PSG1002003CE

Service Manual

Wireless System

Model No. SH-FX71GC
SH-FX71GN

Product Color: (K)...Black Type

SH-FX71

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

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.
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.

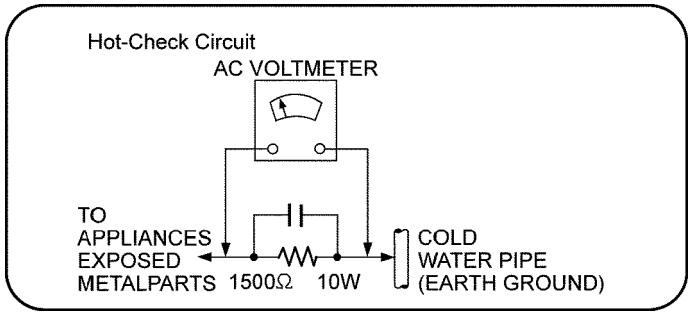


Figure. 1

1.2. Before Repair and Adjustment

This model uses switching mode power supply (SMPS) module to provide the necessary voltages for the Digital Receiver
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 110 V to 240 V, at 50/60 Hz in NO SIGNAL mode (at volume minimum) should be ~200 mA. (GC only)
- Current consumption at AC 220 V to 240 V, at 50 Hz in NO SIGNAL mode (at volume minimum) should be ~200 mA. (GN only)

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. Safety Part 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.

Table 1

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	11	RGNX1088-K	NAME PLATE STICKER	GN
⚠	11	RGNX1086-K	NAME PLATE STICKER	GC
⚠	18	N0AE3GJ00001	SMPS MODULE P.C.B.	
⚠	A1	K2CJ2DA00010	AC CORD	GN
⚠	A1	K2CP2CA00001	AC CORD /W TAG	GC
⚠	A1	K2CQ2CA00007	AC CORD (2PIN)	GC
⚠	A1	K2CZ3YY00005	AC CORD (3PIN)	GC
⚠	A2	RQTX1132-G	O/I BOOK (Sp,Cn,Ru,Ur)	GC
⚠	A2	RQTX1140-B	O/I BOOK (En)	
⚠	A5	RFAX1012D	TRANSMITTER UNIT	GC
⚠	A5	RFAX1012E	TRANSMITTER UNIT	GN
⚠	A7	J0KG00000037	FERRITE CORE	
⚠	PCB1	REPX0771B	DIGITAL RECEIVER MODULE (RX) P.C.B.	

2 Warning

2.1. Prevention of Electro Static 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 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-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge 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, aluminium foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution :
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize 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).

2.2. Service caution based on Legal restrictions

2.2.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

3 Service Navigation

3.1. Service Hint

3.1.1. Power supply

This model uses Switching Mode Power Supply (SMPS) Module for powering the receiver unit. It is replaceable as an assembly unit. (Part No : N0AE3GJ00001) Do not attempt to repair or its component on board.

3.1.2. Digital Transmitter Unit / Digital Receiver Module (Rx) P.C.B. Replacement

1. This Model uses Digital Transmitter Unit & Digital Receiver Module (Rx) P.C.B. for the wireless transmission of signals.
2. After replacement of either Digital Transmitter Unit or Digital Receiver Module (Rx) P.C.B., ID setting is required. Refer to section 6.1 Service Mode Table 1 for the procedures for ID setting.

3.1.3. Wireless System Compatibility

SH-FX71 wireless system is not compatible with SH-FX65, SH-FX67 or SH-FX70 wireless system (Digital Transmitter & Digital Receiver.

4 Specifications

■ **Amplifier Section**

RMS output power	
Surround Ch	125 W per channel (3 Ω), 1 kHz, 10 % THD
Total RMS power	250 W
DIN output power	
Surround Ch	70 W per channel (3 Ω),1 kHz, 1 % THD
Total DIN power	140 W

■ **General**

Power supply	
(For GC Only)	AC 110V to 240V, 50/60 Hz
(For GN Only)	AC 220V to 240V, 50 Hz
Power consumption	
Digital transmitter	1.2 W
Wireless system	43 W
Dimensions (W x H x D)	
Digital transmitter	43.3 mm x 37.3 mm x 8.2 mm
Wireless system	165 mm x 91.5 mm x 164 mm
Mass	
Digital transmitter	0.0095 kg
Wireless system	0.695 kg
Wireless module	
Frequency range	2.4 GHz to 2.4835 GHz
Number of channels	3
Operating temperature range	0°C to +40°C
Operating humidity range	20% to 80 % RH (no condensation)
Power consumption in off mode	approx. 0.3 W

Notes :

1. Specifications are subject to change without notices. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Power supply:

This model uses Switching Mode Power Supply (SMPS) Module for powering the receiver unit. It is replaceable as an assembly unit.

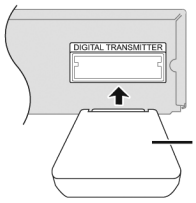
5 Operating Instructions

Turn off all equipmend before connection.

Do not connect the AC power supply cord until all other connections are complete.

5.1. Digital Transmitter connection

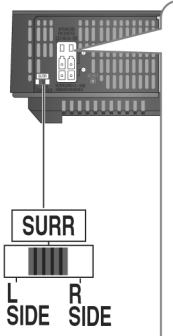
Do not insert or remove while the home theater unit is on.



e.g.
Rear of the home theater unit

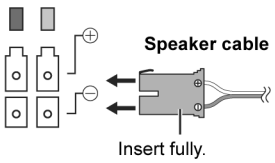
Digital transmitter (included)
Insert fully until you hear a click.

5.2. Surround Speakers connection to the Digital Receiver



Surround selector

Connecting the speakers to the wireless system
Connect to terminals of the same color.



Speaker cable

Insert fully.

Impedance: 3 Ω to 6 Ω
Speaker input power: 100 W (Min)

For 5.1ch connection

SURROUND (LS): Blue
SURROUND (RS): Grey

Selector setting for the left and right speakers

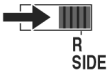
For 7.1ch connection

SURROUND (LS): Blue
SURROUND BACK (LB): Grey

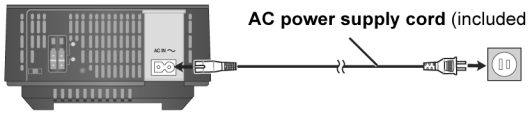
Selector setting for the left speakers

SURROUND (RS): Grey
SURROUND BACK (RB): Blue

Selector setting for the right speakers



5.3. AC Power Supply Cord connection



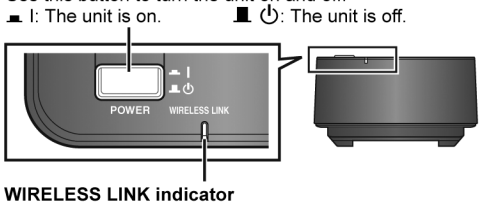
AC power supply cord (included)

To household AC outlet

5.4. Making the Wireless link

1 **Turn on the wireless system.**

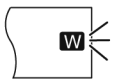
Unit on/off button [POWER I, ⏻]
Use this button to turn the unit on and off.
I: The unit is on. ⏻: The unit is off.



WIRELESS LINK indicator
Red: The unit is on and the wireless link is deactivated.
Green: The unit is on and the wireless link is activated.

2 **Turn on your home theater unit.**
The wireless link indicator on your home theater unit will be turned on.
- The type of the indicator varies according to the home theater unit.

e.g. Display on the home theater unit

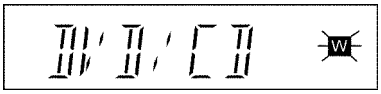
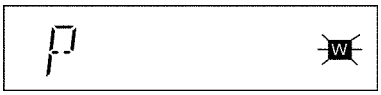
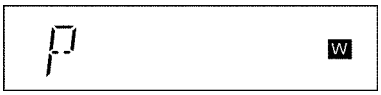
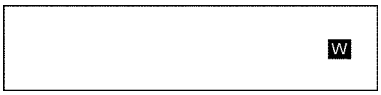


3 **Start play on the home theater unit.**

Conserving power
The wireless system consumes a small amount of power, even when it is off (approx. 0.2 W). To save power when the unit is not to be used for a long time, unplug it from the household AC outlet.

6 Service Mode

6.1. Service Mode Table 1

Item		Main Unit FL Display	Key Operation	
Mode Name	Description		Main Unit	Remote control
ID Setting	To pair Transmitter Unit & Digital Receiver		[SELECTOR]	
	1. Select DVD/CD mode W. **Note :** Unpaired : - Digital Receiver indicator will be red. - Main Unit W will be blinking W.			
	2. Press & hold [STOP] on main unit, followed by [2] on remote control. **Note :** System will go info pairing mode for 60 secs only, after 60 secs FL display will return to its previous display.		[STOP]	[2]
	3. During Pairing mode, press “ID Set” button on the rear side of Digital Receiver. **Note :** Successful Pairing : - Digital Receiver indicator will turn red to green. - Main Unit W will stop blinking.			
	2. To cancel pairing, press & hold [STOP] on main unit, followed by [2] on remote control.		[STOP]	[2]

7 Disassembly and Assembly Instructions

Caution Note:

- **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 the 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. (See caution as described below)**

CAUTION: HOT!!
PLEASE DO NOT
TOUCH THE HEAT SINK

- **During disassembly and assembly, please ensure proper service tools, equipments or jigs is being used.**
- **During replacement of component parts, please refer to the section of "Replacement Parts List" as described in the service manual.**
- **Select items from the following indexes when disassembly or replacement are required.**

- Disassembly of Top Cabinet Ass'y
- Disassembly of LED Drive P.C.B. and LED P.C.B.
- Disassembly of SMPS Module P.C.B.
- Disassembly of D-AMP P.C.B.
- Disassembly of Digital Amp IC (IC5200)
- Disassembly of Digital Receiver Module (Rx) P.C.B.

