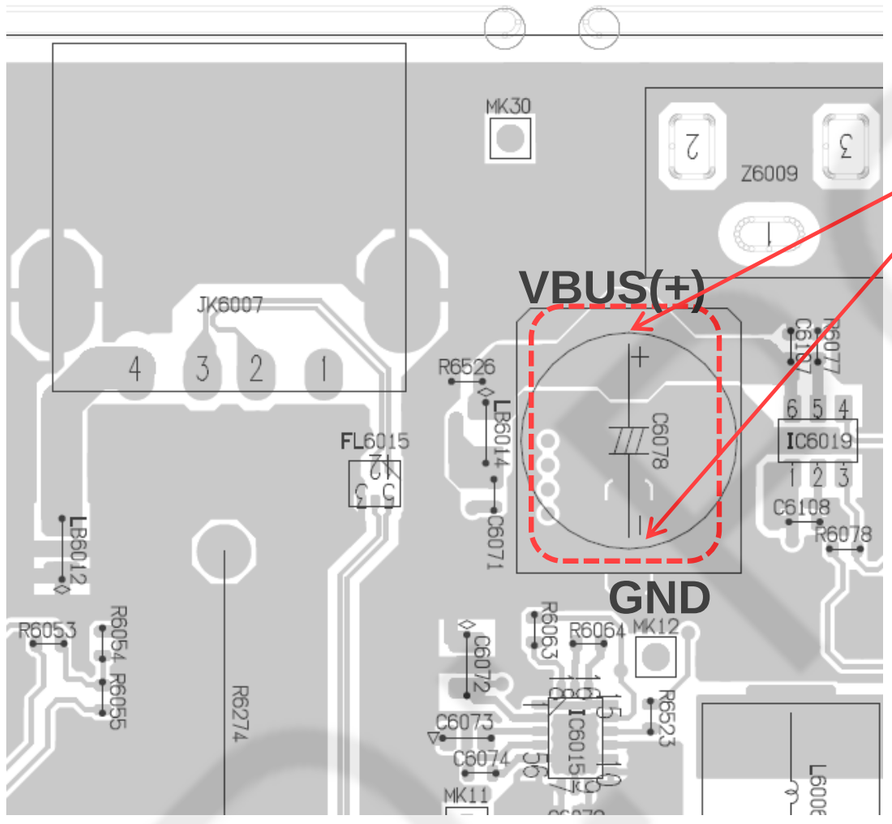
Does function USB thumb drive detect?
NG
↓
Replace Digital P.C.B.

## 7.6. USB-DAC No Detect



From previous page

**3**. Does USB5V power supply?




At Music Apps, select「Speaker equipment selection」
Digital P.C.B.
Measure terminal voltage of C6078 electrolytic capacitor
If possible, JK6007 PIN1 (VBUS)−4 (GND) also be allowed

**Voltage 5.0v typ**

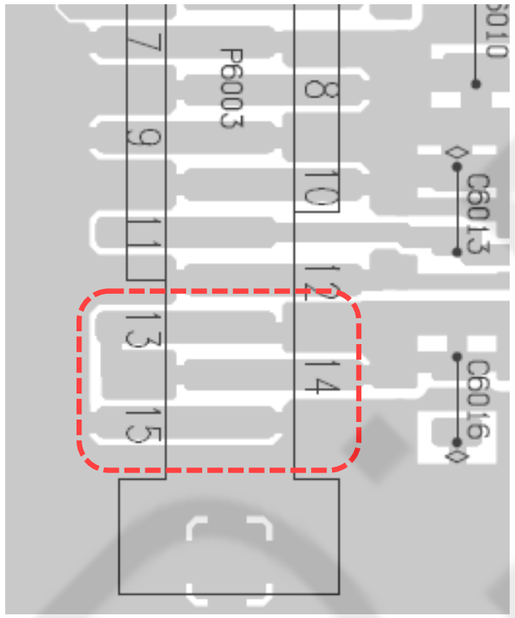
OK

To next page ①

NG

To next page ②

①




P6003

| Pin No | Signal |
|---|---|
| 1 | DC+12V |
| 2 | DC+12V |
| 3 | DC+12V |
| 4 | DC+12V |
| 5 | DC+12V |
| 6 | DC+12V |
| 7 | GND |
| 8 | GND |
| 9 | GND |
| 10 | GND |
| 11 | NSW+3.3V |
| 12 | GND |
| 13 | CLEAN+5.0V |
| 14 | CLEAN+5.0V |
| 15 | GND |

②

Digital P.C.B.
Check voltage of P6003のPIN13(CLEAN+5.0V)−PIN15（GND）

**Voltage 5.0v typ**

OK

IC6019 trouble
Replace Digital P.C.B.

NG

If Main P.C.B Q1801 Radiator E side output 5V,  cabling abnormal

Even disconnect P6003, still output 5V
Replace Main P.C.B.

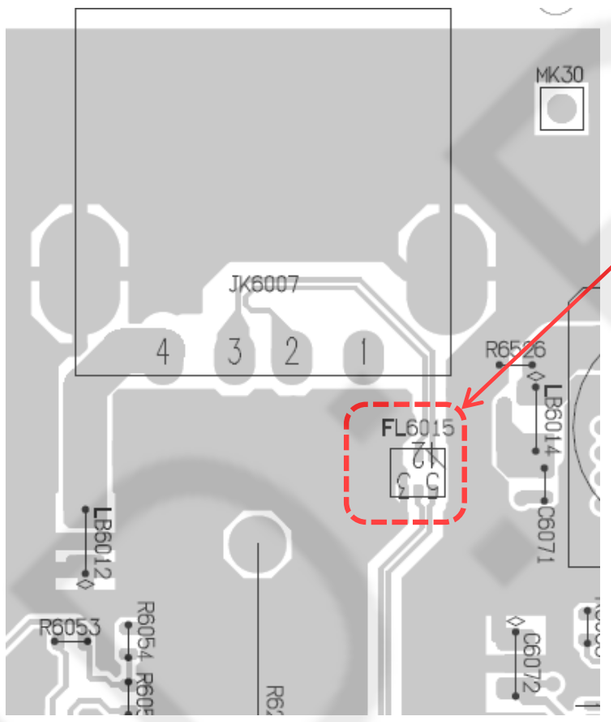
To next page

From previous page

**4. Does USB-DAC treminal（JK6007）damage？**

OK　　NG → Replace Digital P.C.B.

**5. Does USB signal line no problem?**




OK

Check installed FL6015 state
Whether no part floating, diagonal installed. Etc?
NG：Replace Digital P.C.B.

**6.Does USB－DAC supprted？**

Does tested completed USB-DAC be detached?
NG
↓
Replace Digital P.C.B.

## 7.7. CD No Work

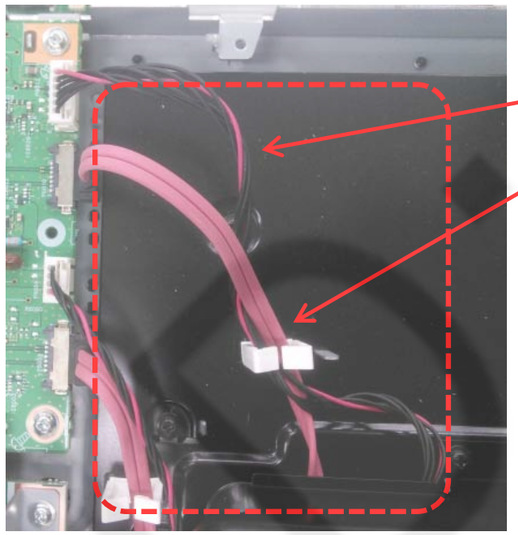
**CD no work**

**1. Does CD spin up sounding？**

NG

Open tray, insert CD and close tray
When CD LED blue blinking, near to main set and check whether sound come out or not.
CD turn sound、seek sounding, but CD LED light blinking contiues
CD LED red lighting
↓
Clean CD disc
↓
NG ← Have improve?

**2. Does cable connection drive normal？**



OK

Check cable connecting between drive and digital P.C.B. connector P6012/P6010

NG
Reinsert if miss over, half inserted occur
Replace if damage, etc

To next page

From previous page

**3. Check drive power**

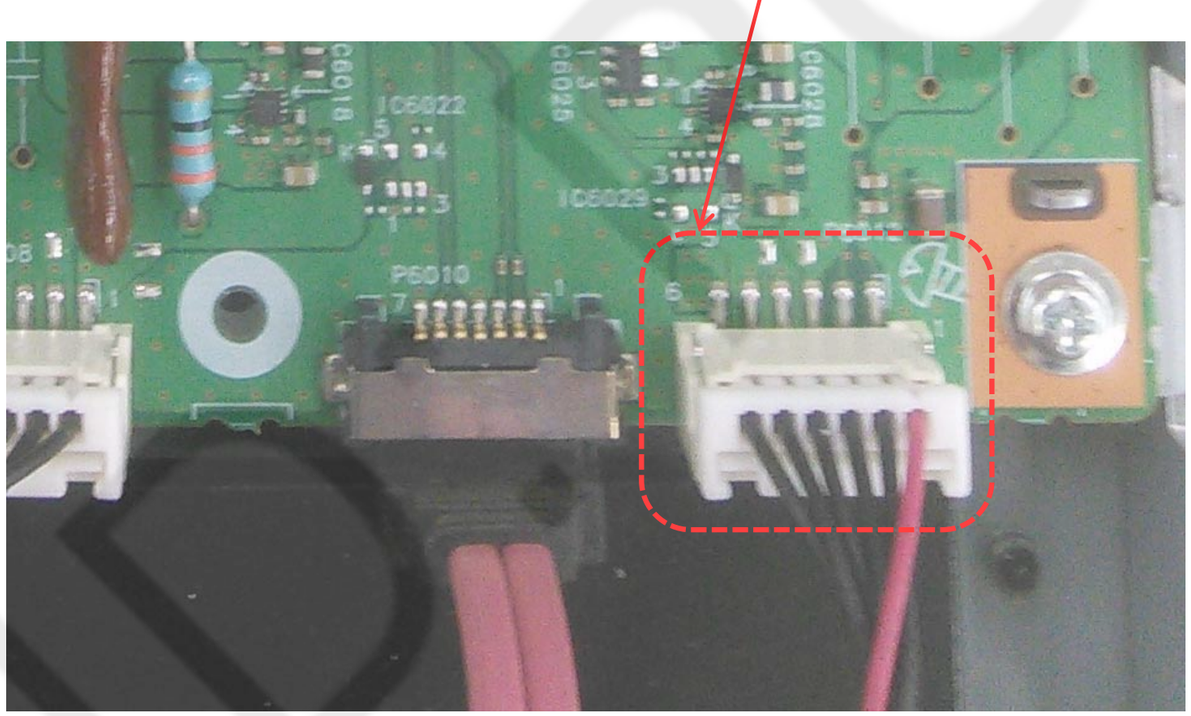
OK

To next page

Measure voltage of P6010 PIN 3(5V)-4(GND) / PIN6(12V)-5(GND)

Measure method
Press front panel O/S Switch
Measure voltage during tray operation
＋5V : 5.0V typ
＋12V : 12.5V typ

NG: Replace Digital P.C.B.




P6010

| Pin No | Signal |
|---|---|
| 1 | DIRECT |
| 2 | OPEN/CLOSE |
| 3 | +5V |
| 4 | GND |
| 5 | GND |
| 6 | +12V |

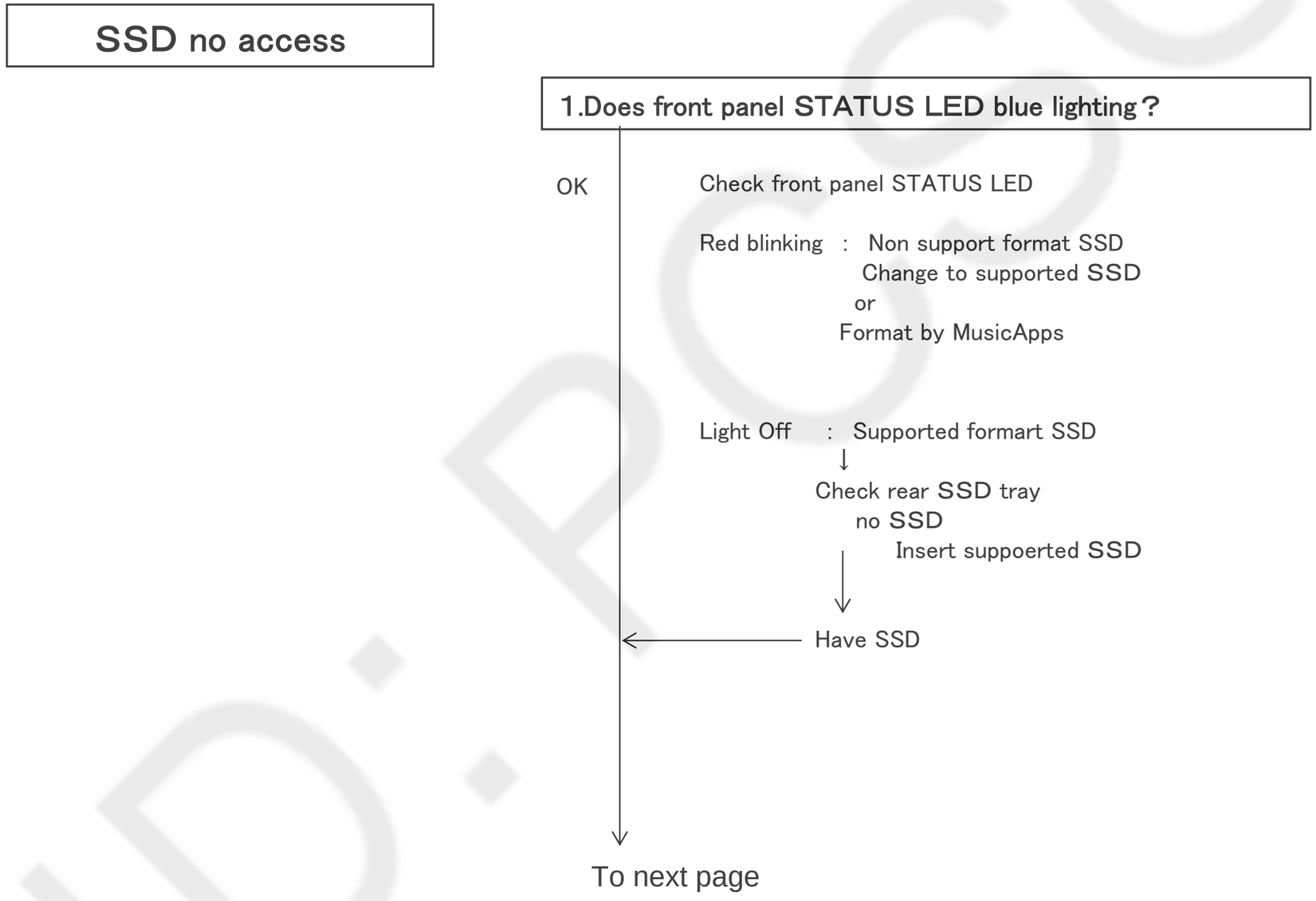
From previous page

↓

**4. After replacement CD drive, have improvement？**

Non improvement: Replace Digital P.C.B.
Improvement : Replace Drive Unit

## 7.8. SSD No Access



From previous page

**2. Does SSD connection cable normal？**

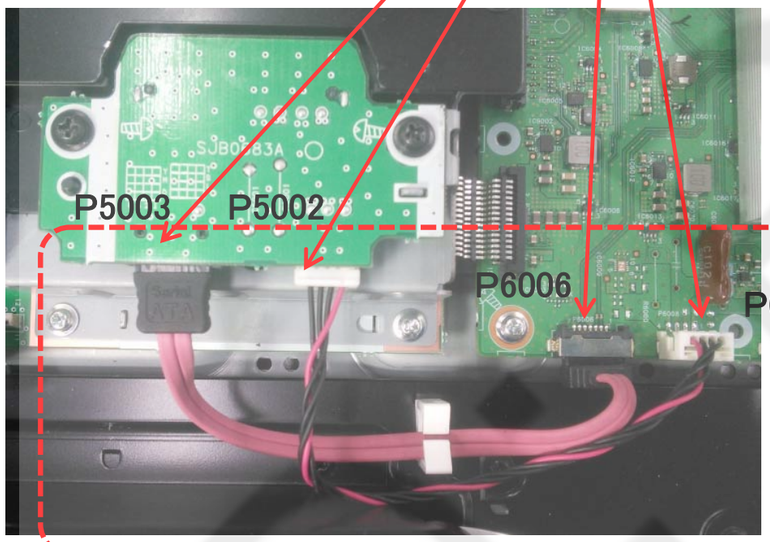
OK

Check cable state between connection of SSD P.C.B. connector P5003/P5002 and Digital P.C.B. connector P6006/P6008

