

Service Manual

DVD Stereo System

Model No. **SA-VKX25EE**
SA-VKX25GA
SA-VKX25GS



Product Color: (K)...Black Type

Please refer to the original service manual for:

- DVD Mechanism Unit (BRS12D), Order No. PSG1408009AE
- Speaker system SB-AKX18PN-K, Order No. PSG1401008CE

⚠ 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.

TABLE OF CONTENTS

	PAGE		PAGE
1 Safety Precautions -----	3	3.1. Service Information-----	10
1.1. General Guidelines-----	3	4 Specifications -----	11
1.2. Before Repair and Adjustment-----	4	5 Location of Controls and Components -----	12
1.3. Protection Circuitry-----	4	5.1. Remote Control Key Button Operation-----	12
1.4. Caution For AC Cord (For GS only)-----	5	5.2. Main Unit Key Button Operation-----	13
1.5. Power Supply using SMPS-----	6	6 Service Mode -----	14
1.6. Safety Parts Information-----	6	6.1. Service Mode Table-----	14
2 Warning -----	7	6.2. Sales Demonstration Lock Function-----	14
2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices-----	7	6.3. Doctor Mode Table-----	15
2.2. Precaution of Laser Diode-----	7	6.4. Error Code Table-----	18
2.3. General description about Lead Free Solder (PbF)-----	8	6.5. Self-Diagnostic Mode-----	19
2.4. Handling Precautions for Traverse Unit-----	8	6.6. Self Diagnostic Function-Error Code-----	24
2.5. Grounding for electrostatic breakdown prevention-----	9	6.7. Firmware Version-Up Information-----	25
3 Service Navigation -----	10	7 Troubleshooting Guide -----	28
		7.1. No Power or No Display-----	28
		7.2. Bluetooth® Pairing Failure-----	28
		7.3. No Key Function-----	28

Panasonic®

© Panasonic Corporation 2014. All rights reserved.
 Unauthorized copying and distribution is a violation
 of law.

7.4. No Remote Control Function-----	28	15.4. Mechanical Replacement Part List-----	91
7.5. USB Device Cannot Detect-----	29	15.5. Electrical Replacement Parts List -----	93
7.6. No Output Sound-----	30		
7.7. Check Point-----	31		
8 Disassembly and Assembly Instructions-----	34		
8.1. Type of Screws -----	34		
8.2. Disassembly Flow Chart-----	34		
8.3. Main Components and P.C.B. Locations-----	35		
8.4. Disassembly of Top Cabinet-----	36		
8.5. Disassembly of Front Panel Unit-----	36		
8.6. Disassembly of Panel P.C.B. and Music Port P.C.B.-----	37		
8.7. Disassembly of USB P.C.B. -----	38		
8.8. Disassembly of Rear Panel.-----	38		
8.9. Disassembly of Main P.C.B. -----	39		
8.10. Disassembly of SMPS Module -----	39		
8.11. Disassembly of DVD Mechanism Unit-----	40		
8.12. Disassembly of Backend P.C.B. Ass'y-----	41		
9 Service Position-----	42		
9.1. Checking of Panel P.C.B. and Music Port P.C.B.-----	42		
9.2. Checking and Repairing of Main P.C.B. and SMPS Module-----	42		
9.3. Checking and Repairing of Backend P.C.B. Ass'y-----	43		
10 Block Diagram -----	45		
10.1. Backend -----	45		
10.2. System Control -----	47		
10.3. Audio -----	50		
10.4. Power Supply -----	51		
11 Wiring Connection Diagram-----	53		
12 Schematic Diagram-----	55		
12.1. Schematic Diagram Notes-----	55		
12.2. Backend (DV5U) Circuit (1/4)-----	57		
12.3. Backend (DV5U) Circuit (2/4)-----	58		
12.4. Backend (DV5U) Circuit (3/4)-----	59		
12.5. Backend (DV5U) Circuit (4/4)-----	60		
12.6. Backend (Motor Driver) Circuit -----	61		
12.7. Backend (Video) Circuit -----	62		
12.8. Main (UP) Circuit -----	63		
12.9. Main (SOC) Circuit-----	64		
12.10. Main (USB) Circuit-----	65		
12.11. Main (Tuner AUX) Circuit -----	66		
12.12. Main (DSP) Circuit-----	67		
12.13. Main (DAMP) Circuit-----	68		
12.14. Main (Voltage Regulator) Circuit -----	69		
12.15. Main (Connector) Circuit -----	70		
12.16. Main (Bluetooth) Circuit-----	71		
12.17. Panel Circuit-----	72		
12.18. USB & Music Port Circuit-----	73		
13 Printed Circuit Board -----	74		
13.1. Backend P.C.B. Ass'y -----	74		
13.2. Main P.C.B. Ass'y (Side A)-----	75		
13.3. Main P.C.B. Ass'y (Side B)-----	76		
13.4. Panel, USB & Music Port P.C.B. -----	77		
14 Voltage and Waveform Measurement -----	79		
14.1. Voltage Measurement-----	79		
15 Exploded View and Replacement Parts List -----	87		
15.1. Cabinet Parts Location 1 -----	87		
15.2. Cabinet Parts Location 2 -----	88		
15.3. Packaging-----	89		

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 $\triangle$ 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.
- 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.
- 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.
- After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
- After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

- Unplug the AC cord and connect a jumper between the two prongs on the plug.
- 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 $1M\Omega$ and $5.2M\Omega$.
When the exposed metal does not have a return path to the chassis, the reading must be ∞

1.1.2. Leakage Current Hot Check

- Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
- Connect a $1.5k\Omega$, 10 watts resistor, in parallel with a $0.15\mu F$ 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.
- Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
- Check each exposed metallic part, and measure the voltage at each point.
- Reverse the AC plug in the AC outlet and repeat each of the above measurements.
- 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.

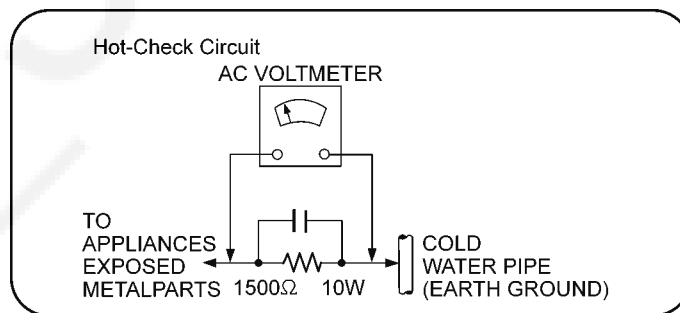


Figure 1-1

1.2. Before Repair and Adjustment

Disconnect Power Supply AC to discharge AC capacitor as indicate below diagram (in SMPS Module) through a 10 W, 10 W resistor to ground.

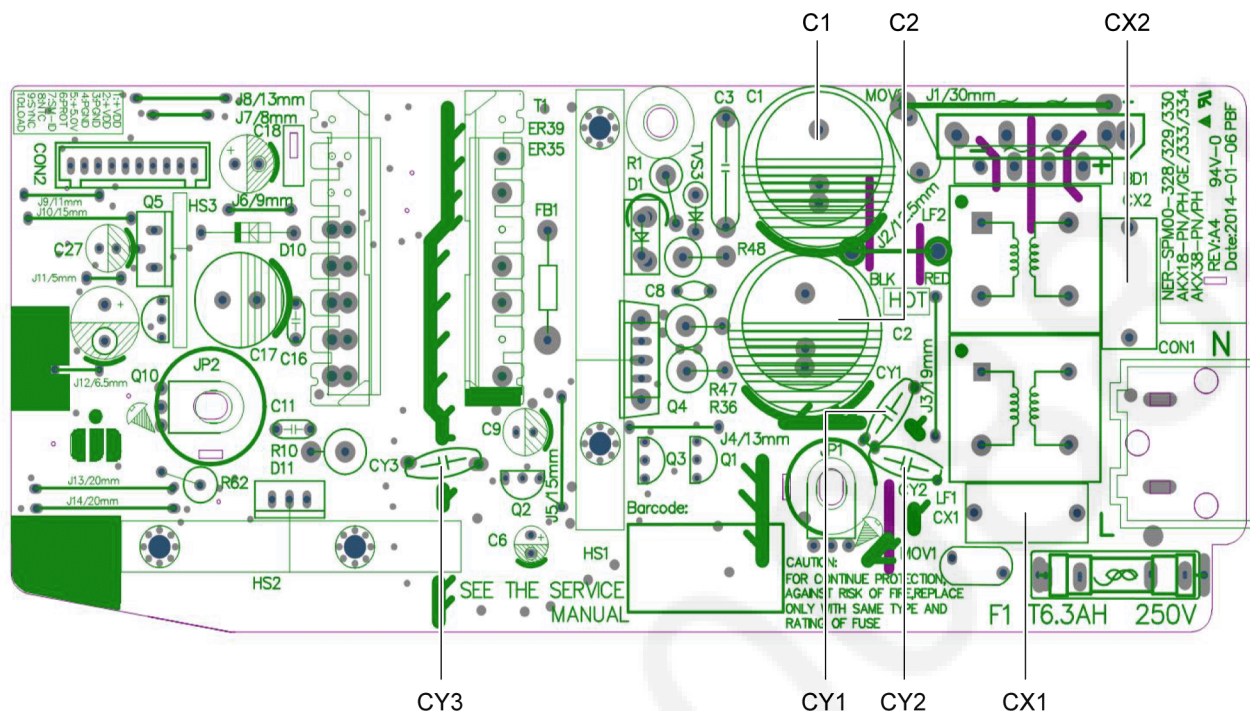


Figure 1-2

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 220–240 V, 50/60 Hz during Power ON, in FM mode at volume minimal should be ~ 850 mA.

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 GS only)

For your safety, please read the following text carefully.

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

A 5-ampere fuse is fitted in this plug.

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

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

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

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

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

CAUTION!

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

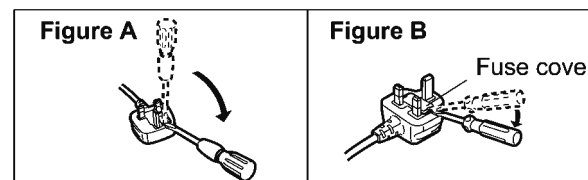
Remove the connector cover.

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.

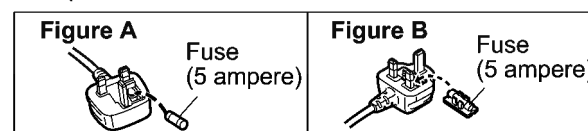


Figure 1-3

1.5. Power Supply using SMPS

This model uses Switching Mode Power Supply (SMPS) to provide the power supply to the unit. Here is the supplied part no. for the SMPS Module

1) N0AC2GK00001

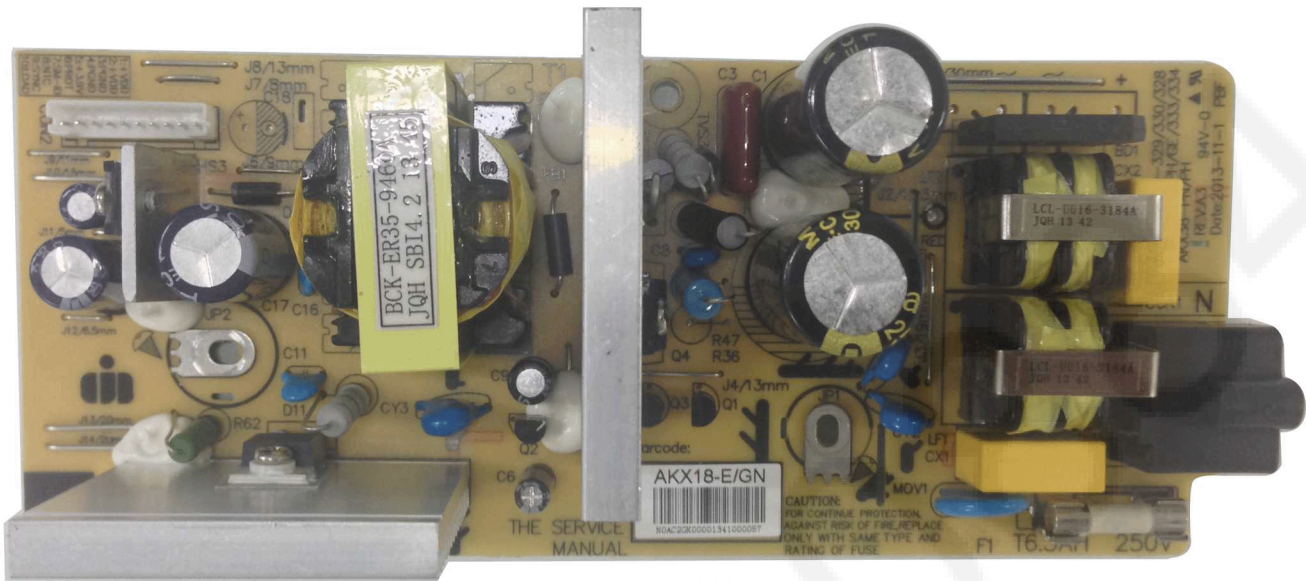


Figure 1-4

1.6. 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
⚠	13	RGR0443V-A1A	REAR PANEL	GA
⚠	13	RGR0443V-B1A	REAR PANEL	GS
⚠	13	RGR0443V-C1A	REAR PANEL	EE
⚠	25	RKM0713-K1	TOP CABINET	
⚠	301	RAE2405Z-V	TRAVERSE UNIT	
⚠	A2	K2CP2YY00061	AC CORD	GA
⚠	A2	K2CQ2YY00119	AC CORD	
⚠	A2	K2CT2YY00097	AC CORD	GS
⚠	A3	RQT9952-B	O/I BOOK (En)	GA/GS
⚠	A3	RQT9954-R	O/I BOOK (Ru/Ur)	EE
⚠	A3	RQT9968-G	O/I BOOK (Pe/Ar)	GS
⚠	PCB6	N0AC2GK00001	SMPS MODULE	

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).

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.

2.2. 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)/655 nm (DVD)

Maximum output radiation power from pickup: 100 μ W/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.

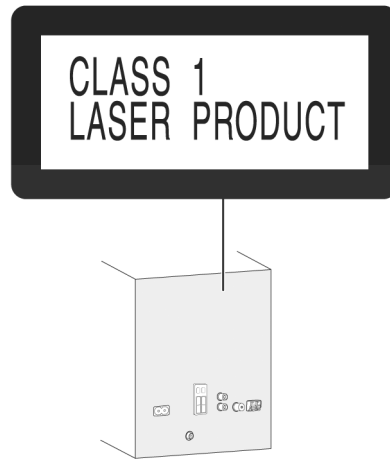


Figure 2-1

2.3. 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%

2.4. Handling Precautions for Traverse Unit

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.

2.4.1. Cautions to Be Taken in Handling the Optical Pickup Unit

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.

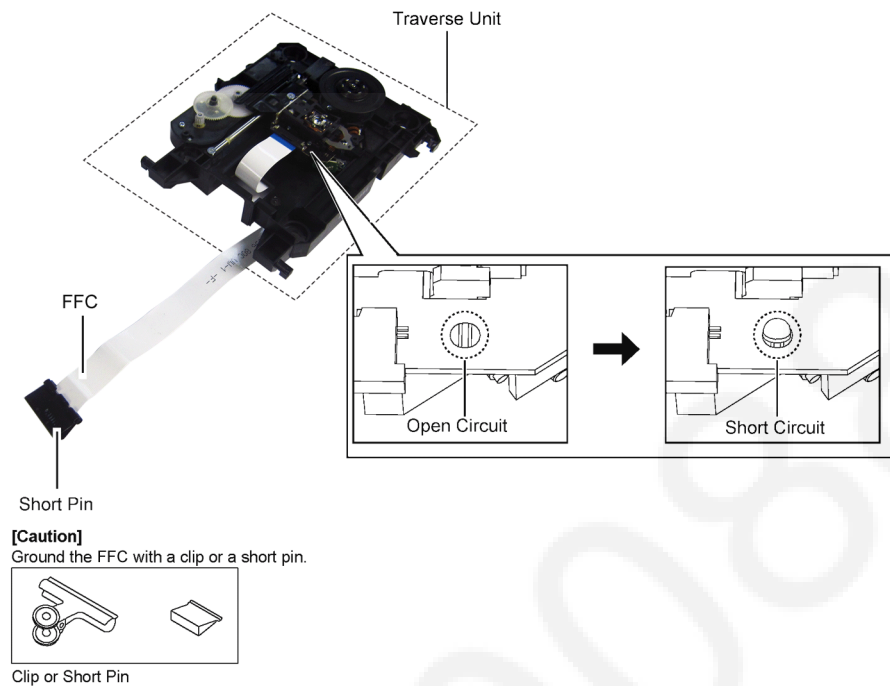


Figure 2-2

2.5. 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.

2.5.1. Worktable grounding

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

2.5.2. Human body grounding

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

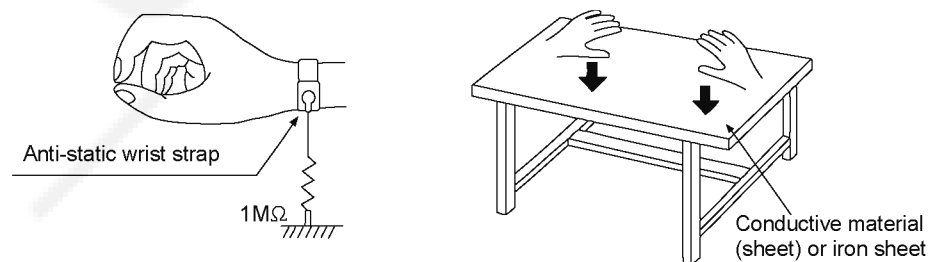


Figure 2-3

3 Service Navigation

3.1. Service Information

This service manual contains technical information which will allow service personnel's to understand and service this model.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

4 Specifications

■ Amplifier section

RMS output power stereo mode

Front Ch	175 W per channel (4 Ω, 1 kHz)
----------	-----------------------------------

Total RMS stereo mode power	350 W (30% THD)
-----------------------------	-----------------

PMPO output power	3900 W
-------------------	--------

■ Tuner, terminals section

Preset memory	FM 30 stations AM 15 stations
---------------	----------------------------------

Frequency modulation (FM)

Frequency range	87.50 MHz to 108.00 MHz (50 kHz step)
-----------------	--

Antenna terminals	75 Ω (unbalanced)
-------------------	-------------------

Amplitude modulation (AM)

Frequency range	522 kHz to 1629 kHz (9 kHz step) 520 kHz to 1630 kHz (10 kHz step)
-----------------	---

AUX 1

Audio input	Pin jack (1 system)
-------------	---------------------

AUX 2

Sensitivity	100 mV, 4.7 kΩ
-------------	----------------

■ USB section

USB Port

USB standard	USB 2.0 full speed
--------------	--------------------

Media file format support	
---------------------------	--

USB AUDIO	MP3 (*.mp3)
-----------	-------------

USB VIDEO	JPEG (*.jpg, *.jpeg), Xvid (*.xvid, *.avi)
-----------	---

USB device file system	FAT12, FAT16, FAT32
------------------------	---------------------

USB port power	500 mA (max)
----------------	--------------

Bit rate	Up to 4 Mbps (Xvid)
----------	---------------------

USB Recording

Bit rate	128 kbps
----------	----------

USB recording speed	1x
---------------------	----

Recording file format	MP3 (*.mp3)
-----------------------	-------------

■ Bluetooth® section

Version	Bluetooth® Ver.2.1 + EDR
---------	--------------------------

Class	Class 2
-------	---------

Supported profiles	A2DP, AVRCP, SPP
--------------------	------------------

Operating frequency	2.4 GHz band, FH-SS
---------------------	---------------------

Operating distance	10 m line of sight
--------------------	--------------------

■ Video section

Video system	PAL, NTSC
--------------	-----------

Composite video output

Output level	1 Vp-p (75 Ω)
--------------	---------------

Terminal	Pin jack (1 system)
----------	---------------------

■ Disc section

Discs played (8 cm or 12 cm)

(1) DVD (DVD-Video, Xvid^{*4, 5})

(2) DVD-R (DVD-Video, DVD-VR, JPEG^{*3, 5}, MP3^{*2, 5}, Xvid^{*4, 5})

(3) DVD-R DL (DVD-Video, DVD-VR, Xvid^{*4, 5})

(4) DVD-RW (DVD-Video, DVD-VR, JPEG^{*3, 5}, MP3^{*2, 5}, Xvid^{*4, 5})

(5) +R/+RW (Video)

(6) +R DL (Video)

(7) CD, CD-R/RW (CD-DA, Video CD, SVCD^{*1}, MP3^{*2, 5}, JPEG^{*3, 5}, Xvid^{*4, 5})

^{*1} Conforming to IEC62107

^{*2} MPEG-1 Layer 3, MPEG-2 Layer 3

^{*3} Exif Ver 2.1 JPEG Baseline files

Picture resolution: between 160 x 120 and 6144 x 4096 pixels
(Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4).

Extremely long and narrow pictures may not be displayed.

^{*4} Plays Xvid video.

^{*5} The total combined maximum number of recognisable audio, picture and video contents and groups: 4000 audio, picture and video contents and 255 groups (Excluding Root folder).

Pick up

Wavelength	
CD	790 nm
DVD	655 nm

■ General

Power supply	AC 220 V to 240 V, 50/60 Hz
--------------	-----------------------------

Power consumption	62 W
-------------------	------

Dimensions (W x H x D)	230 mm x 335 mm x 249 mm
------------------------	--------------------------

Mass	3.0 kg
------	--------

Operating temperature range	0 °C to +40 °C
-----------------------------	----------------

Operating humidity range	35% to 80% RH (no condensation)
--------------------------	------------------------------------

Power Consumption in standby mode	0.5 W (approximate)
-----------------------------------	---------------------

Power Consumption in standby mode (With BLUETOOTH® "STANDBY MODE" set to "ON STANDBY MODE")	0.6 W (approximate)
---	---------------------

1. Specifications are subject to change without notice.

Mass and dimension are appropriate

2. Total harmonic distortion is measured by the digital spectrum analyzer.

■ System: SC-VKX25EE-K

Main Unit: SA-VKX25EE-K
Front Speakers: SB-AKX18PN-K

■ System: SC-VKX25GA-K

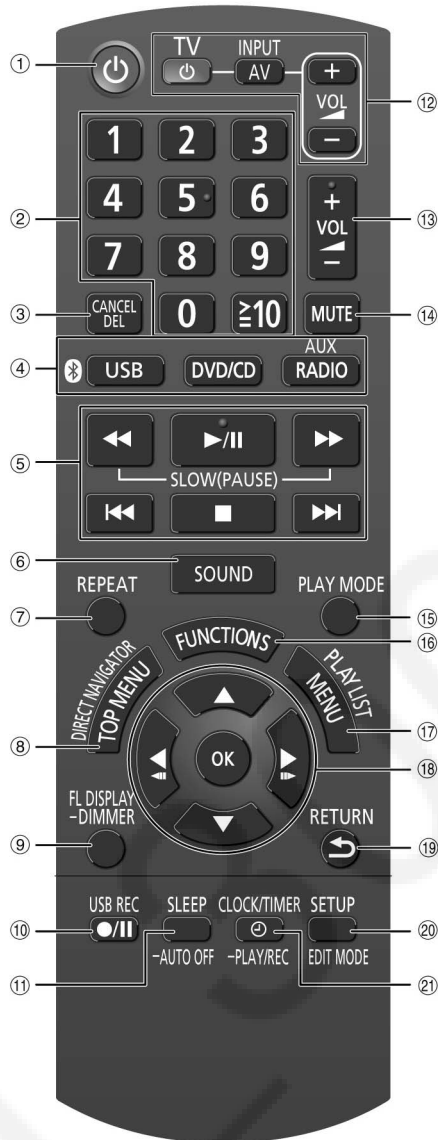
Main Unit: SA-VKX25GA-K
Front Speakers: SB-AKX18PN-K

■ System: SC-VKX25GS-K

Main Unit: SA-VKX25GS-K
Front Speakers: SB-AKX18PN-K

5 Location of Controls and Components

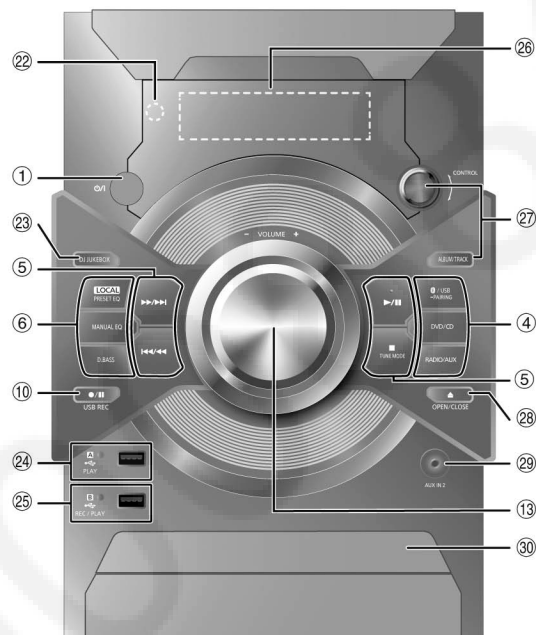
5.1. Remote Control Key Button Operation



- ① **Standby/on switch** [⏻], [⏻/⏿]
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.
- ② **Numeric buttons**
To set a 2-digit number
Example: 16: [≥10] → [1] → [6]
- ③ **Cancel an item**
Delete the programmed tracks
- ④ **Select the source**
On the main unit:
To start Bluetooth® pairing, press and hold [Ⓛ/USB, -PAIRING] when you are in Bluetooth® source.
- ⑤ **Basic playback control**
- ⑥ **Select the sound effects**
- ⑦ **Repeat playback**
- ⑧ **Show the disc top menu**
Show the program list
- ⑨ **View the information shown on the display panel**
Decrease the brightness of the display panel
Press and hold the button to use this function.
To cancel, press and hold the button again.
- ⑩ **Record content to a USB device**
- ⑪ **Set the sleep timer**
Automatically switch off the system
The auto off function switches off the system if you do not use the system for approximately 20 minutes (except when you are in radio source or when a Bluetooth® device is connected).
Press and hold the button to use this function.
To cancel, press and hold the button again.
- ⑫ **Operate a Panasonic TV (compatible models only)**
Point the remote control to a Panasonic TV:
[⏻]: Switch on or switch off the TV
[AV]: Change the video input mode of the TV
[+/-, VOL]: Adjust the volume of the TV
- ⑬ **Adjust the volume level of the system**
- ⑭ **Mute the sound**
To cancel, press the button again.
"MUTE" is also cancelled when you adjust the volume or when you switch off the system.
- ⑮ **Set the play mode item**
- ⑯ **Show the on-screen menu**
- ⑰ **Show the disc menu or playlist**
- ⑱ **Select or confirm menu items**
View frame-by-frame
Browse albums on USB A-AUDIO and USB B-AUDIO source
Press [▲, ▼] to browse.
- ⑲ **Go back to the previous screen**
- ⑳ **Change the system settings**
Set the edit mode for **USB B**
- ㉑ **Set the clock and timer**

5.2. Main Unit Key Button Operation

- ① **Standby/on switch** [⏻], [⏻/⏹]
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.
- ④ **Select the source**
On the main unit:
To start Bluetooth® pairing, press and hold [Ⓜ/USB, -PAIRING] when you are in Bluetooth® source.
- ⑤ Basic playback control
- ⑥ Select the sound effects
- ⑩ Record content to a USB device
- ⑬ Adjust the volume level of the system
- ⑳ **Remote control sensor**
Distance: Within approximately 7 m
Angle: Approximately 20° up and down, 30° left and right
- ㉓ Select the DJ Jukebox
- ㉔ **USB A**
USB port (⚡)
USB status indicator
Play MP3 tracks, Xvid and JPEG.
Record MP3 tracks to **USB B**.
- ㉕ **USB B**
USB port (⚡)
USB status indicator
Record sound or music tracks.
Play MP3 tracks, Xvid and JPEG.
- ㉖ Display panel
- ㉗ **Select MP3 album or track**
Press [ALBUM/TRACK] to select album or track.
Browse tracks or albums
Turn [CONTROL] to browse.
To start playback from the selection, press [▶/⏮].
- ㉘ Open or close the disc tray
- ㉙ AUX IN 2 jack
- ㉚ Disc tray



6 Service Mode

6.1. Service Mode Table

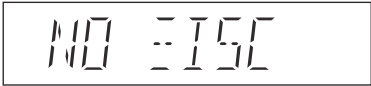
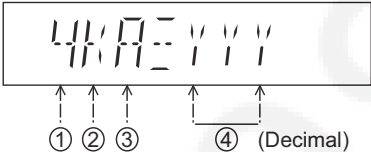
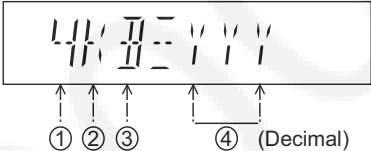
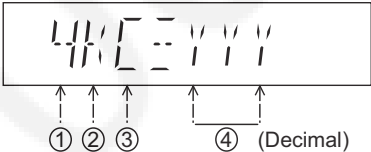
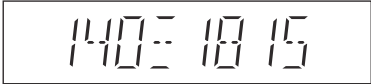
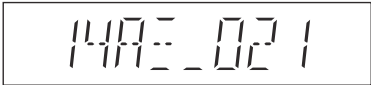
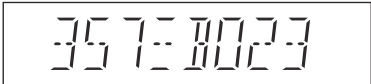
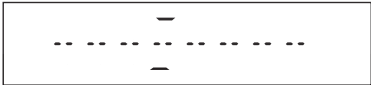
Item		FL display	Key operation								
Mode name	Description										
Service Mode	To enter into Service Mode checking.		Step 1 : Select CD mode (Ensure no disc is inserted). Step 2 : Press and hold [■] 2 seconds follow by [▶▶/▶▶] on main unit for 2 seconds.								
Error code information	System will perform a check on any unusual/error code from the memory.	Example: 	Step 1 : In service mode, Press [■] on main unit. To exit, press [⏻] on main unit or remote control.								
Delete Error code	To clear the stored in memory (EEPROM IC).		Step 1 : In service mode, Press [OK] on remote control more than 5 seconds. To exit, press [⏻] on main unit or remote control.								
Cold Start	To activate cold start upon next power up. (Backup date are initialized)		Step 1 : In service mode, Press [3] on the remote control. To exit, press [⏻] on main unit or remote control.								
Opecon Version	Opecon version display	Opecon Version: <table><tr><th>Model name</th><th>Version display</th></tr><tr><td>VKX95</td><td>4KA ≡*** _</td></tr><tr><td>VKX65</td><td>4KB ≡*** _</td></tr><tr><td>VKX25</td><td>4KC ≡*** _</td></tr></table>	Model name	Version display	VKX95	4KA ≡*** _	VKX65	4KB ≡*** _	VKX25	4KC ≡*** _	Step 1 : Enter Service Mode, Press [FL Display] on remote control. To exit, press [⏻] on main unit or remote control.
Model name	Version display										
VKX95	4KA ≡*** _										
VKX65	4KB ≡*** _										
VKX25	4KC ≡*** _										

6.2. Sales Demonstration Lock Function

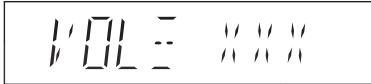
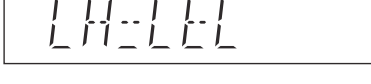
Item		FL display	Key operation
Mode name	Description		
Entering into Sales demonstration lock mode	To enter into Sales demonstration lock mode.		Step 1 : Turn on the unit. Step 2 : Select to any mode function. Step 3 : Press and hold [■] and [DVD/CD] keys for 5 sec. The display will show upon entering into this mode for 2 sec.
Cancellation of Sales demonstration lock mode	To cancel Sales demonstration lock mode.		Step 1 : Turn on the unit. Step 2 : Select to any mode function. Step 3 : Set volume to Vol 19. Step 4 : Press and hold [■] and [DVD/CD] keys for 5 sec. The display will show upon entering into this mode for 2 sec.