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

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

ⓐ : RHD30111-31

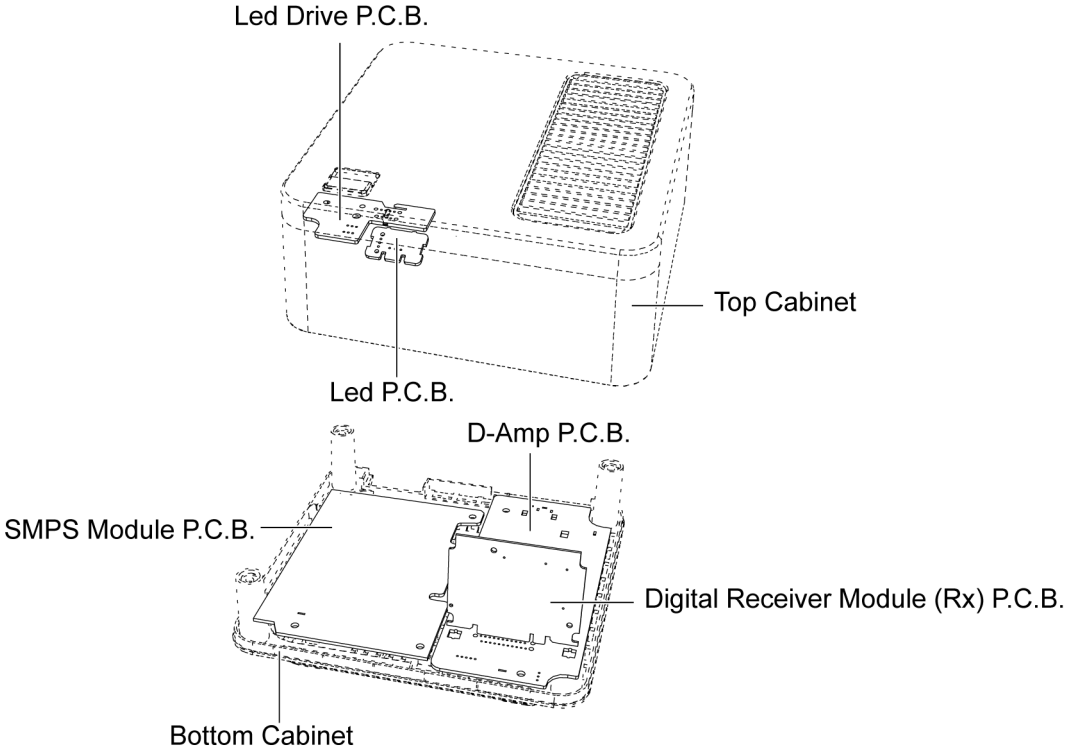
ⓑ : XTB3+10JFJ-J

ⓒ : XTB3+8JFJ-J

Caution: SMPS Module P.C.B. Replacement

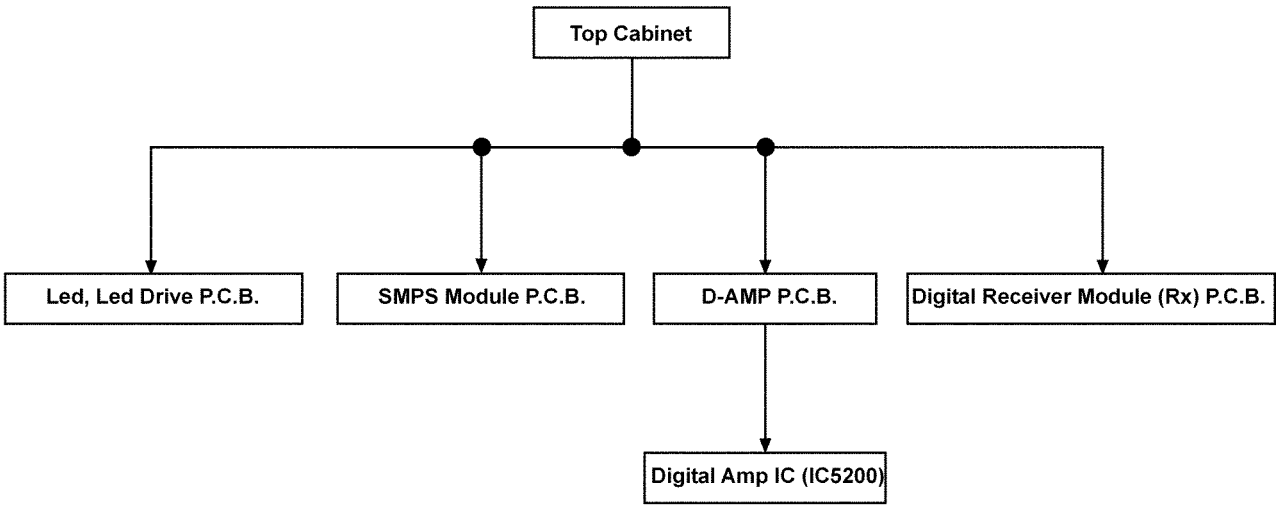
This model uses SMPS Module P.C.B. to provide the necessary supply voltages for the Digital Receiver.
It is advisable to replace the SMPS Module P.C.B. if upon detecting of non-working conditions. Do not attempt to repair or replace its components on board.

7.1. Main Parts Location Diagram



7.2. Disassembly flow chart

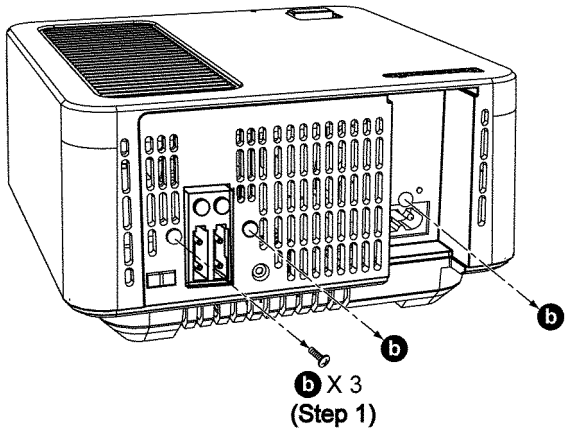
The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart below.



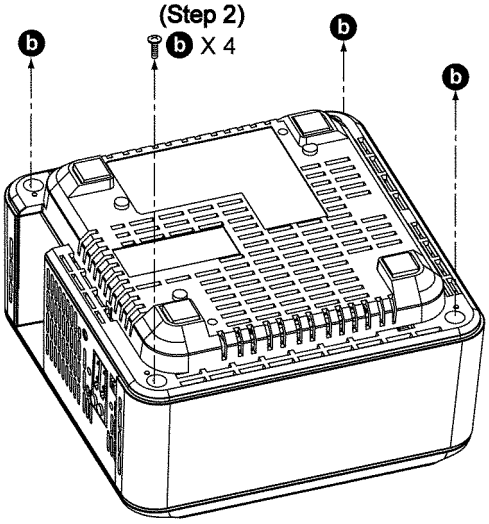
7.3. Disassembly of Digital Receiver

7.3.1. Disassembly of Top Cabinet Ass'y

Step 1 : Remove 3 screws.



Step 2 : Upset the unit and remove 4 screws.

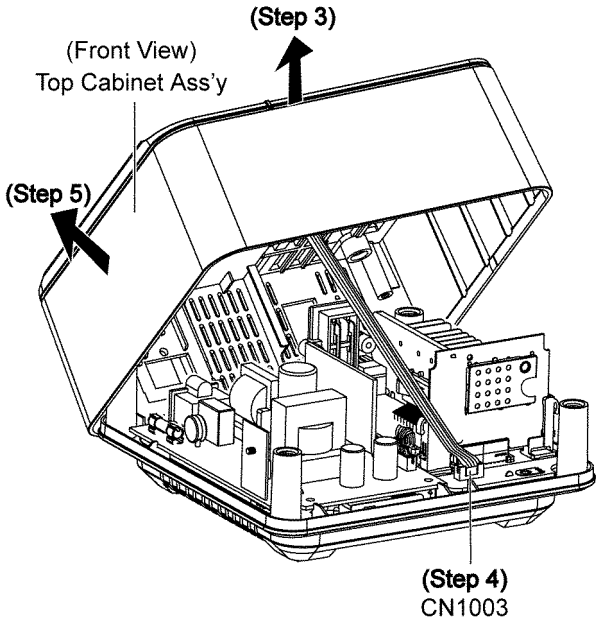


Step 3 : Lift up slightly theTop Cabinet Ass'y.

Caution : Do not apply strong force when lifting up the Top Cabinet Ass'y to avoid damage of the wire & wire connector at CN1003

Step 4 : Detach 5P cable at connector (CN1003).

Step 5 : Push back slightly before lifting the Top Cabinet Ass'y entirely.

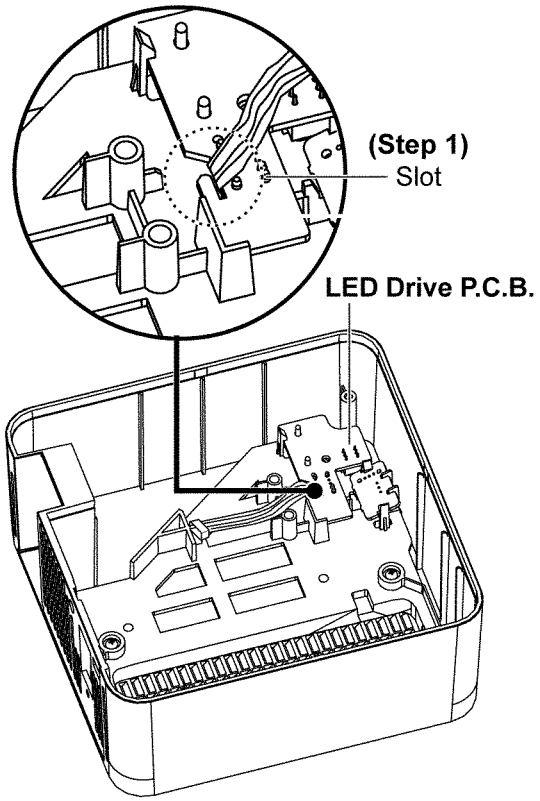


7.3.2. Disassembly of LED Drive P.C.B. and LED P.C.B.

• Follow the (Step 1) - (Step 5) of item 7.3.1.