NG

Miss out: fully insert

Cable scratch, damage: Replace cable

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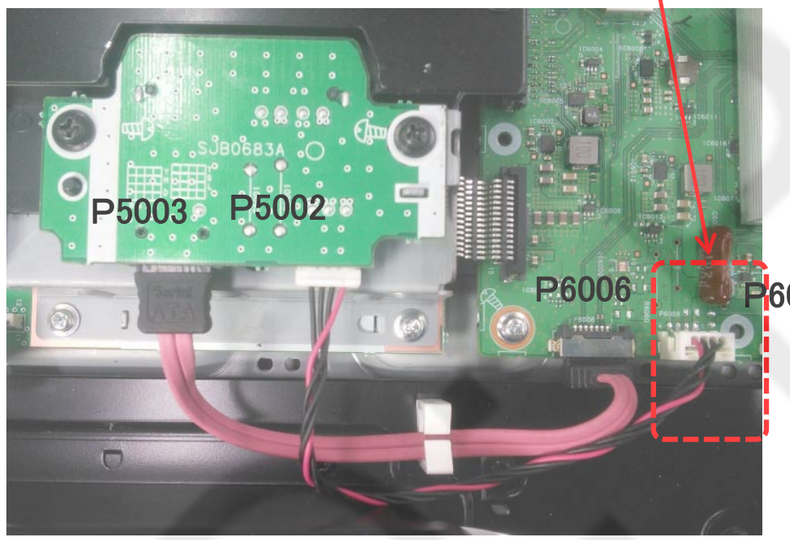
**3. Does power supply to SSD normal？ ・・・ ①**

OK




Check voltage between connector PIN1−2 of Digital P.C.B.
(Pin4 no in use)
**Voltage 5V typ**

NG
Replace Digital P.C.B.

P6008

| Pin No | signal |
|---|---|
| 1 | +5V |
| 2 | GND |
| 3 | GND |
| 4 | +12V |

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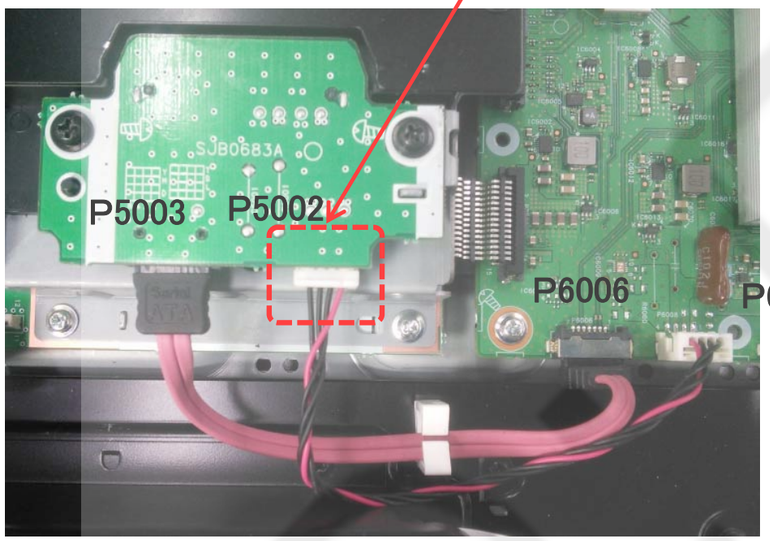
**4. Does power to SSD normal？ ・・・ ②**

OK

Check voltage between connector P5002 PIN1−2 of SSD P.C.B.
(Pin4 no in use)
**Voltage 5V typ**

NG
Replace cable




P6008

| Pin No | signal |
|---|---|
| 1 | +5V |
| 2 | GND |
| 3 | GND |
| 4 | +12V |

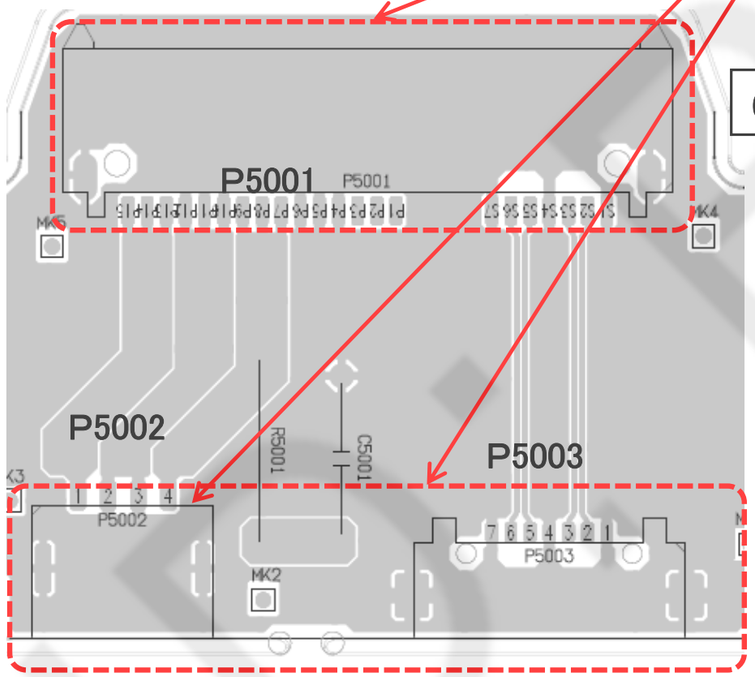
To next page

From previous page

**5. Check SSD P.C.B ?**

OK

Check SSD P.C.B.
Check condition of connector P5001/P5002/P5003
Floating, solder condition, pin blended, etc
NG→ Replace SSD P.C.B.




**6. Confirm replace SSD P.C.B.?**

Replace function test completed SSD P.C.B.
NG
↓
Replace Digital P.C.B.

OK

**SSD abnormal**

## 7.9. LED No Lighting

LED no lighting

↓

1. After action Cold Start, have improve？

↓ NG　→OK: No problem (setting dependent)

2. Does any LED no lighting?

- During power on, Front power included Power LED all lighting, not blinking → Go to next checking
- During power on, except Power LED, specific LED only not lighting → Go to check PXX
- Rear side LED for LAN (All or few) no lighting → Go to title Technics Music App flow page to confirm

↓

3.Does FFC connection between Main P.C.B. and Power Switch failure?

- FFC reinsert, have improve
- FFC both side no conduction

} → Replace FFC

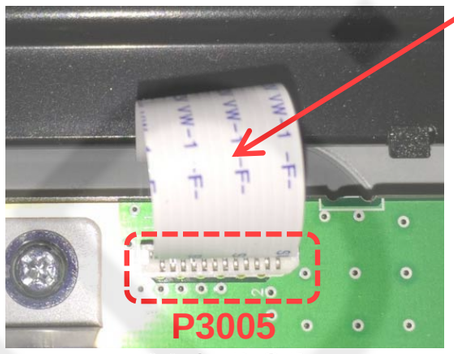
↓ OK

4. Does voltage connector (P3005) normal?

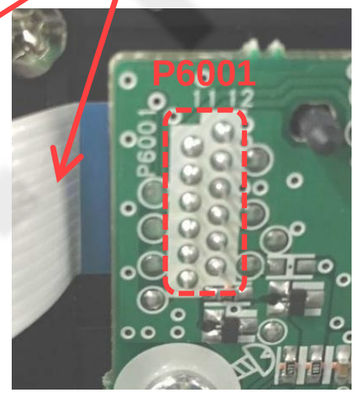
NG → Replace Main P.C.B.

↓ OK

5. Replace Power Switch P.C.B.



Main P.C.B.



Power Switch P.C.B.

Cold Start:
All setting return to factory default setting except SSD data、e-onkyo or Technics tracks account info, Time

① Unplug Power OFF state, Disconnect Power cord
② Insert power cord while pressing power button
③ STATUS LED, CD LED light blinking state, press power button to release
※ Cold Stard executing
LED no lighting, 2,3 sec blinking stop, power abnormal, etc problem incomplete
④ Complete when all LED light off
⑤ Press again Power Button to power on

### P3005 Terminal voltage check point(Red box)

| Pin No. | VALUE1 | VALUE2 |
|---|---|---|
| 1 | GND | GND |
| 2 | - | - |
| 3 | - | - |
| 4 | +5V | +5V |
| 5 | GND | GND |
| 6 | +3.3V (POWER LED BLUE ON) | 0V (POWER LED BLUE OFF) |
| 7 | +3.3V (CD LED BLUE ON) | 0V (CD LED BLUE OFF) |
| 8 | +3.3V (CD LED RED ON) | 0V(OFF) (CD LED RED OFF) |
| 9 | +3.3V (STATUS LED BLUE ON) | 0V (STATUS LED BLUE OFF) |
| 10 | +3.3V (STATUS LED RED ON) | 0V (STATUS LED RED OFF) |
| 11 | - | - |
| 12 | +3.3V (Dimmer: standard) | 0V (Dimmer: low light) |

When Power ON、Alwasy fixed

From previous page (**Front panel specific LED only lighting**)

↓

**STATUS LED (Blue) no lighting**

YES: When start up (After power on), does light blinking？
OK:
→ Could check SSD drive music data from Technics APP？
OK:No problem
NG: SSD no connect、trouble possibility→ Go to “SSD no access“ flow
NO NG: Go to next page

↓

**STATUS LED (Red) no lighting**

YES: Replace other writeable SSD to customer SSD
Red not lighting, does USB import possible from Technics APP？
OK: Go to next page
NO NG: Go to “SSD no access“ flow page

↓

**CD LED (Blue) no lighting**

YES:Insert CDDA into CD drive, after tray close, blue blinking？
OK:
→ After blinking、detect CDDA, blue lighting？
OK:No problem
NG: Go to “CD no work“ flow
NG: Replace other writeable SSD to customer SSD
→ Does CD ripping by Technics APP？(CD LED (Red) lighting?)
OK: Go to next page
NO NG: Go to “CD no work” flow

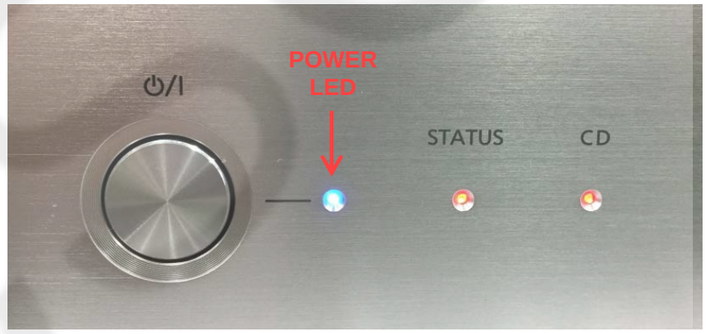
↓

**CD LED (Red) no lighting**

YES:Replace other writeable SSD to customer SSD
Remain to Red no lighting, Dose CD ripping by Technics APP？
OK: Go to next pagge
NG: Go to “CD no work ” flow page

To next page

## FrontLED




## Front LED light On/ Light Off state

| LED | Light Off state | Light On state |
|---|---|---|
| Power LED(Blue) | Power OFF state | Power ON state |
| STATUS LED(Blue) | SSD no access state (No connection, etc) | SSD (Normal) access possible |
| STATUS LED(Red) | | Content downloading<br>Importing<br>Backup listing |
| CD LED (Blue) | No Disc | CDDA Detect complete (Stop) |
| CD LED (Red) | | Ripping |

From previous page

LED dimmer low setting only
Specific LED no lighting

YES→ Replace Power Switch P.C.B.

NO

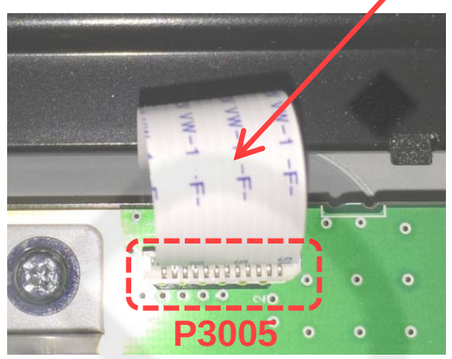
Does FFC connection between Main P.C.B. and Power Switch failure?

・FFC reinsert, have improve
・FFC both side no conduction
→ Replace FFC

OK

Connector (P3005) no lighting
Does LED power control voltage normal?

NG → Replace Main P.C.B.

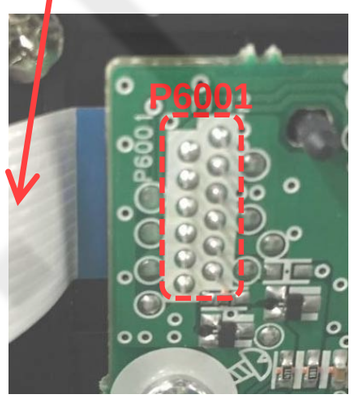



Main P.C.B.

OK

Replace Power Switch P.C.B.


LED Dimmer setting (ST-G30 setting Menu)




Power Switch P.C.B.