6.3. Doctor Mode Table

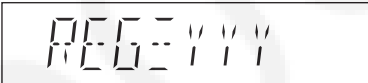
6.3.1. Doctor Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Doctor Mode	To enter into Doctor Mode		In CD Mode: 1. Press [■] button on main unit follow by [4] and [7] on remote control. 2. To exit, press [CANCEL/DEL] button on remote control or, press [POWER, ⏻] button on Main Unit
Firmware Version	Displaying of 1. Year Develop. 2. Model Type. 3. ROM Type. 4. Firmware Version.	(Display 1) (For VKX95)  (Display 1) (For VKX65)  (Display 1) (For VKX25)  Version No. (001 ~ 999) → specific for each firmware (Display 2)  (Display 3)  (Display 4)  Note: Display 2~4 is for illustration use only. Refer display on actual unit.	In CD mode: 1. Enter into Doctor Mode
Cold Start	To active cold start upon next AC power up when reset start is execute the next time.		In Doctor Mode: 1. Press [4] button on the remote control.

6.3.2. Doctor Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Volume Setting Check	To check the volume setting of the main unit.	 ↑ Volume	In Doctor Mode: 1. Press below button on the remote control. Press [7]: VOL50 Press [8]: VOL35 Press [9]: VOL0
FL Display Check	To check the FL segment display. All segments will light up while all LED blink at 0.5s intervals.		In Doctor mode: 1. Press [1] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.
Traverse Test	To determine the traverse unit operation for inner & outer access track. In this mode, ensure the CD is in the unit.	 ↑ The counter will increment by one. When reach 99999999 will change to 00000000 Cancellation Display 	In Doctor Mode: 1. Press [10] → [1] → [2] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.
Loading Test	To determine the open & close operation of the CD Mechanism Unit. In this mode, the tray will open & close automatically.	 ↑ The counter will increment by one. When reach 99999999 will change to 00000000 Cancellation Display 	In Doctor Mode: 1. Press [10] → [2] → [1] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.
Reliability Test (Combination of Traverse & Loading Test)	To determine the traverse unit operation & open/close operation of the mechanism. In this mode, ensure the CD is in the unit.	 ↑ The counter will increment by one. When reach 99999999 will change to 00000000 Cancellation Display 	In Doctor Mode: 1. Press [10] → [1] → [5] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.

6.3.3. Doctor Mode Table 3

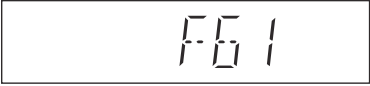
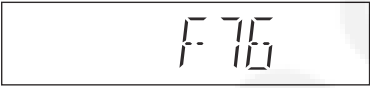
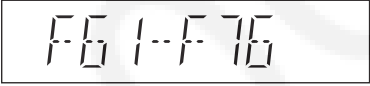
Item		FL Display	Key Operation																														
Mode Name	Description		Front Key																														
Bluetooth Version Check	Bluetooth module will need some time to power up and read the version display. Meanwhile [_BT_II----_] will show before the ver. numbers appear. 2s display count should start after flash version number appear.	  v = flash version (0~7), w = flash sub version (0~F), x = control version (0~F), yyy = EEPROM version (0~255), zz = EEPROM sub version (0~99),	1. Go to Bluetooth selector and then enter Doctor Mode. 2. Press [10] ➔ [2] ➔ [4] and display will show.																														
Bluetooth Devices Address Confirmation	Bluetooth Address Check	 XX is a 6 byte BD address. If there is any error, it will show ERROR on Left side FL display.	In Doctor Mode: 1. Press [10] ➔ [2] ➔ [8] and display will show.																														
Region Check	Checking for model no and Region	 AD value of region pin is check and display will show [REG---YYY] based on region table. YYY = 001 ~ 013 based on region table as below. <table><thead><tr><th>Region</th><th>Model</th><th>Series</th></tr></thead><tbody><tr><td>1</td><td>VKX95</td><td>GA</td></tr><tr><td>2</td><td>VKX95</td><td>GS</td></tr><tr><td>3</td><td>VKX95</td><td>EE</td></tr><tr><td>6</td><td>VKX25</td><td>GA</td></tr><tr><td>7</td><td>VKX25</td><td>GS</td></tr><tr><td>8</td><td>VKX25</td><td>EE</td></tr><tr><td>11</td><td>VKX65</td><td>GA</td></tr><tr><td>12</td><td>VKX65</td><td>GS</td></tr><tr><td>13</td><td>VKX65</td><td>EE</td></tr></tbody></table>	Region	Model	Series	1	VKX95	GA	2	VKX95	GS	3	VKX95	EE	6	VKX25	GA	7	VKX25	GS	8	VKX25	EE	11	VKX65	GA	12	VKX65	GS	13	VKX65	EE	In Doctor Mode: 1. Press [10] ➔ [1] ➔ [6] button on the remote control.
Region	Model	Series																															
1	VKX95	GA																															
2	VKX95	GS																															
3	VKX95	EE																															
6	VKX25	GA																															
7	VKX25	GS																															
8	VKX25	EE																															
11	VKX65	GA																															
12	VKX65	GS																															
13	VKX65	EE																															

6.4. Error Code Table

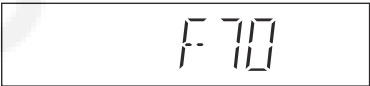
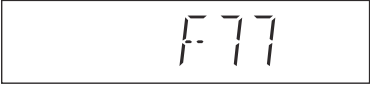
Self-Diagnostic Function provides information on any problems occurring for the unit and its respective components by displaying the error codes. These error code such as U**, H** and F** are stored in memory and held unless it is cleared.

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

6.4.1. Power Supply Error Code Table

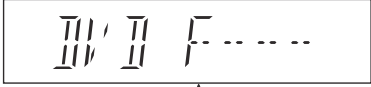
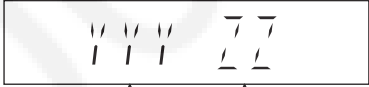
Item		FL Display	Key Operation
Mode Name	Description		Front Key
Error Code F61	Diagnosis Contents: Power Amp IC output abnormal. Upon power on, PCONT=HIGH, DC_DET_AMP after checking LSI.		Press  on main unit for next error.
Error Code F76	Diagnosis Contents: Power Amp IC output abnormal. DC_DET_PWR.		Press  on main unit for next error.
Error Code F61-76	Diagnosis Contents: Power Amp IC output abnormal. Both DCDET (NG).		Press  on main unit for next error.

6.4.2. Bluetooth Error Code Table

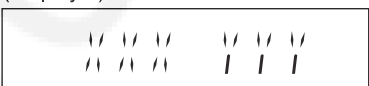
Item		FL Display	Key Operation
Mode Name	Description		Front Key
Error Code F70	Diagnosis Contents: Bluetooth Communication. Communication between Bluetooth module and micro-p abnormal.		Press  on main unit for next error.
Error Code F77	Diagnosis Contents: Bluetooth Address Error If there is no valid Bluetooth address stored in the EEPROM IC.		Press  on main unit for next error.

6.5. Self-Diagnostic Mode

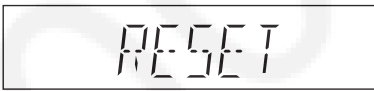
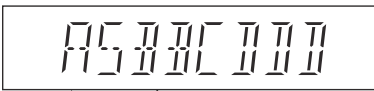
6.5.1. Self-Diagnostic Mode Table 1 (For DVD Module)

Item		FL Display	Key Operation
Mode Name	Description		
Error code check	Error code check The latest error code stored in the EEPROM IC is displayed. Note: Refer to "[Section 6.6] DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.	 F / H / U Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → DVDnn U12 Error code = 0 x DBXX is expressed: → DVDnn H12 Error code = 0 x DXXX is expressed: → DVDnn F123 Error code = 0 x 0000 is expressed: → DVDnn F--- * "xx" denotes the error code	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [0] button on the remote control unit. To exit, press [POWER] button on main unit or remote control.
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more. FL Display sequence: Display 1→2.	(Display 1)  Jitter Check Mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2)  Lead Error Counter Focus Drive Value	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [5] button on the remote control unit. Press [FL Display] on remote control unit for next page (FL Display).
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC. FL Display sequence: Display 1→2.	(Display 1)  Laser Current Measurement Mode The value denotes the current in decimal notation. (Display 2)  CD Laser DVD Laser The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [PLAY/PAUSE] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

6.5.2. Self-Diagnostic Mode Table 2 (For DVD Module)

Item		FL Display	Key Operation
Mode Name	Description		
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  ↑ DVD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  ↑ ↑ DVD Laser Initial Value DVD Laser Value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [FUNCTIONS] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.
CD laser drive current measurement	CD laser drive current measurement. CD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  ↑ CD Laser Current Measurement Mode The value denotes the current in decimal notation. (Display 2)  ↑ ↑ CD Laser Initial Value CD Laser Current Value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [3] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page. (FL Display)

6.5.3. Self-Diagnostic Mode Table 3 (For DVD Module)

Item		FL Display	Key Operation
Mode Name	Description		
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. It is indicated in Display 2. FL Display sequence: Display 1→2→3.	(Display 1)  (Display 2)  ↑ Opecon Version ↑ EEPROM Checksum (If applicable, refer below.)	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [7] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button on remote control unit for next page. (FL Display)
Initialization mode	Initialization. User settings are cancelled and player is initialized to factory setting. It is necessary when after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) & DVD Module P.C.B.	 ↓ Full Initialization 	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [≥ 10] button on the remote control unit. Cancelled automatically 5 seconds later. In DVD/CD (no disc) Mode: Press [OK] button on the and [≥ 10] button on the remote control unit. Cancelled automatically 5 seconds later.
Region display	Region code display, TV broadcasting system & the model no. information. Note: Refer to Fig. 6.5.5 for "Video Design Information".	 ↑ ↑ ↑ ↑ ↑ Region No.: 0-8 N: NTSC / 6: PAL60 N: no PAL / P: PAL Model No. Information	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [6] button on the remote control unit. Cancelled automatically 5 seconds later.
Region & Version Display	Region & System Controller version is displayed on the FL Display. The firmware version can be updated using recovery disc. Note: It is necessary to check for firmware version before carrying out the version up using the disc.	 ↑ ↑ ↑ ↑ ↑ Region No.: 0-8 Firmware Generation Firmware Destination Firmware Version	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [8] button on the remote control unit. Cancelled automatically 5 seconds later.

6.5.4. Self-Diagnostic Mode Table 4 (For DVD Module)

Item		FL Display	Key Operation
Mode Name	Description		
Timer 1 check	Timer 1 check Laser operation timer is measured separately for DVD laser and CD laser. FL Display sequence: Display 1→2.	(Display 1)  ↑ DVD laser usage time Shown to the above is DVD laser usage time, and to the below is CD laser usage time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999". (DVD laser) (Display 2)  ↑ CD laser usage time Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999". (CD laser)	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [▲] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button for next page of FL Display.
Timer 1 reset	Timer 1 reset Laser operation timer of both DVD laser and CD laser is reset all at once.	 Time is shown in 4 digits of decimal notation in a unit of 10 hours. It will clear to "0000" upon reset.	While displaying Timer 1 data, press [STOP] button on the main unit, and [▼] button on the remote control unit. Cancelled automatically 5 seconds later
Timer 2 check	Timer 2 check Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. "00000" will follow "99999".	In DVD/CD (no disc) Mode: Press [STOP] button on the main unit, and [▶] button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 reset	Timer 2 reset Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. It will be cleared to "00000" upon activating this.	While displaying Timer 2 data, press [STOP] button on the main unit, and [◀] button on the remote control unit. Cancelled automatically 5 seconds later.

6.5.5. Video Design Information

Model Series	Country Region	Region Code	TV Broadcasting System	Product			
				Signal System (Default)	Region Display (Default)	OSD Default	OSD Menu Language
P, PC, PX	USA, Canada, US Military	1	NTSC	NTSC (*A)	1PN	English	English (NA), Spanish (NA), Canadian French
(S)	Japan	2	NTSC	NTSC (*A)	2PN	Japanese	Japanese, English
EP	Poland, E.Europe	2	PAL	PAL (*C)	2P6	English	English (EU), French, German, Spanish (EU), Polish, Russian, Czech, Hungarian
EB, EG	UK, Germany, W.Europe	2	PAL	PAL (*C)	2P6	English	English (EU), French, German, Italian, Spanish (EU), Polish, Swedish, Dutch
GC, GS	Middle East, Africa, S.E.A	2	PAL	PAL (*C)	2P6	English	English (EU), French (EU), Spanish (EU), Russian
GA, GD, GT, GJ	South East Asia, Korea, Taiwan	3	PAL NTSC	NTSC (*B)	3PN	English	English (EU), French (EU), Spanish (EU), Russian
GN	New Zealand, Australia	4	PAL	PAL (*C)	4P6	English	English (EU), French, German, Italian, Spanish (EU), Polish, Swedish, Dutch
PN	Central & S.America, Brazil	4	NTSC	NTSC (*D)	4PN	Spanish	English (NA), Spanish (Panama), French, Brazilian Portuguese
PB	Central & S.America, Brazil	4	NTSC	NTSC (*D)	4PN	Portuguese	English (NA), Spanish (Panama), French, Brazilian Portuguese
PU, PH, PR	South/Central America, Argentina	4	NTSC	NTSC (*D)	4PN	English	English (NA), Spanish (Panama), French, Brazilian Portuguese
EE	CIS	5	SECAM	PAL (*C)	5P6	English	English (EU), French (EU), Spanish (EU), Russian
GW	India	5	PAL	PAL (*C)	5P6	English	English (NA), Traditional Chinese
GK	China	6	NTSC	NTSC (*B)	6PN	Simplified Chinese	English (NA), Simplified Chinese

NTSC (*A)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	PAL (DVD-V)
	NTSC (DVD-A/VCD)

NTSC (*B)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC (default)
	PAL60
PAL disc	PAL

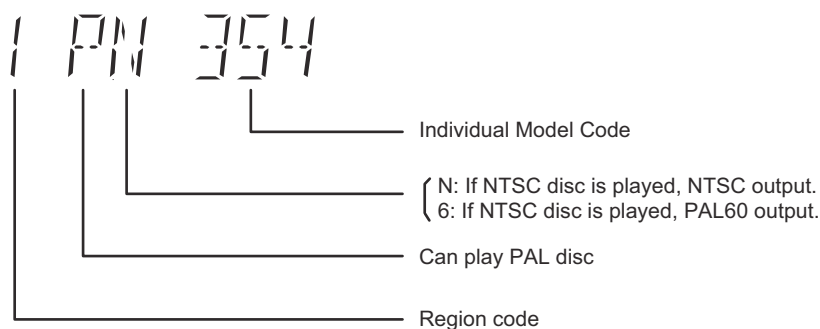
PAL (*C)

Source	Output
Screen Saver	PAL
NTSC disc	PAL60 (default)
	NTSC
PAL disc	PAL

NTSC (*D)

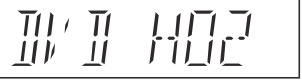
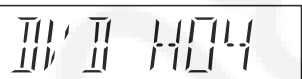
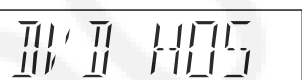
Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

Explanation of Display

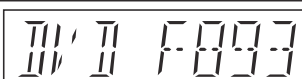
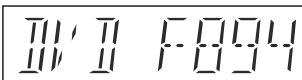
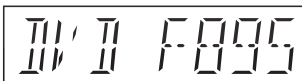
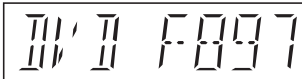


6.6. Self Diagnostic Function-Error Code

6.6.1. Mechanism Error Code Table

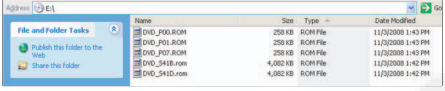
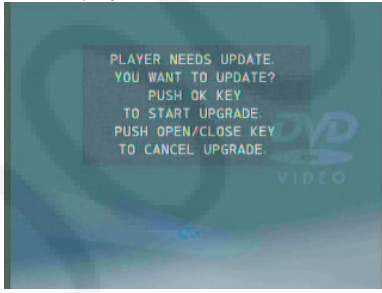
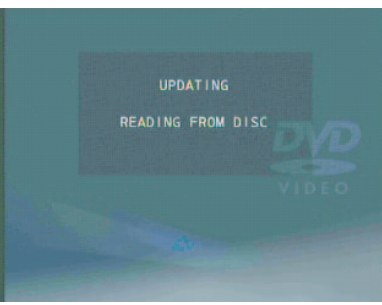
Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	Tray loading error	The tray opening and closing is abnormal. CLOSE and OPEN of the tray cannot be carried out properly. Loading motor error, DV5 LSI IC (IC8001) error.		Press [■STOP] on main unit for next error. (OPEN time: OPEN → CLOSE → OPEN → H01 at CLOSE: CLOSE → OPEN → CLOSE H01)
H02	Spindle servo error	The spindle motor cannot start. Spindle servo error, DSC Disk motor error, CLVS failure.		Press [■STOP] on main unit for next error.
H03	Traverse motor error	The traverse is abnormal. TRV motor error.		Press [■STOP] on main unit for next error.
H04	Tracking servo error	Tracking coil NG (OPU unit abnormal).		Press [■STOP] on main unit for next error.
H05	Seek time out error	It is not possible to access the disc. TOC cannot read. Abnormal disc etc. Pickup abnormal or disk is dirty.		Press [■STOP] on main unit for next error.
H07	Spindle motor drive error	The spindle motor drive voltage is abnormally low.		Press [■STOP] on main unit for next error.
U11	Focus servo error	Focus coil, FE signal error. Disc may be dirty.		Press [■STOP] on main unit for next error. (Unfinalized DVD-R is likely to become U11.)

6.6.2. DVD Module Error Code Table

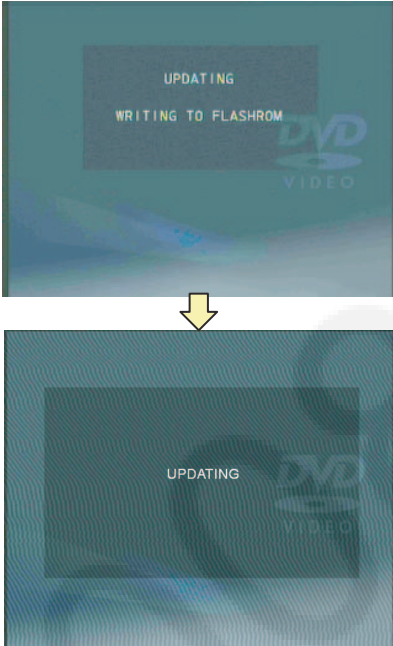
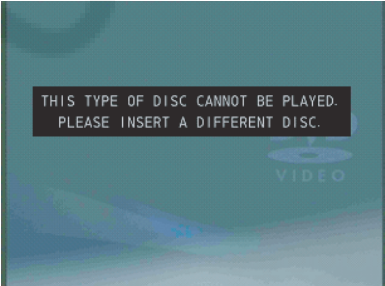
Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
U702	HDMI/DVI I2C communication error	The communication error of I2C when connecting it with HDMI/DVI. For instance, when EDID information to which information on the TV set side has been described cannot be read, it is generated.		Press [■STOP] on main unit for next error.
U703	HDMI/DVI attestation error	When attestation (HDCP) with the TV side fails when connecting it with HDMI/DVI, it is generated.		Press [■STOP] on main unit for next error.
F893	FLASH ROM IC data falsification error	Firmware error, DV5.0 LSI IC (IC8651) error.		Press [■STOP] on main unit for next error.
F894	EEPROM IC abnormality error	When failing in the access to EEPROM IC located in the Main P.C.B. (IC8611).		Press [■STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■STOP] on main unit for next error.

6.7. Firmware Version-Up Information

6.7.1. Process Flow (1/3)

Item		FL/ GUI Display	Remarks
Process	Description		
1	Collect ROM Files (Copy files into CD-R/RW) There are 2 files: A) Syscon ROM file type: - DVD_S70B.ROM (support English and non-Chinese) - DVD_S70C.ROM (support English and Simplified Chinese) - DVD_S70D.ROM (support English and Traditional Chinese) B) Opecon ROM file type: - DVD_P09.ROM	Display 1: 	User can put both files into the same root directory. DVD MODEL will choose the right ROM files to update its firmware.
2	Load disc into unit (To update rate) Load the disc into the set (To be updated). Press [OK] in remote controller to start updating process after the following signal appear: → FL Display 1.1: "PLAY" . → GUI Display 1.1: PLAYER NEED UPDATE. YOU WANT TO UPDATE? PUSH OK KEY TO STAY UPGRADE. PUSH OPEN/CLOSE KEY TO CANCEL UPGRADE. (For Syscon): → GUI Display 1.3.1: UPDATING READING FROM DISC	FL Display 1.1:  GUI Display 1.1:  GUI Display 1.3.1: 	All panel keys and remote controller keys, including [POWER] key, are invalid during CD Update. Caution: Make sure the powersupply during CD update. If the power supply cable is unplugged during update stage, CD update will fail. The DVD model can't work, and can't be recovered by CD update again.

6.7.2. Process Flow (2/3)

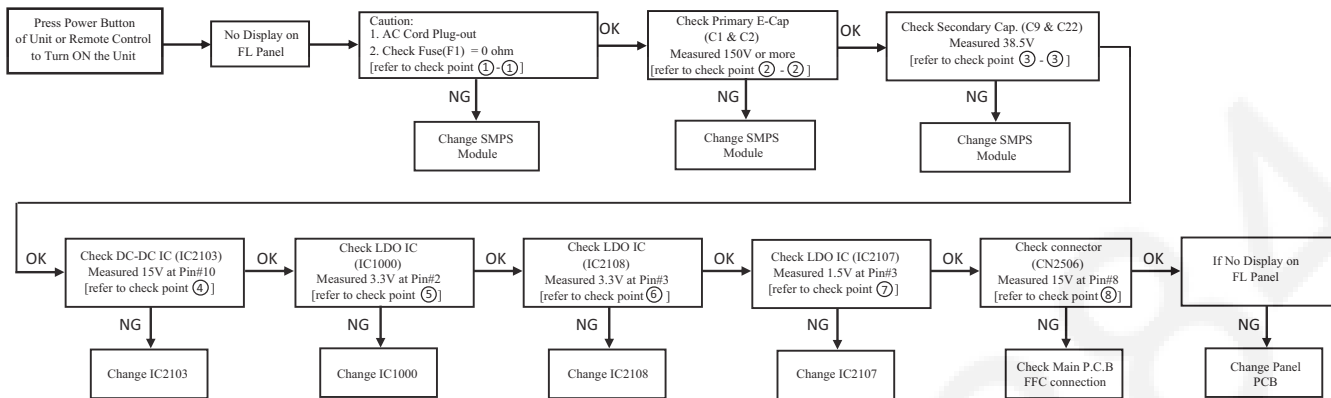
Item		FL/ GUI Display	Remarks
Process	Description		
	➔ <i>GUI Display 1.3.2:</i> UPDATING WRITING TO FLASHROM	GUI Display 1.3.2: 	
2-1	Check Correct ROM file type ROM files doesn't fit to the product type. If the ROM files doesn't fit for the product type, then CD update "STOP" and display as below: ➔ <i>FL Display 2:</i> "NO PLAY" . ➔ <i>GUI Display 2 :</i> THIS TYPE OF DISC CANNOT BE PLAYED. PLEASE INSERT A DIFFERENT DISC.	FL Display 2:  GUI Display 2: 	Update stop (Wrong ROM Type)
2-2	Check ROM version type Update not Necessary If the ROM files has the same (latest) version or an older version than the product: ➔ <i>FL Display 3:</i> "NO NEED" . ➔ <i>GUI Display 3:</i> THIS PLAYER DOES NOT REQUIRE THE UPDATE	FL Display 3:  GUI Display 3: 	Update stop (product has the latest firmware)

6.7.3. Process Flow (3/3)

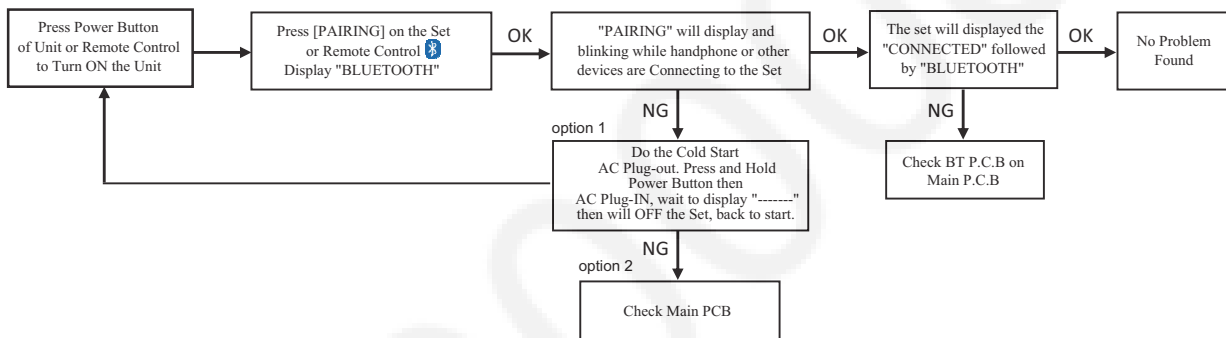
Item		FL/ GUI Display	Remarks
Process	Description		
3	Update software (Opecon)	1. Update Failed If Opecon software update fail: → FL Display 3: "FAIL" . → GUI Display 3:"UPDATE FAIL"	Update stop. The theater set can't work, and can't be recovered by CD update again.
	2. Update Completed - If Opecon software update completes successfully: → FL Display 3: "GOOD" . → GUI Display 3: COMPLETED PLEASE EJECT THE DISC → Open the tray and take out the CD, the update procedure has been finished successfully. → Power off, then remove AC Cord.	FL Display 5:  GUI Display 5: 	The theater set will reboot automatically.

7 Troubleshooting Guide

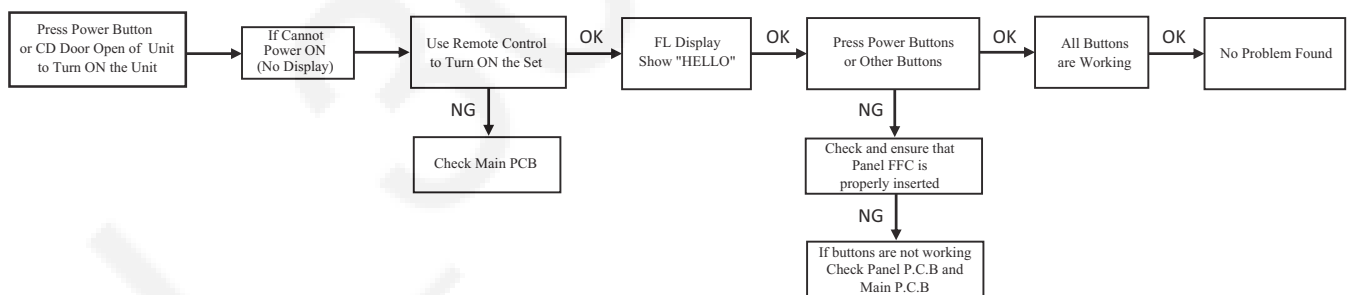
7.1. No Power or No Display



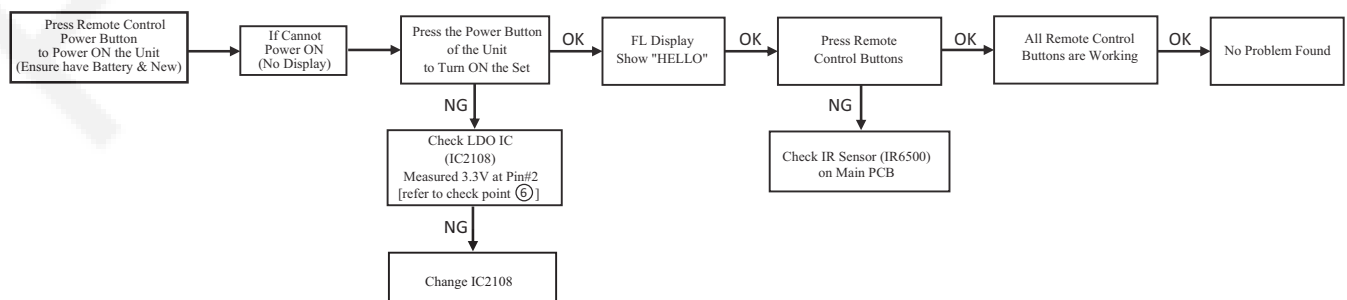
7.2. Bluetooth® Pairing Failure



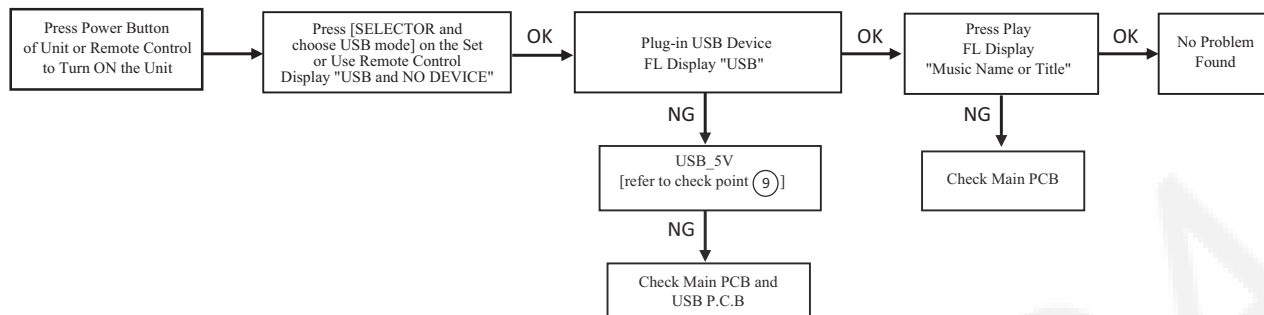
7.3. No Key Function



7.4. No Remote Control Function

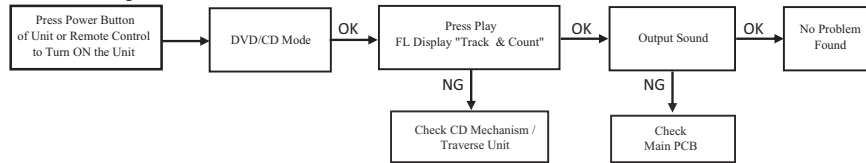


7.5. USB Device Cannot Detect



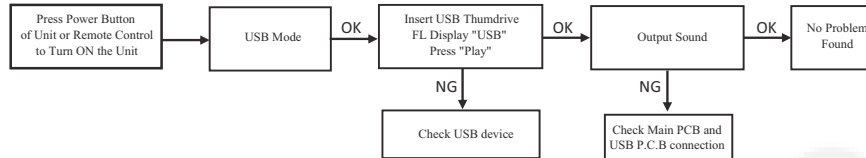
7.6. No Output Sound

DVD/CD Play

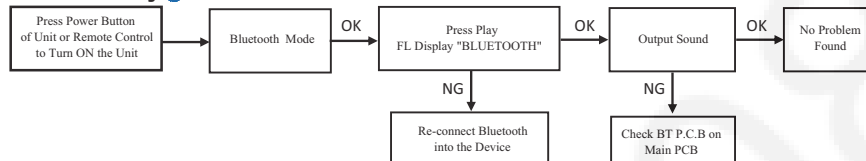


Checking Points:
 1) IC4001 (DSP IC) pin 4 (I/P) & pin 27-30 (O/P) PWM signal
 2) IC4001 (DSP IC) pin 41/42 for OSC signal
 3) IC4803 pin 43 (BCK), 44 (WCK), 45 (SCDO)
 4) IC6000 (Power Amplifier) I/P (pin5,6,14,15) and O/P pins (32,35,39,40)
 5) IC6000 pin 30/31/36/37 for +32V, pin 1/2/22 for +12V