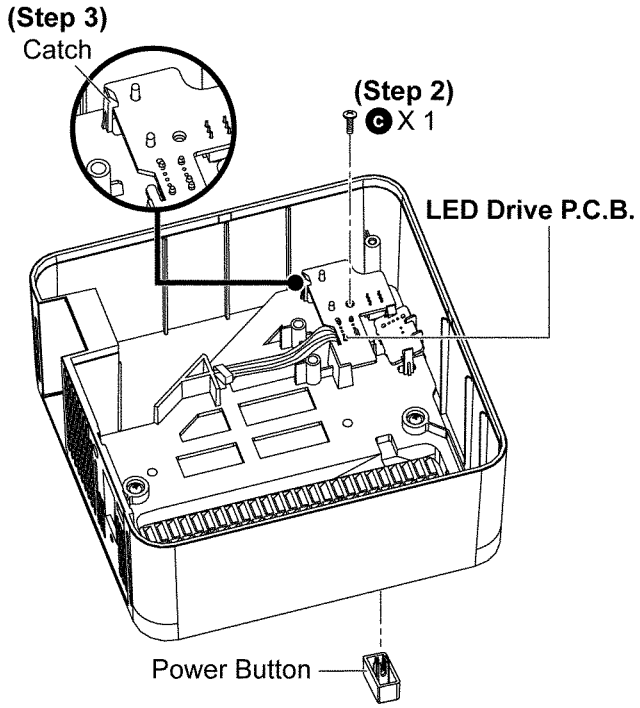
• Disassembly of LED Drive P.C.B.

Step 1 : Remove the 5P wire from the slot at LED Drive P.C.B..



Step 2 : Remove 1 screw.

Step 3 : Release the catch and remove the LED Drive P.C.B..

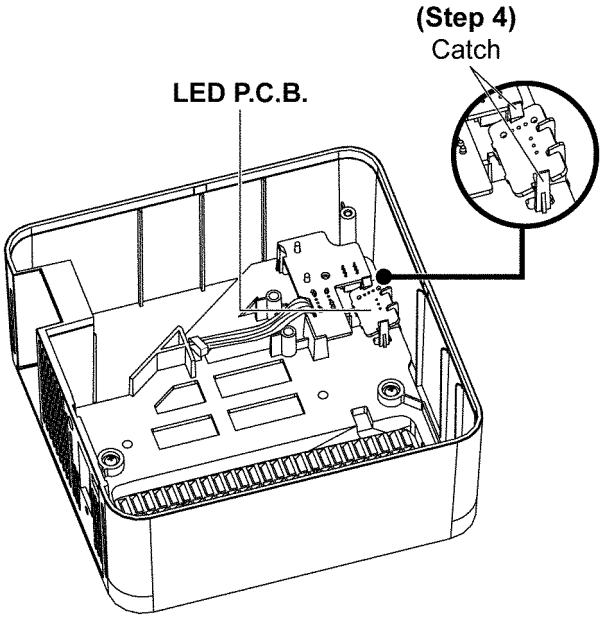


Caution 1 : Do not apply strong force in releasing the catches to avoid damage of the catches.
Caution 2 : Power Button will be released after removing LED Drive P.C.B. Keep it in safe place & install during assebling.

• Disassembly of LED P.C.B.

Step 4 : Release the catches and remove the LED P.C.B..

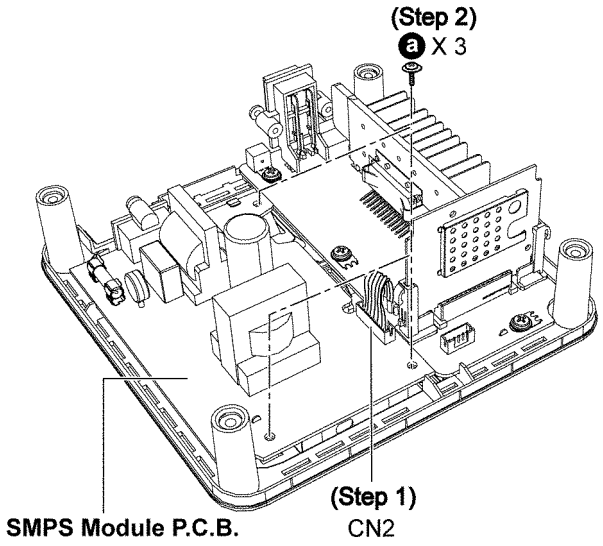
Caution : Do not apply strong force in releasing the catches to avoid damage of the catches.



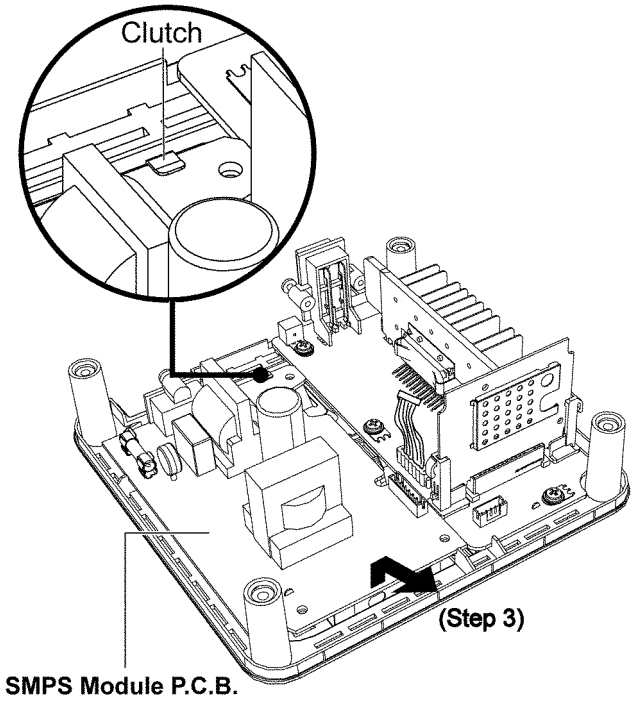
7.3.3. Disassembly of SMPS Module P.C.B.

• Follow the (Step 1) - (Step 5) of item 7.3.1.

Step 1 : Detach 7P cable at connector (CN2).
Step 2 : Remove 3 screws.



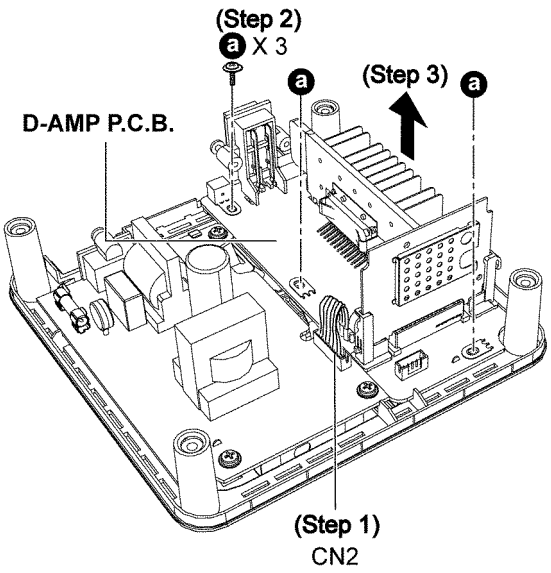
Step 3 : Slide SMPS Module P.C.B. out from the clutch.
Caution : During assembling, ensure the SMPS Module P.C.B. is seated properly.



7.3.4. Disassembly of D-AMP P.C.B.

• Follow the (Step 1) - (Step 5) of item 7.3.1.

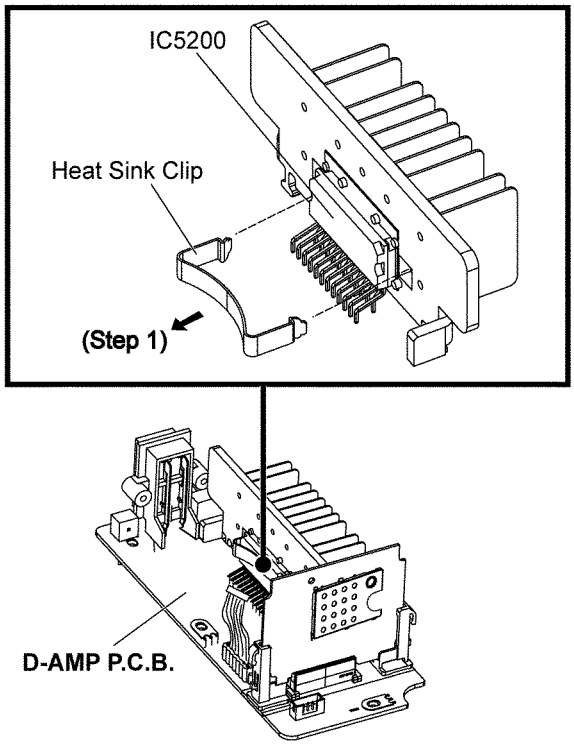
Step 1 : Detach 7P cable at connector (CN2).
Step 2 : Remove 3 screws.
Step 3 : Remove D-AMP P.C.B..



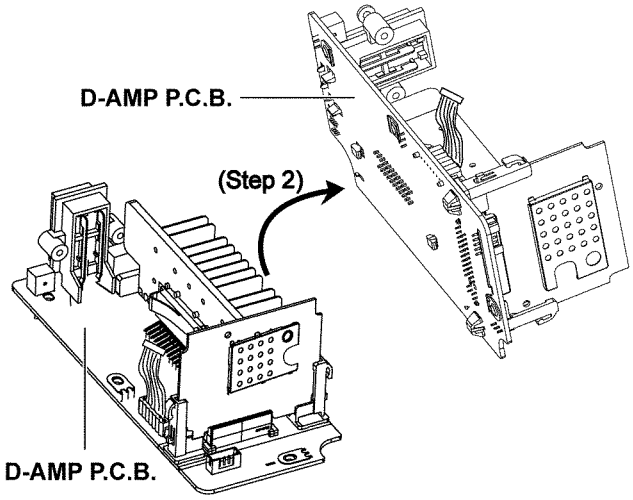
7.3.5. Disassembly of D-Amp IC (IC5200)

- Follow the (Step 1) - (Step 5) of item 7.3.1.
- Follow the (Step 1) - (Step 3) of item 7.3.4.