## During normal operating front LED state

| LED | Light Off state | Light On State |
|---|---|---|
| Power LED(Blue) | Powr OFF state | Power ON state |
| STATUS LED(Blue) | SSD no access state (No connection, etc) | SSD (Normal) access possible |
| STATUS LED(Red) | | Content downloading<br>Importing<br>Backup listing |
| CD LED (Blue) | No Disc | CDDA Detect complete (Stop) |
| CD LED (Red) | | Ripping |

## P3005 Terminal voltage check point(Red box)

| Pin No. | VALUE1 | VALUE2 |
|---|---|---|
| 1 | GND | GND |
| 2 | – | – |
| 3 | – | – |
| 4 | +5V | +5V |
| 5 | GND | GND |
| 6 | +3.3V<br>POWER LED(B;ue) lighiting | 0V<br>Power LED(Blue) Light off |
| 7 | +3.3V<br>CD LED(Blue) lighting | 0V<br>CD LED(Blue) Light off |
| 8 | +3.3V<br>CD LED(Red) lighting | 0V(OFF)<br>CD LED(Red) Light off |
| 9 | +3.3V<br>STATUS LED(BLue) Lighting | 0V<br>STATUS LED(BLue) Light off |
| 10 | +3.3V<br>STATUS LED(Red) Lighting | 0V<br>STATUS LED(Red) Light off |
| 11 | – | – |
| 12 | +3.3V<br>LED Dimmer: standard | 0V<br>LEDDimmer:Dimming, Light off |

When LED dimmer set to standard, LED always dark (become dimming setting state)

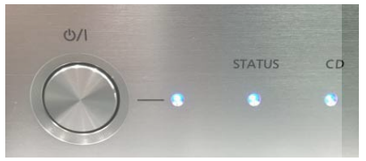
When LED dimmer set to standard,
Does voltage connector (P3005) normal？

NG→ Replace Main P.C.B.


LED Dimmer setting
(ST-G30 setting
Menu)


LED dimmer light off


LED dimmer dimming

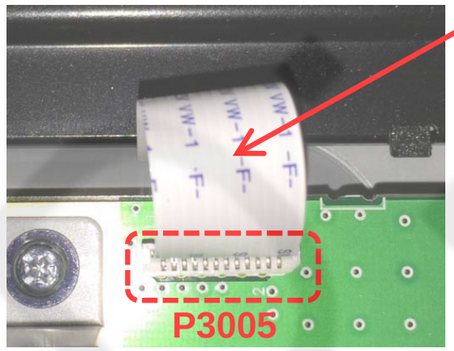



LED dimmer standard

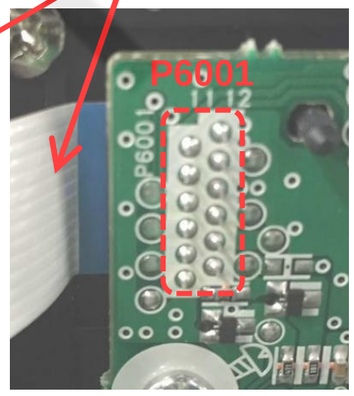
OK

Does FFC connection between Main P.C.B. and Power Switch failure?

・FFC reinsert, have improve
・FFC both side no conduction
→ Replace FFC




Main P.C.B.




Power Switch P.C.B.

OK

Replace Power switch P.C.B.

## P3005 Terminal voltage check point(Red box)

| Pin No. | VALUE1 | VALUE2 |
|---|---|---|
| 1 | GND | GND |
| 2 | - | - |
| 3 | - | - |
| 4 | +5V | +5V |
| 5 | GND | GND |
| 6 | +3.3V<br>(POWER LED BLUE ON) | 0V<br>(POWER LED BLUE OFF) |
| 7 | +3.3V<br>(CD LED BLUE ON) | 0V<br>(CD LED BLUE OFF) |
| 8 | +3.3V<br>(CD LED RED ON) | 0V(OFF)<br>(CD LED RED OFF) |
| 9 | +3.3V<br>(STATUS LED BLUE ON) | 0V<br>(STATUS LED BLUE OFF) |
| 10 | +3.3V<br>(STATUS LED RED ON) | 0V<br>(STATU |
| 11 | - | - |
| 12 | +3.3V<br>(ディマー：標準) | 0V<br>(ディマー：減光) |

When Power ON、
Alwasy fixed

When standard、
Alwasy fixed

No Power (Does Power Button function normal？)

↓

Does voltage Power Button connector (P6001) normal?

- P6001_11pin (Power Button signal line) always open state (+3.3V fix) → Replace Power Switch P.C.B.
- P6001_11pin always in short state ( Below +0.7V)

  Without pressing power button state, check conduction between P6001_11pin–12pin

  If short (0Ω) → Replace Power Switch P.C.B.

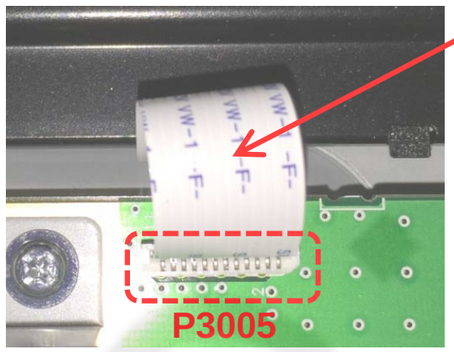
  If short ( 100kΩ above) → Go to check next FFC

OK ↓

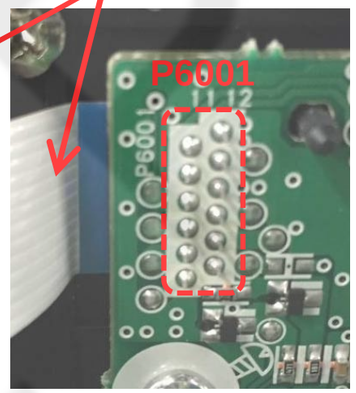
Does FFC connection between Main P.C.B. and Power Switch failure?

- FFC reinsert, have improve
- FFC both side no conduction

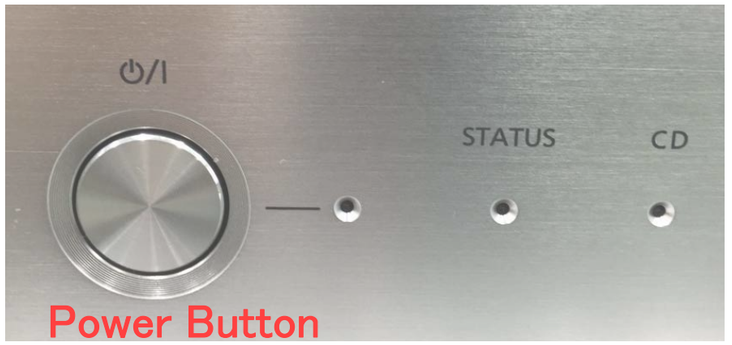
→ Replace FFC



Main P.C.B.



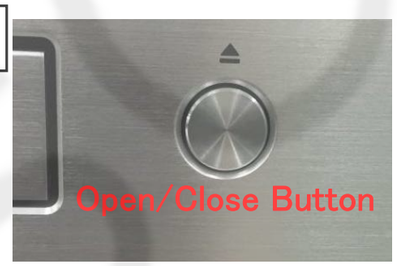
Power Switch P.C.B.




OK ↓

Replace Main P.C.B.

CD drive open/close no work ( Does open/close button function normal？)




Does open /close button connector (P6201) voltage normal?

- P6201_2pin (Power Button signal line) always open state (+3.3V fix) → CD O/C Switch P.C.B.
- P6201_2pin always in short state ( Below +0.7V)
  During Open/Close Button function no problem, check conduction between P6201_1pin-2pin
  If short (0Ω) → Replace CD O/C Switch P.C.B.
  If short ( 100kΩ above) → Go to check next FFC

Dose cable connection between CD O/C Switch P.C.B. (P6201) and Power Switch P.C.B. (P6002) failure?

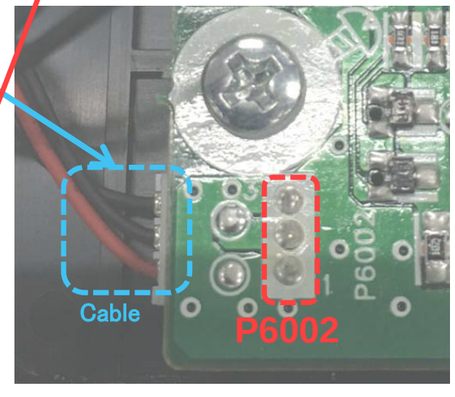
- FFC reinsert, have improve
- FFC both side no conduction

→Replace FFC

OK

Go to next page


CD O/C Switch P.C.B.




Power Switch P.C.B.

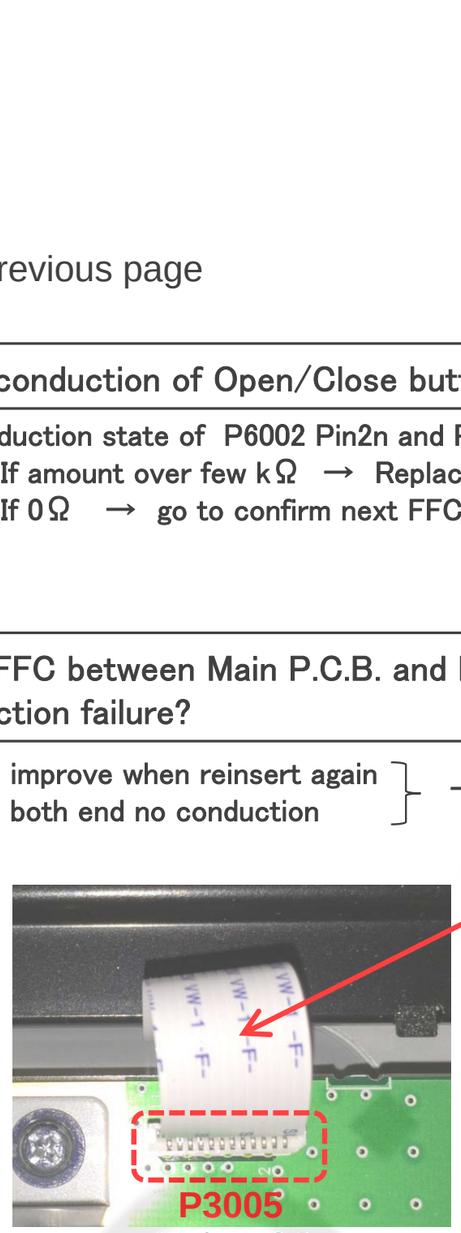
From previous page

Does conduction of Open/Close button normal?

・Conduction state of P6002 Pin2n and P6001 Pin 10 in Power Switch P.C.B.
If amount over few kΩ → Replace Power Switch
If 0Ω → go to confirm next FFC

Does FFC between Main P.C.B. and Power Switch connection failure?

・FFC improve when reinsert again
・FFC both end no conduction
} →Replace FFC



Main P.C.B.



Power Switch P.C.B.



Power Switch P.C.B.

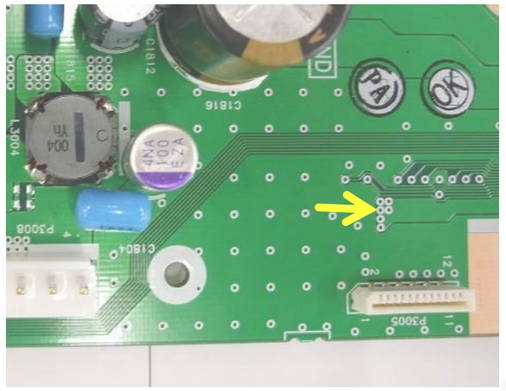
OK

Replace Main P.C.B.

## 7.10. LED No Lighting (AC input, SMPS P.C.B. operate normal)

LED no lighting → Check power of Power Switch P.C.B.

AC input, SMPS P.C.B. function normal



At Left picture 6 holes, check 5V for LED power supply.

Check FFC conduction pin 4 of Main P.C.B (Previous page location) and pin 4 of Power Switch P.C.B. ( Pin no opposite), check FFC adjacent pin short

Check Power Switch P.C.b.

## 7.11. After Replacement Digital P.C.B., Please Adjust Time Clock

**After replacement Digital P.C.B., please adjust time clock**

Setup step：

① Power on ST-G30 while ST-G30 connected to router Wi-Fi by LAN cable
② Adjust time using smart phone/tablet device time by Tehnics App operation through router Wi-Fi
③ Run Technics App
④ Follow below menu selection to complete ST-G30 time adjustment


Home Menu—


Time set menu　　Time set menu

## 7.12. LED Display State

### LED state display specification

There have 3 LED in front of main unit

- Power LED : Green color Power ON/OFF state display
- Status LED : Red , Green 2 color SSD or other device connection error detech display
- CD LED : Red, Blue 2 color CD disc inserted or no activity display

LED state as below

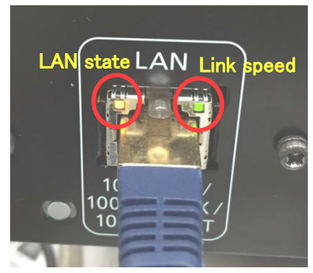
| LED | Light off | Light on | Light blinking |
|---|---|---|---|
| Power LED (Blue) | Power OFF state | Power ON state | Power abnormal |
| STATUS LED (Blue) | SSD no be access state (no connect, etc) | SSD (normal) access possible | Device starting (PON)・Ending (OFF)<br>Built in SSD formatting |
| STATUS LED (Red) | | Content downloading<br>Content uploading<br>Backup list running | Abnormal state<br>(connection device abnormal, etc) |
| CD LED (Blue) | No Disc | CDDA detect complete (stop) | DISC detecting |
| CD LED (Red) | | Ripping | nonsupport disc |

**Front LED**


There have 2 LED in rear of main unit

- LAN link LED: Orange/ Green 2 color. When connecting to router, etc, link speed display
  - 1G connect (1000BASE-T) : Green
  - 100M connect(100BASE-TX) : Orange
  - 10M connect (10BASE-T) : Light Off
  - No linking : Light Off
- LAN state: Yellow 1 color, lighting when receive IP address, light blinking when accessing

**LAN LED(Rear Side)**



# 8 Disassembly and Assembly Instructions

- **This section describes the disassembly and/or assembly procedures for all major printed circuit boards & main components for the unit. (You may refer to the section of "Main components and P.C.B. Locations" as described in this service manual)**
- **Before carrying out the disassembly process, please ensure all the safety precautions & procedures are followed.**
- **During the disassembly and/or assembly process, please handle with care as there may be chassis components with sharp edges.**
- **Avoid touching heatsinks due to its high temperature after prolong use.**
- **Be sure to use proper service tools, equipments or jigs during repair.**
- **Select items from the following indexes when disassembly or replacement are required.**
- Disassembly of Top Cabinet Unit
- Disassembly of Side AL Panel (L) & (R) Unit
- Disassembly of Front AL Panel
- Disassembly of Power Switch P.C.B.
- Disassembly of CD O/C Switch P.C.B
- Disassembly of CD Drive Unit
- Disassembly of Digital P.C.B.
- Disassembly of SSD Drive
- Disassembly of SSD P.C.B.
- Disassembly of Main P.C.B.
- Disassembly of AC Inlet P.C.B.
- Disassembly of SMPS P.C.B.