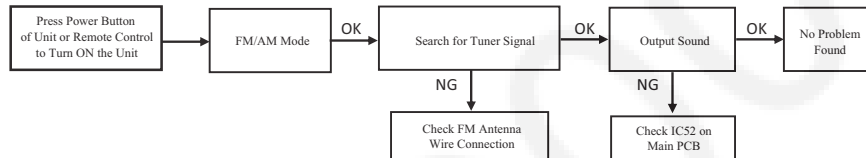
USB Play



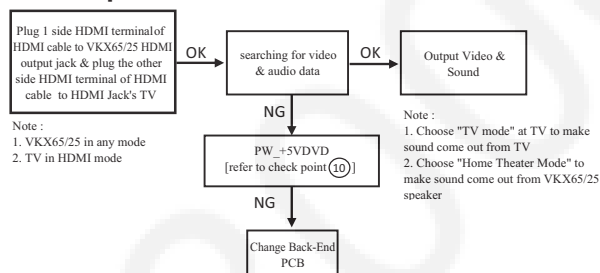
Bluetooth Play



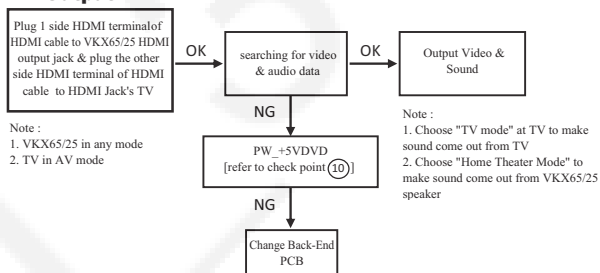
Tuner Mode



HDMI Output

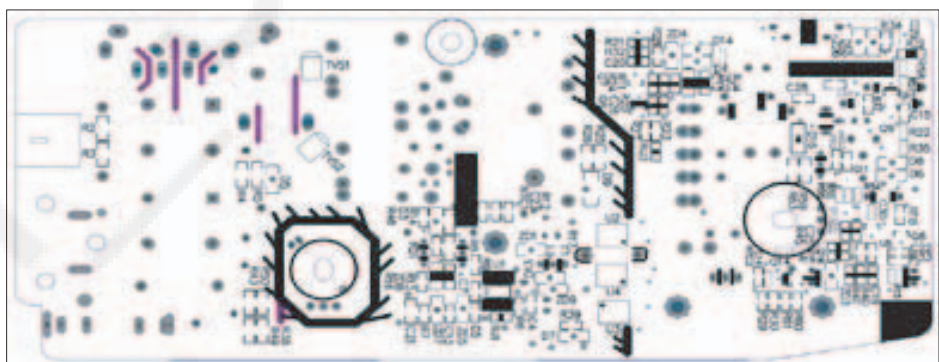
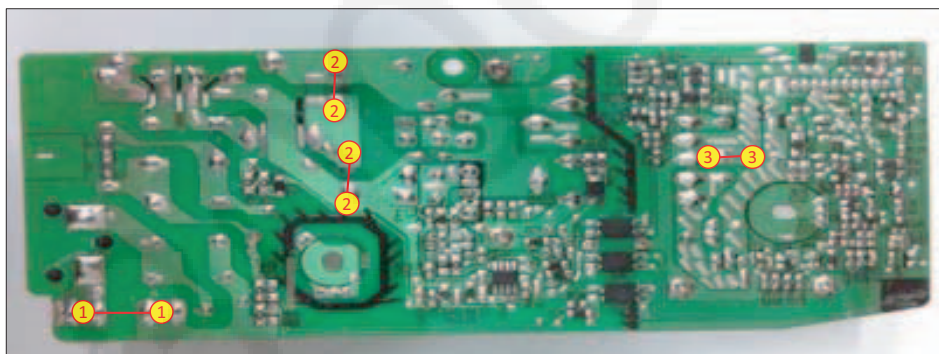
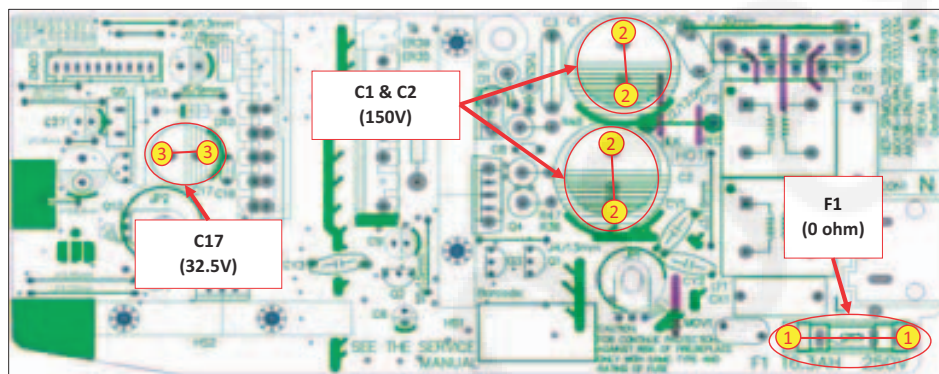
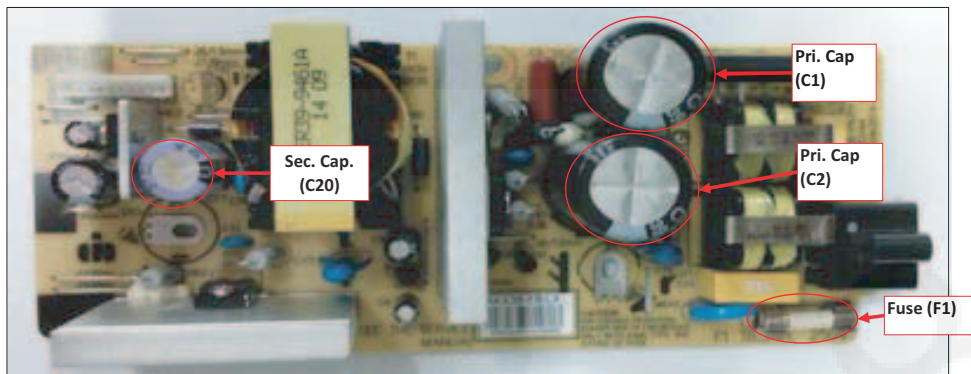


AV Output

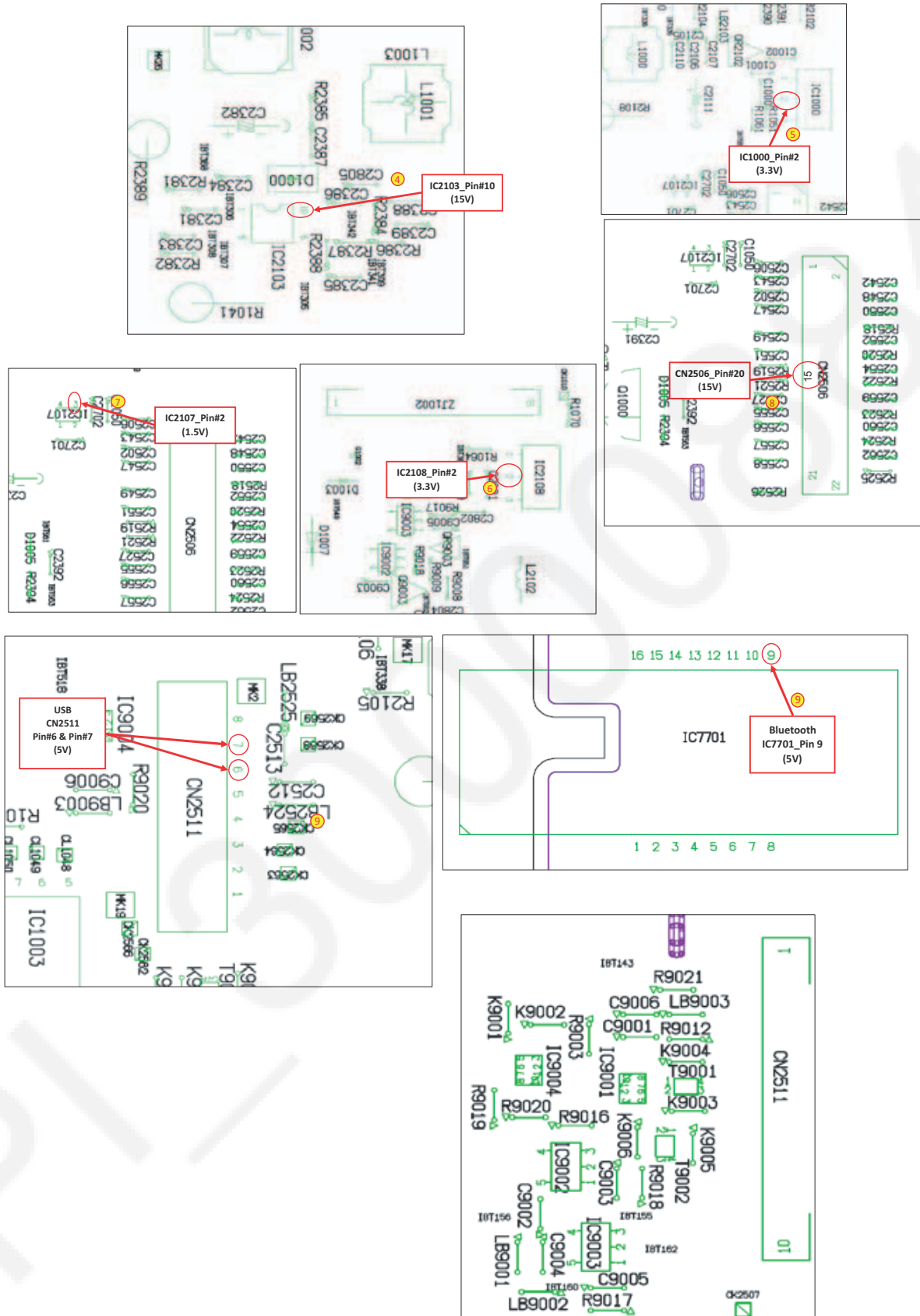


7.7. Check Point

Power PCB



Main PCB



[illegible]

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
- Disassembly of Front Panel Unit
- Disassembly of Panel P.C.B. and Music Port P.C.B.
- Disassembly of USB P.C.B.
- Disassembly of Rear Panel
- Disassembly of Main P.C.B.
- Disassembly of SMPS Module
- Disassembly of DVD Mechanism Unit
- Disassembly of Backend P.C.B. Ass'y

8.1. Type of Screws

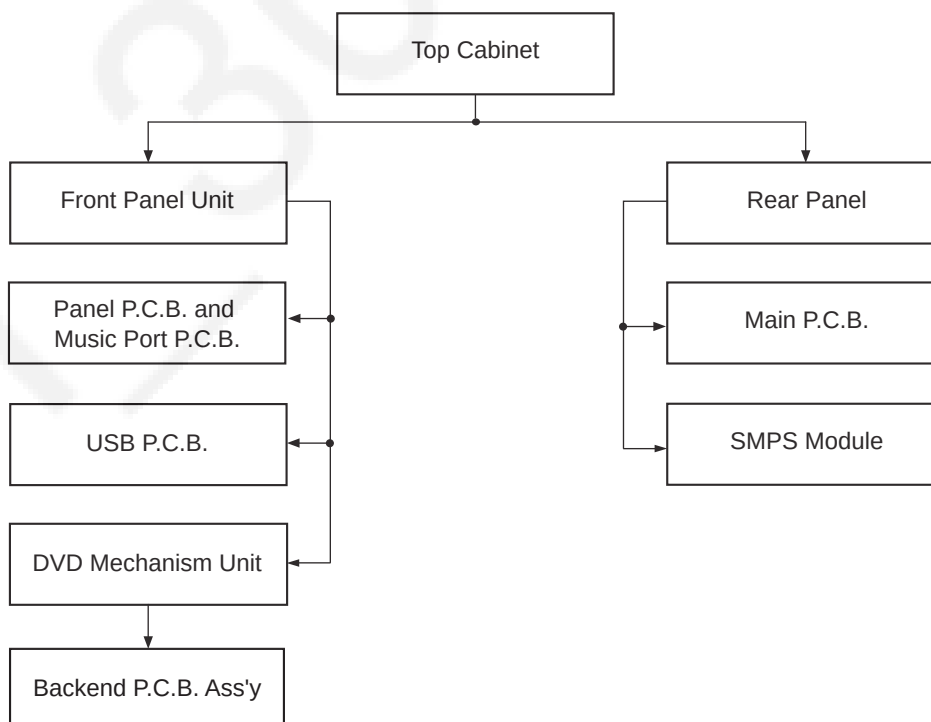
CAUTION NOTE:

Please use original screw and at correct locations.

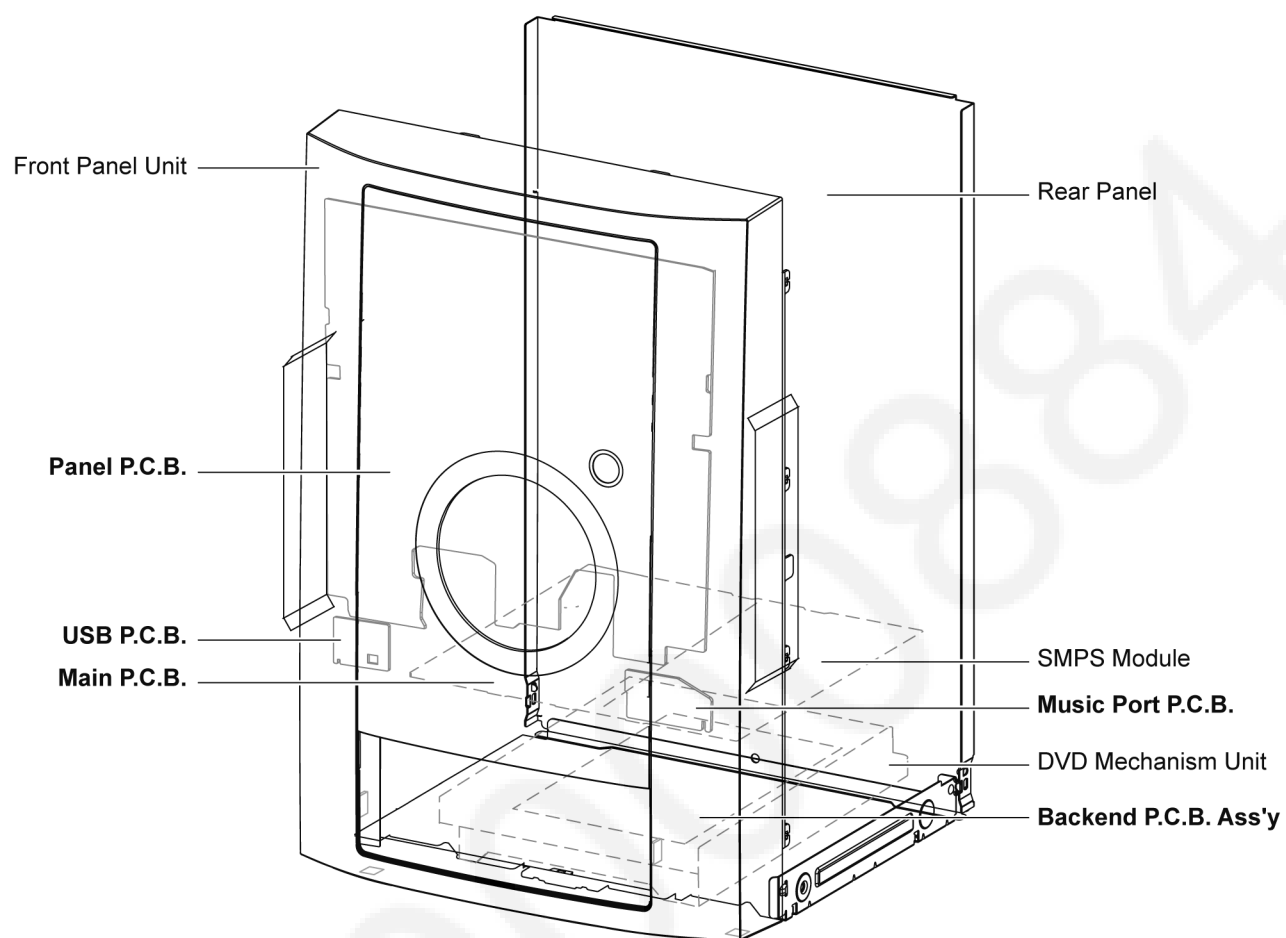
Below shown is part no. of different screw types used:

- a** :RHD30007-K2J **d** :RHD26046-L
- b** :RHD30119-S **e** :RHDX031008
- c** :RHD30111-31

8.2. Disassembly Flow Chart



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

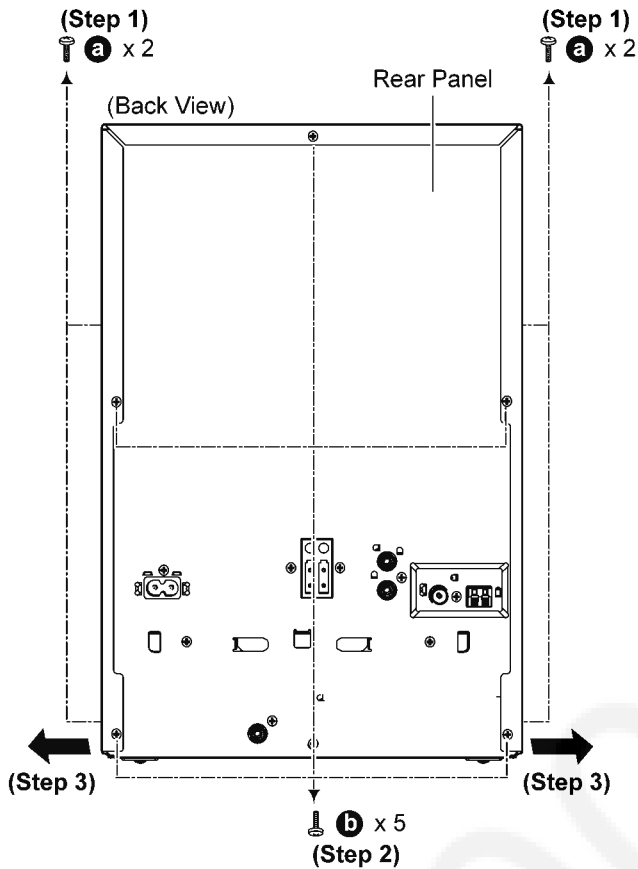


8.4. Disassembly of Top Cabinet

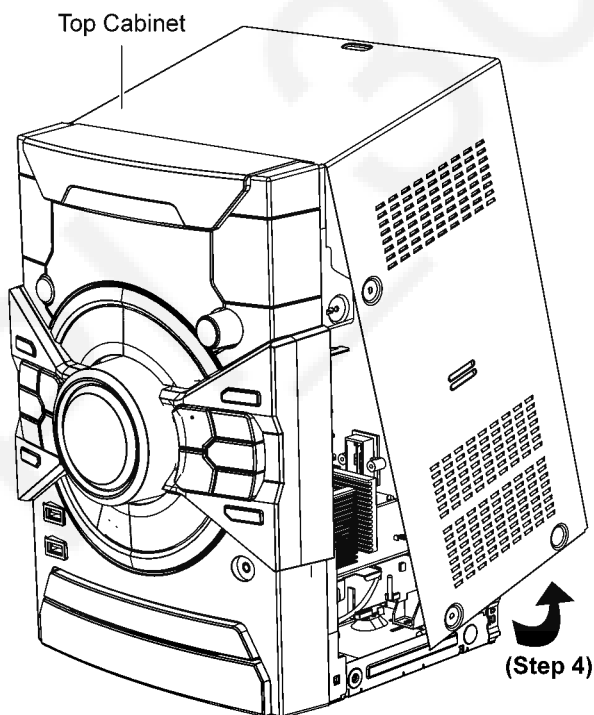
Step 1 Remove 4 screws.

Step 2 Remove 5 screws.

Step 3 Release both sides of Top Cabinet outwards as arrow shown.



Step 4 Slightly lift up to remove Top Cabinet.



8.5. Disassembly of Front Panel Unit

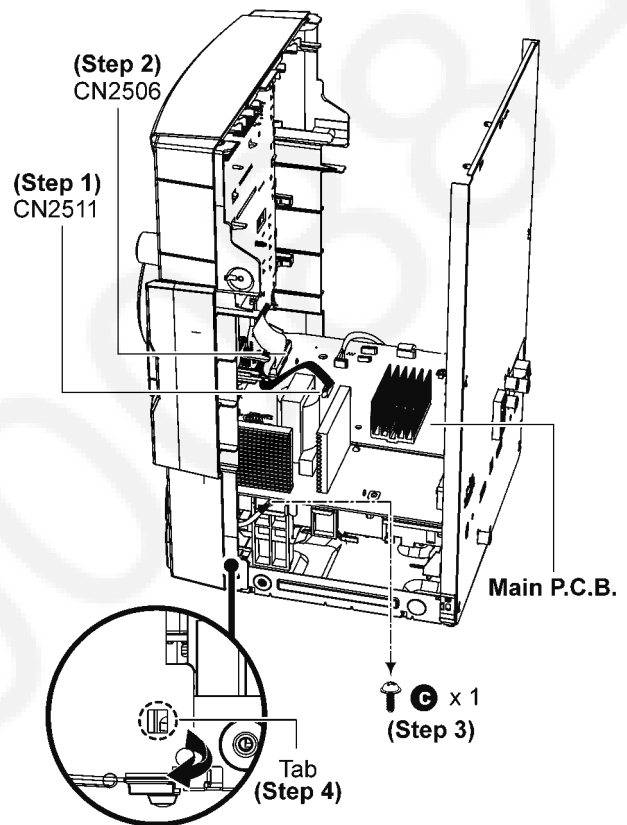
• Refer to "Disassembly of Top Cabinet".

Step 1 Detach 8P Wire at the connector (CN2511) on Main P.C.B..

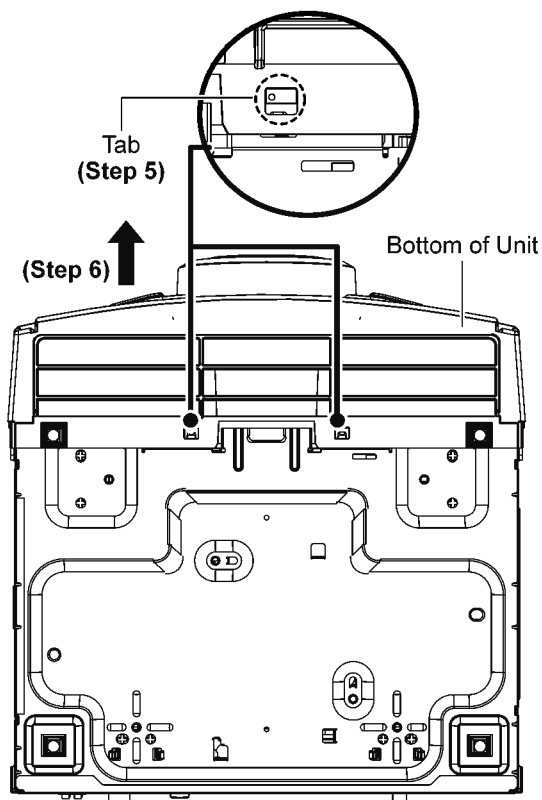
Step 2 Detach 22P FFC at the connector (CN2506) on Main P.C.B..

Step 3 Remove 1 screw.

Step 4 Release tabs on both side of Front Panel Unit.



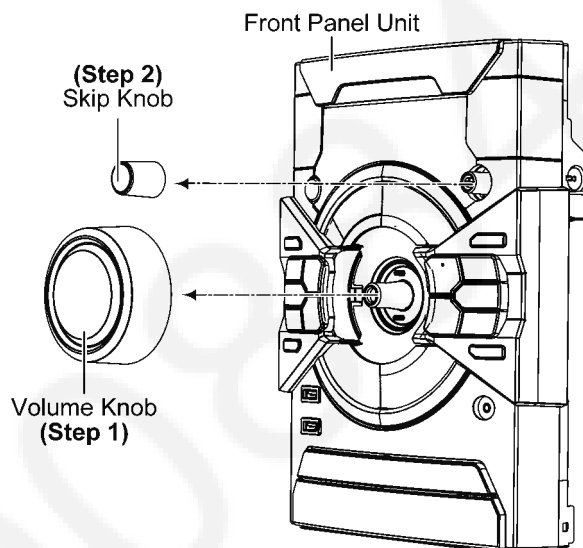
Step 5 Release tabs at bottom of unit.
Step 6 Detach to remove Front Panel Unit



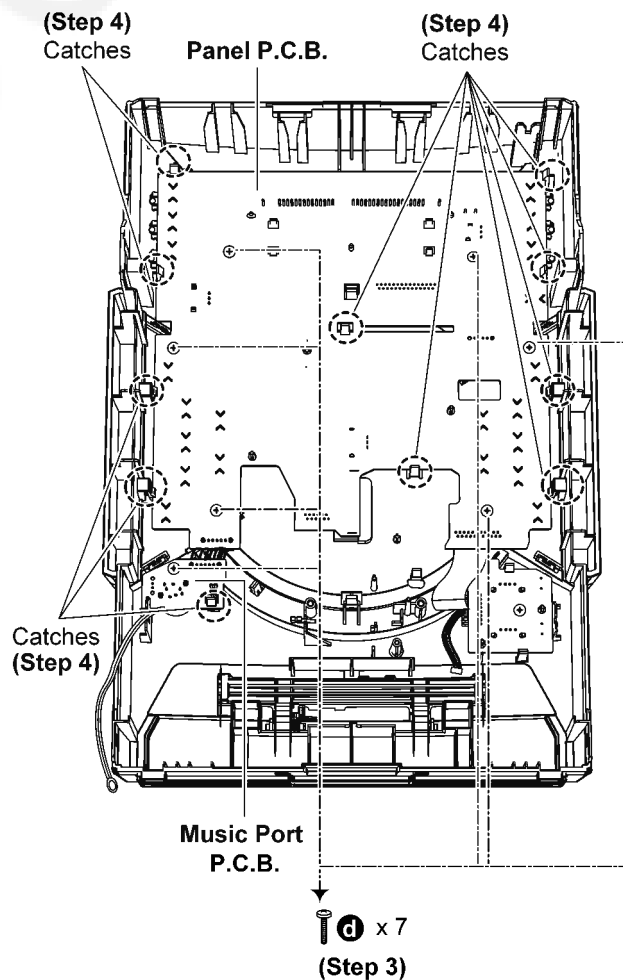
8.6. Disassembly of Panel P.C.B. and Music Port P.C.B.

- Refer to "Disassembly of Top Cabinet".
- Refer to "Disassembly of Front Panel Unit".

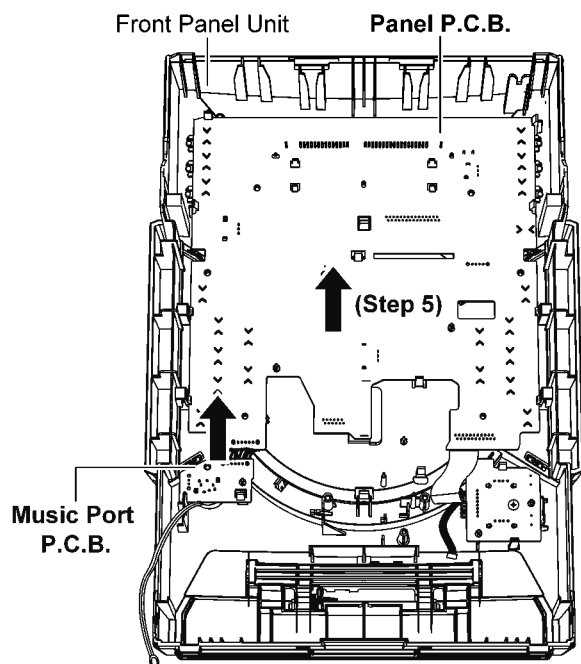
Step 1 Remove Volume Knob.
Step 2 Remove Skip Knob.



Step 3 Remove 7 screws.
Step 4 Release catches.



Step 5 Remove Panel P.C.B. and Music Port P.C.B..



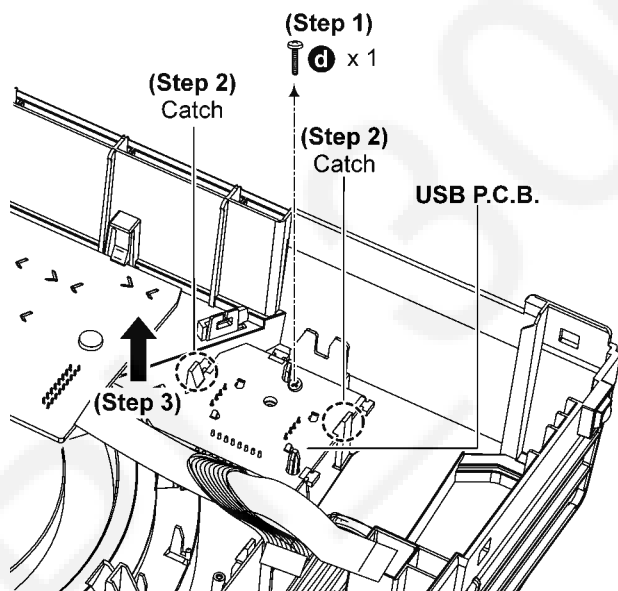
8.7. Disassembly of USB P.C.B.

- Refer to "Disassembly of Top Cabinet".
- Refer to "Disassembly of Front Panel Unit".

Step 1 Remove 1 screw.

Step 2 Remove catches.

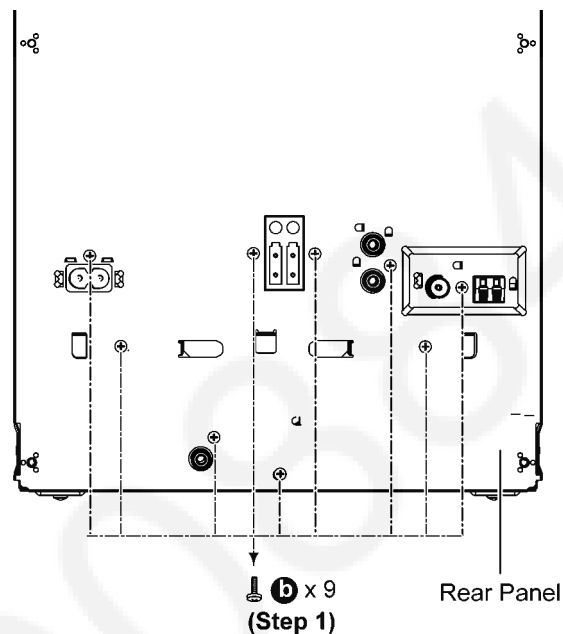
Step 3 Remove USB P.C.B..