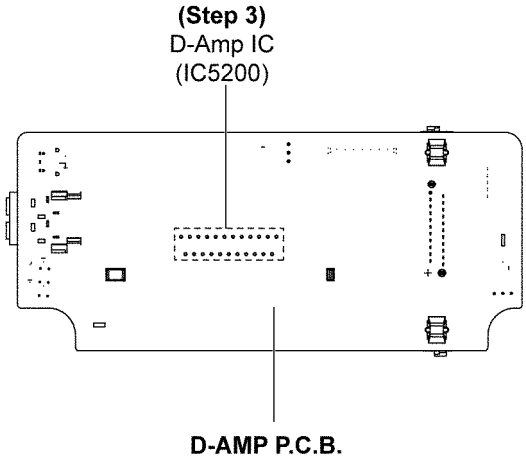
Step 1 : Remove Heat Sink Clip.



Step 2 : Flip over D-Amp P.C.B..

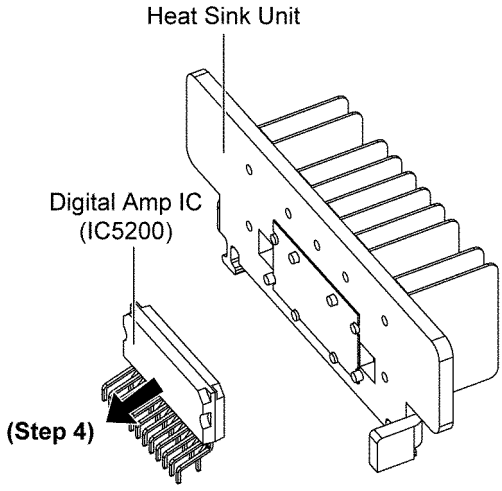


Step 3 : De-solder pins of D-Amp IC (IC5200).



Step 4 : Remove IC5200.

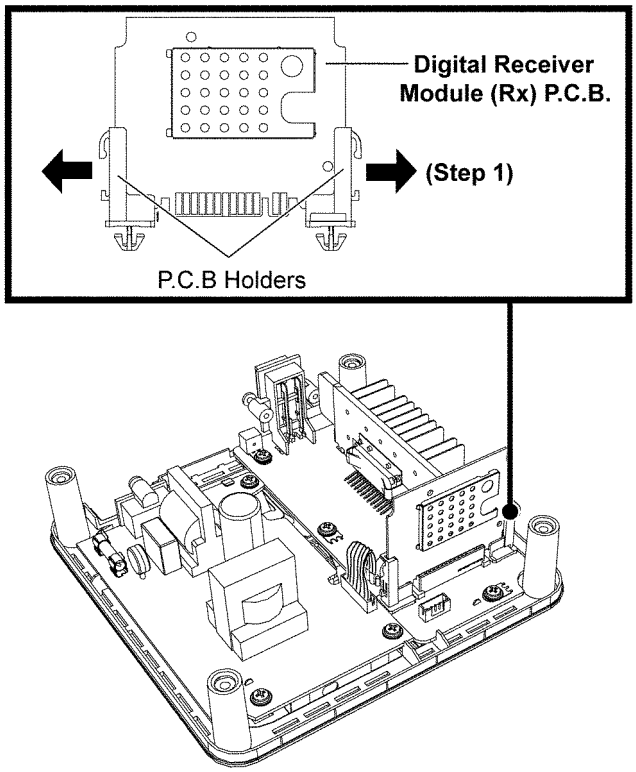
Caution : Ensure the pins of D-Amp IC are properly seated & soldered on D-Amp P.C.B. during assembly.



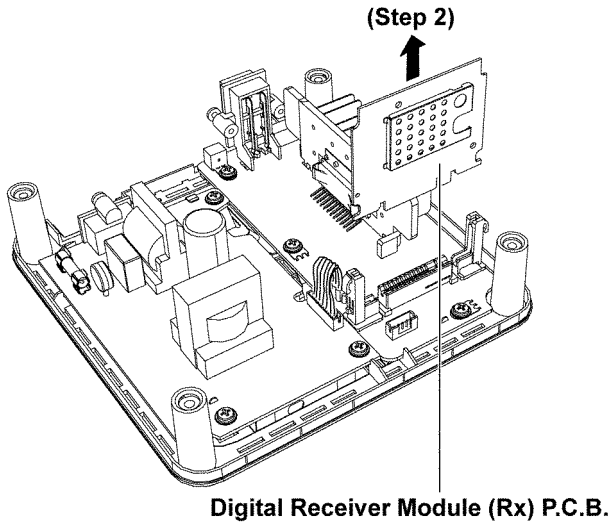
7.3.6. Disassembly of Digital Receiver Module (Rx) P.C.B.

• Follow the (Step 1) - (Step 5) of item 7.3.1.

Step 1 : Pull both the P.C.B holders outwards.



Step 2 : Lift up to remove the Digital Receiver Module (Rx) P.C.B..

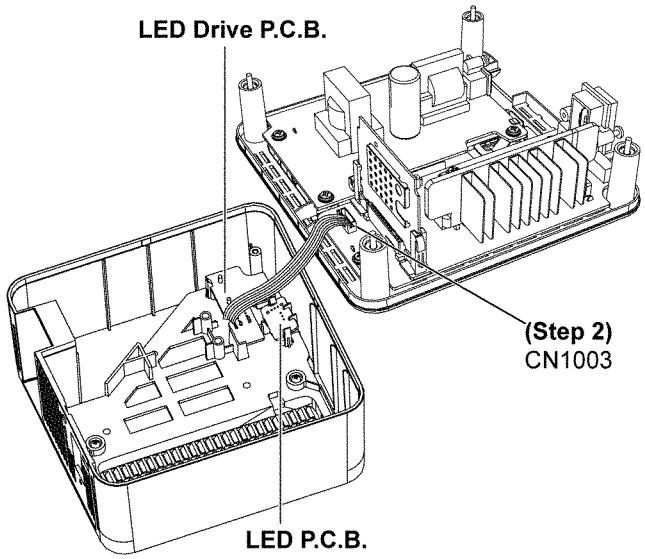


8 Service Position

Note: For description of the disassembly procedures, see the Section 7.

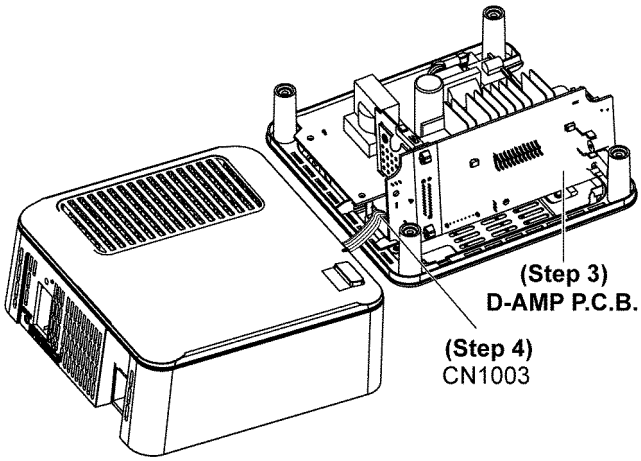
8.1. Checking & Repairing LED Drive P.C.B. and LED P.C.B.

Step 1 : Remove the Top Cabinet.
Step 2 : Attach 5P cable from LED Driver P.C.B. to the D-AMP P.C.B. (CN1003).



8.2. Checking & Repairing D-AMP P.C.B.

Step 1 : Remove the Top Cabinet.
Step 2 : Remove the D-AMP P.C.B..
Step 3 : Flip over D-AMP P.C.B..
Step 4 : Attach 5P cable from LED Driver P.C.B. to the D-AMP P.C.B. (CN1003).



9 Voltage Measurement & Waveform Chart

Note:

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
  Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point because it may differ from actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

9.1. D-AMP P.C.B.

REF NO.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-21.0	0	0	29.5	0	-29.5	0	30.0	0	0	-29.5	-29.5	-29.5	0	0	29.5	-29.5	-29.5	0	29.5
STANDBY	-21.0	0	0	29.5	0	-29.8	0	29.5	0	0	-29.5	-29.5	-29.8	0	0	29.5	-29.5	-29.5	0	29.5

REF NO.	IC5200																			
MODE	21	22	23																	
CD PLAY	0	0	5.0																	
STANDBY	0	0	0																	

REF NO.	Q1004				Q1005				Q1006				Q1007				Q1008			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.0	5.0	5.0		0	0	0		0	5.0	0		0	3.3	0		0	3.3	0	
STANDBY	5.0	0	0		0	0	5.0		0	0	5.0		0	3.3	0		0	3.3	0	

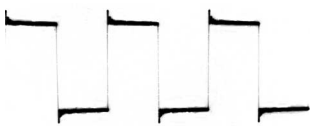
SH-FX71GC/GN D-AMP P.C.B.

9.2. LED P.C.B.

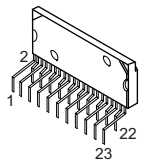
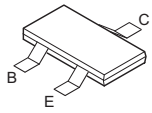
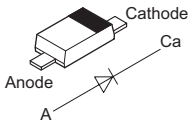
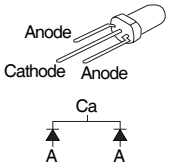
REF NO.	Q4000				Q4001															
MODE	E	C	B		E	C	B													
CD PLAY	0	5.0	5.0		5.0	5.0	0													
STANDBY	0	0	0		0	0	5.0													

SH-FX71GC/GN LED DRIVE P.C.B.