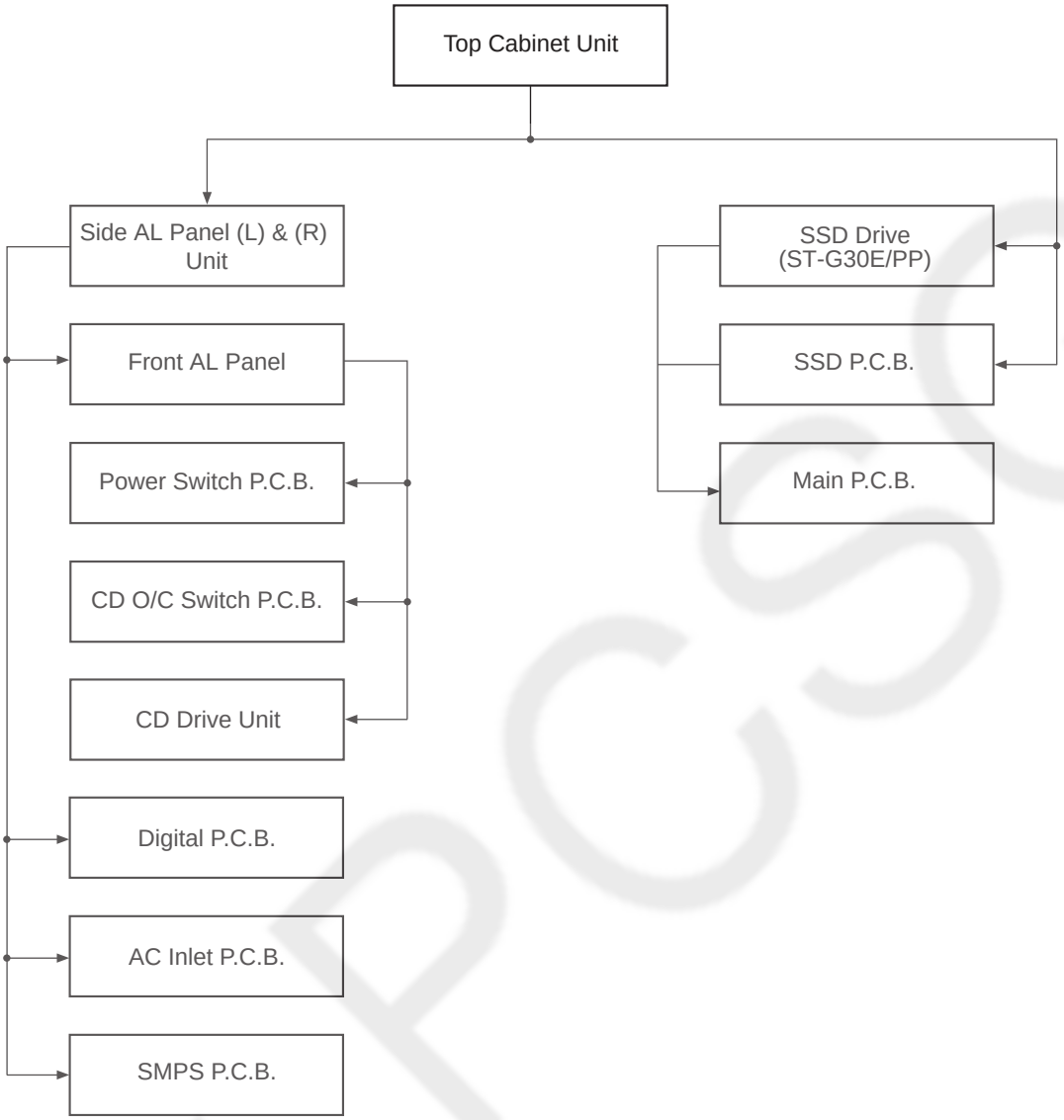
## 8.1. Type of Screws

**CAUTION NOTE:**
Please use original screw and at correct locations.

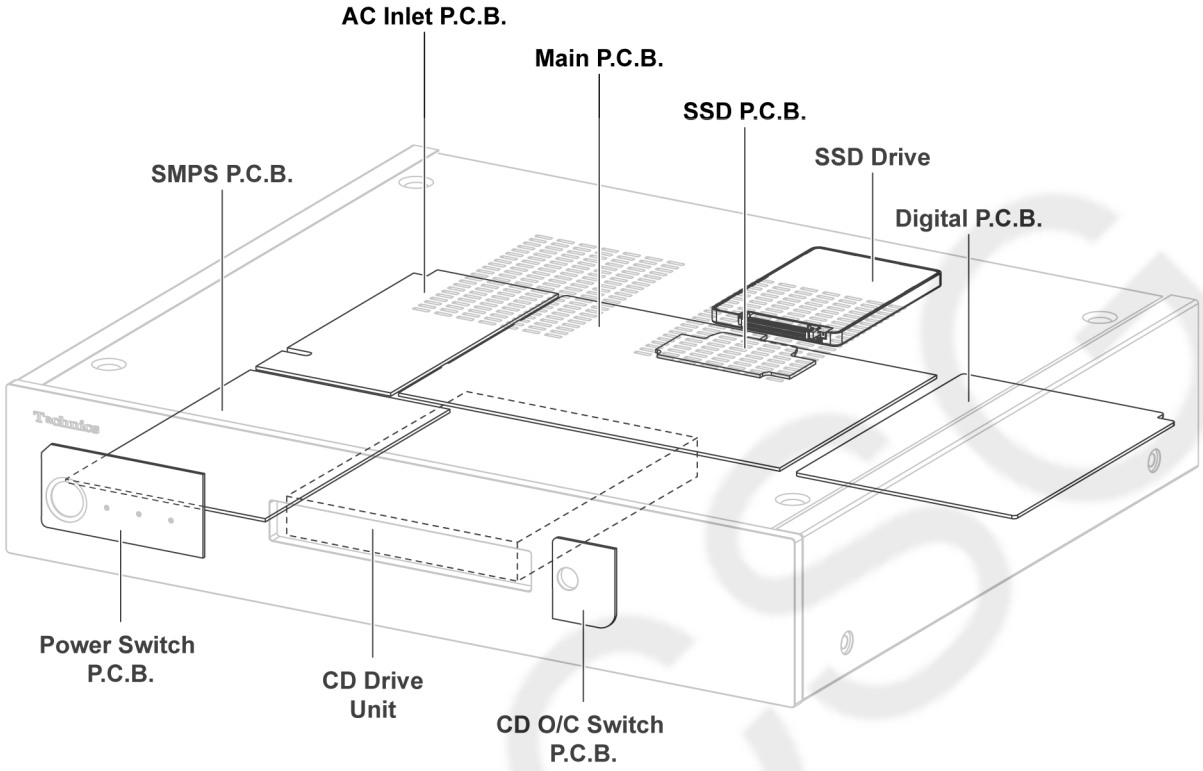
Below shown is part no. of different screw types used:

- a :RHD50032
- b :RHD30119-K
- c :RHDC0023
- d :XSB3+8FN
- e :RHD30111-K
- f :XYN3+C8FJK
- g :XSS3+6FN
- h :XTB4+12JFJK
- i :RHD26045-L

## 8.2. Disassembly Flow Chart

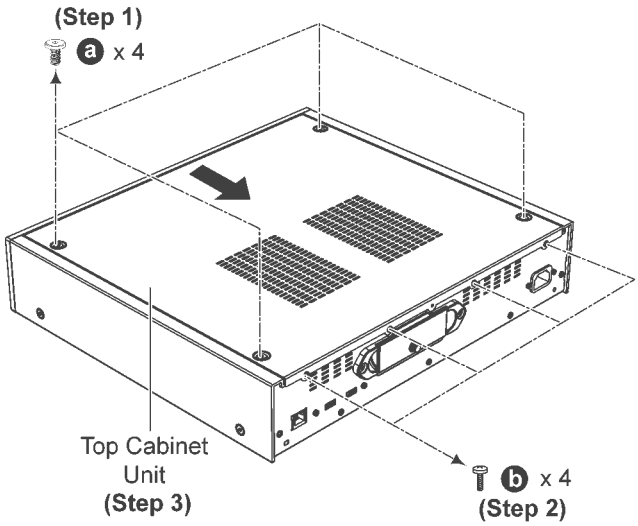


## 8.3. Main Components and P.C.B. Locations



## 8.4. Disassembly of Top Cabinet Unit

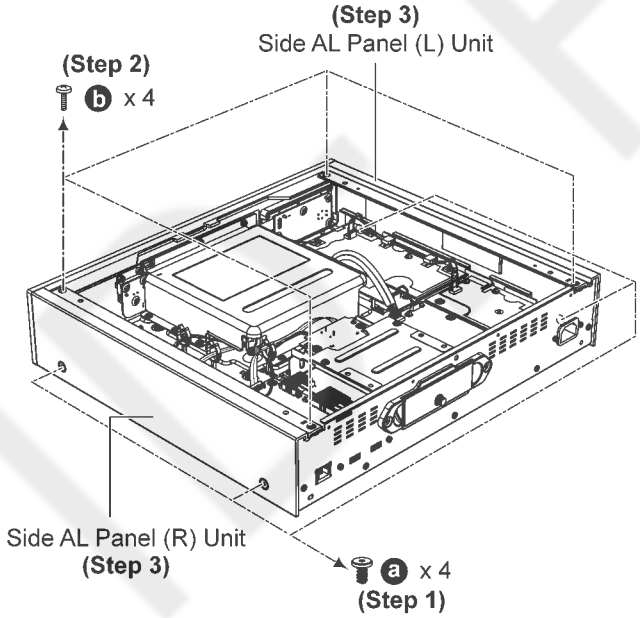
**Step 1** Remove 4 screws.
**Step 2** Remove 4 screws.
**Step 3** Remove Top Cabinet Unit.




## 8.5. Disassembly of Side AL Panel (L) & (R) Unit

- **Refer to "Disassembly of Top Cabinet Unit".**

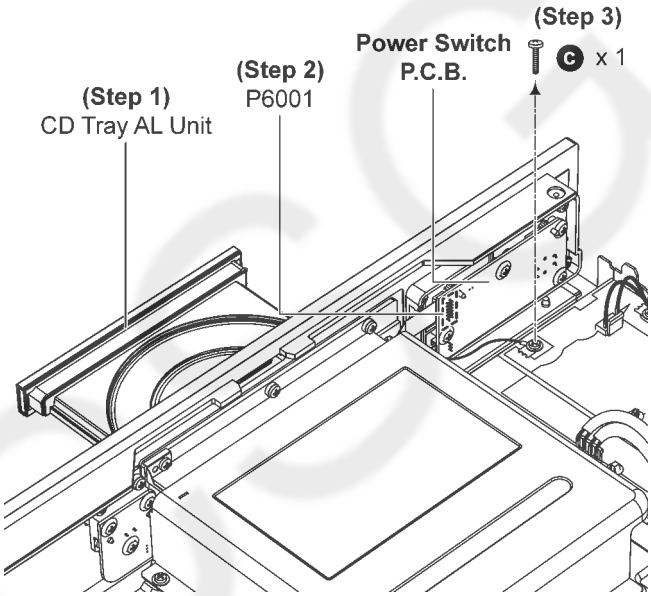
**Step 1** Remove 4 screws.
**Step 2** Remove 4 screws.
**Step 3** Remove Side AL Panel (L) & (R) Unit.



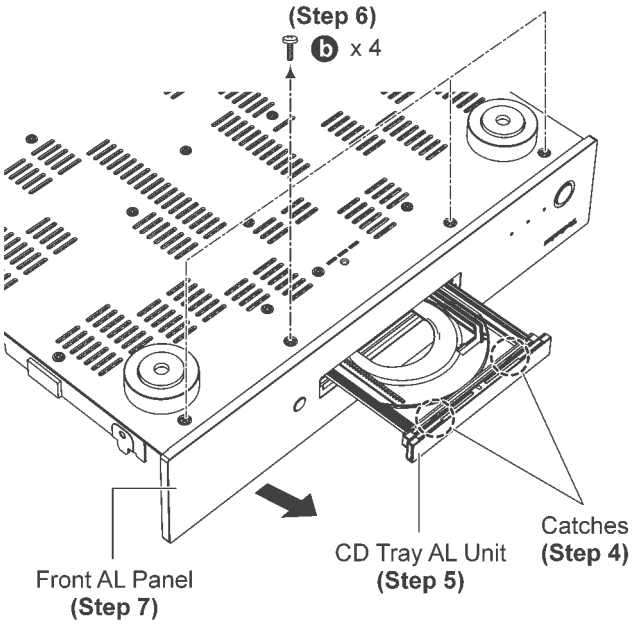

## 8.6. Disassembly of Front AL Panel

- **Refer to "Disassembly of Top Cabinet Unit".**
- **Refer to "Disassembly of Side AL Panel (L) & (R) Unit".**

**Step 1** Switch on the Main Unit and Eject CD Tray AL Unit.
**Step 2** Detach 12P FFC at connector (P6001) on Power Switch P.C.B..
**Step 3** Remove screw.



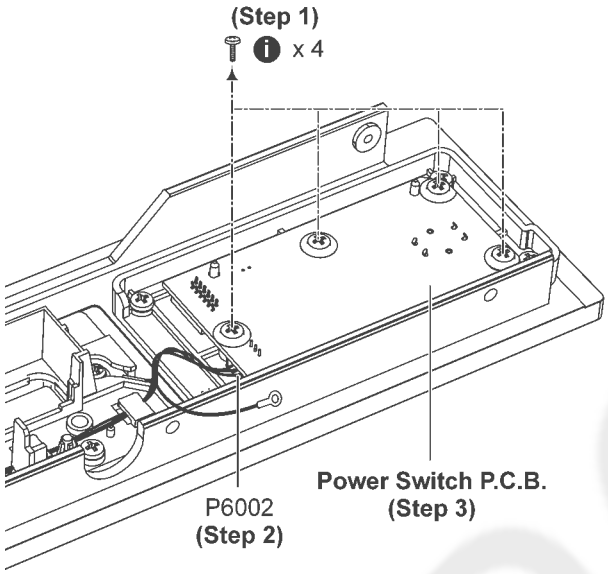

**Step 4** Release catches.
**Step 5** Remove CD Tray AL Unit.
**Step 6** Remove 4 screws.
**Step 7** Remove Front AL Panel.



## 8.7. Disassembly of Power Switch P.C.B.

- **Refer to “Disassembly of Top Cabinet Unit”.**
- **Refer to “Disassembly of Side AL Panel (L) & (R) Unit”.**
- **Refer to “Disassembly of Front AL Panel”.**

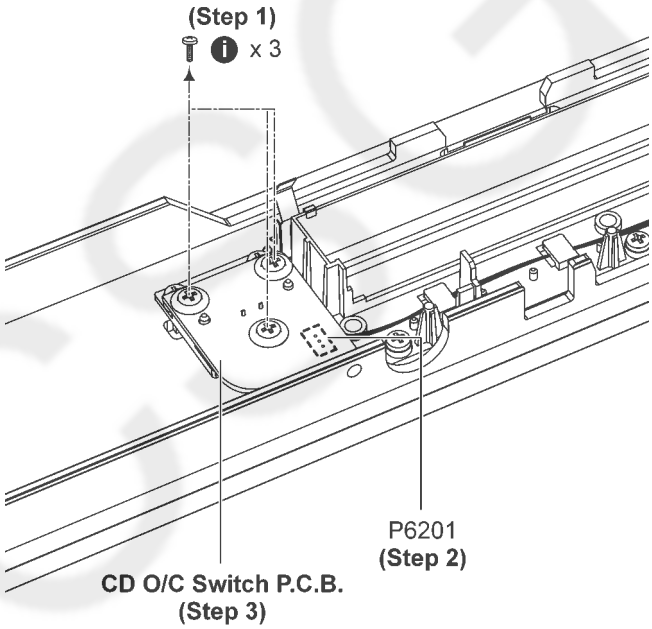
**Step 1** Remove 4 screws.
**Step 2** Detach 3P Cable at connector (P6002) on Power Switch P.C.B..
**Step 3** Remove Power Switch P.C.B..