8.8. Disassembly of Rear Panel.

- Refer to "Disassembly of Top Cabinet".

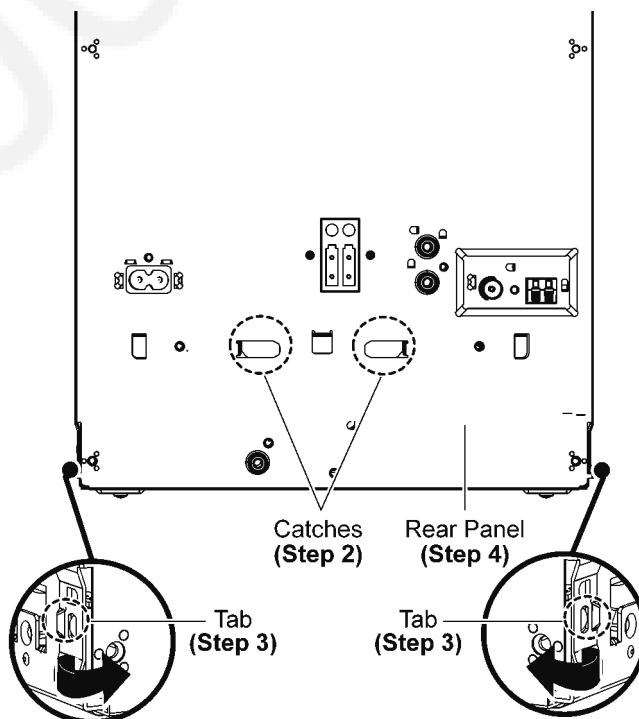
Step 1 Remove 9 screws.



Step 2 Lift up to detach Chassis Unit.

Step 3 Release tabs.

Step 4 Release Rear Panel.



8.9. Disassembly of Main P.C.B.

- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Rear Panel”.

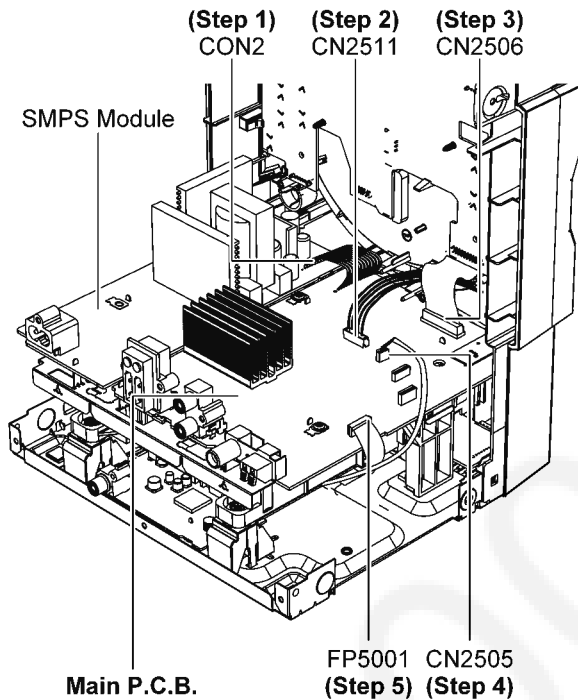
Step 1 Detach 10P Cable at the connector (CON2) on SMPS Module.

Step 2 Detach 8P Wire at the connector (CN2511) on Main P.C.B..

Step 3 Detach 22P FFC at the connector (CN2506) on Main P.C.B..

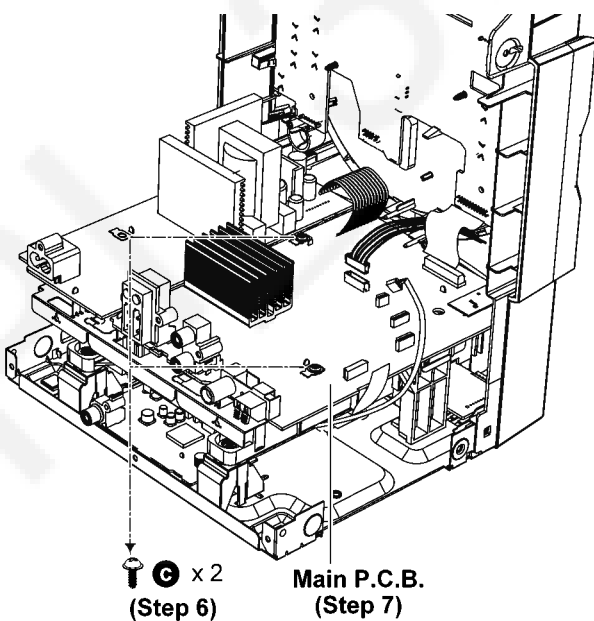
Step 4 Detach 5P Cable at the connector (CN2505) on Main P.C.B..

Step 5 Detach 30P FFC at the connector (FP5001) on Main P.C.B..



Step 6 Remove 2 screws.

Step 7 Remove Main P.C.B..



8.10. Disassembly of SMPS Module

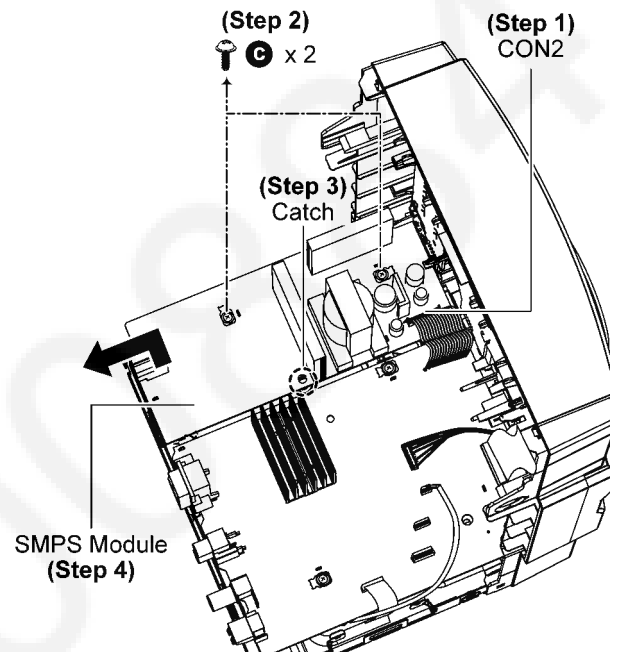
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Rear Panel”.

Step 1 Detach 10P Cable at the connector (CON2) on SMPS Module.

Step 2 Remove 2 screws.

Step 3 Release catch.

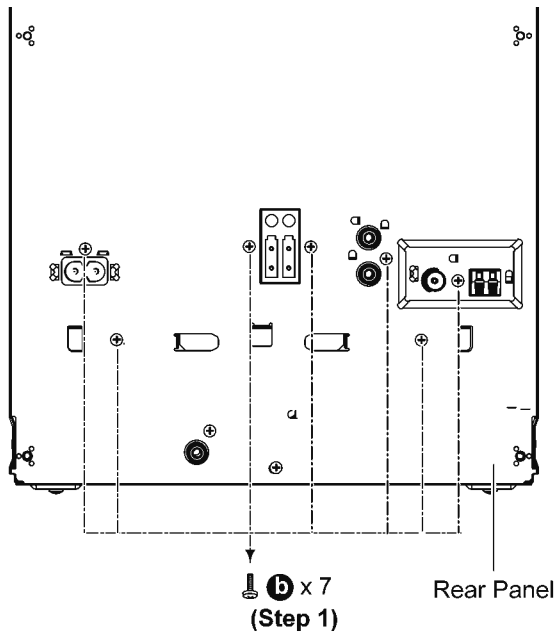
Step 4 Remove SMPS Module.



8.11. Disassembly of DVD Mechanism Unit

- Refer to "Disassembly of Top Cabinet".
- Refer to "Disassembly of Front Panel Unit".

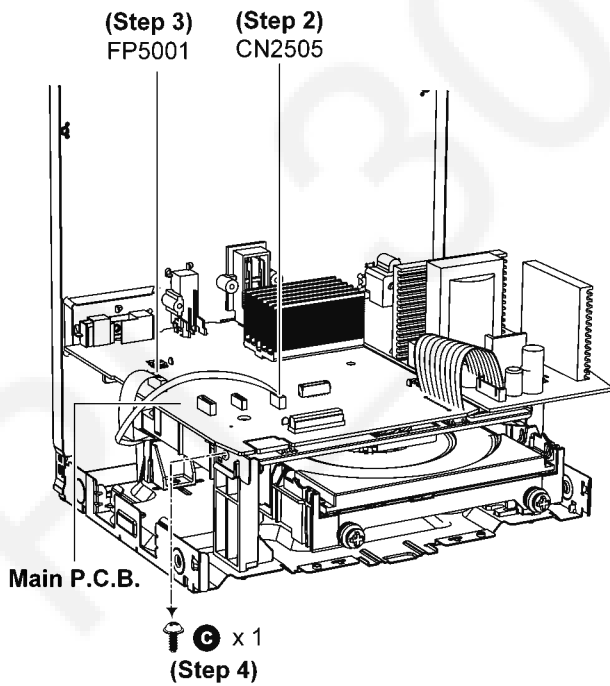
Step 1 Remove 7 screws.



Step 2 Detach 5P Cable at the connector (CN2505) on Main P.C.B..

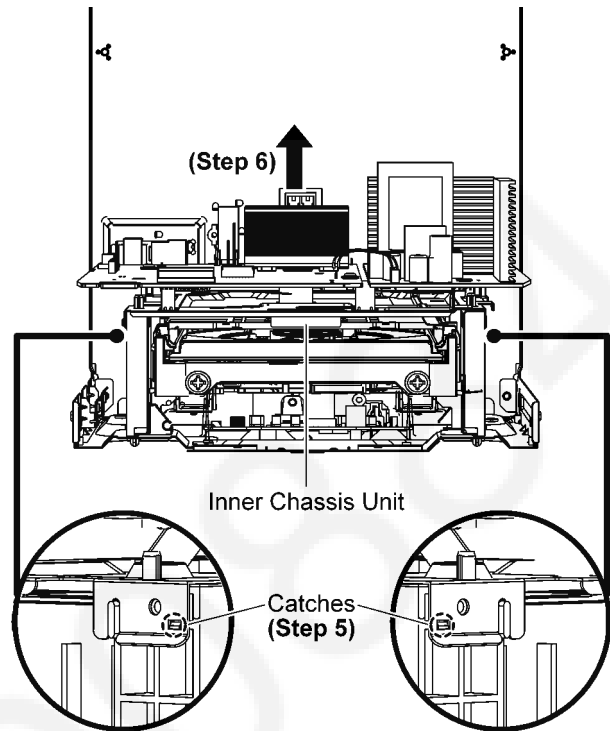
Step 3 Detach 30P FFC at the connector (FP5001) on Main P.C.B..

Step 4 Remove 1 screw.

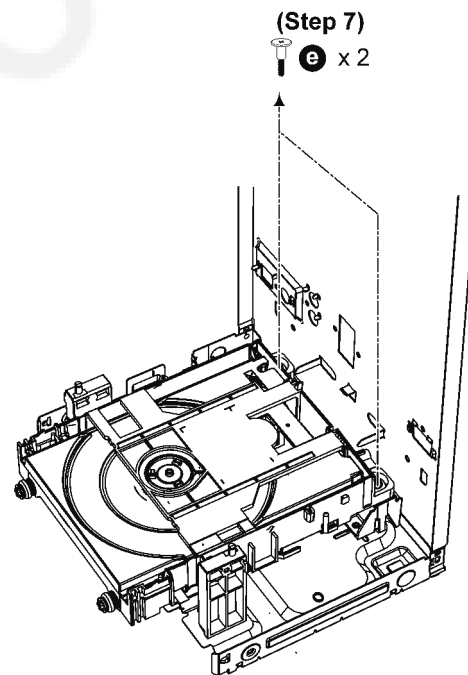


Step 5 Release catches.

Step 6 Lift up to remove Inner Chassis Unit.



Step 7 Remove 2 screws.

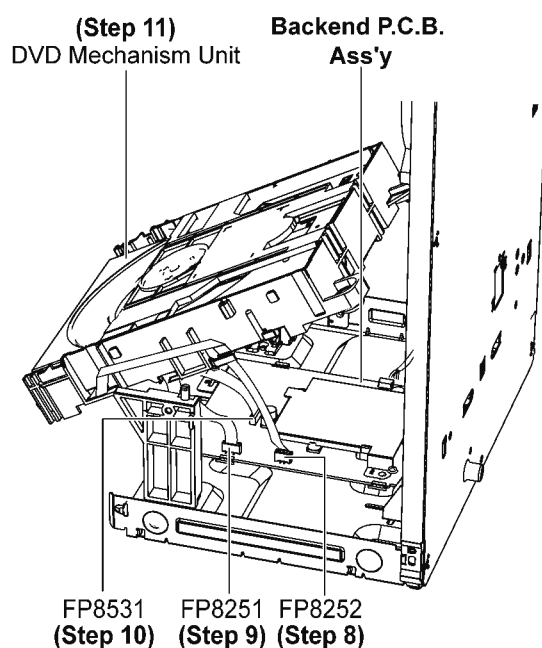


Step 8 Detach 5P FFC at the connector (FP8252) on Backend P.C.B. Ass'y.

Step 9 Detach 6P FFC at the connector (FP8251) on Backend P.C.B. Ass'y.

Step 10 Detach 24P FFC at the connector (FP8531) on Backend P.C.B. Ass'y.

Step 11 Remove DVD Mechanism Unit.

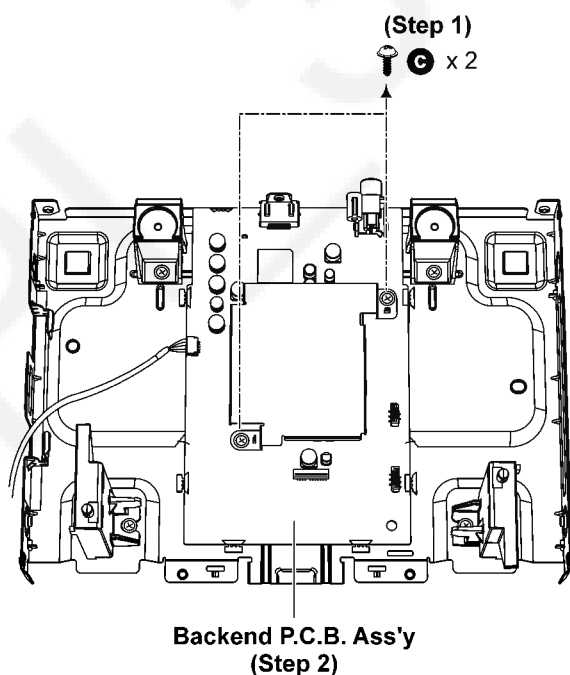


8.12. Disassembly of Backend P.C.B. Ass'y

- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of Rear Panel”.
- Refer to “Disassembly of DVD Mechanism Unit”.

Step 1 Remove 2 screws.

Step 2 Remove Backend P.C.B. Ass'y.



9 Service Position

Note: For description of the disassembly procedures, see the Section 8.

9.1. Checking of Panel P.C.B. and Music Port P.C.B.

Step 1 Remove Top Cabinet.

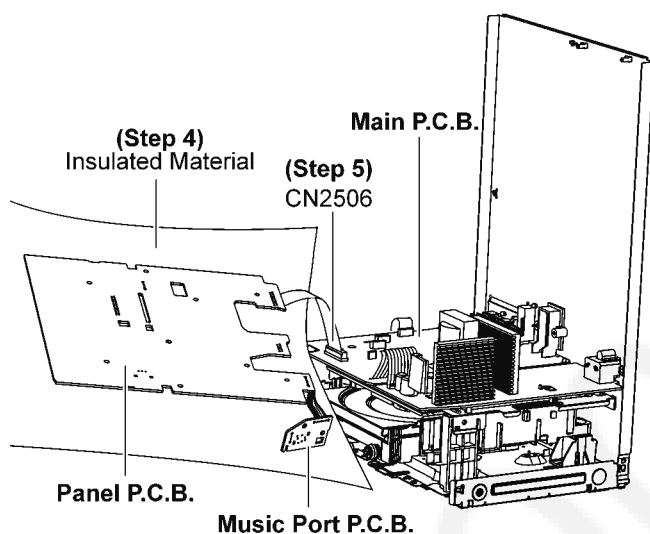
Step 2 Remove Front Panel Unit.

Step 3 Remove Panel P.C.B. and Music Port P.C.B..

Step 4 Place Panel P.C.B. and Music Port P.C.B. on the insulated material as shown.

Step 5 Attach 22P FFC at a connector (CN2506) on the Main P.C.B..

Step 6 Panel P.C.B. and Music Port P.C.B. can be checked as diagram shown.



9.2. Checking and Repairing of Main P.C.B. and SMPS Module

Step 1 Remove Top Cabinet.

Step 2 Remove Rear Panel.

Step 3 Remove Main P.C.B..

Step 4 Remove SMPS Module.

Step 5 Place Main P.C.B. and SMPS Module on the insulated material.

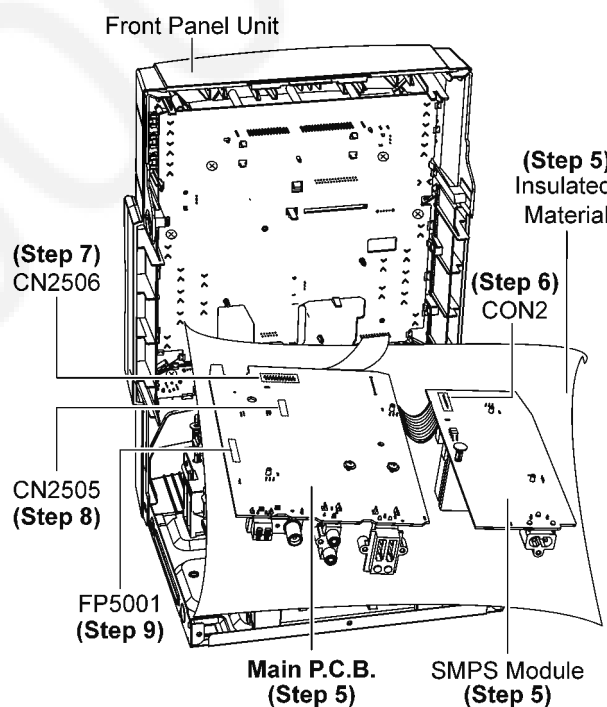
Step 6 Attach 10P Cable at a connector (CON2) on the SMPS Module.

Step 7 Attach 22P FFC at a connector (CN2506) on the Main P.C.B..

Step 8 Attach 5P Cable at the connector (CN2505) on Main P.C.B..

Step 9 Attach 30P FFC at the connector (FP5001) on Main P.C.B..

Step 10 Main P.C.B. and SMPS Module can be checked as diagram shown.



9.3. Checking and Repairing of Backend P.C.B. Ass'y

Step 1 Remove Top Cabinet.

Step 2 Remove Front Panel Unit.

Step 3 Remove Rear Panel.

Step 4 Remove DVD Mechanism Unit.

Step 5 Remove Backend P.C.B. Ass'y.

Step 6 Positioned the Front Panel Unit, Main P.C.B. and SMPS Module as shown.

Step 7 Attach 22P FFC at a connector (CN2506) on the Main P.C.B..

Step 8 Attach 5P Cable at the connector (CN2505) on Main P.C.B..

Step 9 Attach 30P FFC at the connector (FP5001) on Main P.C.B..

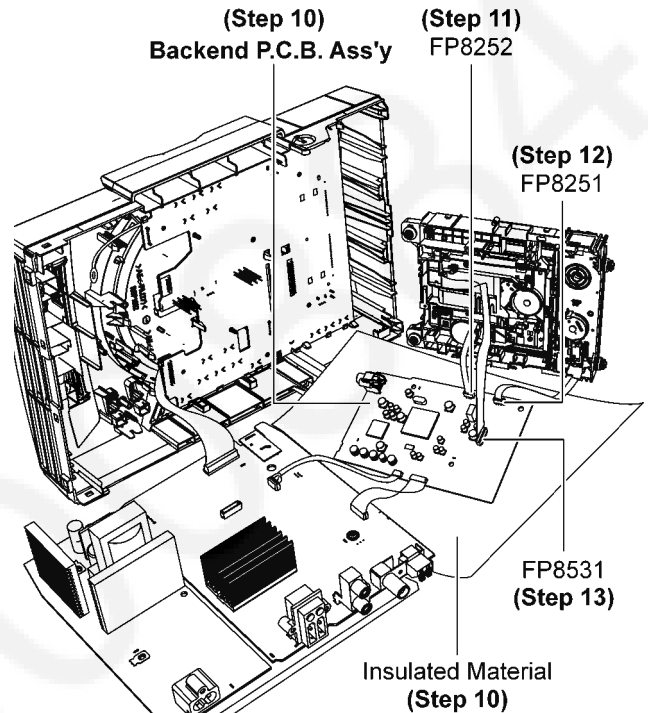
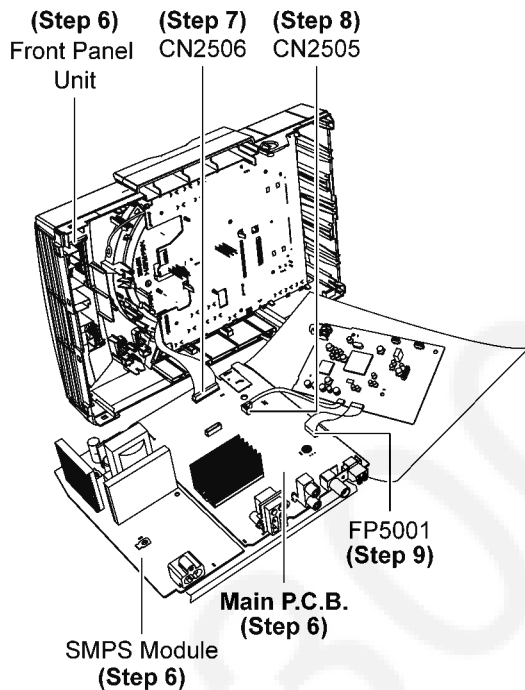
Step 10 Place Backend P.C.B. Ass'y on the insulated material.

Step 11 Attach 5P FFC at the connector (FP8252) on Backend P.C.B. Ass'y.

Step 12 Attach 6P FFC at the connector (FP8251) on Backend P.C.B. Ass'y.

Step 13 Attach 24P FFC at the connector (FP8531) on Backend P.C.B. Ass'y.

Step 14 Check Backend P.C.B. Ass'y as diagram shown.

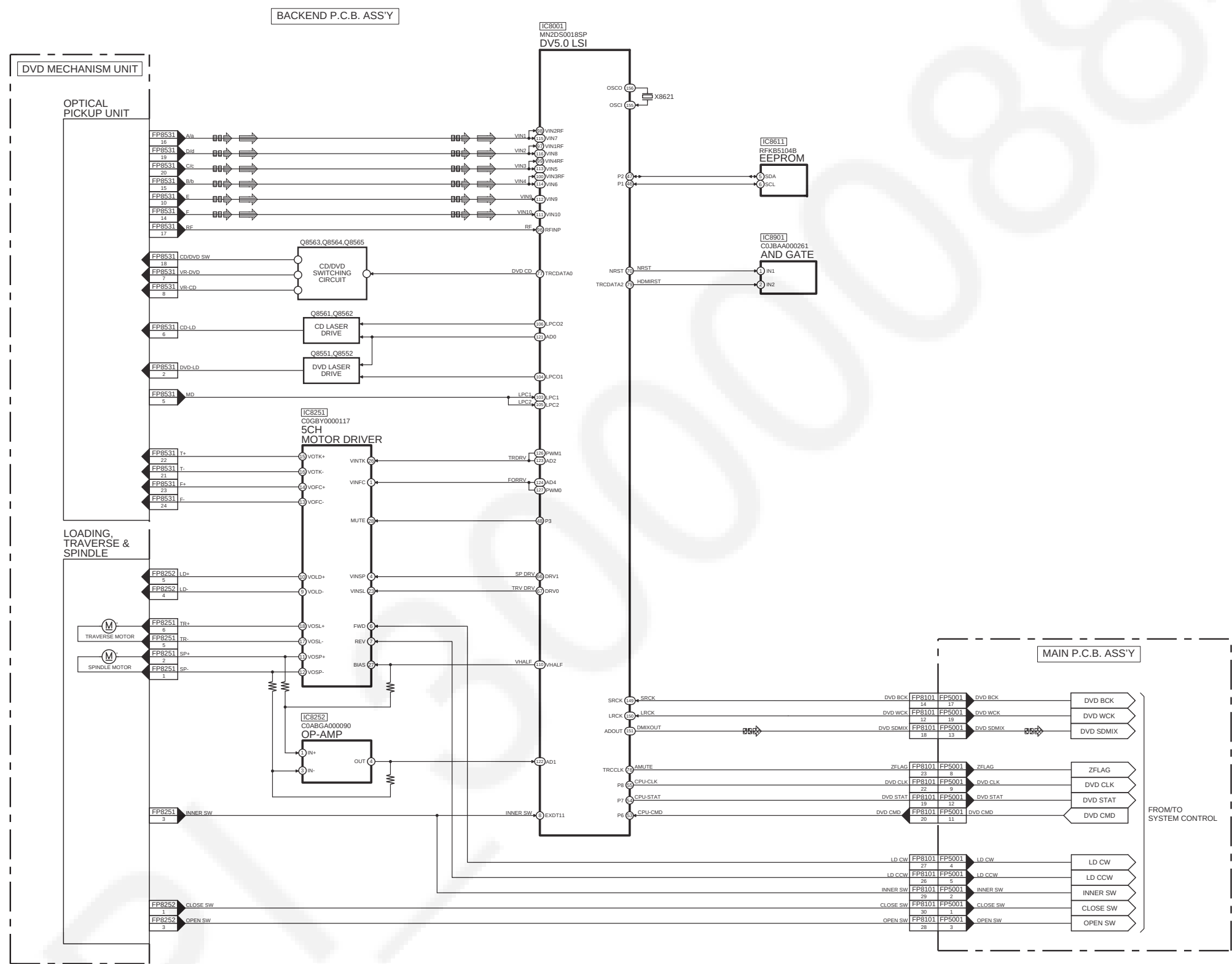


PL/30000884

10 Block Diagram

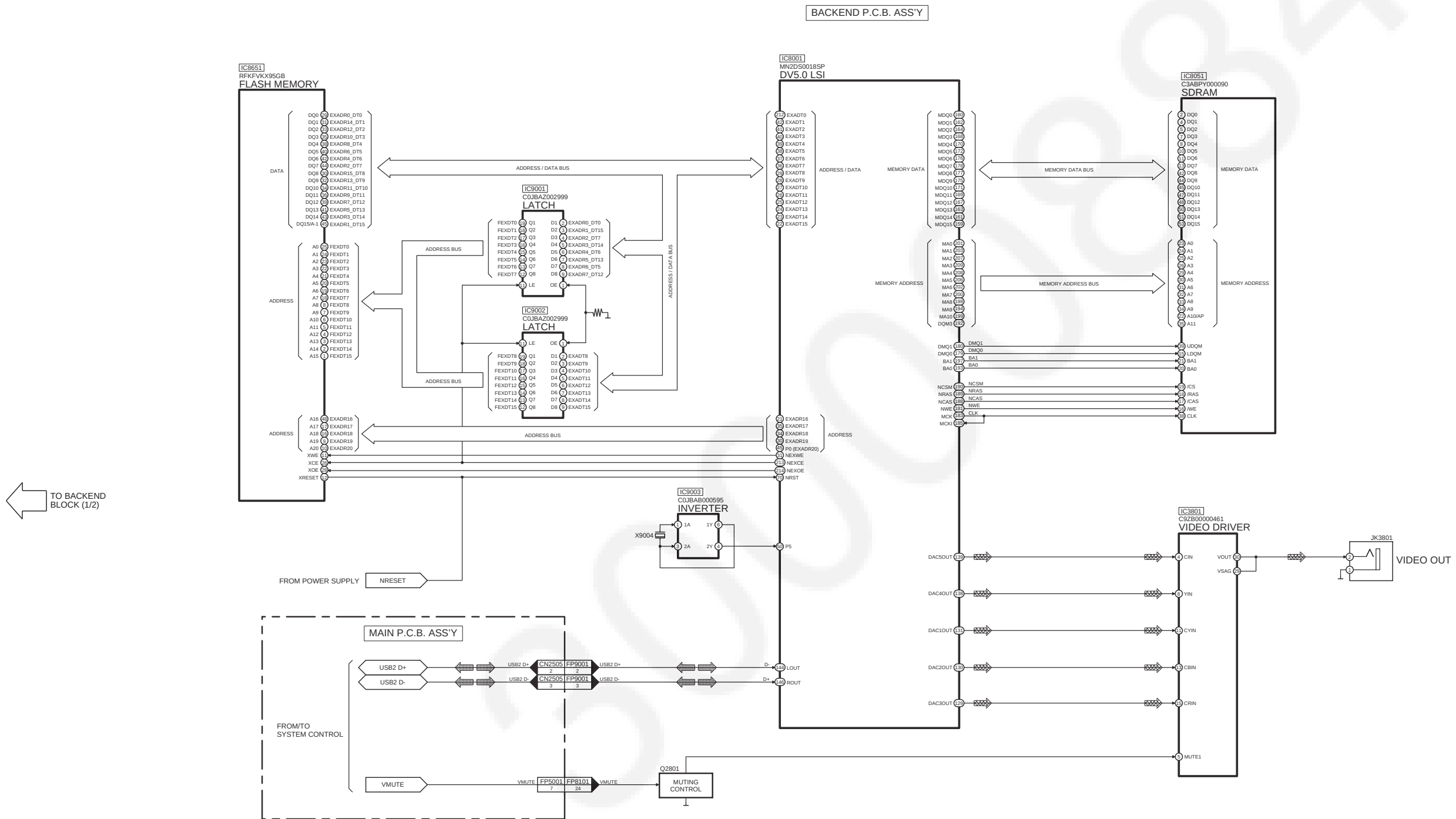
10.1. Backend

⬅️ : CD/DVD AUDIO INPUT SIGNAL LINE ➡️ : CD/DVD VIDEO INPUT SIGNAL LINE 🔊 : AUDIO OUTPUT SIGNAL LINE 📺 : VIDEO OUTPUT SIGNAL LINE 🖱️ : USB SIGNAL LINE