9.3. Waveform Chart

WF No. IC5200-10,14 (PLAY)	WF No. IC5200-2,3,21,22 (PLAY)
	
60Vp-p(1usec/div)	1.1Vp-p(200usec/div)

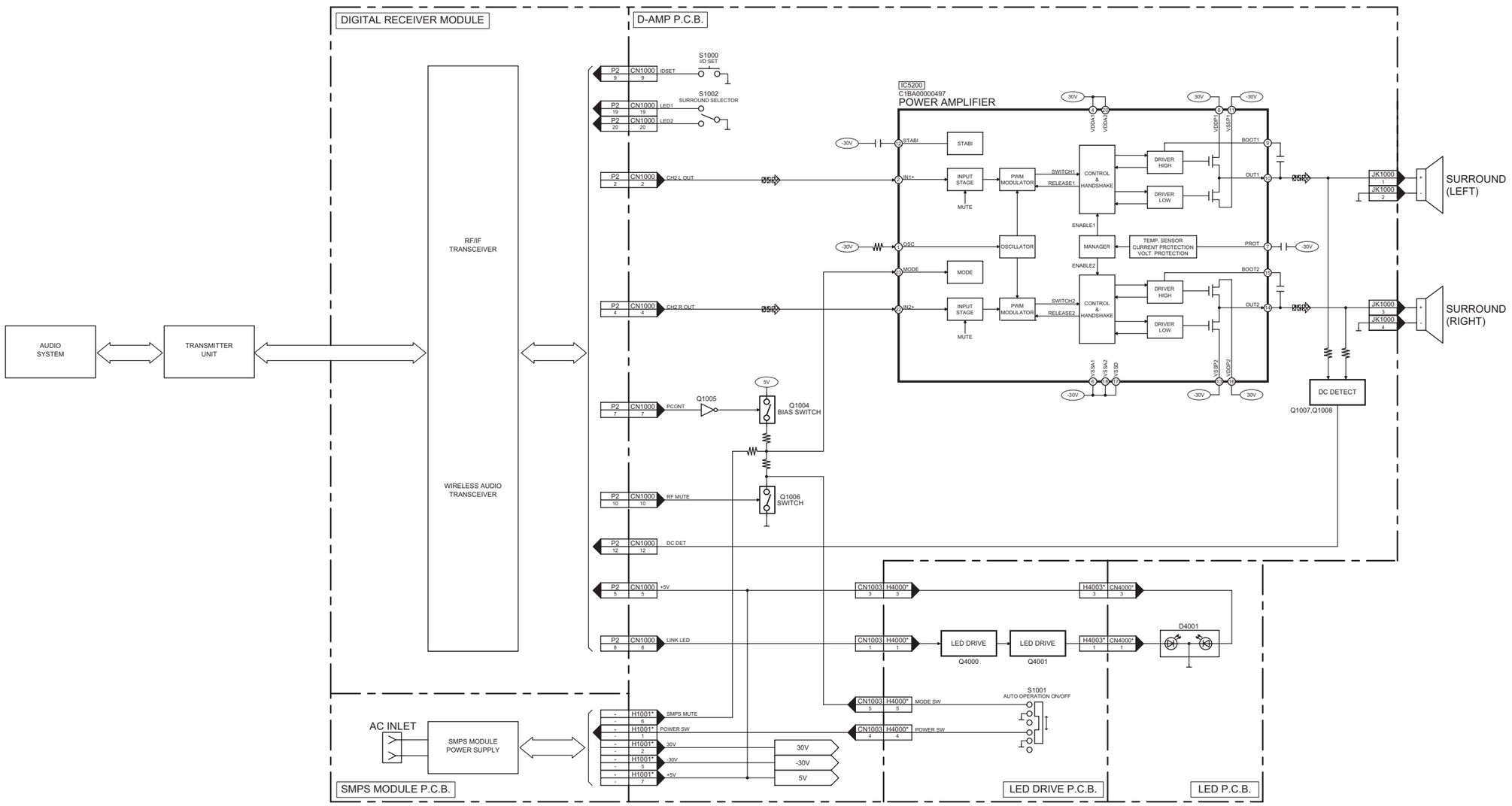
10 Illustration of IC’s, Transistors and Diodes

C1BA00000497 	B1ABCF000176 B1ADCE000012 B1GBCFGG0030 B1GBCFJJ0051 B1GDCFGG0026 	MA2J1110GL 	B3AGA0000124 	

11 Block Diagram

11.1. RECEIVER BLOCK DIAGRAM

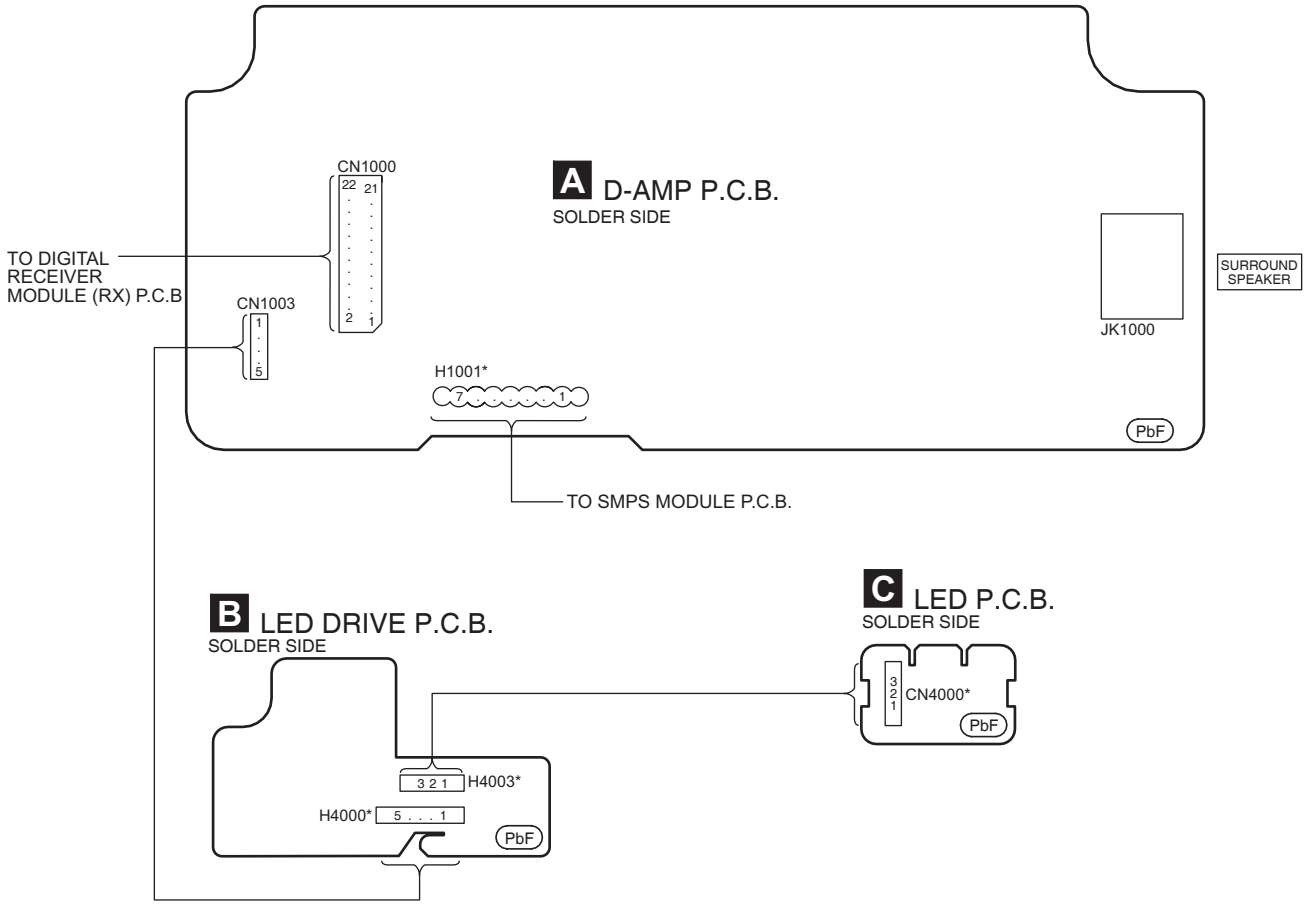
: AUDIO OUTPUT SIGNAL LINE



SH-FX71GC/GN RECEIVER BLOCK DIAGRAM

12 Wiring Connection Diagram

12.1. Digital Receiver



Note : " * " REF IS FOR INDICATION ONLY

13 Schematic Diagram Notes

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

Notes:

S1000: ID SET switch.
S1001: ON/OFF switch.
S1002: SURROUND SELECTOR switch.

- **Importance safety notice :**
  Components identified by (⚠) mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- Capacitor values are in microfarad(μF) unless specified otherwise, F=Farad, pF=Pico-Farad
  Resistance values are in ohm(Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

- **Voltage and Signal lines:**


: +B Signal line


: -B Signal line


: AUDIO OUTPUT signal line

Special Note :

- This model uses Switching Mode Power Supply (SMPS) for providing necessary voltages.
- There is no schematic drawings included in this document for the SMPS Module.
- It is advisable to replace the SMPS module as an assembly unit.
- * Ref is for indication only.