## 8.8. Disassembly of CD O/C Switch P.C.B

- **Refer to “Disassembly of Top Cabinet Unit”.**
- **Refer to “Disassembly of Side AL Panel (L) & (R) Unit”.**
- **Refer to “Disassembly of Front AL Panel”.**

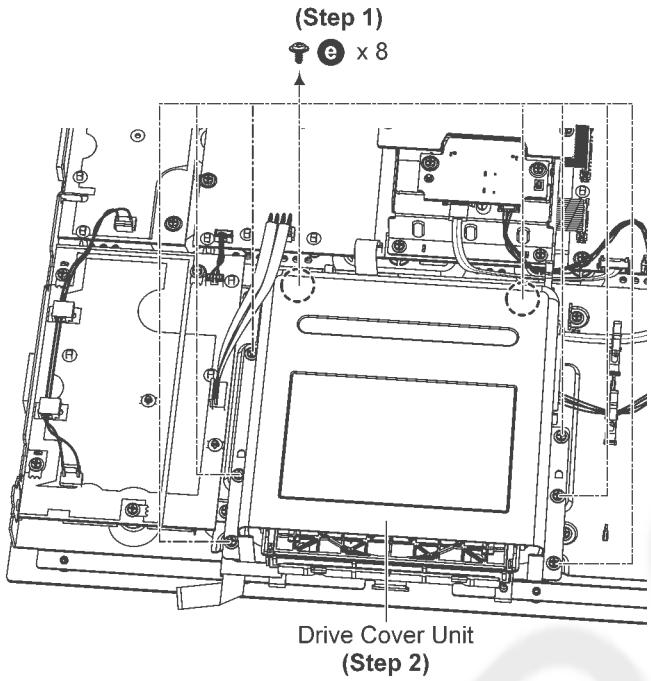
**Step 1** Remove 3 screws.
**Step 2** Detach 3P Cable at connector (P6201) on CD O/C Switch P.C.B..
**Step 3** Remove CD O/C Switch P.C.B..



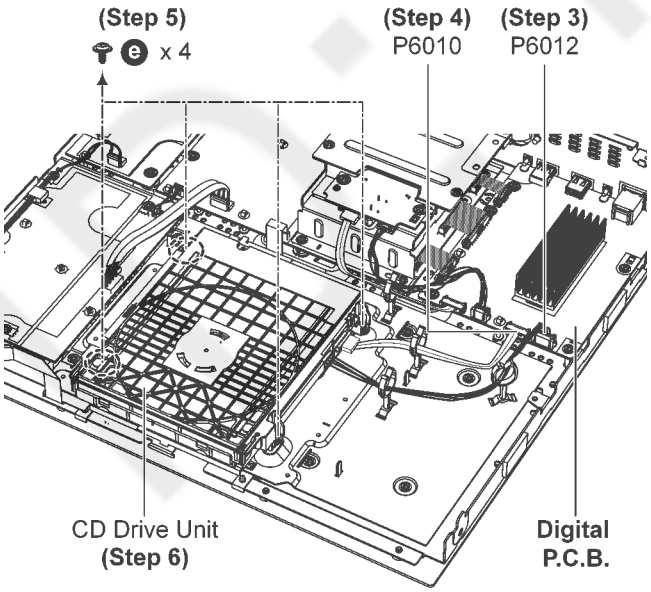
## 8.9. Disassembly of CD Drive Unit

- **Refer to "Disassembly of Top Cabinet Unit".**
- **Refer to "Disassembly of Side AL Panel (L) & (R) Unit".**
- **Refer to "Disassembly of Front AL Panel".**

**Step 1** Remove 8 screws.
**Step 2** Remove Drive Cover Unit.



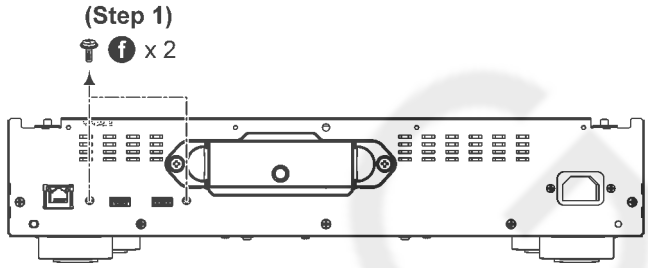

**Step 3** Detach 6P Cable at connector (P6012) on Digital P.C.B..
**Step 4** Detach 7P SATA Cable at connector (P6010) on Digital P.C.B..
**Step 5** Remove 4 screws.
**Step 6** Remove CD Drive Unit.



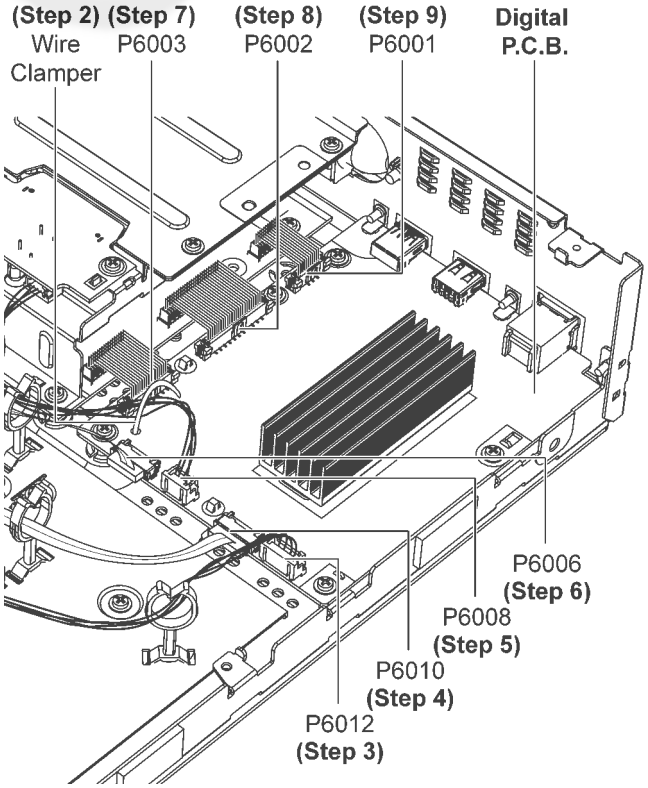

## 8.10. Disassembly of Digital P.C.B.

- **Refer to "Disassembly of Top Cabinet Unit".**
- **Refer to "Disassembly of Side AL Panel (L) & (R) Unit".**

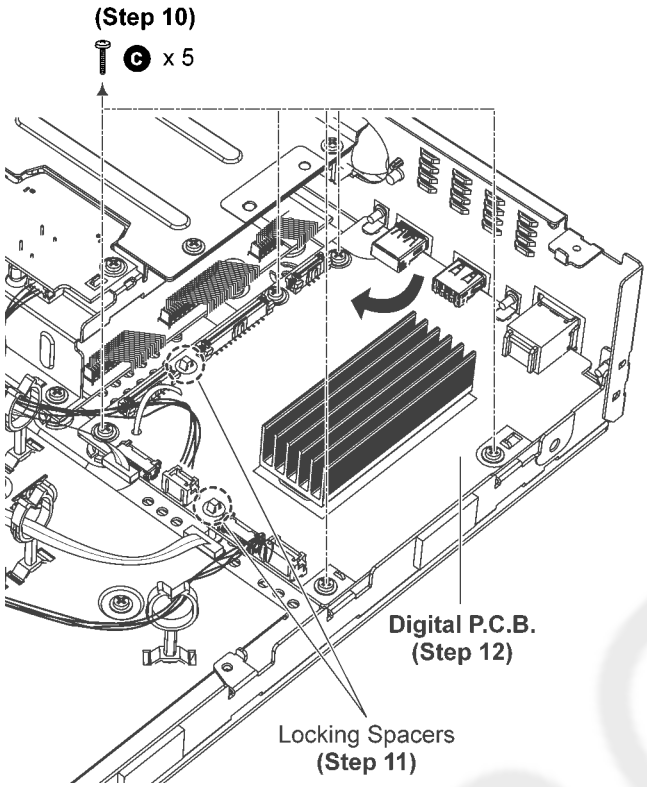
**Step 1** Remove 2 screws.




**Step 2** Release Wire Clamper.
**Step 3** Detach 6P Cable at connector (P6012) on Digital P.C.B..
**Step 4** Detach 7P SATA Cable at connector (P6010) on Digital P.C.B..
**Step 5** Detach 4P Cable at connector (P6008) on Digital P.C.B..
**Step 6** Detach 7P SATA Cable at connector (P6006) on Digital P.C.B..
**Step 7** Detach 15P Bridge Connector at connector (P6003) on Digital P.C.B..
**Step 8** Detach 23P Bridge Connector at connector (P6002) on Digital P.C.B..
**Step 9** Detach 9P Bridge Connector at connector (P6001) on Digital P.C.B..



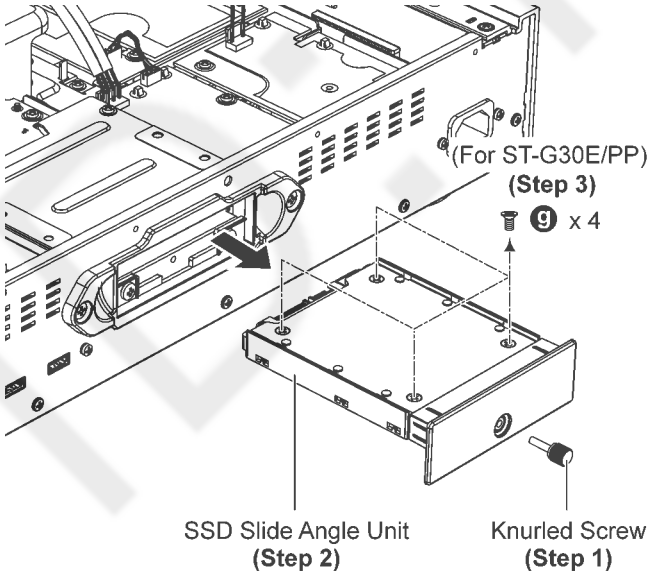
**Step 10** Remove 5 screws.
**Step 11** Release Locking Spacers.
**Step 12** Remove Digital P.C.B..



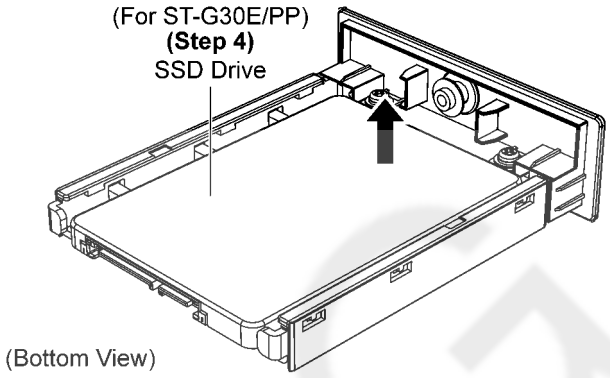

## 8.11. Disassembly of SSD Drive

- **Refer to "Disassembly of Top Cabinet Unit".**

**Step 1** Remove Knurled screw.
**Step 2** Remove SSD Slide Angle Unit.
**Step 3** Remove 4 screws. (For ST-G30E/PP)




**Step 4** Remove SSD Drive. (For ST-G30E/PP)

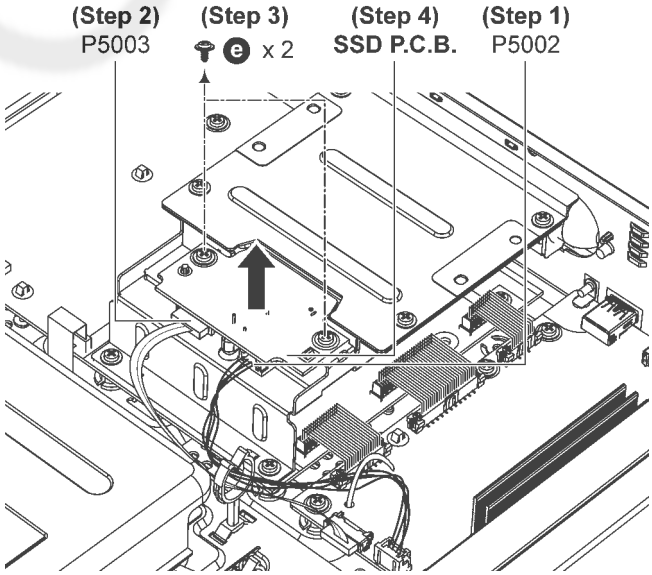



**Remark : Recommended SSD (Commercial product)**
SSD can be used commercial producs. Please check below web site for information on recommended products.
www.technics.com

## 8.12. Disassembly of SSD P.C.B.

- **Refer to "Disassembly of Top Cabinet Unit".**

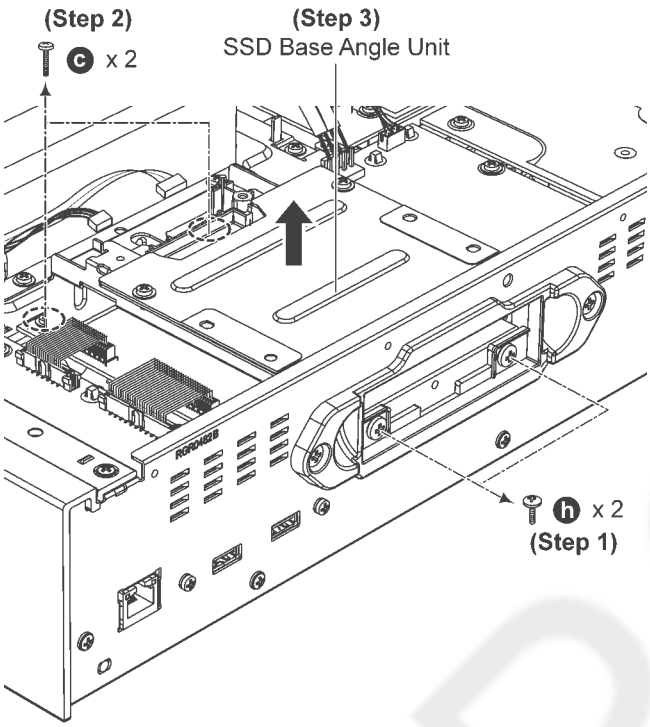
**Step 1** Detach 4P Cable at connector (P5002) on SSD P.C.B..
**Step 2** Detach 7P SATA Cable at connector (P5003) on SSD P.C.B..
**Step 4** Remove 2 screws.
**Step 5** Remove SSD P.C.B..