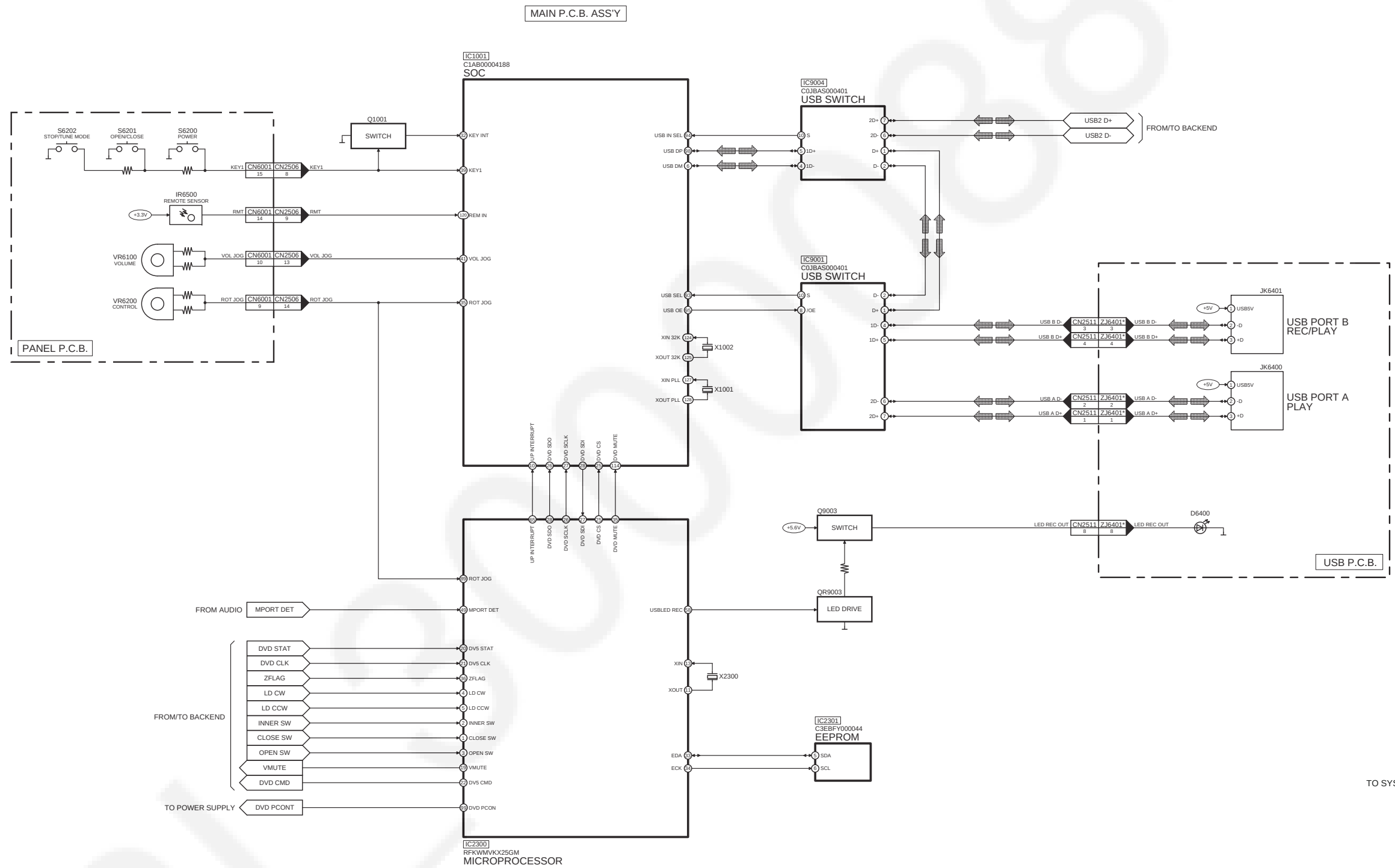


TO BACKEND
BLOCK (2/2)

 : CD/DVD AUDIO INPUT SIGNAL LINE
  : CD/DVD VIDEO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : VIDEO OUTPUT SIGNAL LINE
  : USB SIGNAL LINE

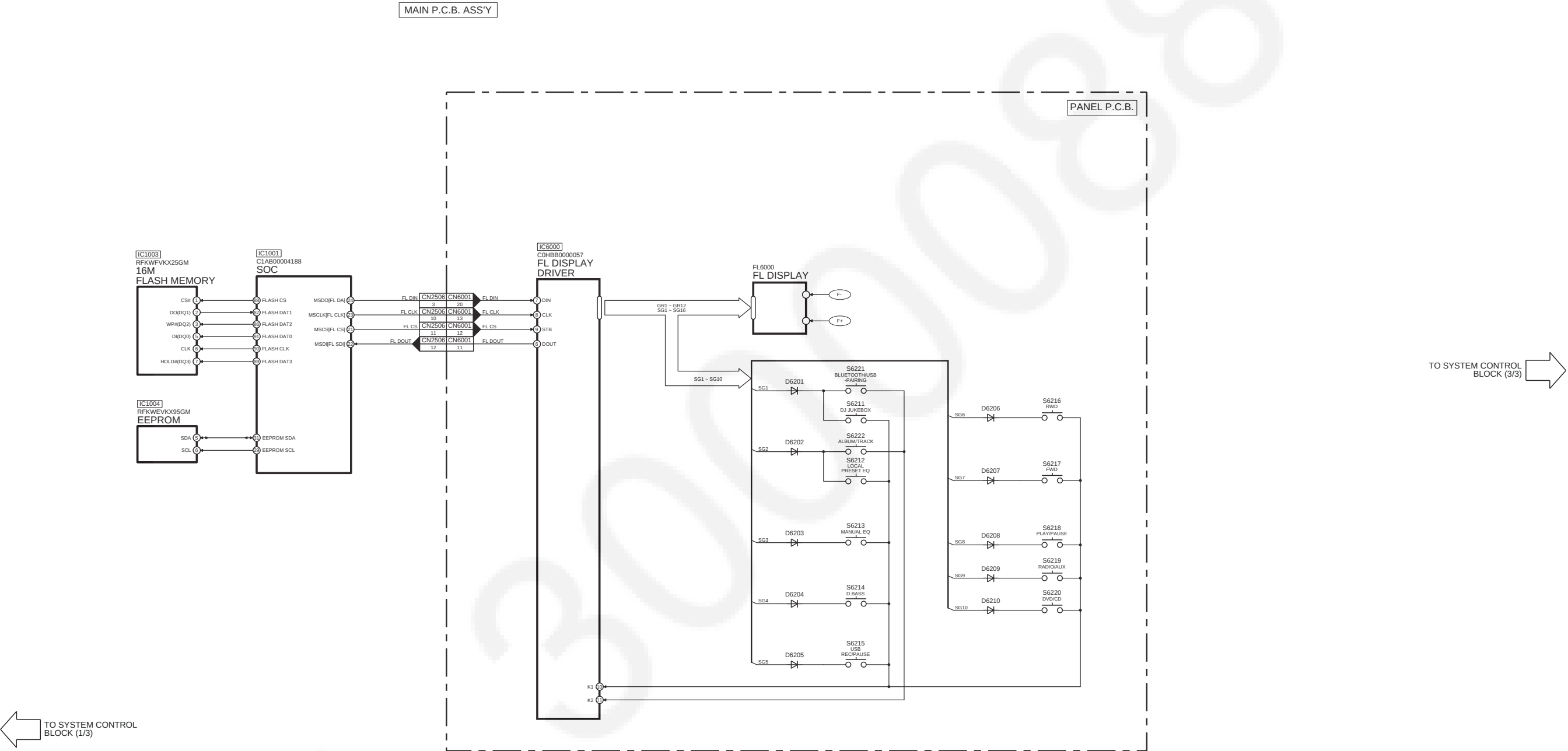


SA-VKX25EE/GA/GS BACKEND (2/2) BLOCK DIAGRAM



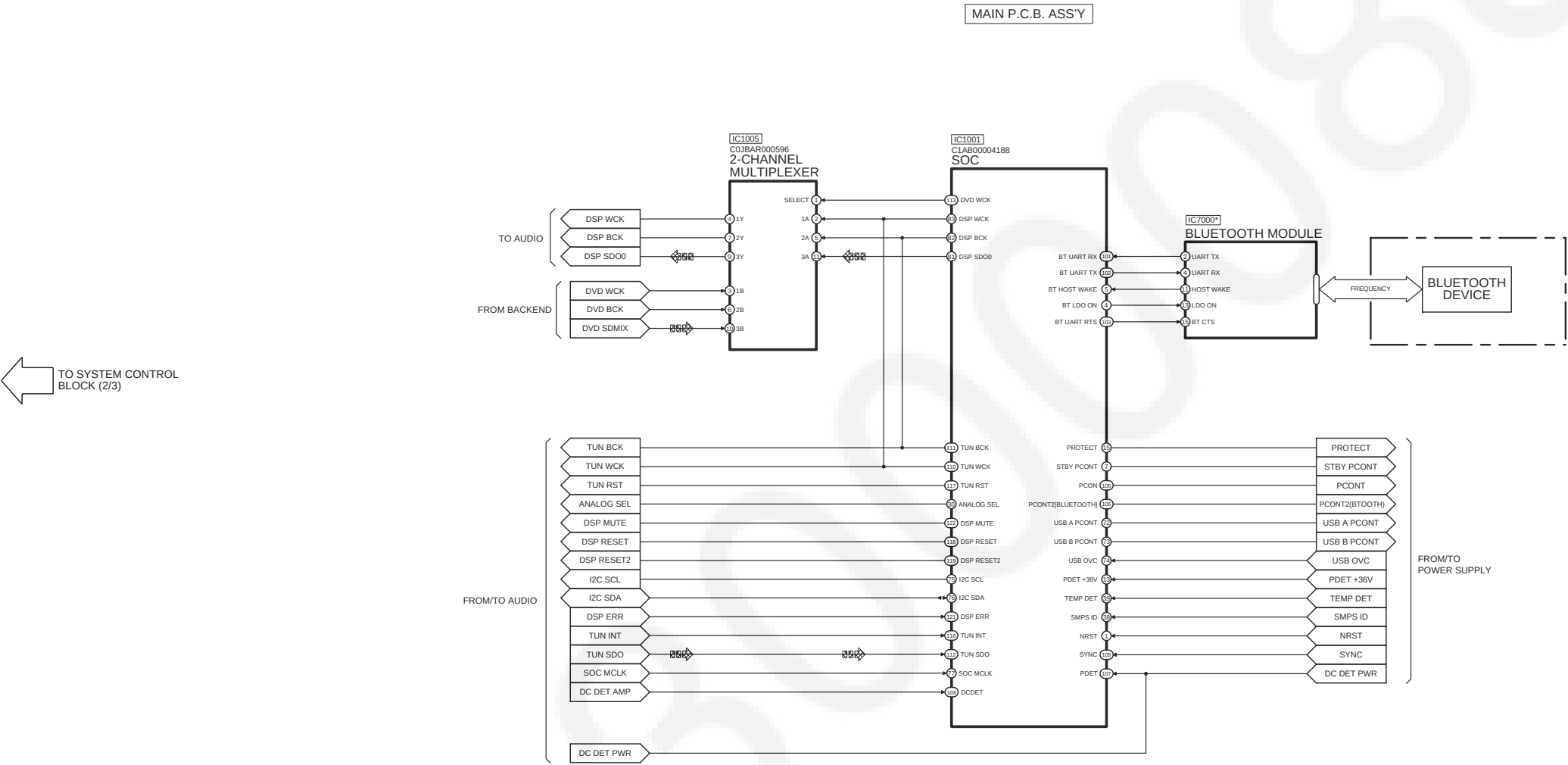
SA-VKX25EE/GA/GS SYSTEM CONTROL (1/3) BLOCK DIAGRAM

 : AUX/MUSIC PORT AUDIO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : USB SIGNAL LINE



SA-VKX25EE/GA/GS SYSTEM CONTROL (2/3) BLOCK DIAGRAM

 : AUX/MUSIC PORT AUDIO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : USB SIGNAL LINE

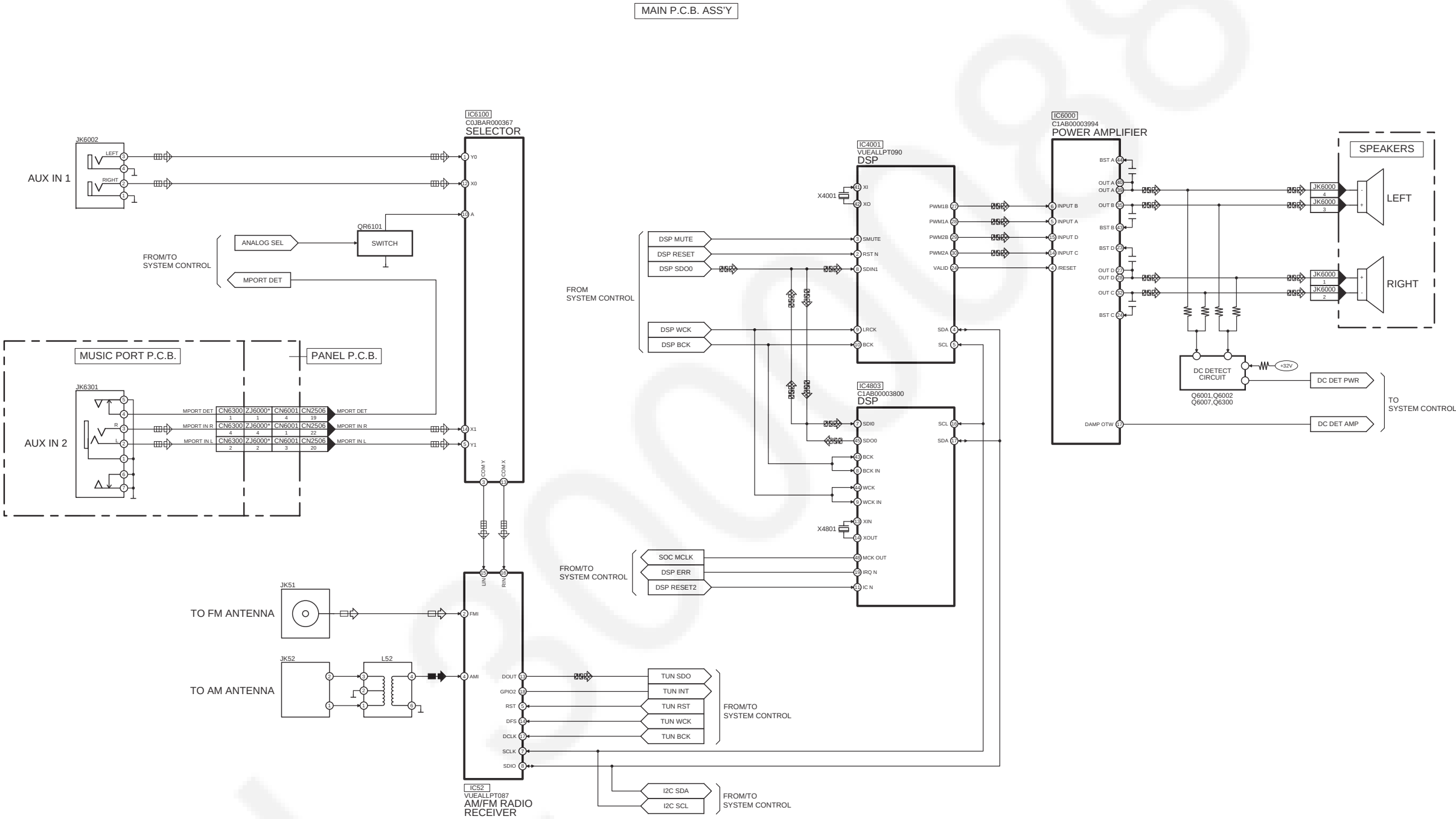


NOTE: “ * ” REF IS FOR INDICATION ONLY

SA-VKX25EE/GA/GS SYSTEM CONTROL (3/3) BLOCK DIAGRAM

10.3. Audio

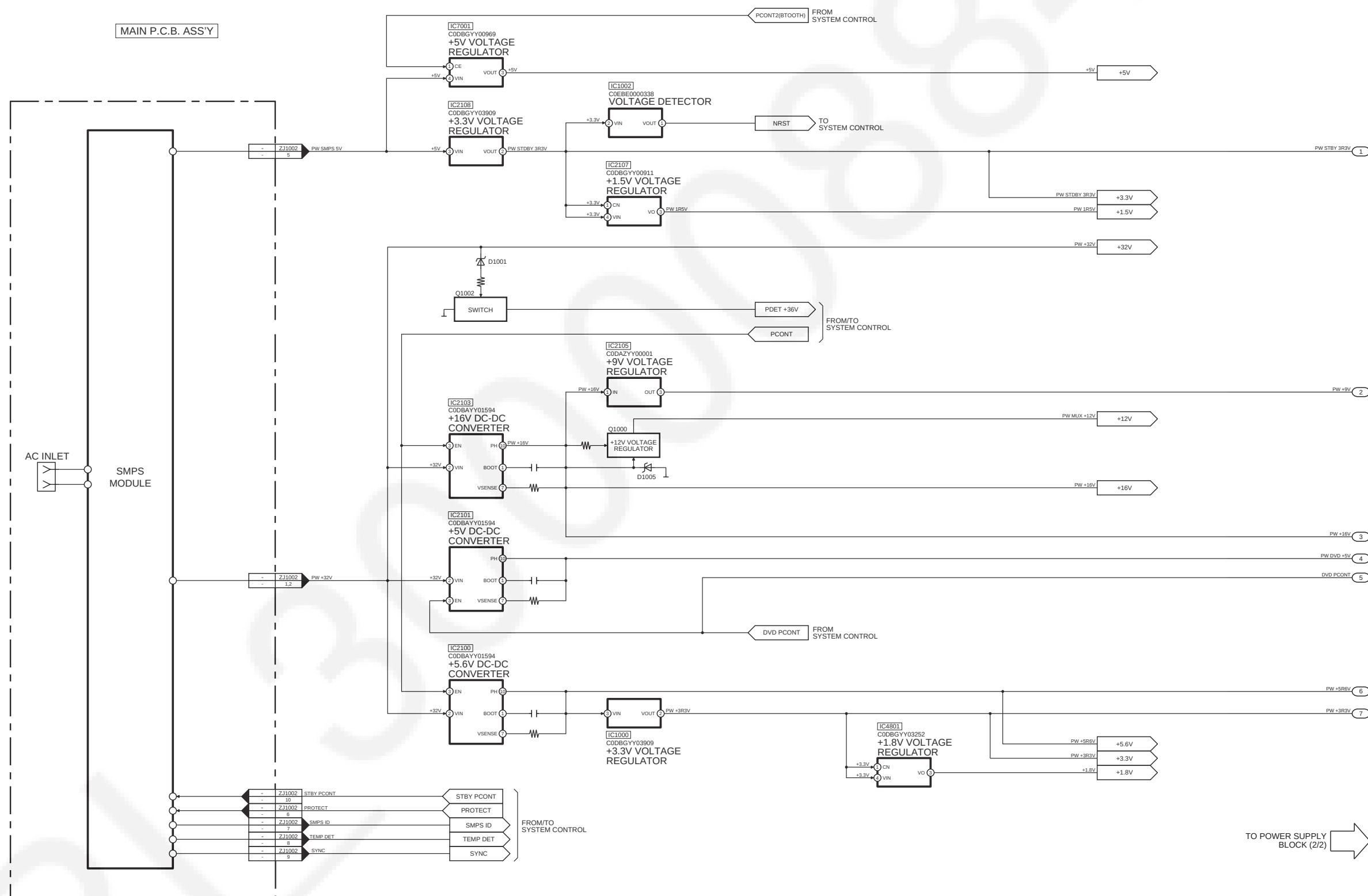
: AUX/MUSIC PORT AUDIO INPUT SIGNAL LINE
 : AUDIO OUTPUT SIGNAL LINE
 : AM SIGNAL LINE
 : FM SIGNAL LINE



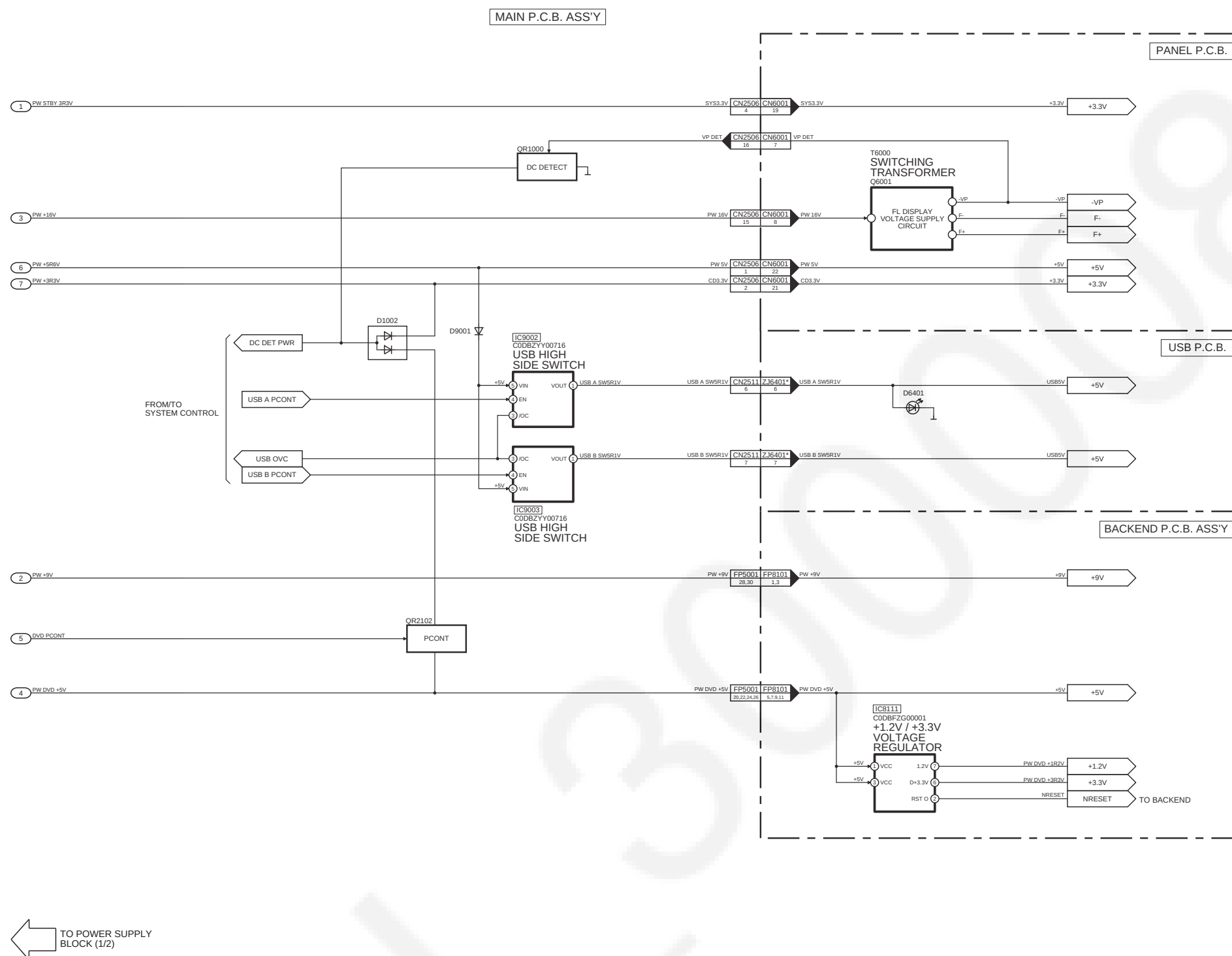
NOTE: “*” REF IS FOR INDICATION ONLY

SA-VKX25EE/GA/GS AUDIO BLOCK DIAGRAM

10.4. Power Supply



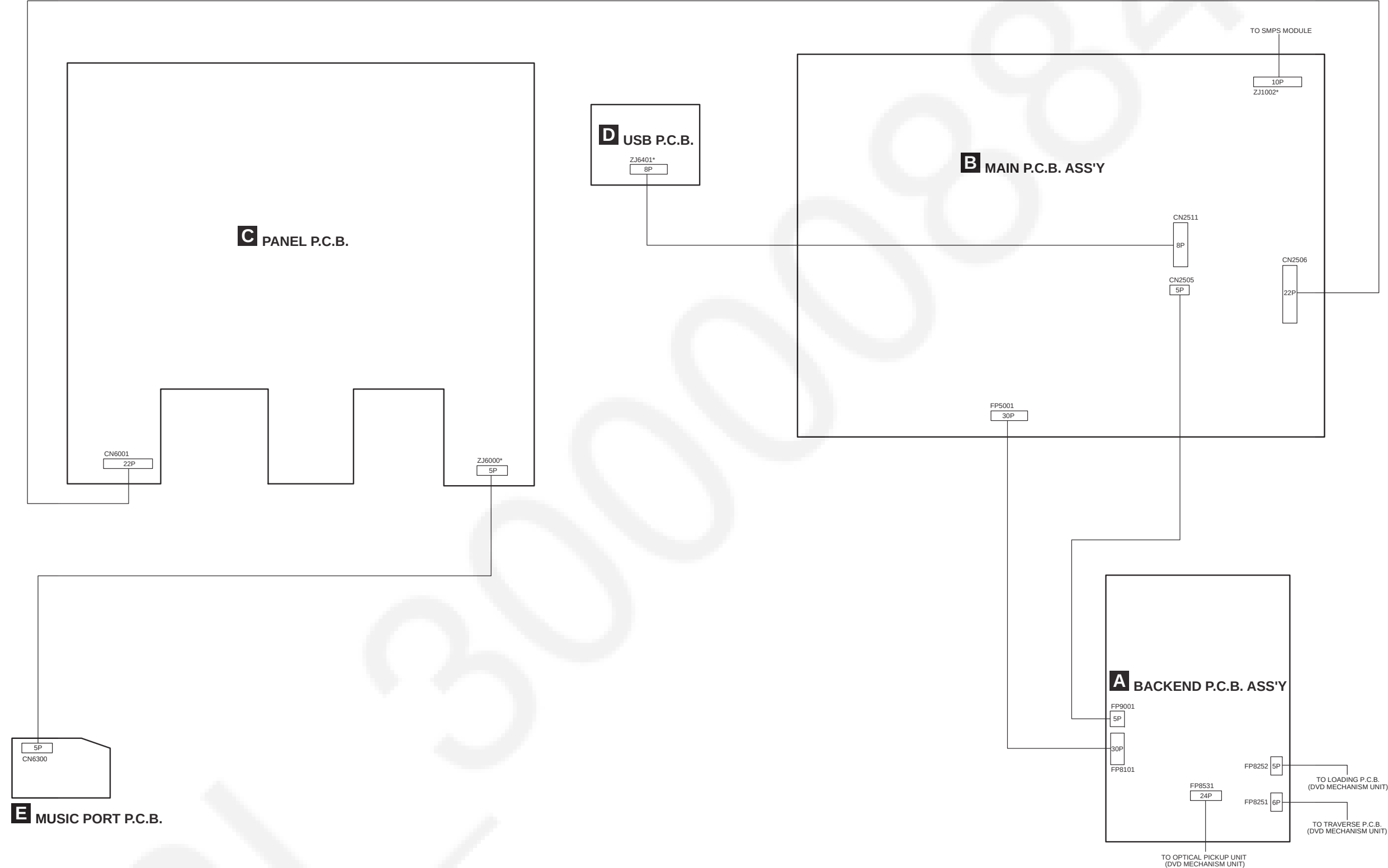
SA-VKX25EE/GA/GS POWER SUPPLY (1/2) BLOCK DIAGRAM



NOTE: “ * ” REF IS FOR INDICATION ONLY

SA-VKX25EE/GA/GS POWER SUPPLY (2/2) BLOCK DIAGRAM

11 Wiring Connection Diagram



NOTE: " * " REF IS FOR INDICATION ONLY.

SA-VKX25GA/GS/EE WIRING CONNECTION DIAGRAM

12 Schematic Diagram

12.1. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S6200:	Power (⏻/⏻) switch.
S6201:	Open/Close (⏮) switch.
S6202:	Stop (■)/Tune Mode switch.
S6211:	DJ Jukebox switch.
S6212:	Local/Preset EQ switch.
S6213:	Manual EQ switch.
S6214:	D. Bass switch.
S6215:	USB REC switch.
S6216:	Rewind (⏮/⏮) switch.
S6217:	Forward (⏭/⏭) switch.
S6218:	Play/Pause (⏮/⏭) switch.
S6219:	Radio/AUX switch.
S6220:	DVD/CD switch.
S6221:	Bluetooth/USB/Pairing switch.
S6222:	Album/Track switch.
VR6100:	Volume Jog.
VR6200:	Illumination/Control Jog.

- Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high quality sound (capacitors), low-noise (resistors), etc are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- Resistor

Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

- Capacitor

Unit of capacitance is μ F, unless otherwise noted. F=Farads, pF=pico-Farad.

- Coil

Unit of inductance is H, unless otherwise noted.

- *

REF IS FOR INDICATION ONLY.