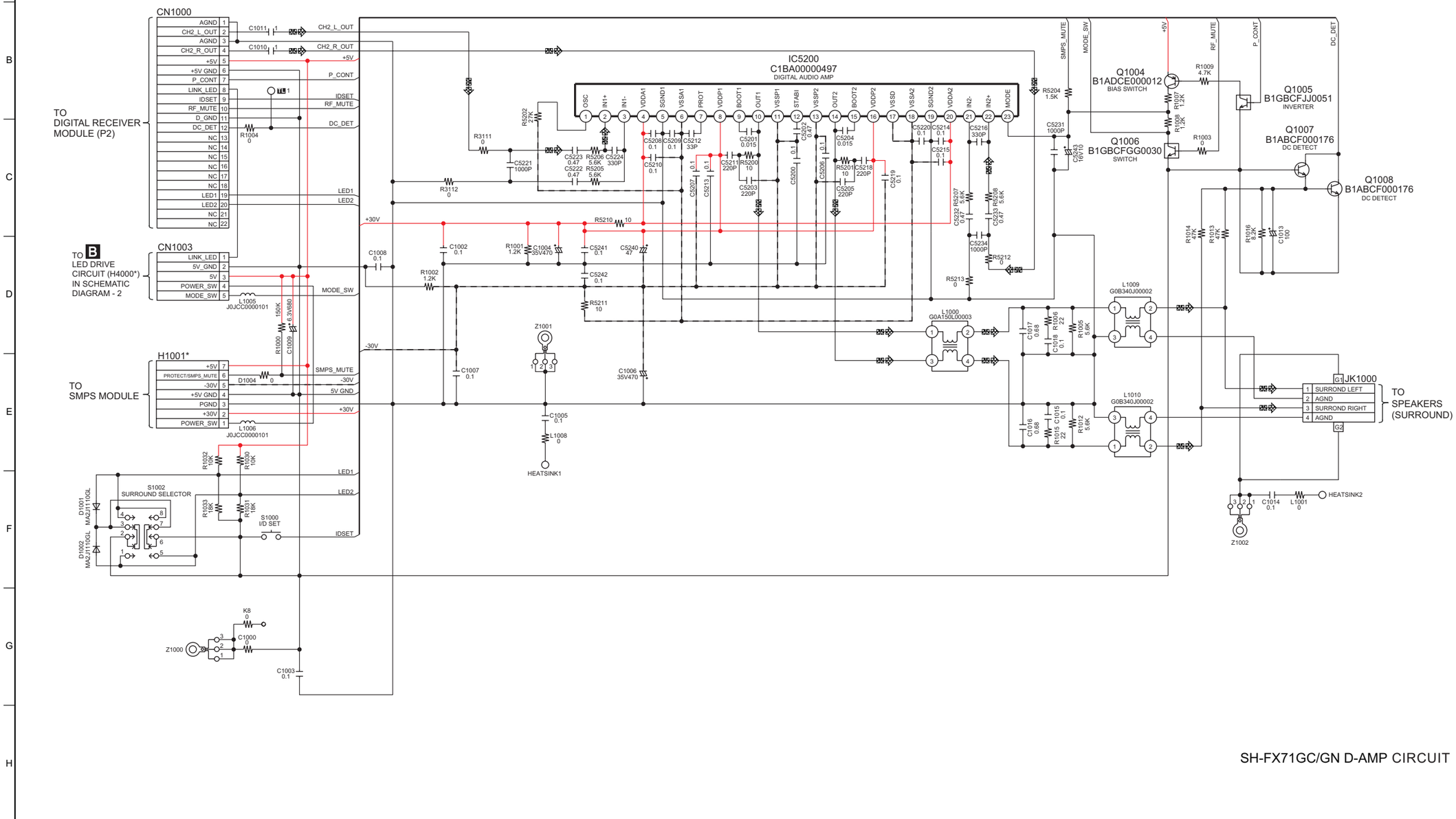
14 Schematic Diagram

14.1. D-AMP CIRCUIT

SCHEMATIC DIAGRAM - 1

A D-AMP CIRCUIT

—— : +B SIGNAL LINE ▷▷ : AUDIO OUTPUT SIGNAL LINE



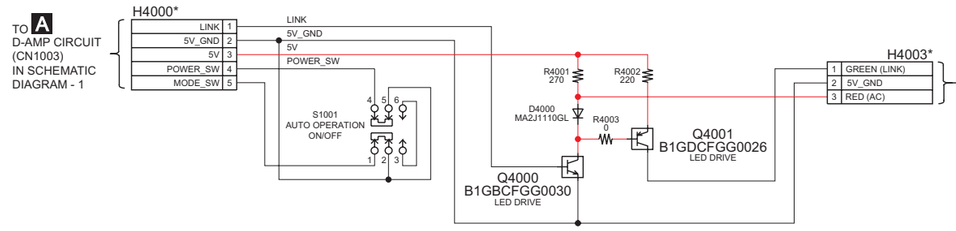
SH-FX71GC/GN D-AMP CIRCUIT

14.2. LED DRIVE CIRCUIT and LED CIRCUIT

SCHEMATIC DIAGRAM - 2

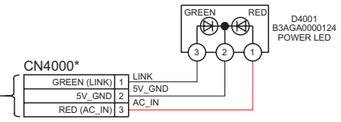
B LED DRIVE CIRCUIT

—— : +B SIGNAL LINE



C LED CIRCUIT

—— : +B SIGNAL LINE

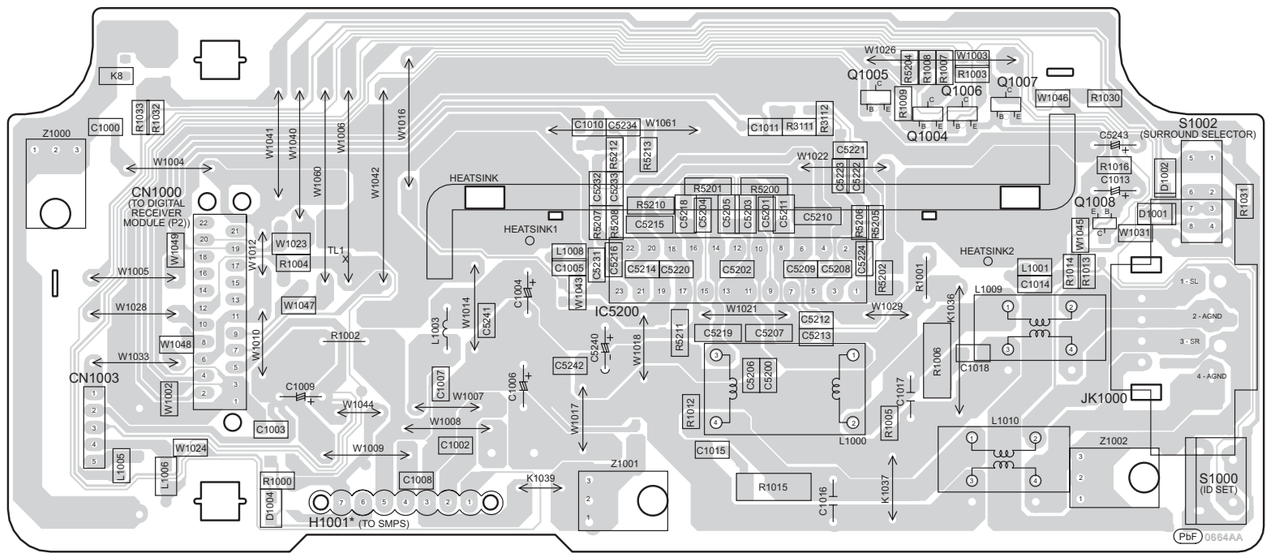


SH-FX71GC/GN LED DRIVE / LED CIRCUIT

15 Printed Circuit Board

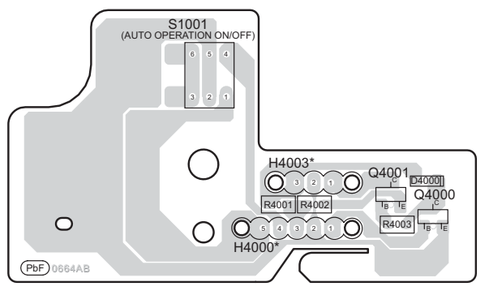
15.1. D-AMP P.C.B., LED DRIVE P.C.B. and LED P.C.B.

A D-AMP P.C.B. (REPX0807B)

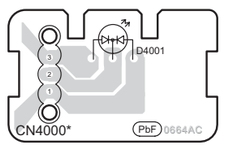


SURROUND SPEAKERS

B LED DRIVE P.C.B. (REPX0807B)



C LED P.C.B. (REPX0807B)



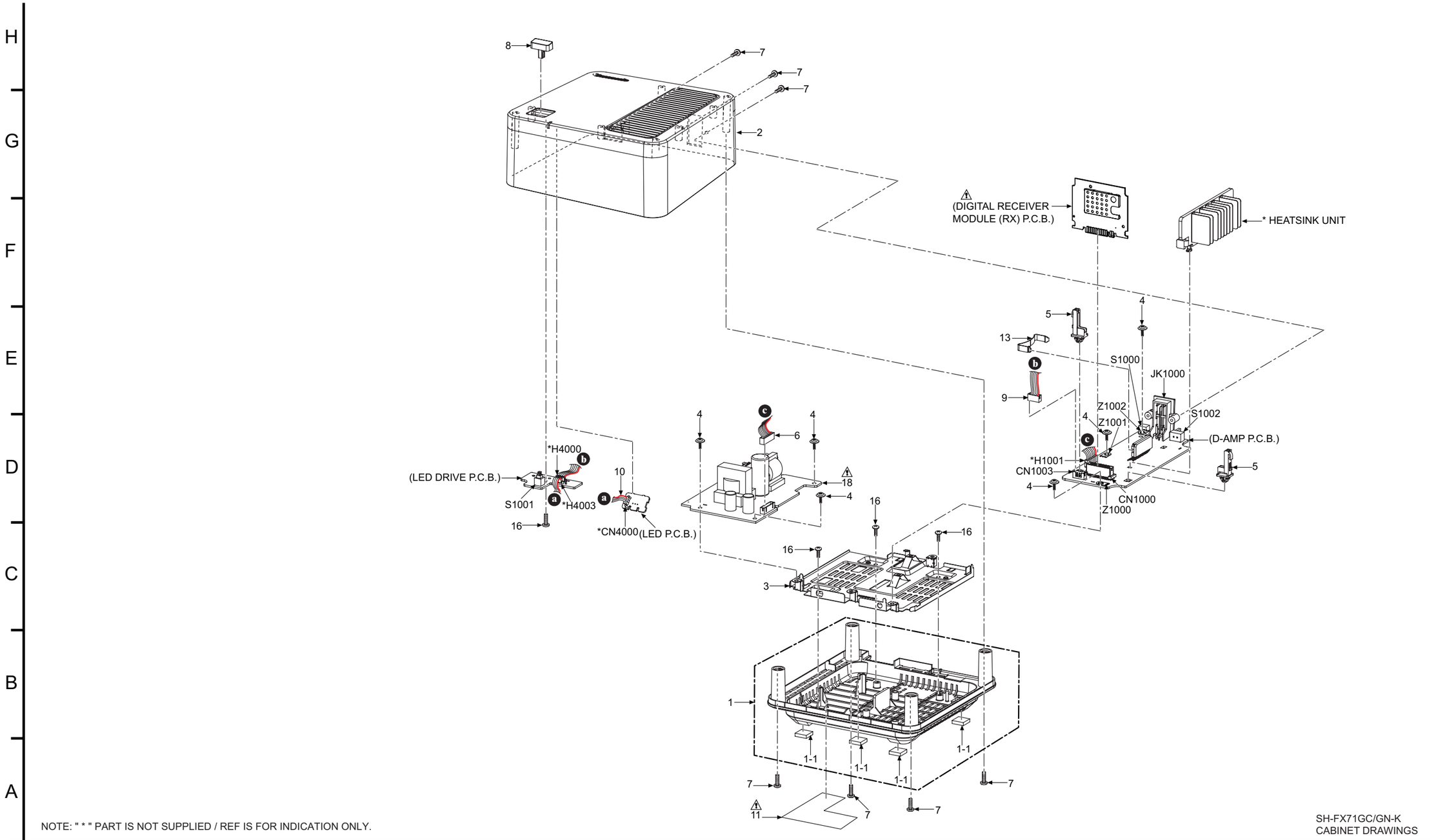
NOTE: " * " REF IS FOR INDICATION ONLY

SH-FX71GC/GN
D-AMP/ LED DRIVE/ LED P.C.B.