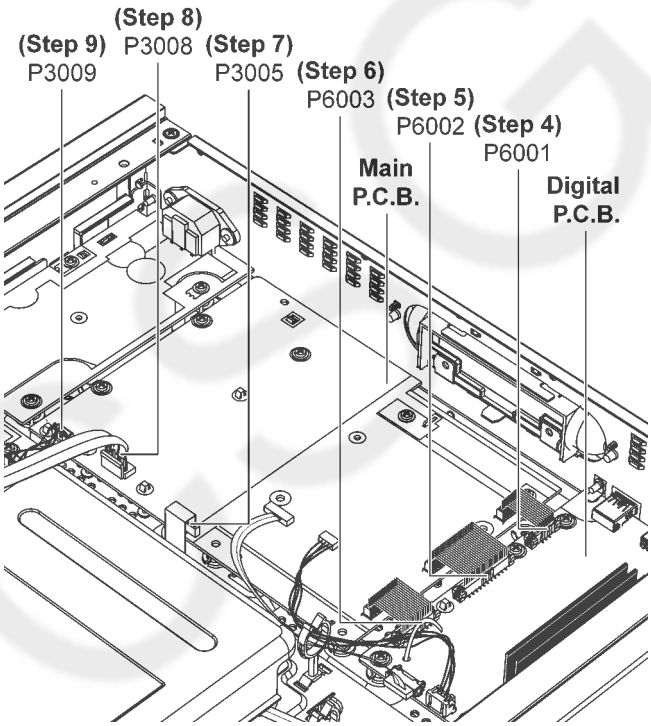
## 8.13. Disassembly of Main P.C.B.

- **Refer to “Disassembly of Top Cabinet Unit”.**
- **Refer to “Disassembly of SSD Drive”.**
- **Refer to “Disassembly of SSD P.C.B.”.**

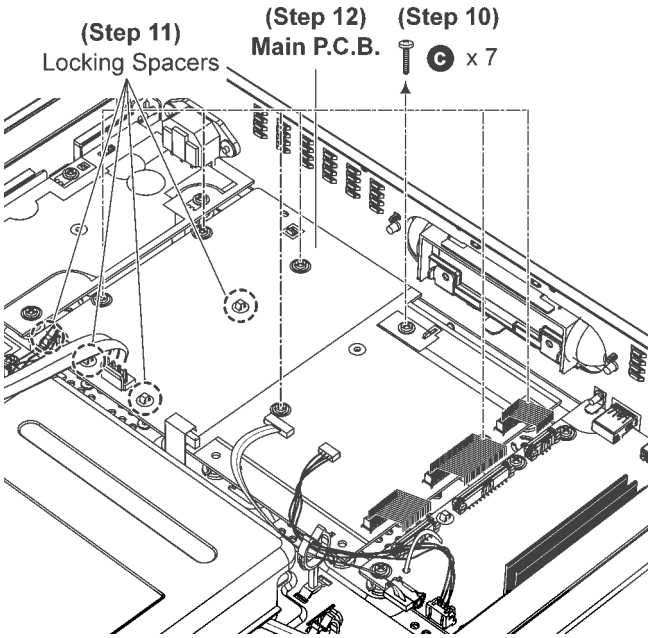
**Step 1** Remove 2 screws.
**Step 2** Remove 2 screws.
**Step 3** Remove SSD Base Angle Unit.




**Step 4** Detach 9P Bridge Connector at connector (P6001) on Digital P.C.B..
**Step 5** Detach 23P Bridge Connector at connector (P6002) on Digital P.C.B..
**Step 6** Detach 15P Bridge Connector at connector (P6003) on Digital P.C.B..
**Step 7** Detach 12P FFC at connector (P3005) on Main P.C.B..
**Step 8** Detach 4P Cable at connector (P3008) on Main P.C.B..
**Step 9** Detach 4P Cable at connector (P3009) on Main P.C.B..



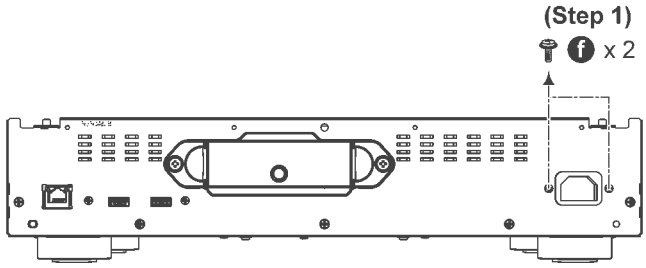

**Step 10** Remove 7 screws.
**Step 11** Release Locking Spacers.
**Step 12** Remove Main P.C.B..



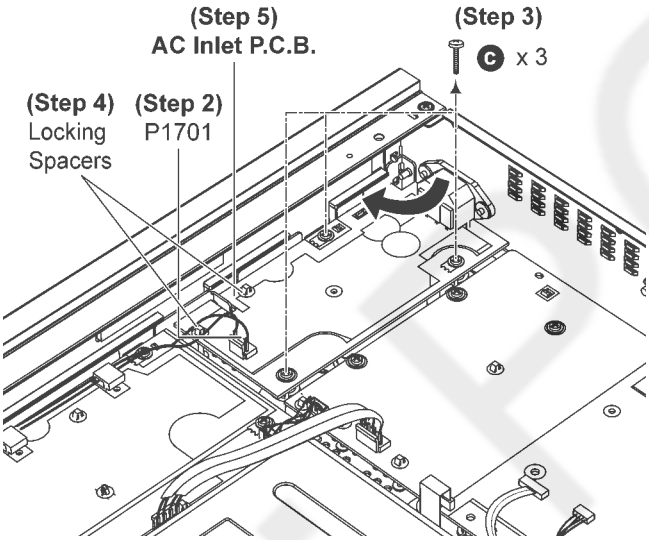
## 8.14. Disassembly of AC Inlet P.C.B.

- **Refer to "Disassembly of Top Cabinet Unit".**
- **Refer to "Disassembly of Side AL Panel (L) & (R) Unit".**

**Step 1** Remove 2 screws.



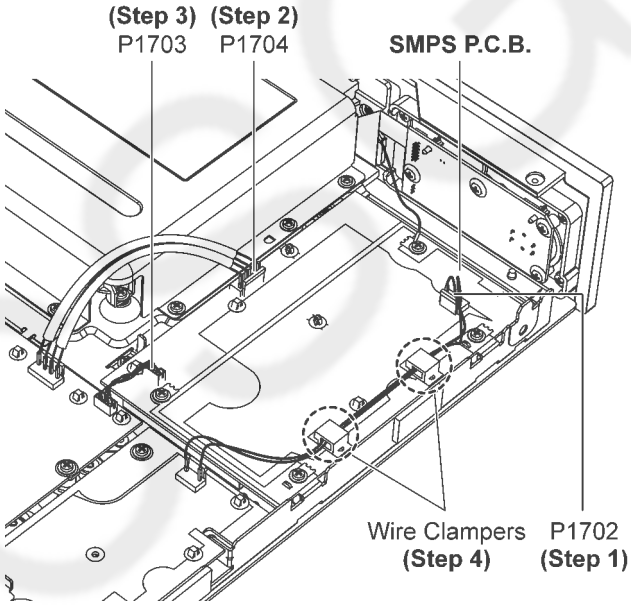

**Step 2** Detach 2P Cable at connector (P1701) on AC Inlet P.C.B..
**Step 3** Remove 3 screws.
**Step 4** Release Locking Spacers.
**Step 5** Remove AC Inlet P.C.B..



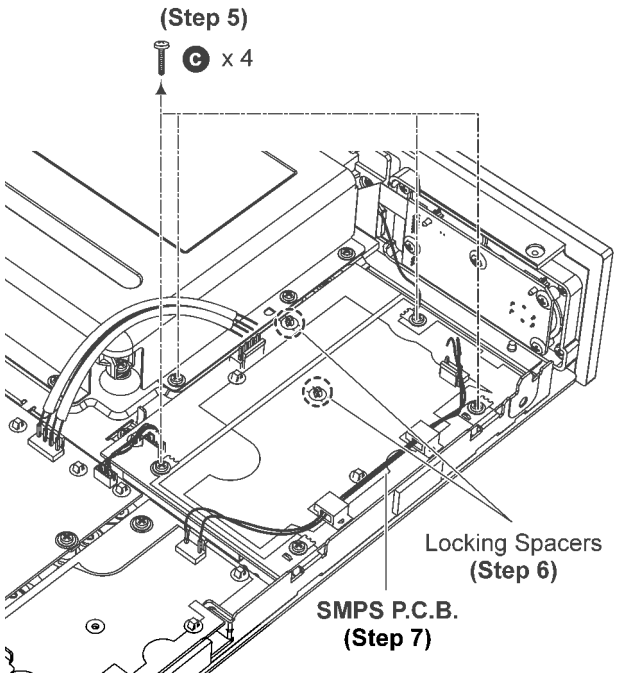

## 8.15. Disassembly of SMPS P.C.B.

- **Refer to "Disassembly of Top Cabinet Unit".**
- **Refer to "Disassembly of Side AL Panel (L) & (R) Unit".**

**Step 1** Detach 2P Cable at connector (P1702) on SMPS P.C.B..
**Step 2** Detach 4P Cable at connector (P1704) on SMPS P.C.B..
**Step 3** Detach 4P Cable at connector (P1703) on SMPS P.C.B..
**Step 4** Release Wire Clampers.




**Step 5** Remove 4 screws.
**Step 6** Release Locking Spacers.
**Step 7** Remove SMPS P.C.B..

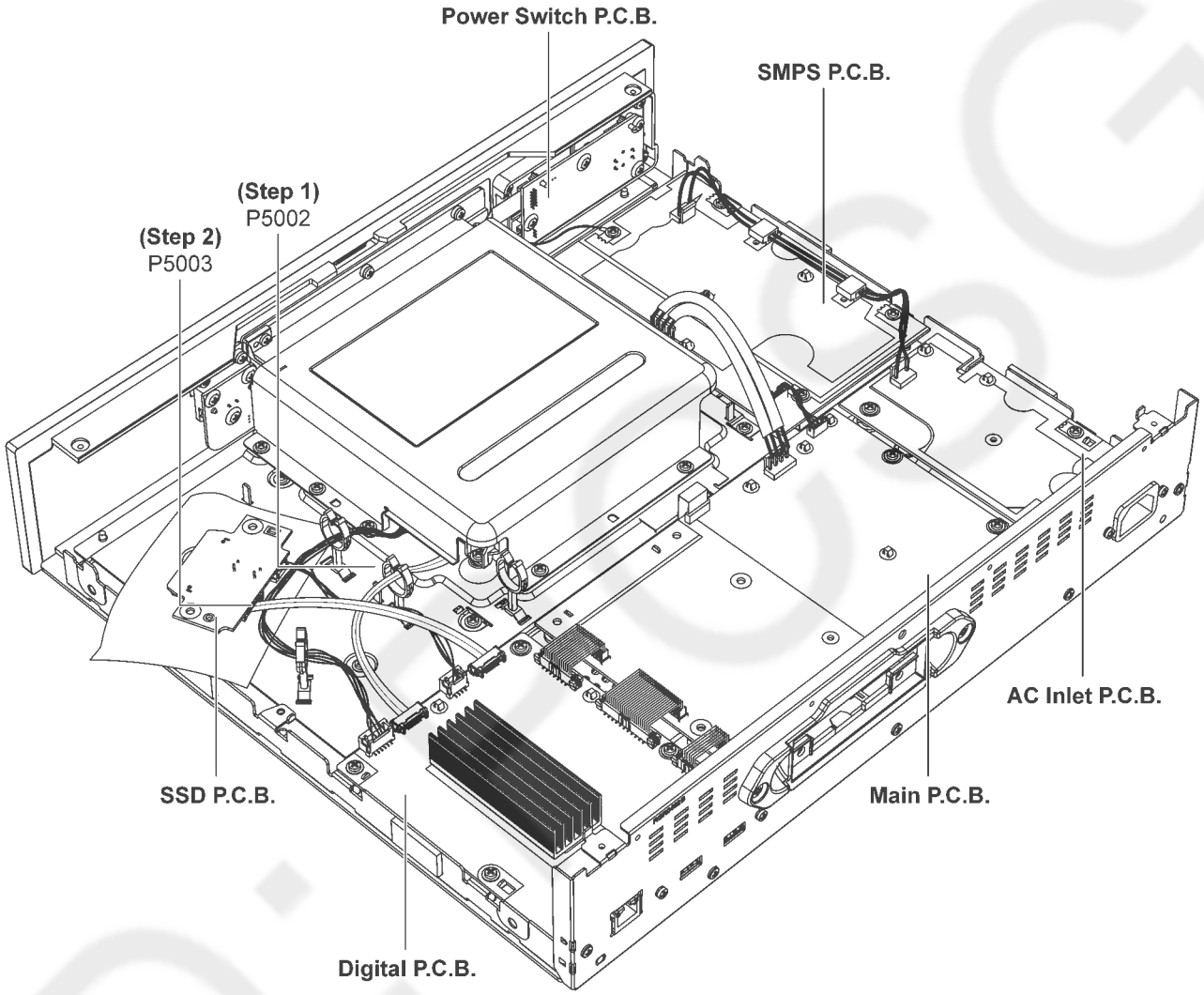


# 9 Service Position

**Note: For description of the disassembly procedures, refer Section 8 of the Service Manual.**

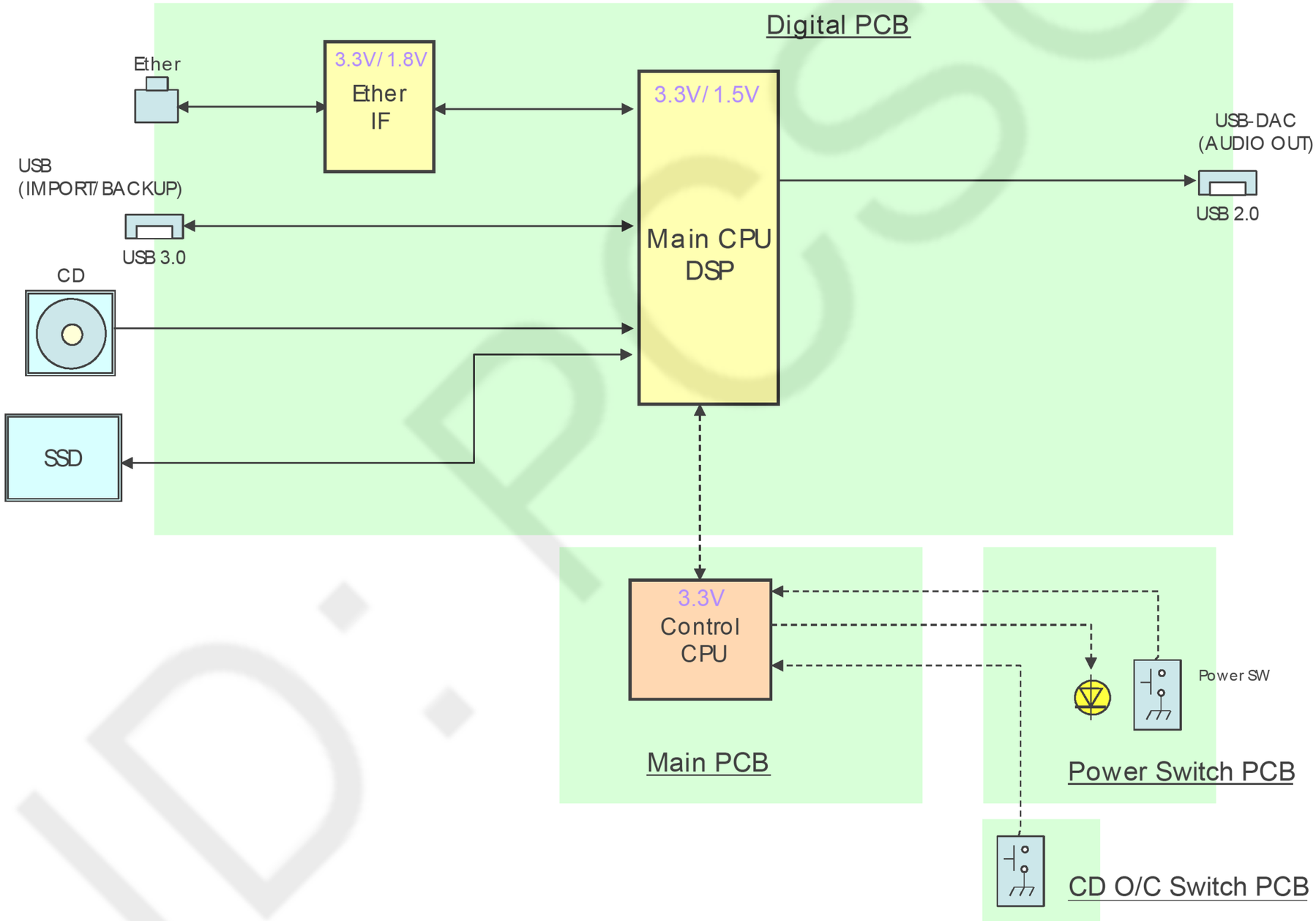
## 9.1. Checking P.C.B.