- Voltage and signal line

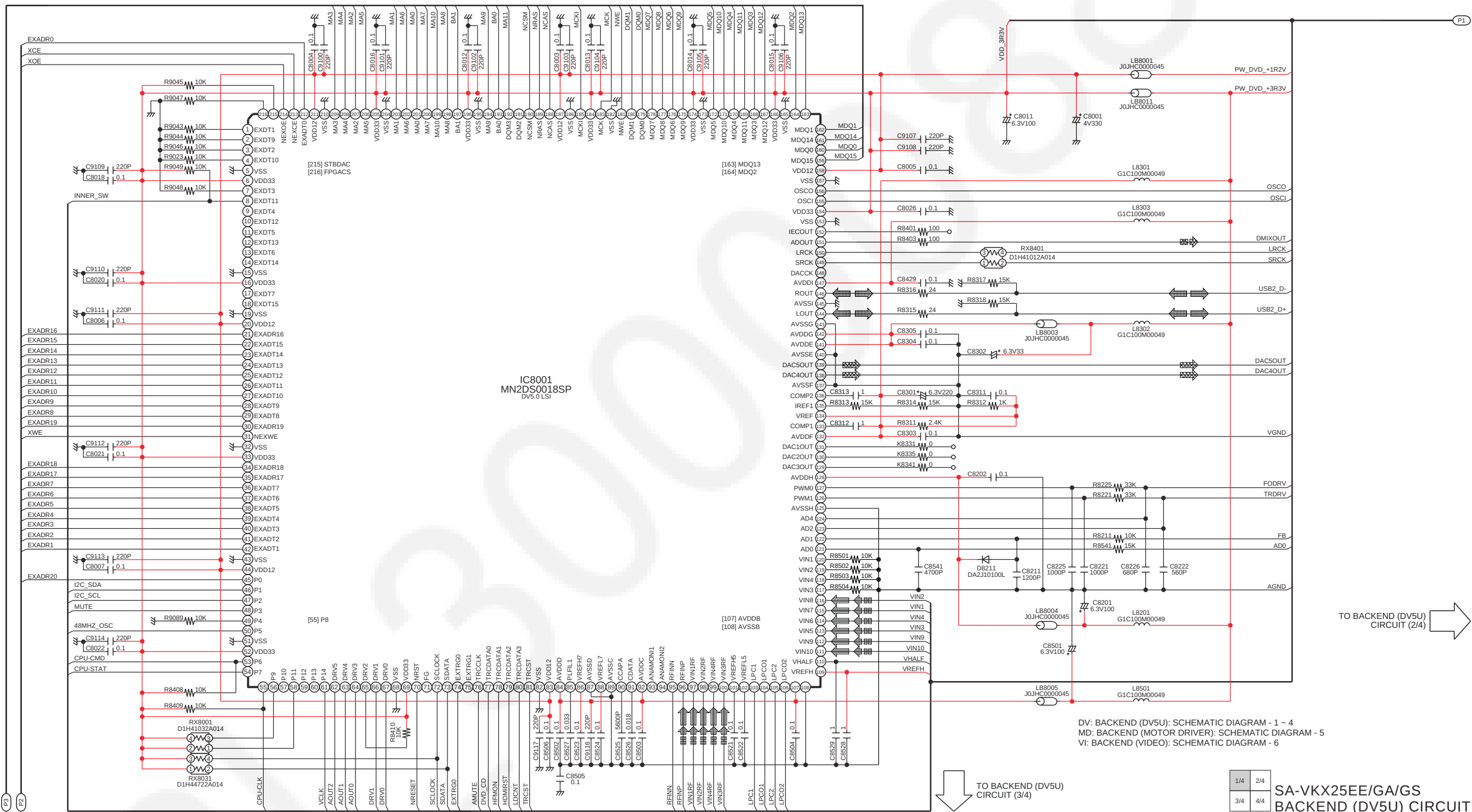
—	: +B signal line
---	: -B signal line
⏮	: CD/DVD Audio input signal line
⏭	: CD/DVD Video input signal line
⏮	: Audio output signal line
⏭	: Video output signal line
⏮	: USB signal line
⏭	: AUX/Music Port Audio input signal line
■	: AM signal line
□	: FM signal line

PL/30000884

12.2. Backend (DV5U) Circuit (1/4)

SCHEMATIC DIAGRAM - 1

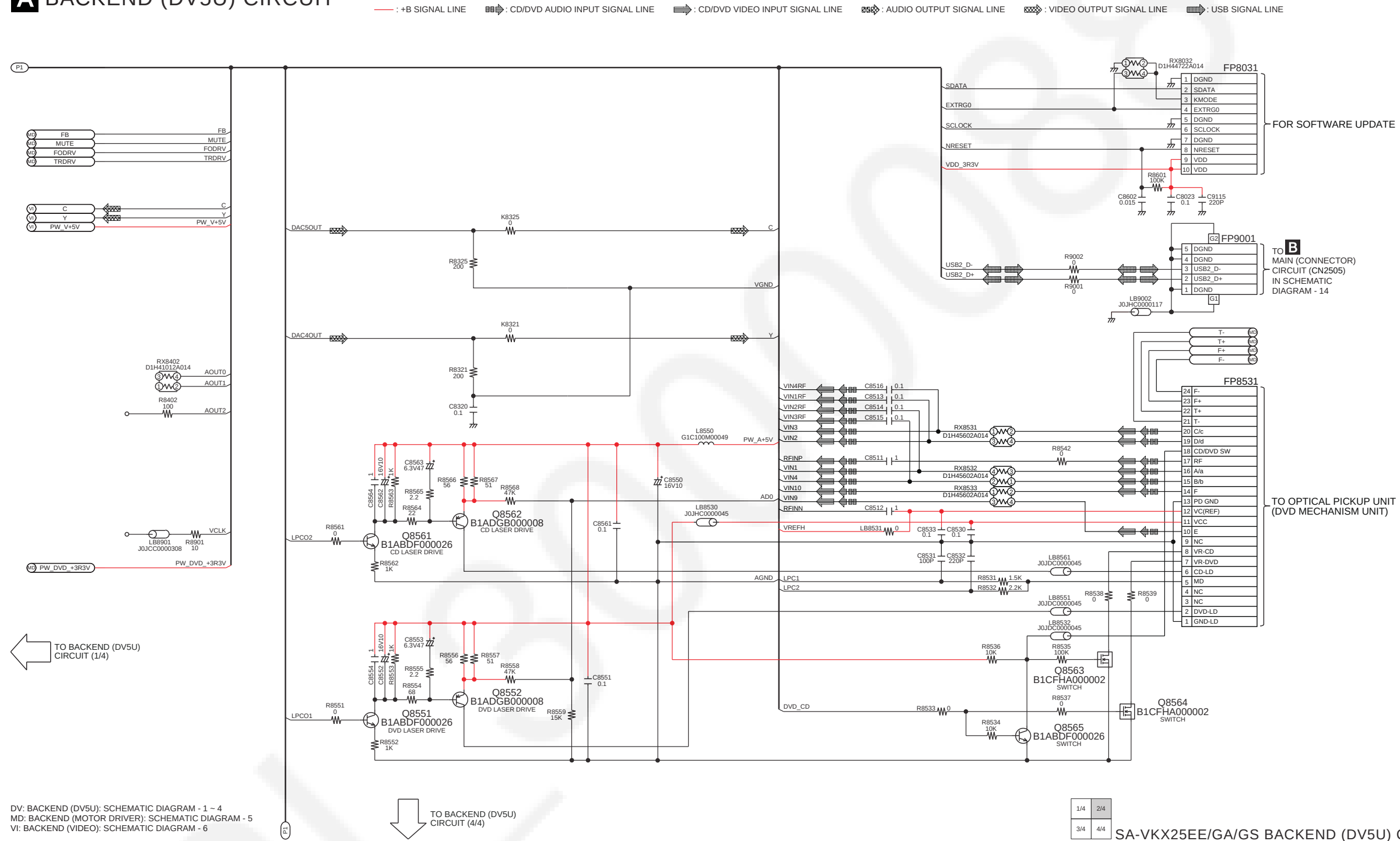
BACKEND (DV5U) CIRCUIT



12.3. Backend (DV5U) Circuit (2/4)

SCHEMATIC DIAGRAM - 2

A BACKEND (DV5U) CIRCUIT



DV: BACKEND (DV5U): SCHEMATIC DIAGRAM - 1 ~ 4
MD: BACKEND (MOTOR DRIVER): SCHEMATIC DIAGRAM - 5
VI: BACKEND (VIDEO): SCHEMATIC DIAGRAM - 6

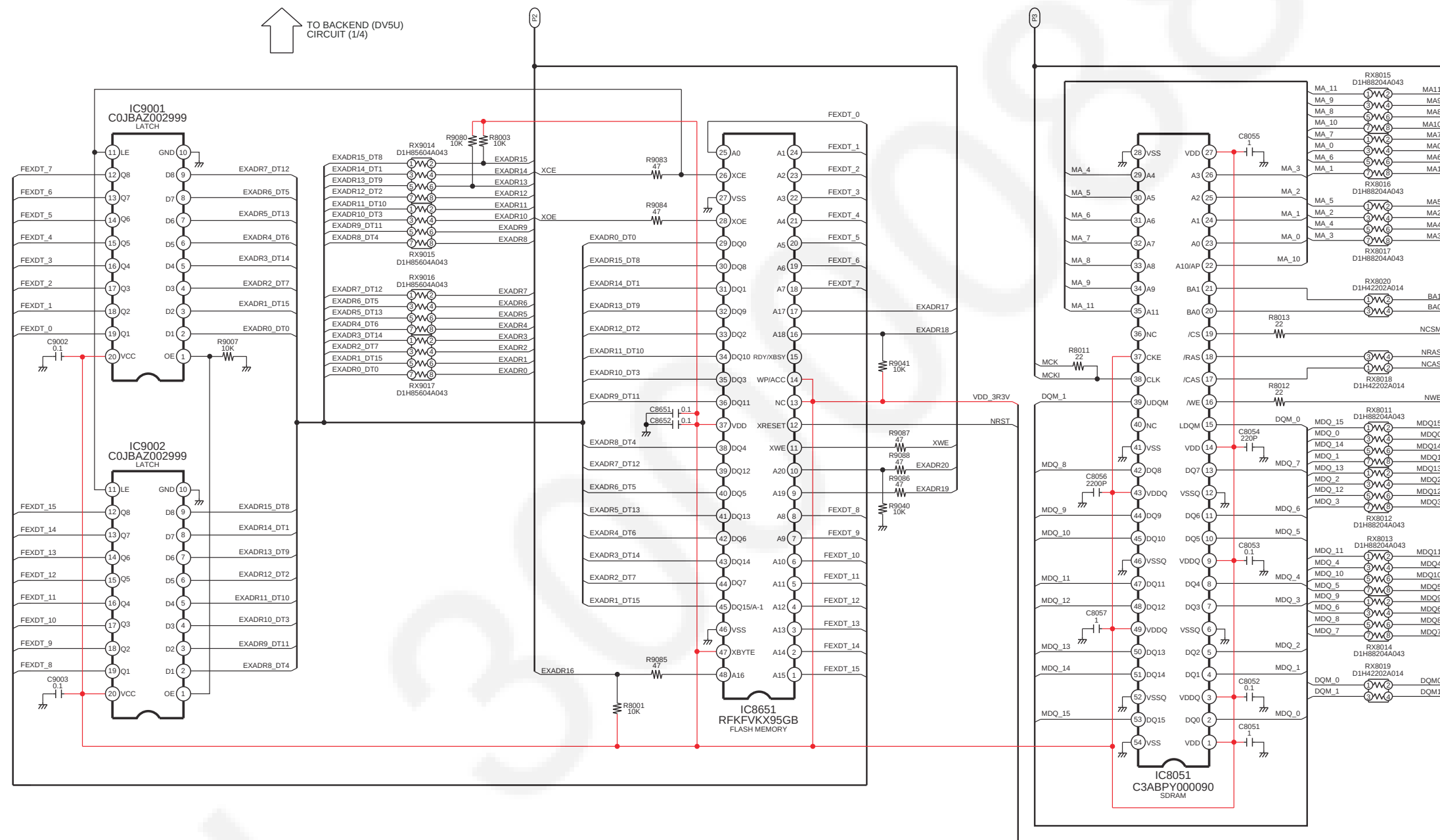
1/4	2/4
3/4	4/4

SA-VKX25EE/GA/GS BACKEND (DV5U) CIRCUIT

12.4. Backend (DV5U) Circuit (3/4)

A BACKEND (DV5U) CIRCUIT

— : +B SIGNAL LINE : CD/DVD AUDIO INPUT SIGNAL LINE : CD/DVD VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE : USB SIGNAL LINE



DV: BACKEND (DV5U): SCHEMATIC DIAGRAM - 1 ~ 4
MD: BACKEND (MOTOR DRIVER): SCHEMATIC DIAGRAM - 5
VI: BACKEND (VIDEO): SCHEMATIC DIAGRAM - 6

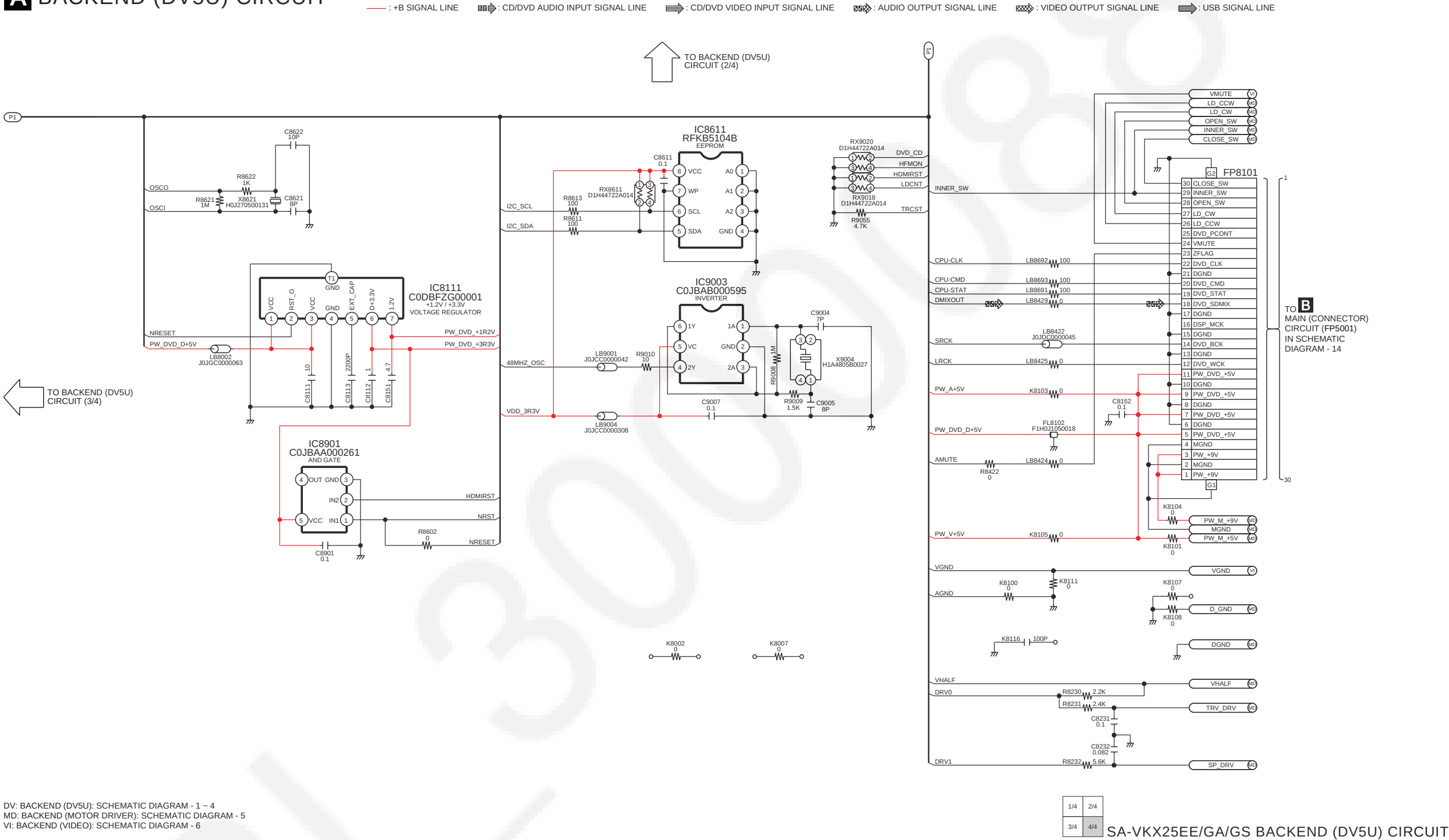
1/4	2/4
3/4	4/4

SA-VKX25EE/GA/GS BACKEND (DV5U) CIRCUIT

12.5. Backend (DV5U) Circuit (4/4)

SCHEMATIC DIAGRAM - 4

A BACKEND (DV5U) CIRCUIT

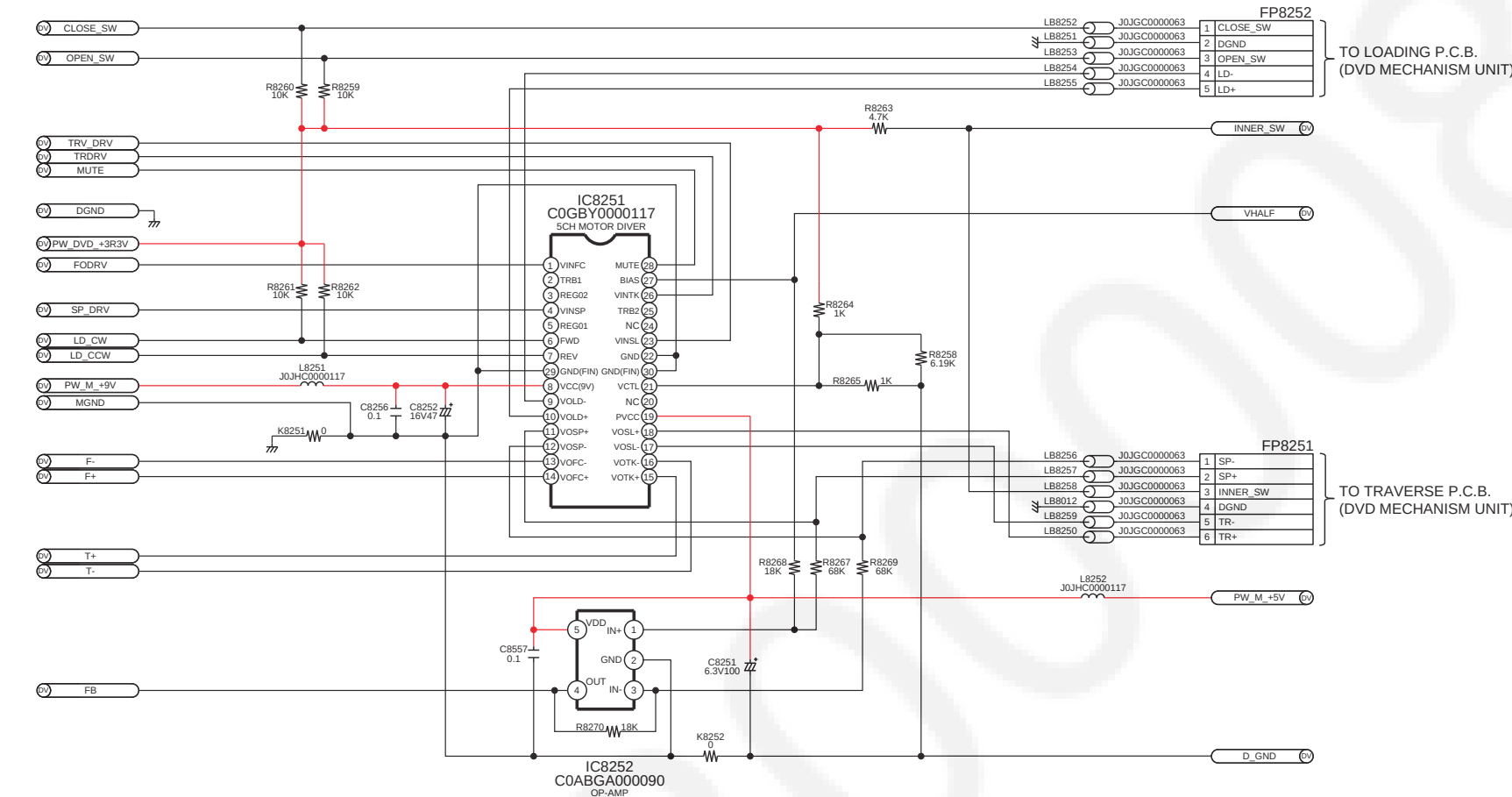


12.6. Backend (Motor Driver) Circuit

SCHEMATIC DIAGRAM - 5

A BACKEND (MOTOR DRIVER) CIRCUIT

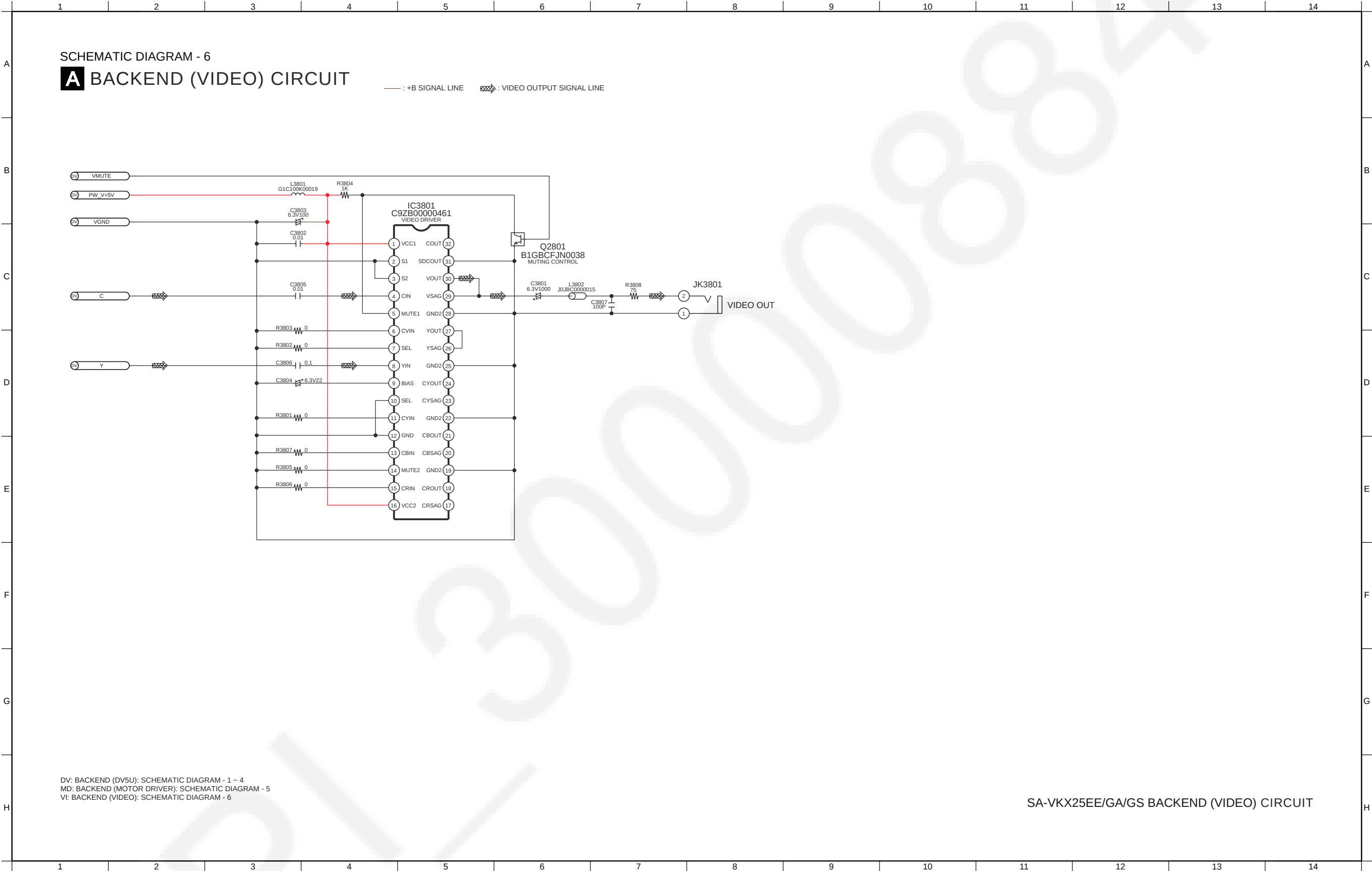
— : +B SIGNAL LINE



DV: BACKEND (DV5U): SCHEMATIC DIAGRAM - 1 ~ 4
MD: BACKEND (MOTOR DRIVER): SCHEMATIC DIAGRAM - 5
VI: BACKEND (VIDEO): SCHEMATIC DIAGRAM - 6

SA-VKX25EE/GA/GS BACKEND (MOTOR DRIVER) CIRCUIT

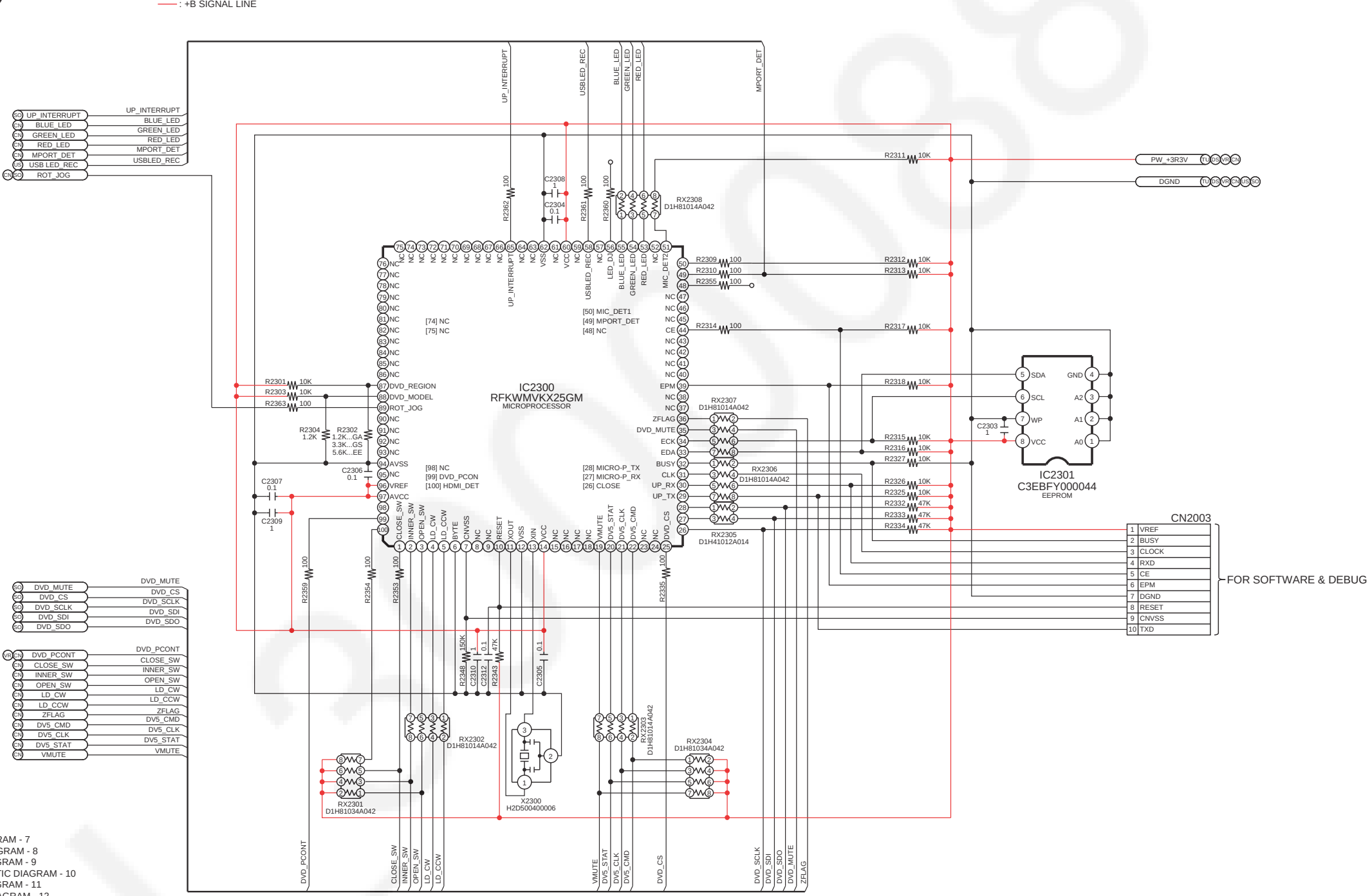
12.7. Backend (Video) Circuit



12.8. Main (UP) Circuit

SCHEMATIC DIAGRAM - 7

B MAIN (UP) CIRCUIT



UP: MAIN (UP): SCHEMATIC DIAGRAM - 7
SO: MAIN (SOC): SCHEMATIC DIAGRAM - 8
US: MAIN (USB): SCHEMATIC DIAGRAM - 9
TU: MAIN (TUNER AUX): SCHEMATIC DIAGRAM - 10
DS: MAIN (DSP): SCHEMATIC DIAGRAM - 11
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 12
VR: MAIN (VOLTAGE REGULATOR): SCHEMATIC DIAGRAM - 13
CN: MAIN (CONNECTOR): SCHEMATIC DIAGRAM - 14
BT: MAIN (BLUETOOTH): SCHEMATIC DIAGRAM - 15