16 Exploded View and Replacement Parts List

16.1. Exploded View and Mechanical Replacement Parts List

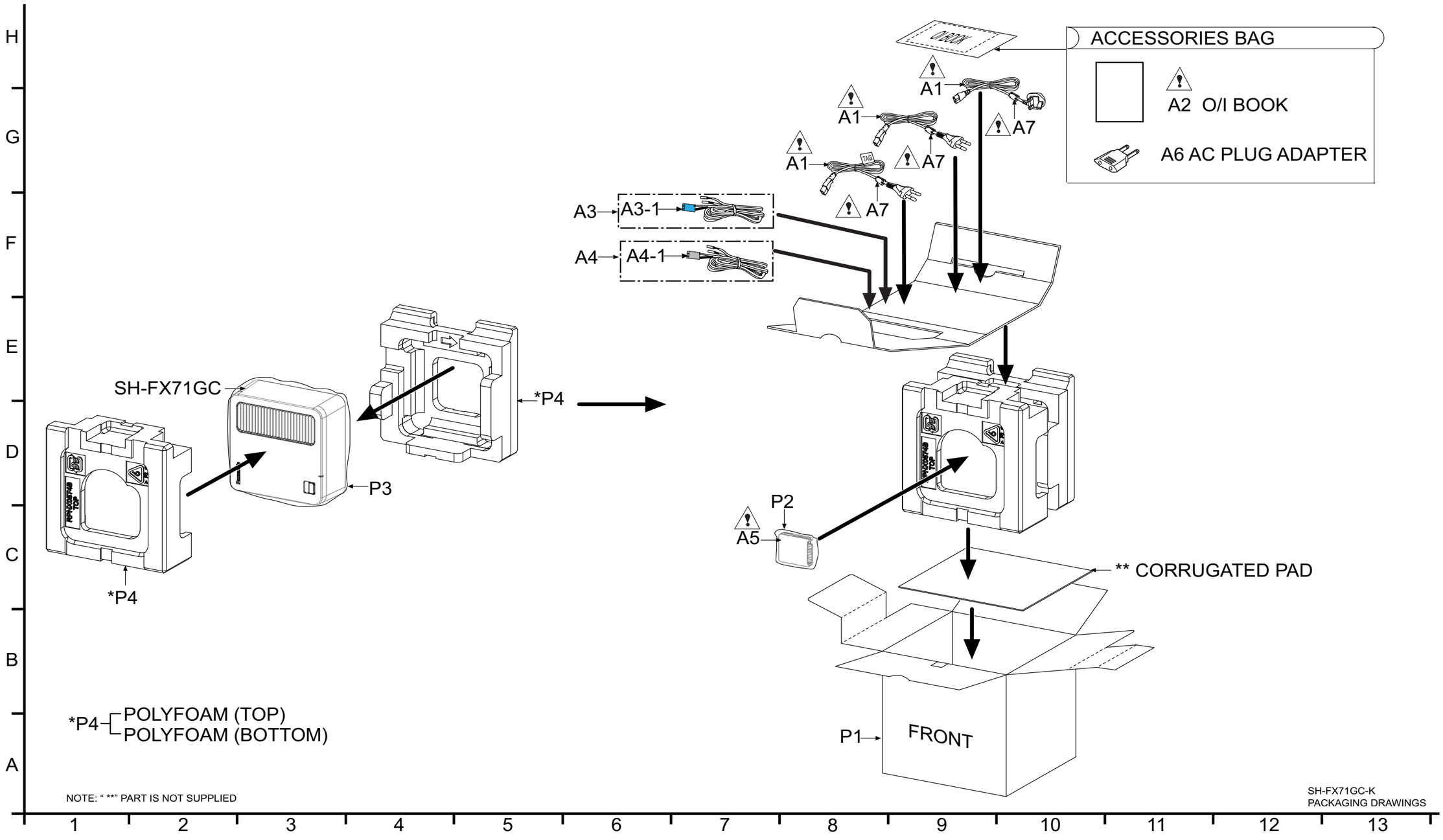
16.1.1. Cabinet Parts Location



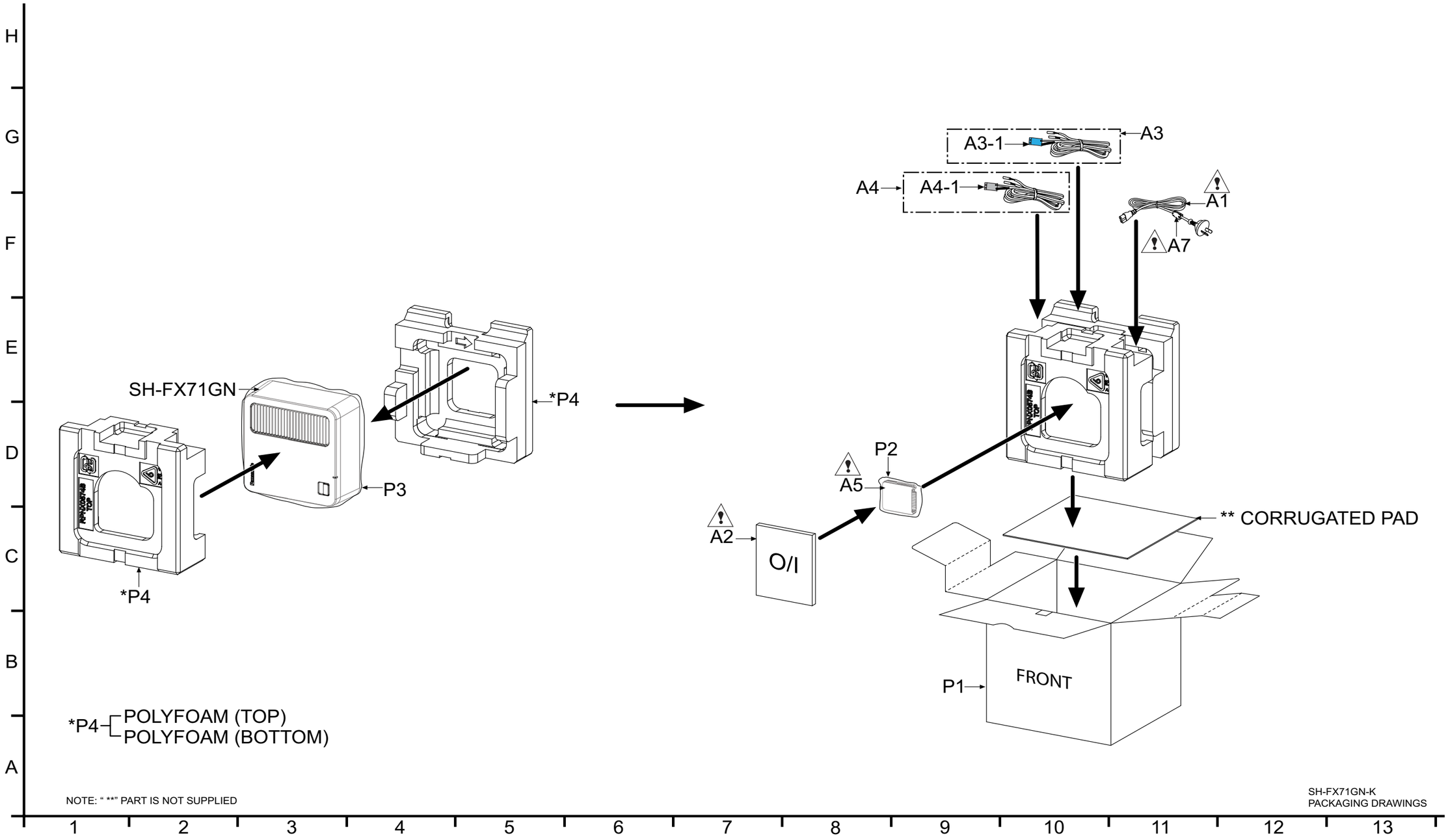
NOTE: " * " PART IS NOT SUPPLIED / REF IS FOR INDICATION ONLY.