**Step 1** Attach 4P Cable at connector (P5002) on SSD P.C.B..
**Step 2** Attach 7P SATA Cable at connector (P5003) on SSD P.C.B..

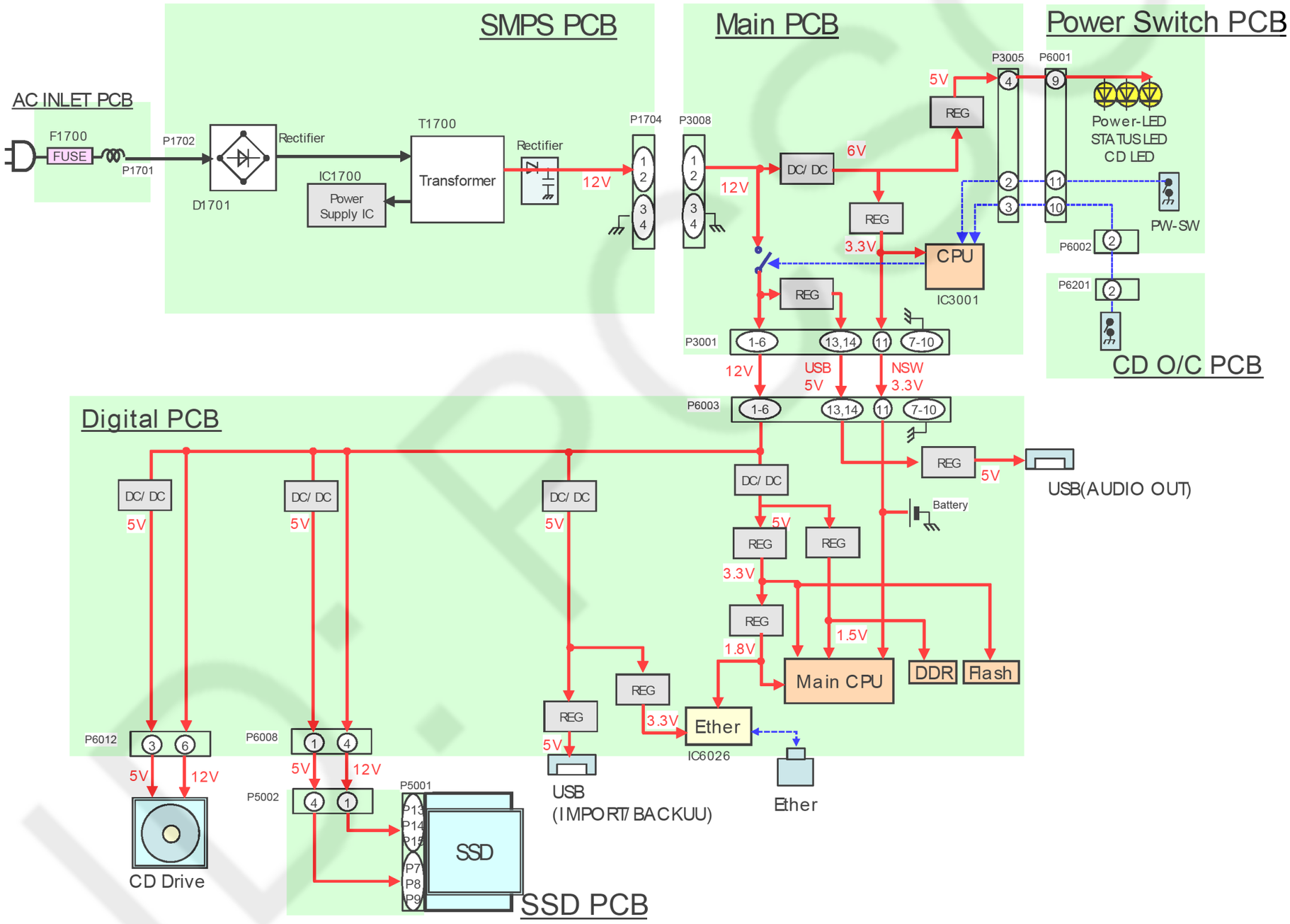


# 10 Block Diagram

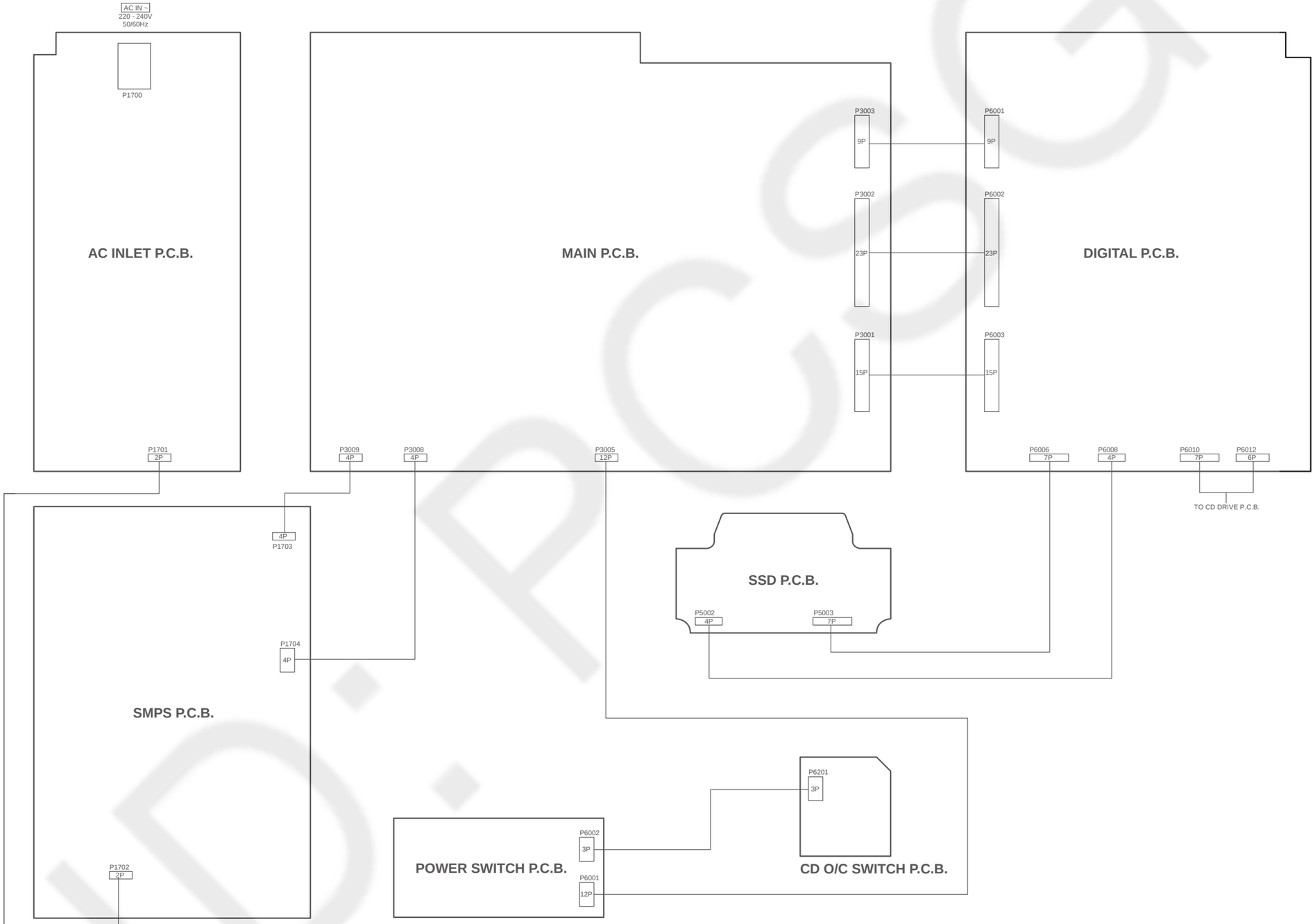
## 10.1. Signal Section



## 10.2. Power Supply Section



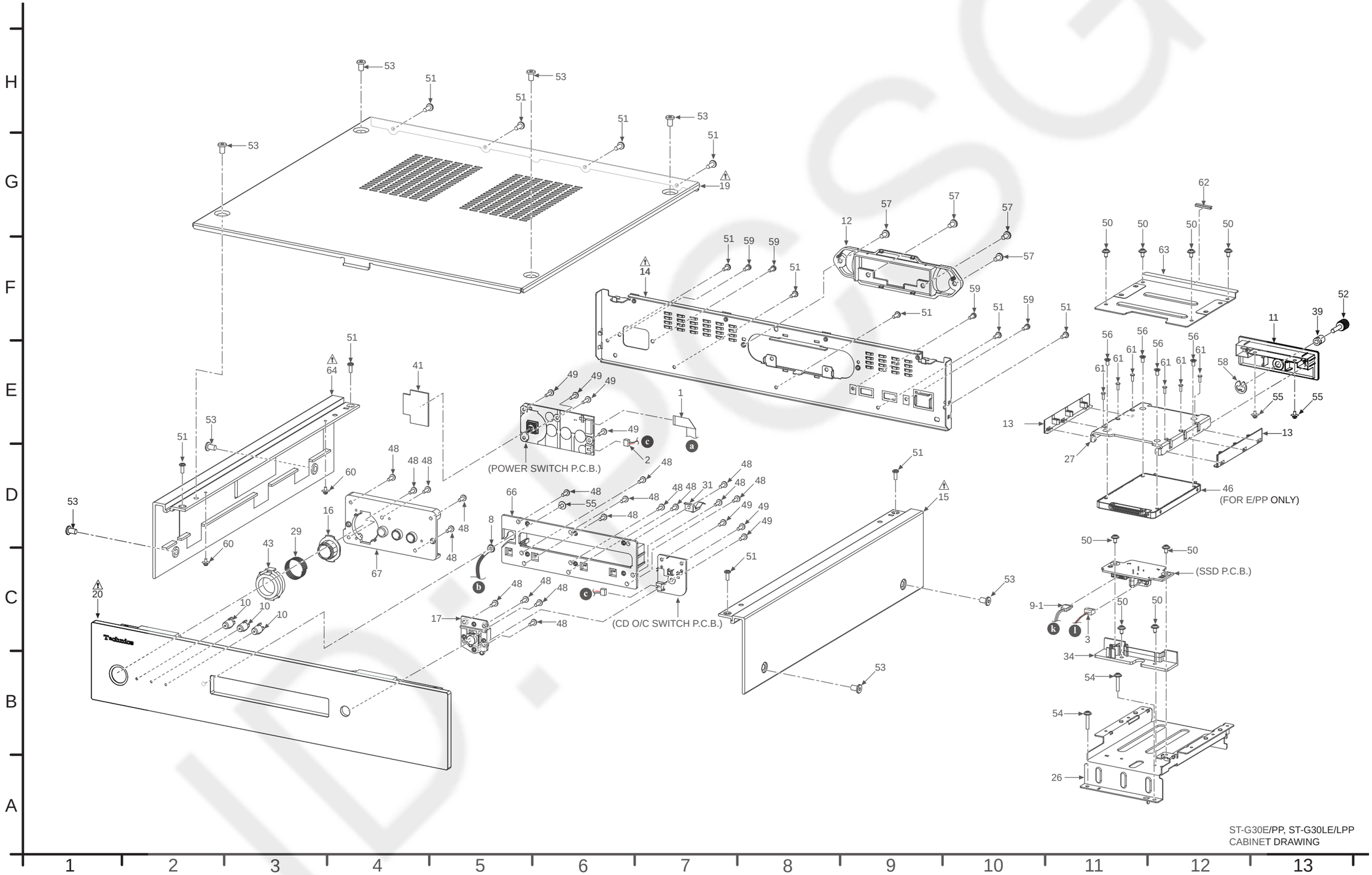
# 11 Wiring Connection Diagram



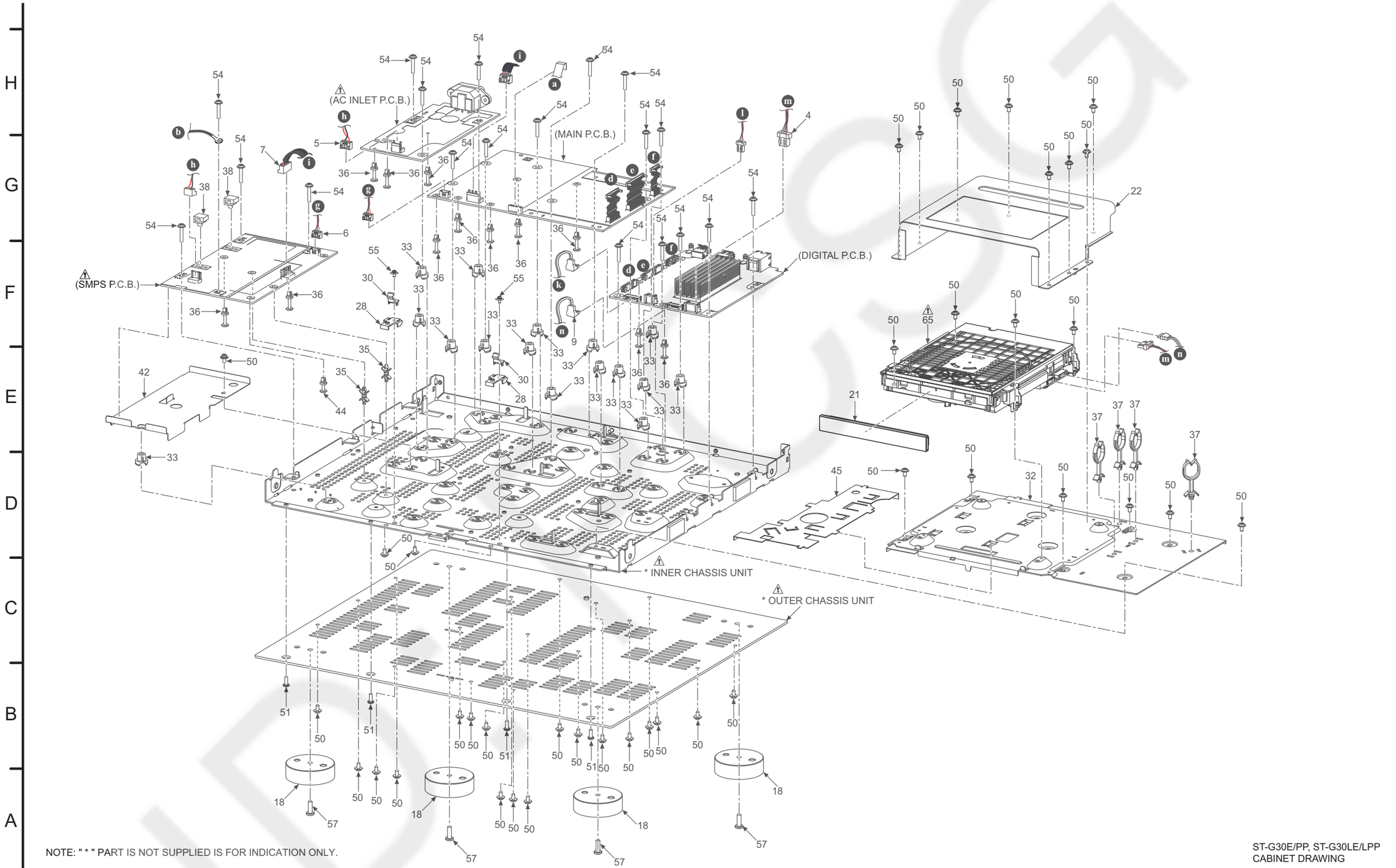

ST-G30E/PP/LE/LPP WIRING CONNECTION DIAGRAM

# 12 Exploded View and Replacement Parts List

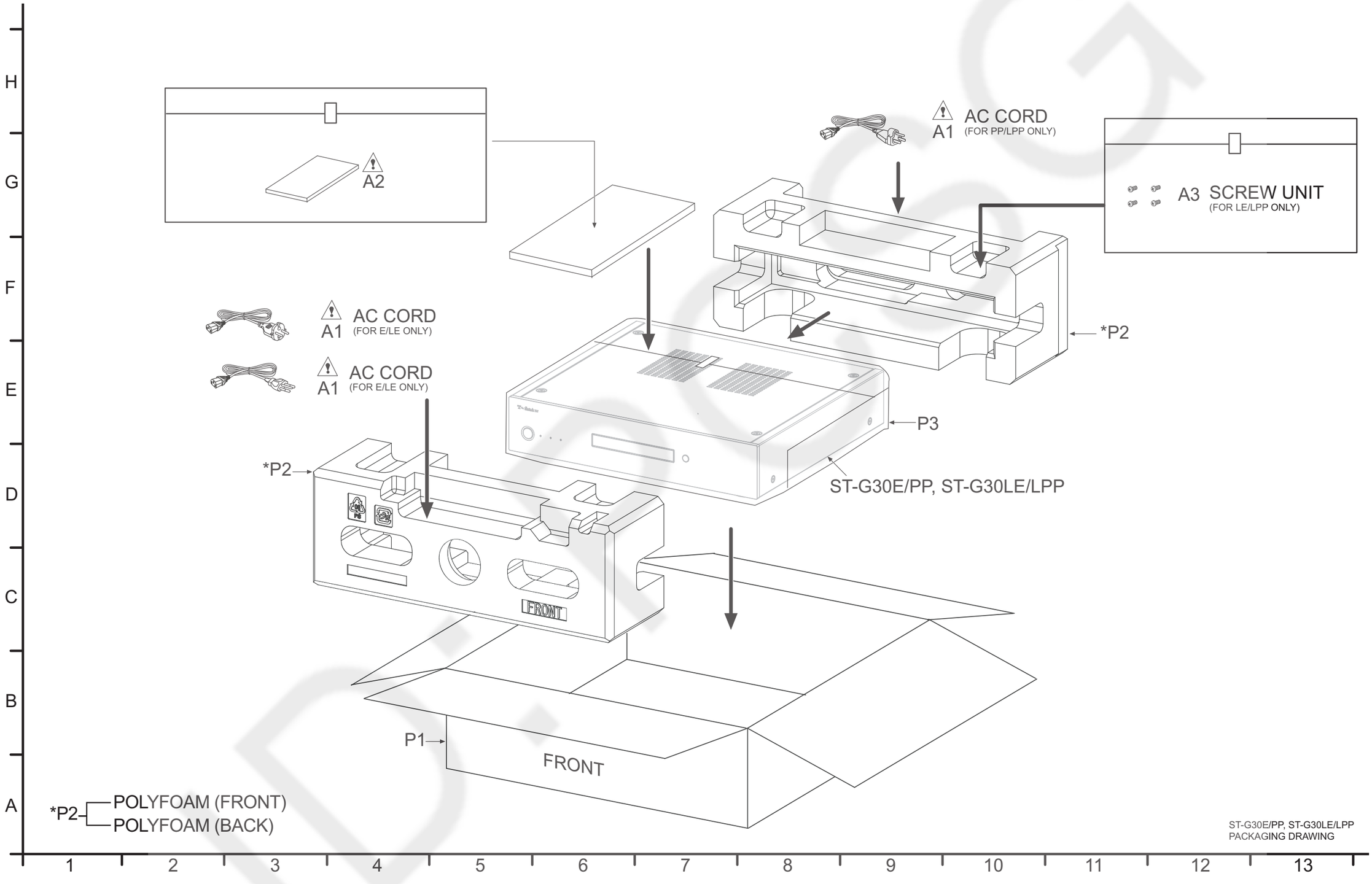
## 12.1. Cabinet Parts Location 1



## 12.2. Cabinet Parts Location 2



## 12.3. Packaging



# 12.4. Mechanical Replacement Part List

**Important Safety Notice**

*Components identified by ⚠ mark have special characteristics important for safety.*
*When replacing any of these components, use only manufacturer's specified parts.*

**RTL (Retention Time Limited)**

**Note:** The marking (RTL) indicates that the Retention Time is Limited for this item. 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 availability is dependant 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.

**Note:**

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by PAVCJM unless indicated likewise.
- 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 | Pr: | Portuguese | Fi: | Finnish |

| Safety | Ref. No. | Part No. | Part Name & Description | Qty | Remarks |
|---|---|---|---|---|---|
| | | | | | |
| | | | CABINET AND CHASSIS | | |
| | | | | | |
| | 1 | REE2134 | 12P FFC (P SW-MAIN) | 1 | |
| | 2 | REX1898 | 3P WIRE (P SW-CD SW ) | 1 | |
| | 3 | REX1899 | 4P WIRE (SSD-DIGITAL) | 1 | |
| | 4 | REX1900 | 6P WIRE (CD-DIGITAL) | 1 | |
| | 5 | REX1918 | 2P WIRE (AC INLET-SMPS) | 1 | |
| | 6 | REX1919 | 4P WIRE (MAIN-SMPS) | 1 | |
| | 7 | REX1920 | 4P WIRE (MAIN-SMPS) | 1 | |
| | 8 | REX1925 | EARTH WIRE (FRONT TO SMPS) | 1 | |
| | 9 | VEE1N59 | SATA SIGNAL CABLE UNIT | 2 | |
| | 10 | RGL0814-Q | LIGHT GUIDE | 3 | |
| | 11 | RGQ0886-K | SSD PULL KNOB | 1 | |
| | 12 | RGQ0887-K | SSD REAR COVER | 1 | |
| | 13 | RGQ0896-K | SSD SIDE COVER | 2 | |
| ⚠ | 14 | RGR0482B-A1 | REAR PANEL | 1 | E |
| ⚠ | 14 | RGR0482B-C | REAR PANEL | 1 | PP |
| ⚠ | 14 | RGR0482B-D | REAR PANEL | 1 | LE |
| ⚠ | 14 | RGR0428B-F | REAR PANEL | 1 | LPP |

| Safety | Ref. No. | Part No. | Part Name & Description | Qty | Remarks |
|---|---|---|---|---|---|
| ⚠ | 15 | RYP2153-S | SIDE AL PANEL R UNIT | 1 | |
| | 16 | RYQ1592-S | POWER SW BUTTON ASS'Y | 1 | |
| | 17 | RYQ1604-S | CD SW BUTTON ASS'Y | 1 | |
| | 18 | RYQ1591-S | INSULATOR UNIT | 4 | |
| ⚠ | 19 | TTFA0307 | TOP CABINET UNIT | 1 | |
| ⚠ | 20 | TTPA0617 | FRONT PANEL SUB ASS'Y | 1 | |
| | 21 | RYQ1605-S | CD TRAY AL UNIT | 1 | |
| | 22 | RYQ1606-K | DRIVE COVER UNIT | 1 | |
| | 26 | RMA2545 | SSD BASE ANGLE | 1 | |
| | 27 | RMA2546 | SSD SLIDE ANGLE | 1 | |
| | 28 | RMA2565 | SUPPORT PLATE | 2 | |
| | 29 | RMB0999-1 | POWER SW SPRING | 1 | |
| | 30 | RMC0841 | SUPPORT SPRING PLATE | 2 | |
| | 31 | RMC0843 | DRIVE COVER SPRING | 1 | |
| | 32 | RMK0910 | DRIVE PLATE | 1 | |
| | 33 | RMN1082 | PCB SUPPORT | 16 | |
| | 34 | RMN1133 | SSD PCB STAND | 1 | |
| | 35 | RMQ2492 | LOCKING SPACER | 2 | |
| | 36 | RMQ2494 | MINI CARD SPACER 2 | 12 | |
| | 37 | RMQ2495 | HARNESS LIFTER | 4 | |
| | 38 | RMQ2551 | WIRE CLAMPER | 2 | |
| | 39 | RMQ2570 | BRASS SPACER | 1 | |
| | 41 | RMQ2600 | POWER SWITCH SHEET | 1 | |
| | 42 | RXQ2342 | SMPS INSULATION ASS'Y | 1 | |

| Safety | Ref. No. | Part No. | Part Name & Description | Qty | Remarks |