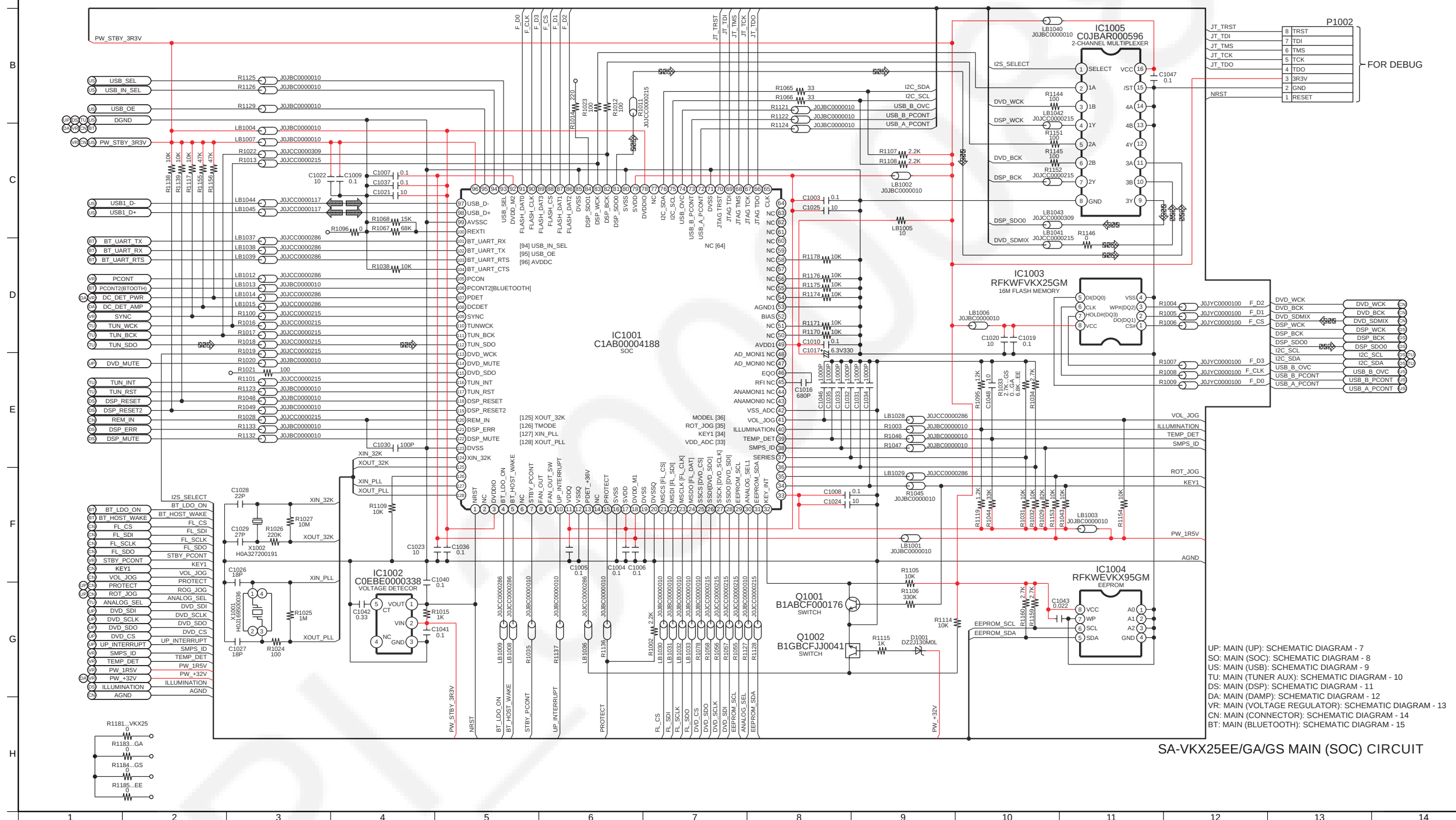
SA-VKX25EE/GA/GS MAIN (UP) CIRCUIT

12.9. Main (SOC) Circuit

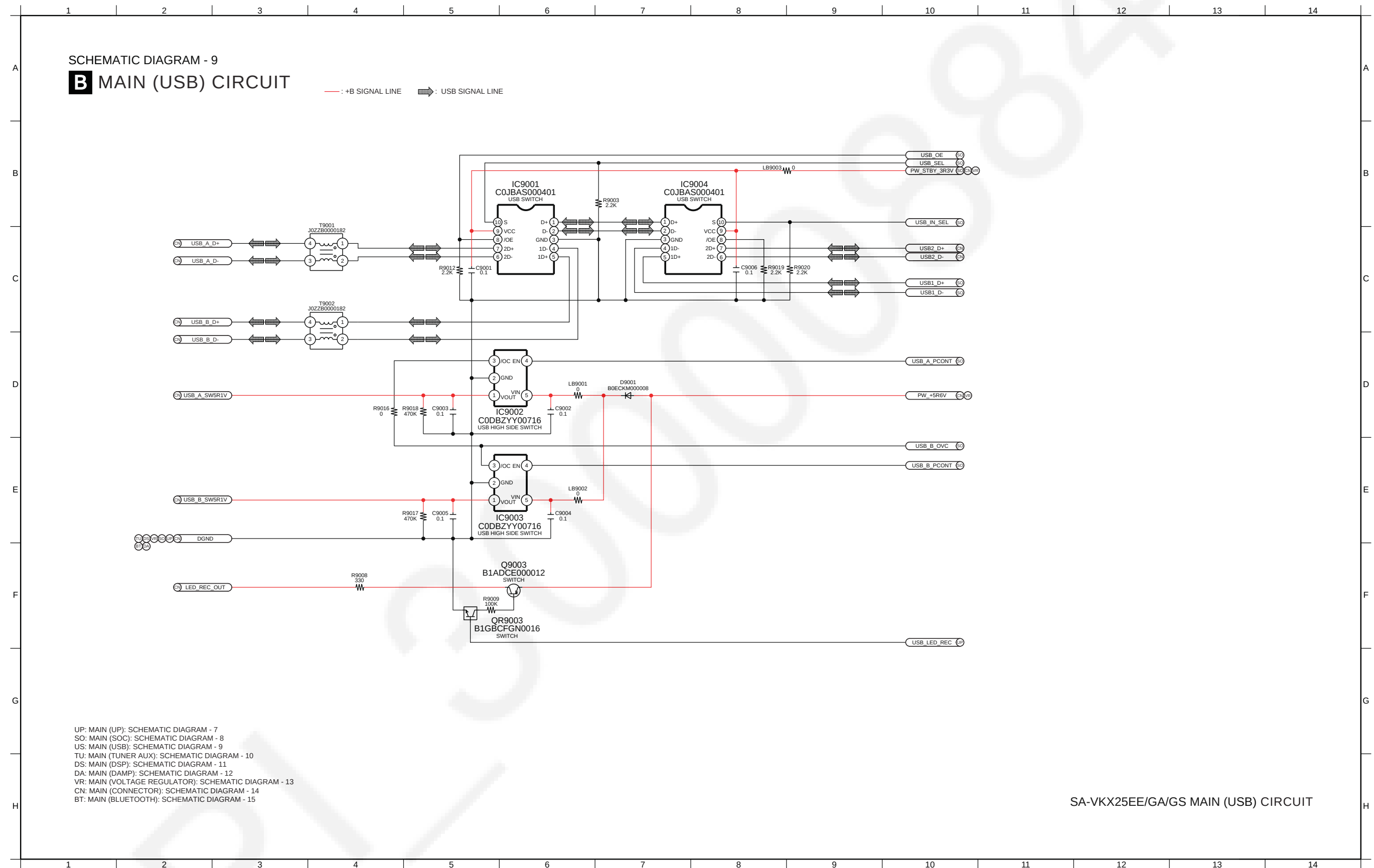
SCHEMATIC DIAGRAM - 8

B MAIN (SOC) CIRCUIT

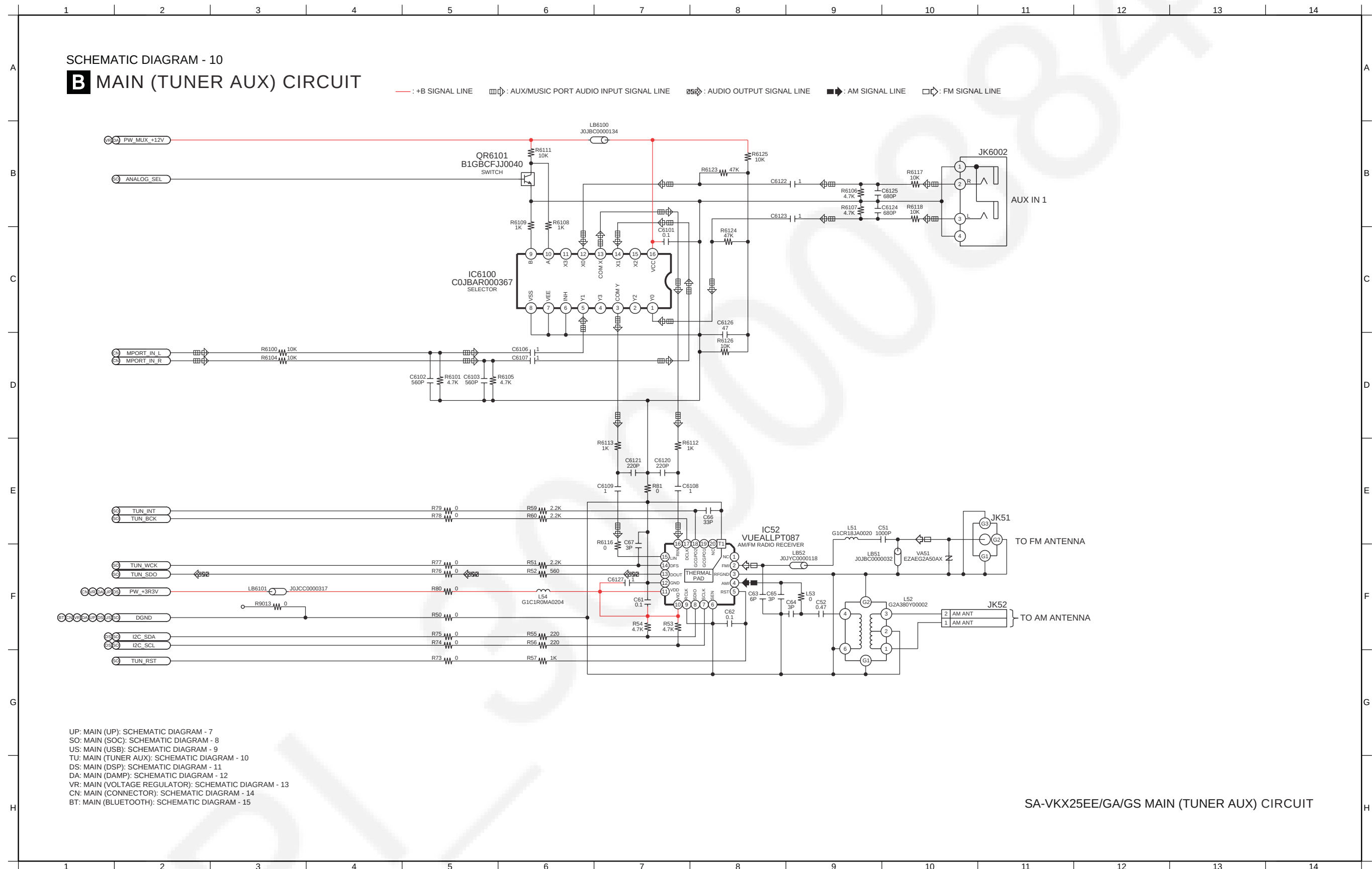
— : +B SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE



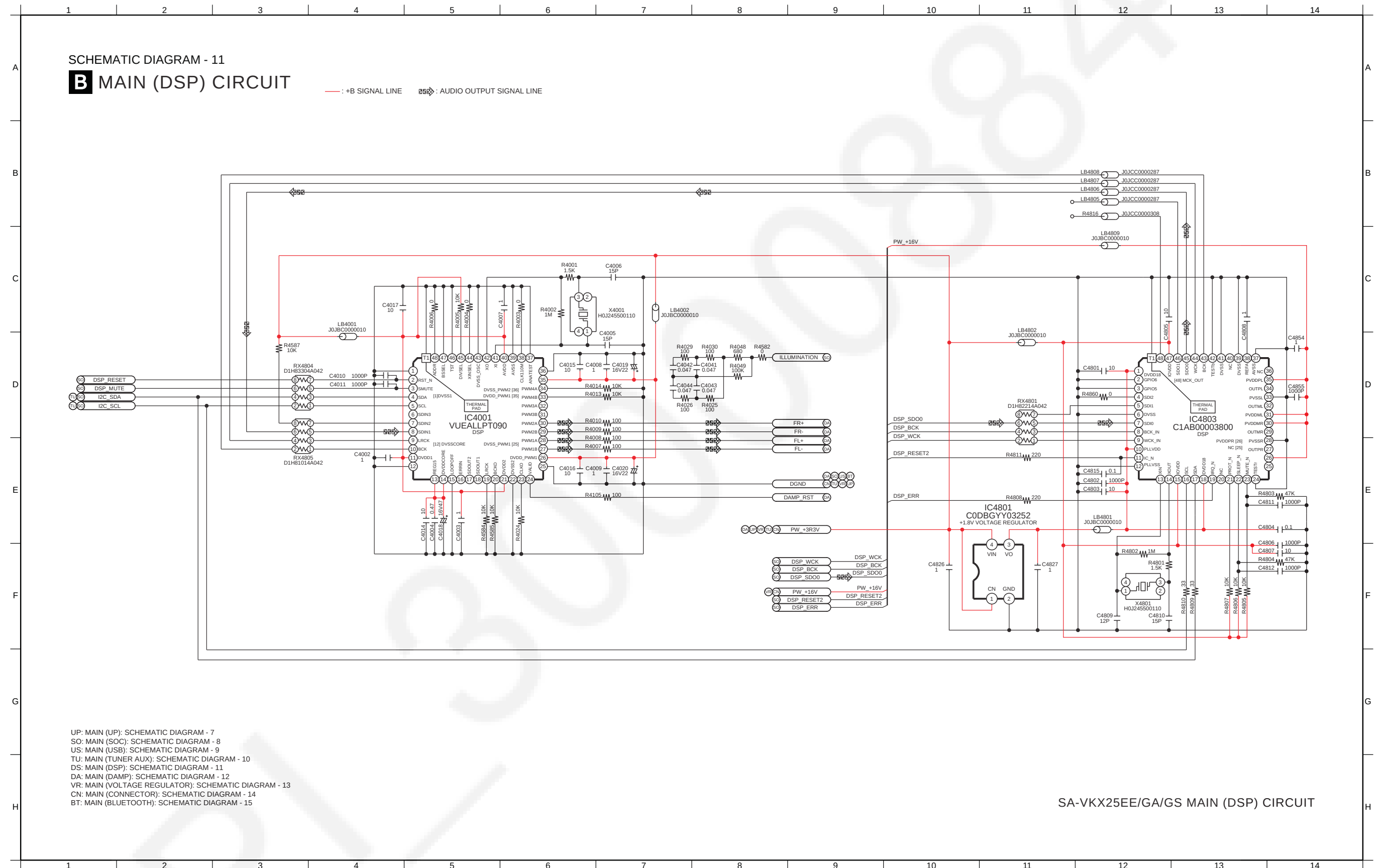
12.10. Main (USB) Circuit



12.11. Main (Tuner AUX) Circuit



12.12. Main (DSP) Circuit

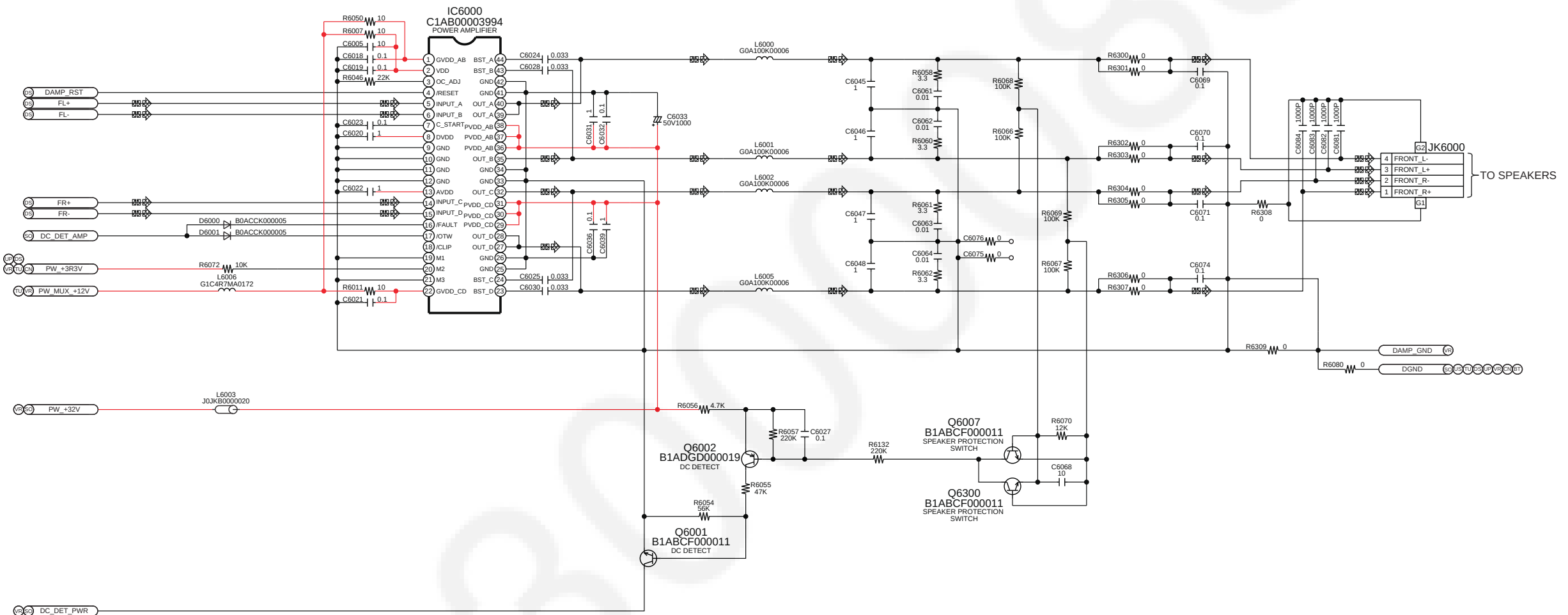


12.13. Main (DAMP) Circuit

SCHEMATIC DIAGRAM - 12

B MAIN (DAMP) CIRCUIT

— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE



UP: MAIN (UP): SCHEMATIC DIAGRAM - 7
SO: MAIN (SOC): SCHEMATIC DIAGRAM - 8
US: MAIN (USB): SCHEMATIC DIAGRAM - 9
TU: MAIN (TUNER AUX): SCHEMATIC DIAGRAM - 10
DS: MAIN (DSP): SCHEMATIC DIAGRAM - 11
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 12
VR: MAIN (VOLTAGE REGULATOR): SCHEMATIC DIAGRAM - 13
CN: MAIN (CONNECTOR): SCHEMATIC DIAGRAM - 14
BT: MAIN (BLUETOOTH): SCHEMATIC DIAGRAM - 15

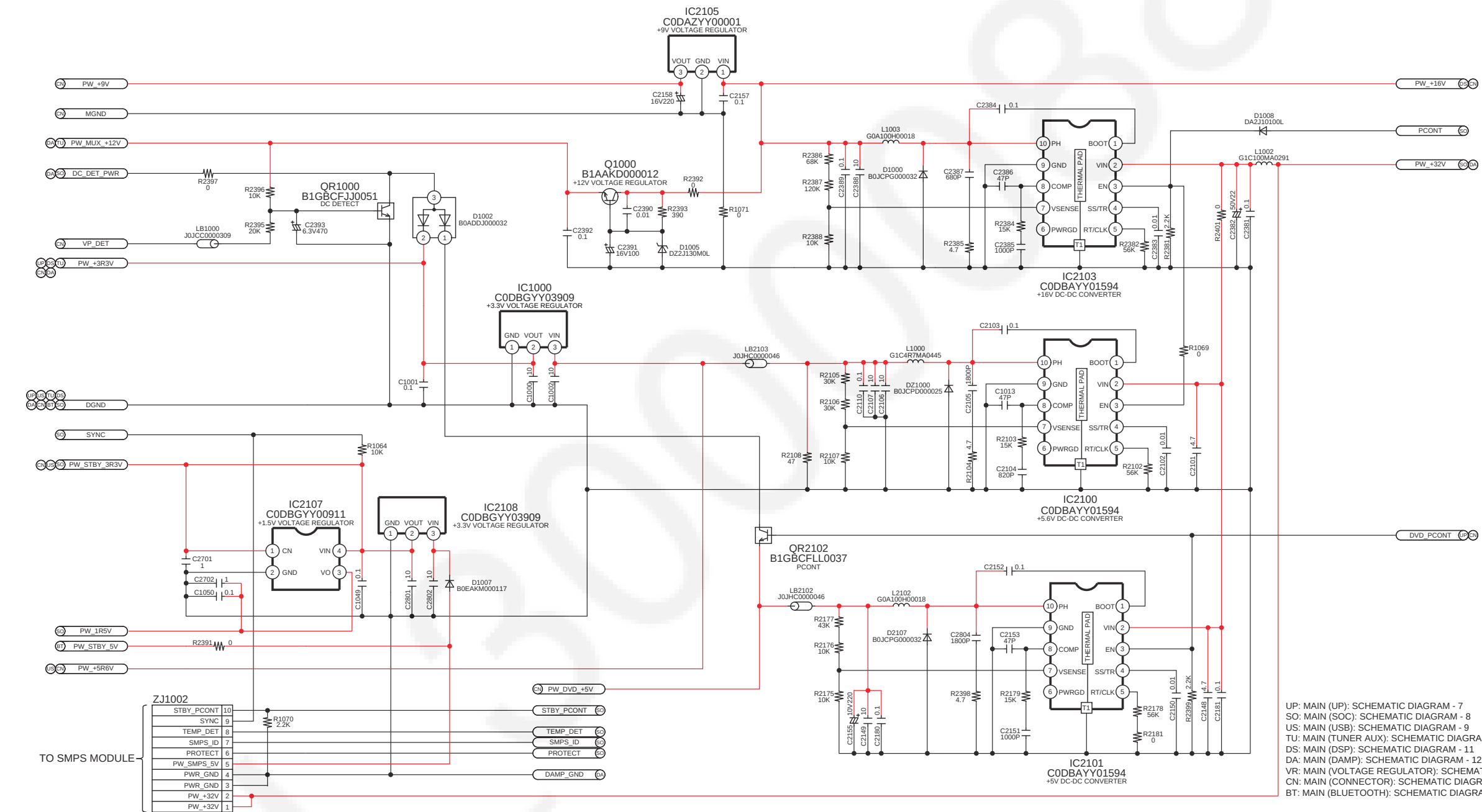
SA-VKX25EE/GA/GS MAIN (DAMP) CIRCUIT

12.14. Main (Voltage Regulator) Circuit

SCHEMATIC DIAGRAM - 13

B MAIN (VOLTAGE REGULATOR) CIRCUIT

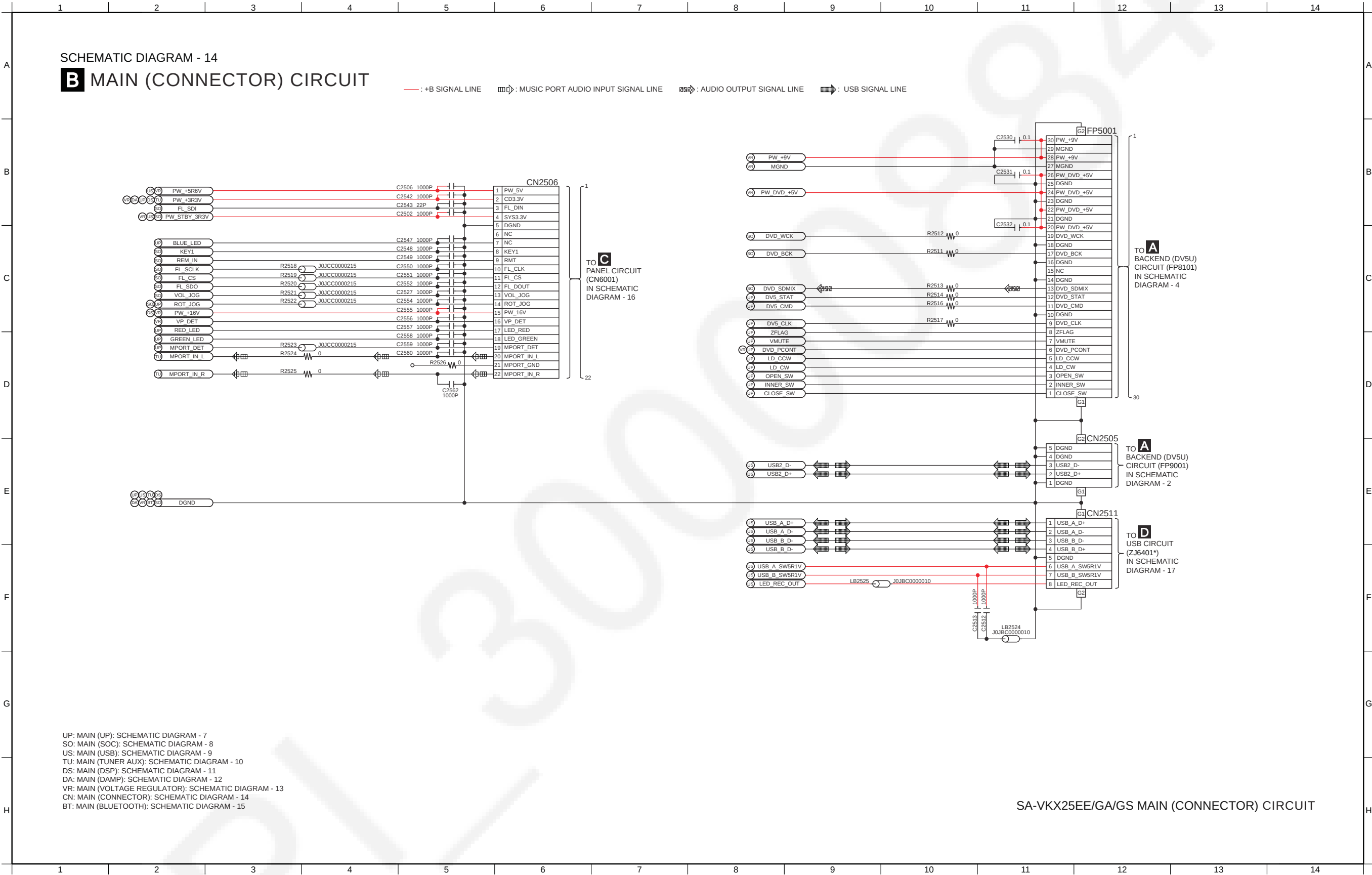
—: +B SIGNAL LINE



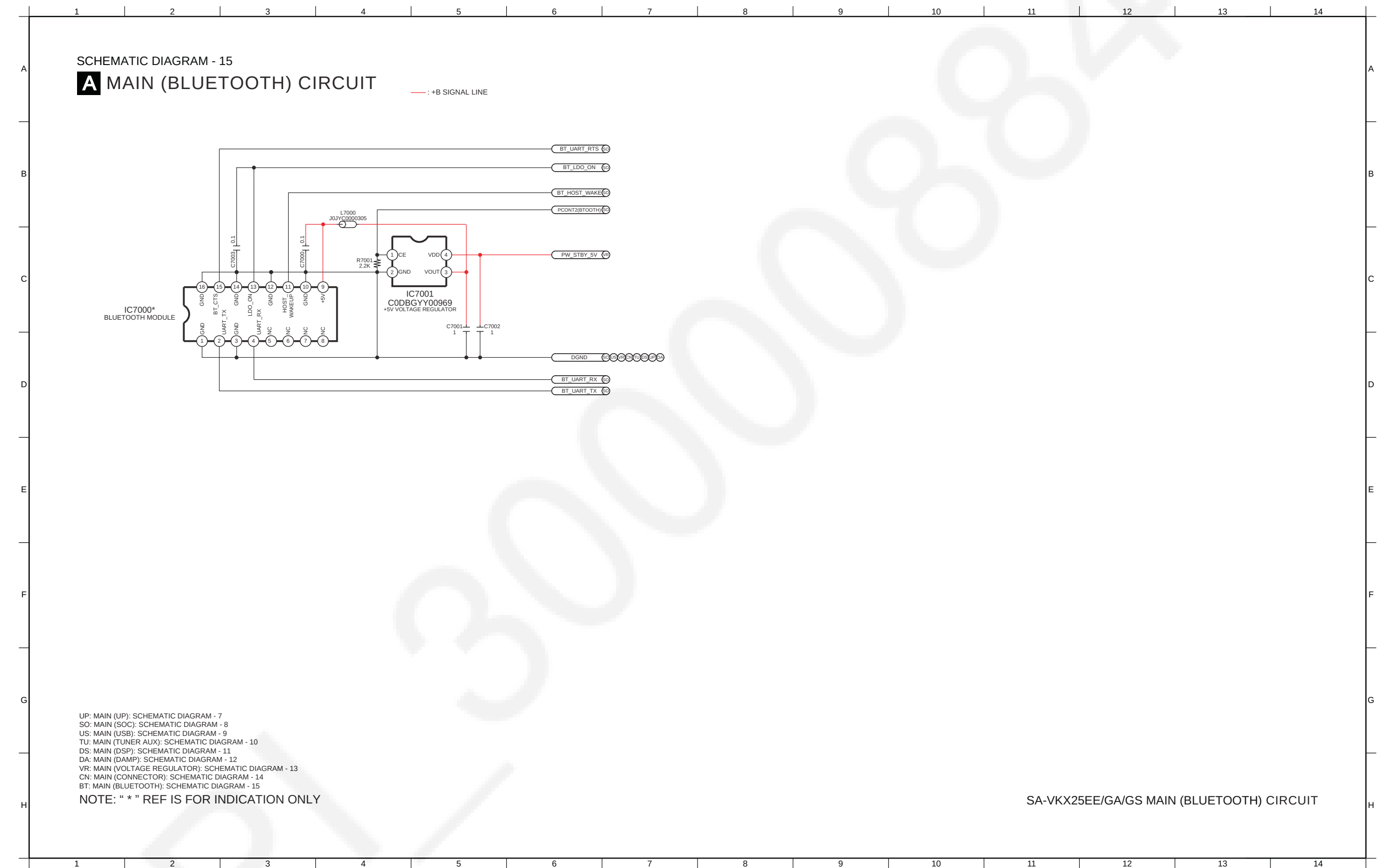
UP: MAIN (UP): SCHEMATIC DIAGRAM - 7
SO: MAIN (SOC): SCHEMATIC DIAGRAM - 8
US: MAIN (USB): SCHEMATIC DIAGRAM - 9
TU: MAIN (TUNER AUX): SCHEMATIC DIAGRAM - 10
DS: MAIN (DSP): SCHEMATIC DIAGRAM - 11
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 12
VR: MAIN (VOLTAGE REGULATOR): SCHEMATIC DIAGRAM - 13
CN: MAIN (CONNECTOR): SCHEMATIC DIAGRAM - 14
BT: MAIN (BLUETOOTH): SCHEMATIC DIAGRAM - 15