SH-FX71GC/GN-K
CABINET DRAWINGS

16.1.2. (SH-FX71GC-K) Packaging



16.1.3. (SH-FX71GN-K) Packaging



16.1.4. Mechanical 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".
- All parts mentioned are supplied by PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.
- 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		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	RYKX0342-K3	BOTTOM CABINET ASS'Y	1	
	1-1	RKAX0028-K	LEG CUSHION	4	
	2	RYPX0353F-K1	TOP CABINET ASS'Y	1	
	3	RMKX0133A-1	BOTTOM CHASSIS	1	
	4	RHD30111-31	SCREW	6	
	5	RMNX0224-1	PCB HOLDER	2	
	6	REXX1094	7P CABLE WIRE (D-AMP-SMPS)	1	
	7	XTB3+10JFJ-J	SCREW	7	
	8	RGUX0714B-K	POWER BUTTON	1	
	9	REXX1080	5P CABLE WIRE (LED DRIVE-D-AMP)	1	
	10	REXX1081	3P CABLE WIRE (LED-LED DRIVE)	1	
⚠	11	RGNX1088-K	NAME PLATE STICKER	1	GN
⚠	11	RGNX1086-K	NAME PLATE STICKER	1	GC
	13	RMCX0035	HEATSINK CLIP A	1	
	16	XTB3+8JFJ-J	SCREW	4	
⚠	18	N0AE3GJ00001	SMPS MODULE P.C.B.	1	
			PACKING MATERIALS		
	P1	RPKX1015	GIFT BOX	1	GC

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	P1	RPKX1016	GIFT BOX	1	GN
	P2	RPFX1023	POLY BAG (FOR TRANSMITTER UNIT)	1	
	P3	RPFX0203	MIRAMAT BAG	1	
	P4	RPNX0574-J	POLYFOAM	1	
			ACCESSORIES		
⚠	A1	K2CJ2DA00010	AC CORD	1	GN
⚠	A1	K2CP2CA00001	AC CORD /W TAG	1	GC
⚠	A1	K2CQ2CA00007	AC CORD (2PIN)	1	GC
⚠	A1	K2CZ3YY00005	AC CORD (3PIN)	1	GC
⚠	A2	RQTX1132-G	O/I BOOK (Sp,Cn,Ru,Ur)	1	GC
⚠	A2	RQTX1140-B	O/I BOOK (En)	1	
	A3	REEX0992	SPEAKER CORD ASS'Y BLUE (HS-LEFT)	1	
	A3-1	RFKVBPT760-B	SPK CONNECTOR HOUSING (BLUE)	1	
	A4	REEX0993	SPEAKER CORD ASS'Y GREY (HS-RIGHT)	1	
	A4-1	RFKVBPT760-Y	SPK CONNECTOR HOUSING (GREY)	1	
⚠	A5	RFAX1012D	TRANSMITTER UNIT	1	GC
⚠	A5	RFAX1012E	TRANSMITTER UNIT	1	GN
	A6	K2DAYYY00002	AC PLUG ADAPTER	1	GC
⚠	A7	J0KG00000037	FERRITE CORE	4	

16.2. 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 PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
⚠	PCB1	REPX0771B	DIGITAL RECEIVER MODULE (RX) P.C.B.	1	
	PCB2	REPX0807B	D-AMP P.C.B.	1	(RTL)
	PCB3	REPX0807B	LED DRIVE P.C.B.	1	(RTL)
	PCB4	REPX0807B	LED P.C.B.	1	(RTL)
			INTEGRATED CIRCUITS		
	IC5200	C1BA00000497	IC	1	
			TRANSISTORS		
	Q1004	B1ADCE000012	TRANSISTOR	1	
	Q1005	B1GBCFJJ0051	TRANSISTOR	1	
	Q1006	B1GBCFGG0030	TRANSISTOR	1	
	Q1007	B1ABCF000176	TRANSISTOR	1	
	Q1008	B1ABCF000176	TRANSISTOR	1	
	Q4000	B1GBCFGG0030	TRANSISTOR	1	
	Q4001	B1GDCFGG0026	TRANSISTOR	1	
			DIODES		
	D1001	MA2J1110GL	DIODE	1	
	D1002	MA2J1110GL	DIODE	1	
	D4000	MA2J1110GL	DIODE	1	
	D4001	B3AGA0000124	DIODE	1	
			SWITCHES		
	S1000	EVQPC105K	SW ID SET	1	
	S1001	K0F122B00107	SW ON/OFF	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	S1002	K0D123A00085	SW AUDIO CONTROL	1	
			CONNECTORS		
	CN1000	K1MY22A00003	22P CONNECTOR	1	
	CN1003	K1KA05AA0193	5P CONNECTOR	1	
			COILS AND INDUCTORS		
	L1000	G0A150L00003	CHOKE COIL	1	
	L1005	J0JCC0000101	INDUCTOR	1	
	L1006	J0JCC0000101	INDUCTOR	1	
	L1009	G0B340J00002	LINE FILTER	1	
	L1010	G0B340J00002	LINE FILTER	1	
			COMPONENT COMBINATION		
	Z1000	K4CZ01000027	TERMINAL	1	
	Z1001	K4CZ01000027	TERMINAL	1	
	Z1002	K4CZ01000027	TERMINAL	1	
			JACK		
	JK1000	K4AL04B00006	JK SURROUND SPEAKER	1	
			CHIP JUMPERS		
	D1004	D0GDR00JA017	0 1/10W	1	
	L1001	D0GBR00JA008	0 1/16W	1	
	L1008	D0GBR00JA008	0 1/16W	1	
	W1002	D0GBR00JA008	0 1/16W	1	
	W1003	D0GBR00JA008	0 1/16W	1	
	W1023	D0GDR00JA017	0 1/10W	1	
	W1024	D0GBR00JA008	0 1/16W	1	
	W1031	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	W1043	D0GBR00JA008	0 1/16W	1	
	W1045	D0GBR00JA008	0 1/16W	1	
	W1046	D0GBR00JA008	0 1/16W	1	
	W1047	D0GBR00JA008	0 1/16W	1	
	W1048	D0GBR00JA008	0 1/16W	1	
	W1049	D0GBR00JA008	0 1/16W	1	
			RESISTORS		
	R1000	D0GB154JA008	150K 1/16W	1	
	R1001	ERG2SJ122E	1.2K 2W	1	
	R1002	ERG2SJ122E	1.2K 2W	1	
	R1003	D0GBR00JA008	0 1/16W	1	
	R1004	D0GBR00JA008	0 1/16W	1	
	R1005	D0GB562JA008	5.6K 1/16W	1	
	R1006	ERJ1TYJ220U	22 1W	1	
	R1007	D0GB122JA008	1.2K 1/16W	1	
	R1008	D0GB122JA008	1.2K 1/16W	1	
	R1009	D0GB472JA008	4.7K 1/16W	1	
	R1012	D0GB562JA008	5.6K 1/16W	1	
	R1013	D0GB473JA008	47K 1/16W	1	
	R1014	D0GB473JA008	47K 1/16W	1	
	R1015	ERJ1TYJ220U	22 1W	1	
	R1016	D0GB822JA008	8.2K 1/16W	1	
	R1030	D0GB103JA008	10K 1/16W	1	
	R1031	D0GB183JA008	18K 1/16W	1	
	R1032	D0GB103JA008	10K 1/16W	1	
	R1033	D0GB183JA008	18K 1/16W	1	
	R3111	D0GBR00JA008	0 1/16W	1	
	R3112	D0GBR00JA008	0 1/16W	1	
	R4001	D0GB271JA008	270 1/16W	1	
	R4002	D0GB221JA007	220 1/10W	1	
	R4003	D0GBR00JA008	0 1/16W	1	
	R5200	D0GF100JA014	10 1/10W	1	
	R5201	D0GF100JA014	10 1/10W	1	
	R5202	D0GB273JA008	27K 1/16W	1	
	R5204	D0GB152JA008	1.5K 1/16W	1	
	R5205	D0GB562JA008	5.6K 1/16W	1	
	R5206	D0GB562JA008	5.6K 1/16W	1	
	R5207	D0GB562JA008	5.6K 1/16W	1	
	R5208	D0GB562JA008	5.6K 1/16W	1	
	R5210	D0GF100JA014	10 1/10W	1	
	R5211	D0GF100JA014	10 1/10W	1	
	R5212	D0GBR00JA008	0 1/16W	1	
	R5213	D0GBR00JA008	0 1/16W	1	
	K8	D0GBR00JA008	0 1/16W	1	
			CAPACITORS		
	C1000	D0GBR00JA008	0 1/16W	1	
	C1002	F1H1H104A013	0.1uF 50V	1	
	C1003	F1H1H104A013	0.1uF 50V	1	
	C1004	F2A1V4710036	470uF 35V	1	
	C1005	F1H1H104A013	0.1uF 50V	1	
	C1006	F2A1V4710036	470uF 35V	1	
	C1007	F1H1H104A013	0.1uF 50V	1	
	C1008	F1H1H104A013	0.1uF 50V	1	
	C1009	F2A0J681A550	680uF 6.3V	1	
	C1010	F1H1C105A097	1uF 16V	1	
	C1011	F1H1C105A097	1uF 16V	1	
	C1013	F2A0J101A245	100uF 6.3V	1	
	C1014	F1H1H104A013	0.1uF 50V	1	
	C1015	F1H1H104A013	0.1uF 50V	1	
	C1016	ECQV1H684JL3	0.68uF 50V	1	
	C1017	ECQV1H684JL3	0.68uF 50V	1	
	C1018	F1H1H104A013	0.1uF 50V	1	
	C5200	F1H1H104A013	0.1uF 50V	1	
	C5201	F1H1H153A219	0.015uF 50V	1	
	C5202	F1H1C474A008	0.47uF 16V	1	
	C5203	F1J2A221A030	220pF 100V	1	
	C5204	F1H1H153A219	0.015uF 50V	1	
	C5205	F1J2A221A030	220pF 100V	1	
	C5206	F1H1H104A013	0.1uF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C5207	F1K2A1040007	0.1uF 100V	1	
	C5208	F1H1H104A013	0.1uF 50V	1	
	C5209	F1H1H104A013	0.1uF 50V	1	
	C5210	F1K2A1040007	0.1uF 100V	1	
	C5211	F1J2A221A030	220pF 100V	1	
	C5212	F1H1H330A971	33pF 50V	1	
	C5213	F1H1H104A013	0.1uF 50V	1	
	C5214	F1H1H104A013	0.1uF 50V	1	
	C5215	F1K2A1040007	0.1uF 100V	1	
	C5216	F1H1H331A013	330pF 50V	1	
	C5218	F1J2A221A030	220pF 100V	1	
	C5219	F1K2A1040007	0.1uF 100V	1	
	C5220	F1H1H104A013	0.1uF 50V	1	
	C5221	F1H1H102A219	1000pF 50V	1	
	C5222	F1H1A474A025	0.47uF 10V	1	
	C5223	F1H1A474A025	0.47uF 10V	1	
	C5224	F1H1H331A013	330pF 50V	1	
	C5231	F1H1H102A219	1000pF 50V	1	
	C5232	F1H1A474A025	0.47uF 10V	1	
	C5233	F1H1A474A025	0.47uF 10V	1	
	C5234	F1H1H102A219	1000pF 50V	1	
	C5240	F2A1J470A050	47uF 63V	1	
	C5241	F1H1H104A013	0.1uF 50V	1	
	C5242	F1H1H104A013	0.1uF 50V	1	
	C5243	F2A1C100A234	10uF 16V	1	

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