|---|---|---|---|---|---|
| | 43 | RMR2181-K | POWER SW GUIDE | 1 | |
| | 44 | RMX0444 | SPACER | 1 | |
| | 45 | RMZ1551 | FFC COVER | 1 | |
| | 46 | M3ZZZYY00006 | SSD | 1 | E/PP |
| | 48 | XSB3+8FN | SCREW | 18 | |
| | 49 | RHD26045-L | SCREW | 7 | |
| | 50 | RHD30111-K | SCREW | 47 | |
| | 51 | RHD30119-K | SCREW | 17 | |
| | 52 | RHD40057 | SCREW | 1 | |
| | 53 | RHD50032 | SCREW | 8 | |
| | 54 | RHDC0023 | SCREW | 21 | |
| | 55 | XYN3+F5FJK | SCREW | 5 | |
| | 56 | XSS3+6FN | SCREW | 4 | |
| | 57 | XTB4+12JFJK | SCREW | 8 | |
| | 58 | XUC5FJ | E RING | 1 | |
| | 59 | XYN3+C8FJK | SCREW | 4 | |
| | 60 | XYN3+F5FN | SCREW | 2 | |
| | 61 | VHD1224-1A | SCREW | 6 | |
| | 62 | RMQ2608 | SSD GASKET | 1 | |
| | 63 | RMA2548 | SSD TOP PLATE | 1 | |
| ⚠ | 64 | RYP2154-S | SIDE AL PANEL L UNIT | 1 | |
| ⚠ | 65 | SXY0026 | CD DRIVE UNIT | 1 | |
| | 66 | RMR2187-K | GRILLED CENTER | 1 | |
| | 67 | RMR2188-K | GRILLED LEFT | 1 | |
| | | | | | |
| | | | PACKING MATERI-ALS | | |
| | | | | | |
| | P1 | SPG0640 | PACKING CASE | 1 | E |
| | P1 | SPG0788 | PACKING CASE | 1 | LE |
| | P1 | SPG0642 | PACKING CASE | 1 | PP |
| | P1 | SPG0790 | PACKING CASE | 1 | LPP |
| | P2 | SPN0365 | CUSHION | 1 | |
| | P3 | SPH0022-1 | PE SHEET | 1 | |
| | | | | | |
| | | | ACCESSORIES | | |
| | | | | | |
| ⚠ | A1 | K2CG3YY00191 | AC CORD | 1 | PP |
| ⚠ | A1 | K2CM3YY00041 | AC CORD | 1 | E |
| ⚠ | A1 | K2CS3YY00033 | AC CORD | 1 | E |
| ⚠ | A2 | SQT1219 | O/I BOOK (En) | 1 | E |
| ⚠ | A2 | SQT1220 | O/I BOOK (Ge/Fr/It/Du) | 1 | E |
| ⚠ | A2 | SQT1221 | O/I BOOK (Sp/Sw/Da/Fi) | 1 | E |
| ⚠ | A2 | SQT1342 | O/I BOOK (En) | 1 | LE |
| ⚠ | A2 | SQT1343 | O/I BOOK(Ge/Fr/It/Du) | 1 | LE |
| ⚠ | A2 | SQT1344 | O/I BOOK (Sp/Sw/Da/Fi) | 1 | LE |
| ⚠ | A2 | SQT1222 | O/I BOOK (En/Cf) | 1 | PP |
| ⚠ | A2 | SQT1345 | O/I BOOK (En/Cf) | 1 | LPP |
| | A3 | RFA3676 | SCREW UNIT | 1 | LE/LPP |

## 12.5. Electrical Replacement Parts List

**Important Safety Notice**

*Components identified by ⚠ mark have special characteristics important for safety.*
*When replacing any of these components, use only manufacturer's specified parts.*

**RTL (Retention Time Limited)**

**Note:** The marking (RTL) indicates that the Retention Time is Limited for this item. 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 availability is dependant 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.

**Note:**

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- Capacitor value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1000 (OHM).
- All parts mentioned are supplied by PAVCJM unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by JAPAN.

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

| Safety | Ref. No. | Part No. | Part Name & Description | Qty | Remarks |
|---|---|---|---|---|---|
| | | | | | |
| | | | PRINTED CIRCUIT BOARDS | | |
| | | | | | |
| | PCB1 | SEP0590AA | DIGITAL P.C.B | 1 | |
| | PCB2 | SEP0603AA | MAIN P.C.B | 1 | |
| | PCB3 | SEP0604AA | POWER SWITCH P.C.B | 1 | |
| | PCB4 | SEP0683AA | SSD P.C.B | 1 | |
| ⚠ | PCB5 | SEP0589AA | SMPS P.C.B | 1 | |

| Safety | Ref. No. | Part No. | Part Name & Description | Qty | Remarks |
|---|---|---|---|---|---|
| | PCB6 | SEP0636AA | CD O/C SWITCH P.C.B | 1 | |
| ⚠ | PCB7 | SEP0769AA | AC INLET P.C.B | 1 | |
| | PCB8 | VEP76303Q | CD DRIVE P.C.B | 1 | |
| | | | | | |
| | | | FUSE | | |
| | | | | | |
| ⚠ | F1700 | K5G312Y00007 | FUSE | 1 | |
| ⚠ | F1701 | K5G202Y00006 | FUSE | 1 | |

MMH1603