SA-VKX25EE/GA/GS MAIN (VOLTAGE REGULATOR) CIRCUIT

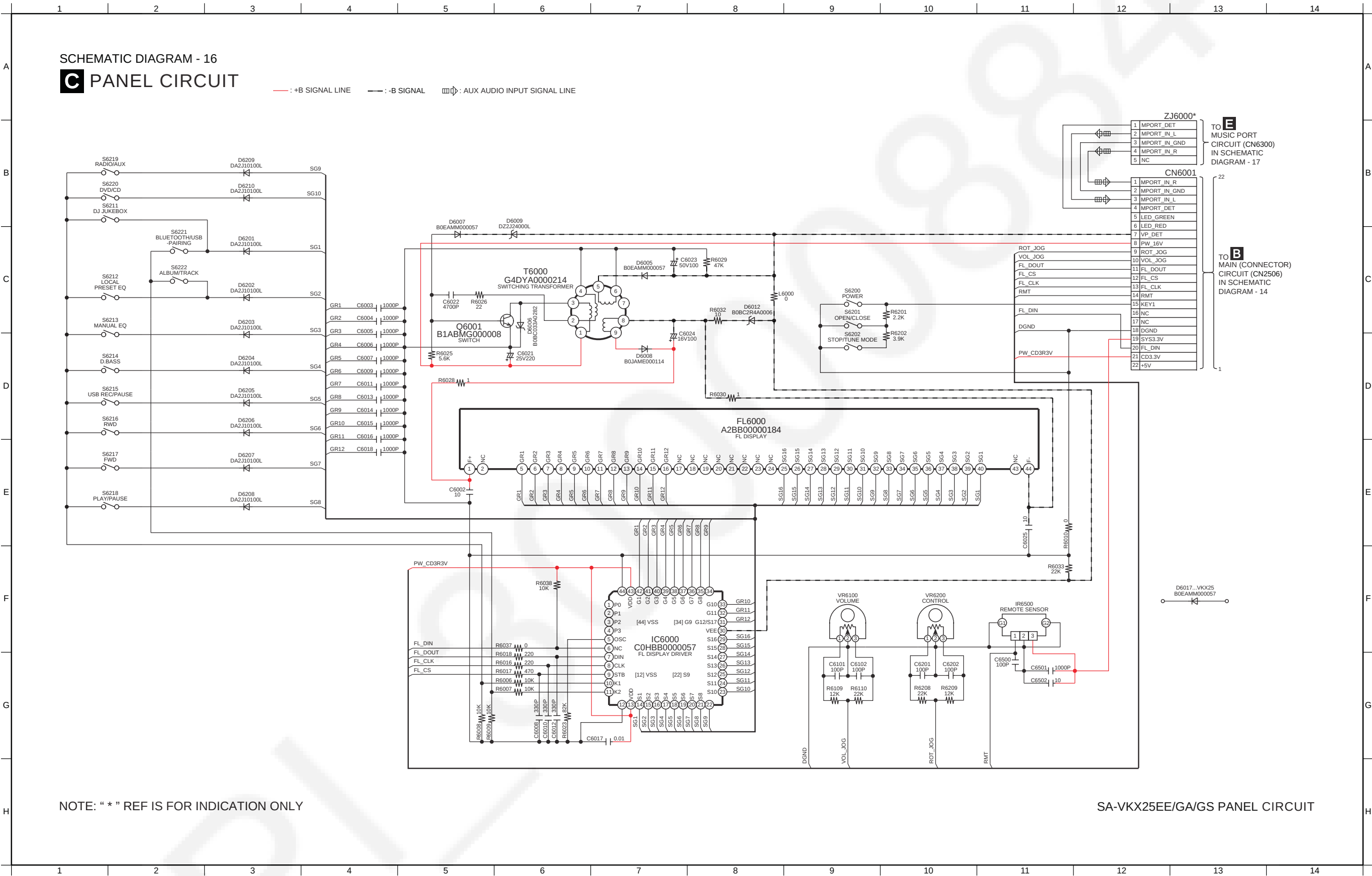
12.15. Main (Connector) Circuit



12.16. Main (Bluetooth) Circuit



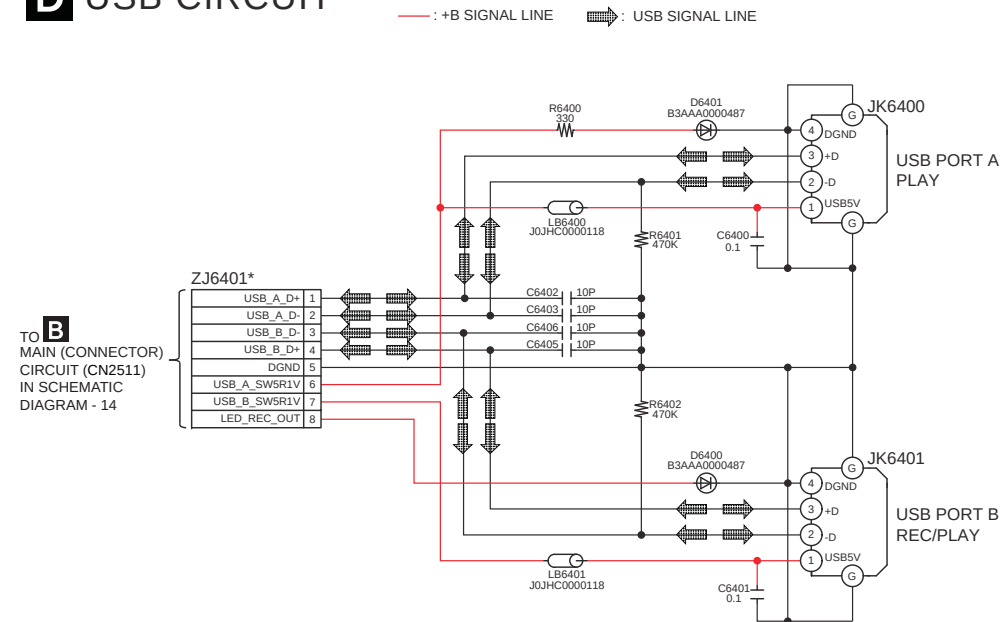
12.17. Panel Circuit



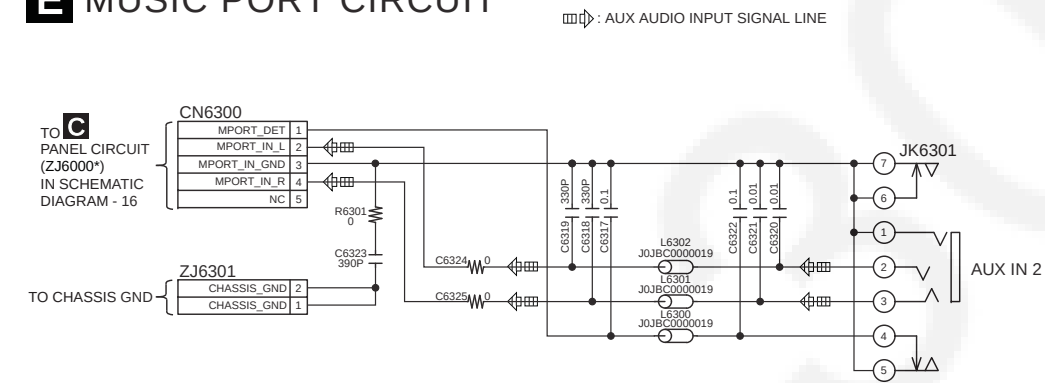
12.18. USB & Music Port Circuit

SCHEMATIC DIAGRAM - 17

D USB CIRCUIT



E MUSIC PORT CIRCUIT

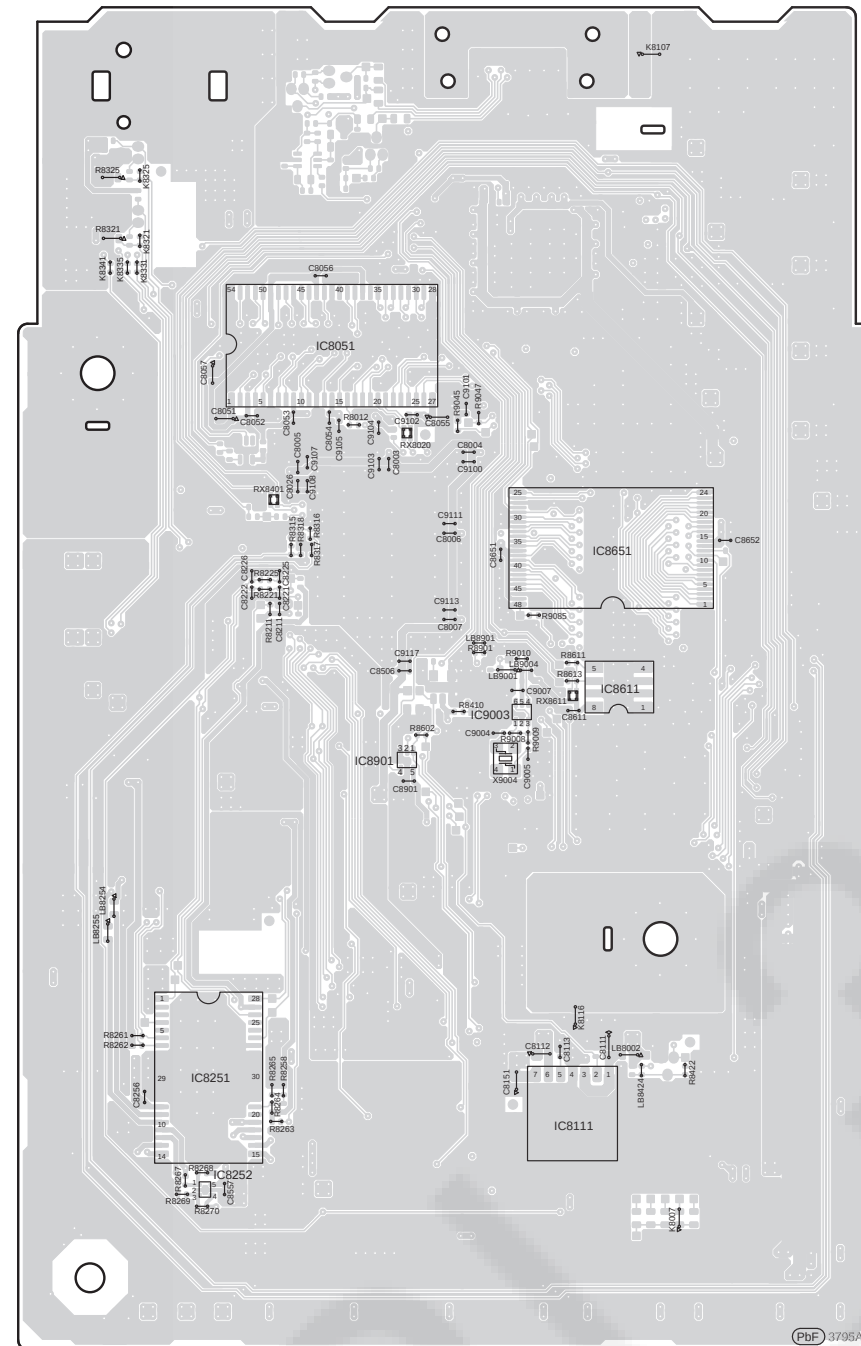


NOTE: " * " REF IS FOR INDICATION ONLY

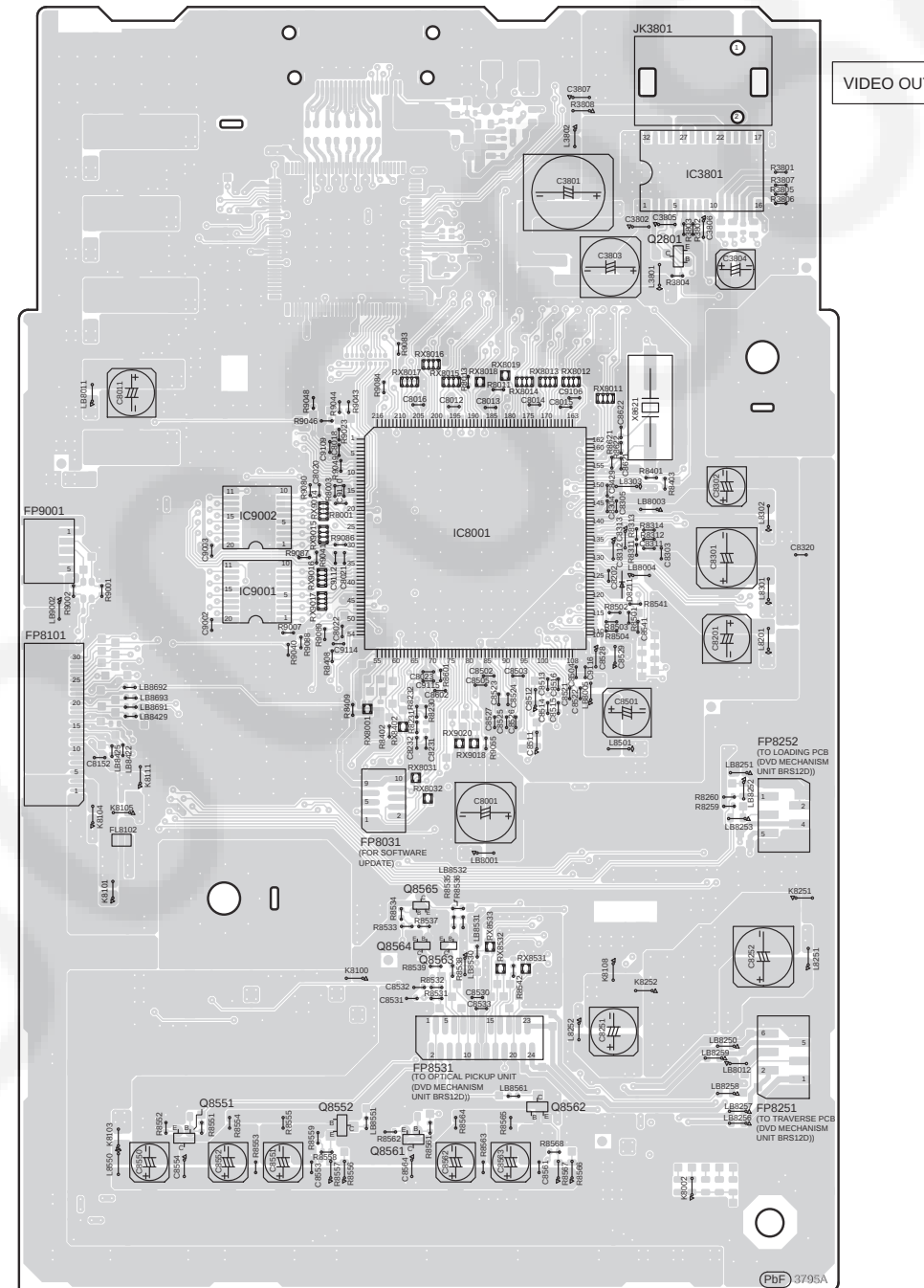
SA-VKX25EE/GA/GS USB / MUSIC PORT CIRCUIT

13.1. Backend P.C.B. Ass'y

A BACKEND P.C.B. ASS'Y (RFKB5104B)



(SIDE A)



(SIDE B)

SA-VKX25EE/GA/GS
BACKEND P.C.B. ASS'Y



AM ANT

FM ANT

AUX IN 1

TO SPEAKERS

A vertical number line with tick marks labeled A, B, C, D, E, F, G, and H from bottom to top.

A horizontal number line with tick marks at every integer from 1 to 13. The segment between 2 and 3 is shaded gray.

77

14 Voltage and Waveform Measurement

14.1. Voltage Measurement

Note:

- Indication Voltage Values are in 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 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.

14.1.1. Backend P.C.B. Ass'y (1/3)

REF NO.	IC3801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	5	0	0	2.2	4.9	0	0	1.6	2.2	0	0	0	0	0	0	5	2.9	2.9	0	2.9
STANDBY	5	0	0	2.2	4.9	0	0	1.6	2.2	0	0	0	0	0	0	5	2.9	2.9	0	2.9

REF NO.	IC3801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
PLAY	2.9	0	1.7	1.7	0	1.3	1.3	0	1.4	1.4	0	2.3								
STANDBY	2.9	0	1.7	1.7	0	1.3	1.3	0	1.4	1.4	0	2.3								

REF NO.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	0	3.3	0	3.3	0	3.3	1.5	0.1	0.5	1.3	0.5	0.6	0	3.3	0.5	0.9	0	1.2
STANDBY	0	0	0	3.3	0	3.3	0	3.3	1.5	0.1	0.5	1.3	0.5	0.6	0	3.3	0.5	0.9	0	1.2

REF NO.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	1.6	0.7	1.8	1	1.4	1	2.1	2.2	0.8	1	3.3	0	3.3	1.2	1.8	1	1.4	1.4	1.8	2.1
STANDBY	1.6	0.7	1.8	1	1.4	1	2.1	2.2	0.8	1	3.3	0	3.3	1.2	1.8	1	1.4	1.4	1.8	2.1

REF NO.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	3.3	1.5	0	1.2	0.6	3.2	3.2	3.3	3.3	1.7	0	3.3	1.7	2.8	3	3.3	3.3	3.3	0	3.3
STANDBY	3.3	1.5	0	1.2	0.6	3.2	3.2	3.3	3.3	1.7	0	3.3	1.7	2.8	3	3.3	3.3	3.3	0	3.3

REF NO.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	1.6	0	0	1.2	3.3	1.9	1.6	0	3.3	3.3	3.2	3.3	3.3	0	1.4	0	3.3	3.3	3.3	3.3
STANDBY	1.6	0	0	1.2	3.3	1.9	1.6	0	3.3	3.3	3.2	3.3	3.3	0	1.4	0	3.3	3.3	3.3	3.3

REF NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	0	1.2	3.3	0.8	2.3	0	1.8	0	0.4	1.8	3.3	1.5	1.5	1.8	1.8	1.6	1.6	1.6	1.6
STANDBY	0	0	1.2	3.3	0.8	2.3	0	1.8	0	0.4	1.8	3.3	1.5	1.5	1.8	1.8	1.6	1.6	1.6	1.6

REF NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	0	0	0.2	2.3	0.2	0	3.3	0	2.2	1.6	2.3	2.3	2.4	2.5	2.4	2.4	0	0	0	0
STANDBY	0	0	0.2	2.3	0.2	0	3.3	0	2.2	1.6	2.3	2.3	2.4	2.5	2.4	2.4	0	0	0	0

REF NO.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	1.7	2.1	1.6	1.6	0	1.7	1.6	3.3	3.3	3.3	3.3	3.3	2.4	1	1	2.4	0	0.4	0.9	0
STANDBY	1.7	2.1	1.6	1.6	0	1.7	1.6	3.3	3.3	3.3	3.3	3.3	2.4	1	1	2.4	0	0.4	0.9	0

REF NO.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY	3.3	3.3	0	0	0	0	3.3	1.5	1.6	1.7	1.2	1.6	0	3.3	1.5	1.5	0	1.2	3	3
STANDBY	3.3	3.3	0	0	0	0	3.3	1.5	1.6	1.7	1.2	1.6	0	3.3	1.5	1.5	0	1.2	3	3

SA-VKX25GA/GS/EE BACKEND P.C.B. ASS'Y

14.1.2. Backend P.C.B. Ass'y (2/3)

REF NO.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
PLAY	2.9	3	2.9	3	0	3.3	3.1	3	3	3.1	3	3	0	3.3	3	2.9	3	3	2.9	2.9
STANDBY	2.9	3	2.9	3	0	3.3	3.1	3	3	3.1	3	3	0	3.3	3	2.9	3	3	2.9	2.9
REF NO.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
PLAY	3.3	0	1.5	3.3	1.5	0	1.2	3.2	3.2	3	1.4	0	1.7	0	0	3.3	1.7	0	0	1.6
STANDBY	3.3	0	1.5	3.3	1.5	0	1.2	3.2	3.2	3	1.4	0	1.7	0	0	3.3	1.7	0	0	1.6
REF NO.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
PLAY	0.1	1.7	0.4	0	3.3	2	0.3	1.2	1.2	0	1.2	1.9	2.6	2.5	3.3	0				
STANDBY	0.1	1.7	0.4	0	3.3	2	0.3	1.2	1.2	0	1.2	1.9	2.6	2.5	3.3	0				
REF NO.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.4	3.2	3.4	3.2	3.2	3.2	3.1	3.4	3.2	3.2	0.1	3.2	0.1	3.0	3.4	3.3	3.3	3.3	3.3	1.9
STANDBY	3.4	3.2	3.4	3.2	3.2	3.2	3.1	3.4	3.2	3.2	0.1	3.2	0.1	3.0	3.4	3.3	3.3	3.3	3.3	1.9
REF NO.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	1.6	0.1	0.2	0.5	0.6	1.5	3.4	0.1	0	1.9	1.7	1.6	0.1	0.1	0.1	0.1	3.4	1.6	2.9	0
STANDBY	1.6	0.1	0.2	0.5	0.6	1.5	3.4	0.1	0	1.9	1.7	1.6	0.1	0.1	0.1	0.1	3.4	1.6	2.9	0
REF NO.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
PLAY	0.1	3.2	3.4	3.2	3.2	0.1	3.2	3.2	3.4	3.2	3.1	0.1	3.1	0.1						
STANDBY	0.1	3.2	3.4	3.2	3.2	0.1	3.2	3.2	3.4	3.2	3.1	0.1	3.1	0.1						
REF NO.	IC8111																			
MODE	1	2	3	4	5	6	7													
PLAY	5.2	0	5.2	0	0.9	3.4	1.2													
STANDBY	4.9	0	5.2	0	0.9	3.4	1.2													
REF NO.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.6	5.9	2.6	1.6	2.6	0	0	5.9	0	0	3.1	2.9	2.9	3.1	3	3.1	3.6	2.5	5.9	2.4
STANDBY	1.6	5.9	2.6	1.6	2.6	0	0	5.9	0	0	3	3	3	3	3	3	3	3	5.9	2.4
REF NO.	IC8251																			
MODE	21	22	23	24	25	26	27	28	29	30										
PLAY	1.5	0	1.8	5.9	5.9	1.6	1.6	3.3	0	0										
STANDBY	1.5	0	1.6	5.9	5.9	1.6	1.6	3.3	0	0										
REF NO.	IC8252																			
MODE	1	2	3	4	5															
PLAY	2.5	0	2.5	2.1	5															
STANDBY	2.5	0	2.5	2.1	5															
REF NO.	IC8901																			
MODE	1	2	3	4	5															
PLAY	3.3	3.3	0	3.4	3.4															
STANDBY	3.3	3.3	0	3.4	3.4															
REF NO.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	1.2	2.5	1.4	1.1	2.1	1.2	2.1	2.1	0	2.5	2.1	2.1	1.2	2.2	1.1	1.3	2.5	1.3	3.4
STANDBY	0	0.9	2.7	0.9	0.7	2.6	0.7	0	2.6	0	2.9	2.6	2.5	0.7	2.6	0.7	0.8	2.7	0.9	3.4

SA-VKX25GA/GS/EE BACKEND P.C.B. ASS'Y

14.1.3. Backend P.C.B. Ass'y (3/3)

REF NO.	IC9002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	3.2	0	0	0	0	3.2	3.2	0	0	0	0	3.4	3.2	0	0	0	0	3.3	3.3
STANDBY	0	3.2	0	0	0	0	3.2	3.2	0	0	0	0	3.4	3.2	0	0	0	0	3.3	3.3

REF NO.	IC9003																			
MODE	1	2	3	4	5	6														
PLAY	1.5	0	1.6	1.7	3.3	1.6														
STANDBY	1.5	0	1.6	1.7	3.3	1.6														

REF NO.	Q8551				Q8552				Q8561				Q8562				Q8563			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		S	D	G	
PLAY	0	5.1	0		5.0	0	5.0		1.9	3.3	2.5		4.0	1.8	3.4		0	0	5.0	
STANDBY	0	5.1	0		5.1	0	5.1		0	5.1	0		5.2	0	5.2		0	0	5.0	

REF NO.	Q8564				Q8565															
MODE	S	D	G		E	C	B													
PLAY	0	0	5.0		0	4.4	0													
STANDBY	0	0	5.0		0	4.4	0													

SA-VKX25GA/GS/EE BACKEND P.C.B. ASS'Y

14.1.4. Main P.C.B. Ass'y (1/4)

REF NO.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	3.3	3.3	3.3	1.4	3.3	0	3.3	3.3	0	3.3	0	0	3.3	0	0	3.3	1.6	0	0
STANDBY	3.3	3.3	3.3	3.3	1.4	3.3	0	3.3	3.3	0	3.3	0	0	3.3	0	0	3.3	1.6	0	0
REF NO.	IC1001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3	3.3	0.1	3	0	0.6	3.2	2.2	3.3	0	3.3	0.1	1.6	1.6	0.9	0	0	1.3	1.3	0.2
STANDBY	3	3.3	0.1	3	0	0.6	3.2	2.2	3.3	0	3.3	0.1	1.6	1.6	0.9	0	0	1.3	1.3	0.2
REF NO.	IC1001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0.7	0	3.3	3.3	1.1	1.1	3.3	3.3	3.3	1.7	1.7	1.7	0	1.6	1.6	1.4	1.4	0.1	0.5	1.6
STANDBY	0.7	0	3.3	3.3	1.1	1.1	3.3	3.3	3.3	1.7	1.7	1.7	0	1.6	1.6	1.4	1.4	0.1	0.5	1.6
REF NO.	IC1001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	1.7	1.7	1.7	1.7	1.7	0	1.5	1.5	1.5	1.5	0	0	3.3	3.3	3.3	3.3	1.7	3.3	3.3	0
STANDBY	1.7	1.7	1.7	1.7	1.7	0	1.5	1.5	1.5	1.5	0	0	3.3	3.3	3.3	3.3	1.7	3.3	3.3	0
REF NO.	IC1001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	1.7	1.7	0.9	0	3.3	1.4	3.3	3.3	0	0	1.6	0	3.2	0	3.3	0	0	0	0
STANDBY	0	1.7	1.7	0.9	0	3.3	1.4	3.3	3.3	0	0	1.6	0	3.2	0	3.3	0	0	0	0
REF NO.	IC1001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	1.6	3.3	3.3	0	3.1	3.1	3.3	3.3	2	1.7	1.7	1.5	3.3	0	0	3.3	3.3	3.3	3.3	3.3
STANDBY	1.6	3.3	3.3	0	3.1	3.1	3.3	3.3	2	1.7	1.7	1.5	3.3	0	0	3.3	3.3	3.3	3.3	3.3
REF NO.	IC1001																			
MODE	121	122	123	124	125	126	127	128												
PLAY	3.3	3.3	0	1.5	1.6	0	1.4	1.5												
STANDBY	3.3	3.3	0	1.5	1.6	0	1.4	1.5												
REF NO.	IC1002																			
MODE	1	2	3	4	5															
PLAY	3.3	3.3	0	0	1.9															
STANDBY	3.3	3.3	0	0	1.9															
REF NO.	IC1005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0	1.2	0.8	1.2	1.6	1.6	1.6	0	1.6	1.7	1.6	0	0	0	0	3.3				
STANDBY	0	1.2	0.8	1.2	1.6	1.6	1.6	0	1.6	1.7	1.6	0	0	0	0	3.3				
REF NO.	IC2100																			
MODE	1	2	3	4	5	6	7	8	9	10										
PLAY	10.9	39.5	3.1	2.1	0.5	0	0.8	0.7	0	4.7										
STANDBY	10.9	39.5	3.1	2.1	0.5	0	0.8	0.7	0	4.7										
REF NO.	IC2101																			
MODE	1	2	3	4	5	6	7	8	9	10										
PLAY	10.9	39.5	3.1	2.1	0.5	0	0.8	0.7	0	4.7										
STANDBY	10.9	39.5	3.1	2.1	0.5	0	0.8	0.7	0	4.7										
REF NO.	IC2103																			
MODE	1	2	3	4	5	6	7	8	9	10										
PLAY	21.3	39.5	3.1	2.1	0.5	0	0.8	0.7	0	15.2										
STANDBY	21.3	39.5	3.1	2.1	0.5	0	0.8	0.7	0	15.2										

SA-VKX25GA/GS/EE MAIN P.C.B. ASS'Y

14.1.5. Main P.C.B. Ass'y (2/4)

REF NO.	IC2105																			
MODE	1	2	3																	
PLAY	15.4	0	9.2																	
STANDBY	15.4	0	9.2																	
REF NO.	IC2107																			
MODE	1	2	3	4																
PLAY	3.3	0	1.6	3.3																
STANDBY	3.3	0	1.6	3.3																
REF NO.	IC2108																			
MODE	1	2	3																	
PLAY	0	3.3	5																	
STANDBY	0	3.3	5																	
REF NO.	IC2300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	3.3	3.3	3.3	3.3	0	0	-	1	3.3	1.7	0	1.4	3.3	1.7	0	0	0	0	2.8
STANDBY	0	3.3	3.3	3.3	3.3	0	0	-	1	3.3	1.7	0	1.4	3.3	1.7	0	0	0	0	2.8
REF NO.	IC2300																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3	1.6	0	0	0	3.2	2.2	0.6	0	3.3	0	0	3.3	3.3	0	0	0	0	0	0
STANDBY	3	1.6	0	0	0	3.2	2.2	0.6	0	3.3	0	0	3.3	3.3	0	0	0	0	0	0
REF NO.	IC2300																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	0	0	3.3	0	0	0	0	0	3.3	3.3	0	0	0	3.3	0	0	0	0	3.3
STANDBY	0	0	0	3.3	0	0	0	0	0	3.3	3.3	0	0	0	3.3	0	0	0	0	3.3
REF NO.	IC2300																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	0	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC2300																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	0	0	0	0	0	0.4	2	1.5	1.5	0	1.5	1.5	0	1.5	3.3	3.3	0	3.2	3.3
STANDBY	0	0	0	0	0	0	0.4	2	1.5	1.5	0	1.5	1.5	0	1.5	3.3	3.3	0	3.2	3.3
REF NO.	IC4001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	3.3	3.3	3.3	3.3	0	1.4	1.3	1.7	1.6	3.3	3.3	1.5	1.5	0	1.4	0	0	1.7	1.6
STANDBY	0	3.3	3.3	3.3	3.3	0	1.4	1.3	1.7	1.6	3.3	3.3	1.5	1.5	0	1.4	0	0	1.7	1.6
REF NO.	IC4001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.3	0	1.5	3.3	0	3.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	0	0	0	0	3.3
STANDBY	3.3	0	1.5	3.3	0	3.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	0	0	0	0	3.3
REF NO.	IC4001																			
MODE	41	42	43	44	45	46	47	48												
PLAY	1.5	1.5	0	0	3.3	0	0	0												
STANDBY	1.5	1.5	0	0	3.3	0	0	0												
REF NO.	IC4801																			
MODE	1	2	3	4																
PLAY	3.3	0	1.8	3.3																
STANDBY	3.3	0	1.8	3.3																

SA-VKX25GA/GS/EE MAIN P.C.B. ASS'Y

14.1.6. Main P.C.B. Ass'y (3/4)

REF NO.	IC4803																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.8	0	3	1.7	1.8	0	0.8	1.2	1.2	1.8	3.3	0	1.3	1.6	3.3	3.3	3.3	1.8	3.3	0
STANDBY	1.8	0	3	1.7	1.8	0	0.8	1.2	1.2	1.8	3.3	0	1.3	1.6	3.3	3.3	3.3	1.8	3.3	0
REF NO.	IC4803																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.3	3.3	3.3	0	0	16.8	0	0	3	16.8	16.8	0.6	0	3	16.8	0	0	0.3	0	0
STANDBY	3.3	3.3	3.3	0	0	16.8	0	0	3	16.8	16.8	0.6	0	3	16.8	0	0	0.3	0	0
REF NO.	IC4803																			
MODE	41	42	43	44	45	46	47	48												
PLAY	0	0	0	0	0	1.5	3.3	1.6												
STANDBY	0	0	0	0	0	1.5	3.3	1.6												
REF NO.	IC6100																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0	0	0	0	0	0	0	0	12.5	12.5	0	0	0	0	0	12.5				
STANDBY	0	0	0	0	0	0	0	0	12.5	12.5	0	0	0	0	0	12.5				
REF NO.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10										
PLAY	0	0	0	0	0	1	1.4	0	3.3	0										
STANDBY	0	0	0	0	0	1	1.4	0	3.3	0										
REF NO.	IC9002																			
MODE	1	2	3	4	5															
PLAY	0	0	3.3	0	5.1															
STANDBY	0	0	3.3	0	5.1															
REF NO.	IC9003																			
MODE	1	2	3	4	5															
PLAY	5.1	0	3.3	3.3	5.1															
STANDBY	5.1	0	3.3	3.3	5.1															
REF NO.	IC9004																			
MODE	1	2	3	4	5	6	7	8	9	10										
PLAY	0	0	0	0	0	1	1.4	0	3.3	0										
STANDBY	0	0	0	0	0	1	1.4	0	3.3	0										
REF NO.	IC1000																			
MODE	1	2	3																	
PLAY	0	3.3	5.6																	
STANDBY	0	3.3	5.6																	
REF NO.	IC6000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	12.4	12.4	1.1	3.3	1.7	1.7	2.7	3.3	0	0	0	0	7.7	1.7	1.7	3.3	3.3	3.3	0	2.7
STANDBY	12.4	12.4	1.1	3.3	1.7	1.7	2.7	3.3	0	0	0	0	7.7	1.7	1.7	3.3	3.3	3.3	0	2.7
REF NO.	IC6000																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	12.5	27.7	27.7	0	0	16.4	16.4	32.7	32.7	32.7	16.4	0	0	16.4	32.7	32.7	32.7	16.4	16.4
STANDBY	0	12.5	27.7	27.7	0	0	16.4	16.4	32.7	32.7	32.7	16.4	0	0	16.4	32.7	32.7	32.7	16.4	16.4
REF NO.	IC6000																			
MODE	41	42	43	44																
PLAY	0	0	27.7	27.7																
STANDBY	0	0	27.7	27.7																

SA-VKX25GA/GS/EE MAIN P.C.B. ASS'Y

14.1.7. Main P.C.B. Ass'y (4/4) & Panel P.C.B.

REF NO.	IC7001																			
MODE	1	2	3	4																
PLAY	3.1	0	4.6	5																
STANDBY	3.1	0	4.6	5																

REF NO.	Q1001				Q1002				QR2102				QR6101				Q1000			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	0	0.6		0	0	23.9		0	0	3.1		0	12.2	0		12.7	15.7	13.4	
STANDBY	0	0	0.6		0	0	23.9		0	0	3.1		0	12.2	0		12.7	15.7	13.4	

REF NO.	Q6001				Q6002				Q6007				Q6300				Q9003			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	3.2	0		38.3	0	11		19.1	10.5	19.1		19.1	10.5	19.1		5.6	0.1	5.6	
STANDBY	0	3.2	0		38.3	0	11		19.1	10.5	19.1		19.1	10.5	19.1		5.6	0.1	5.6	

REF NO.	QR1000				QR9003															
MODE	E	C	B		E	C	B													
PLAY	0	3.2	0.4		0	5.3	0													
STANDBY	0	3.2	0.4		0	5.3	0													

SA-VKX25GA/GS/EE MAIN P.C.B. ASS'Y

REF NO.	IC6000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	0	0	1.9	3.3	1.3	0	2.9	0	0	0	3.3	-15.9	-15.9	-19.6	-23.3	-21.4	-23.3	-21.4
STANDBY	0	0	0	0	1.9	3.3	1.3	0	2.9	0	0	0	3.3	-15.9	-15.9	-19.6	-23.3	-21.4	-23.3	-21.4

REF NO.	IC6000																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	-23.3	-23.3	-21.4	-23.3	-15.9	-19.6	-15.9	-21.4	-23.3	-23.7	-22	-21.6	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4
STANDBY	-23.3	-23.3	-21.4	-23.3	-15.9	-19.6	-15.9	-21.4	-23.3	-23.7	-22	-21.6	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4

REF NO.	IC6000																			
MODE	41	42	43	44																
PLAY	-21.5	-21.8	3.3	0																
STANDBY	-21.5	-21.8	3.3	0																

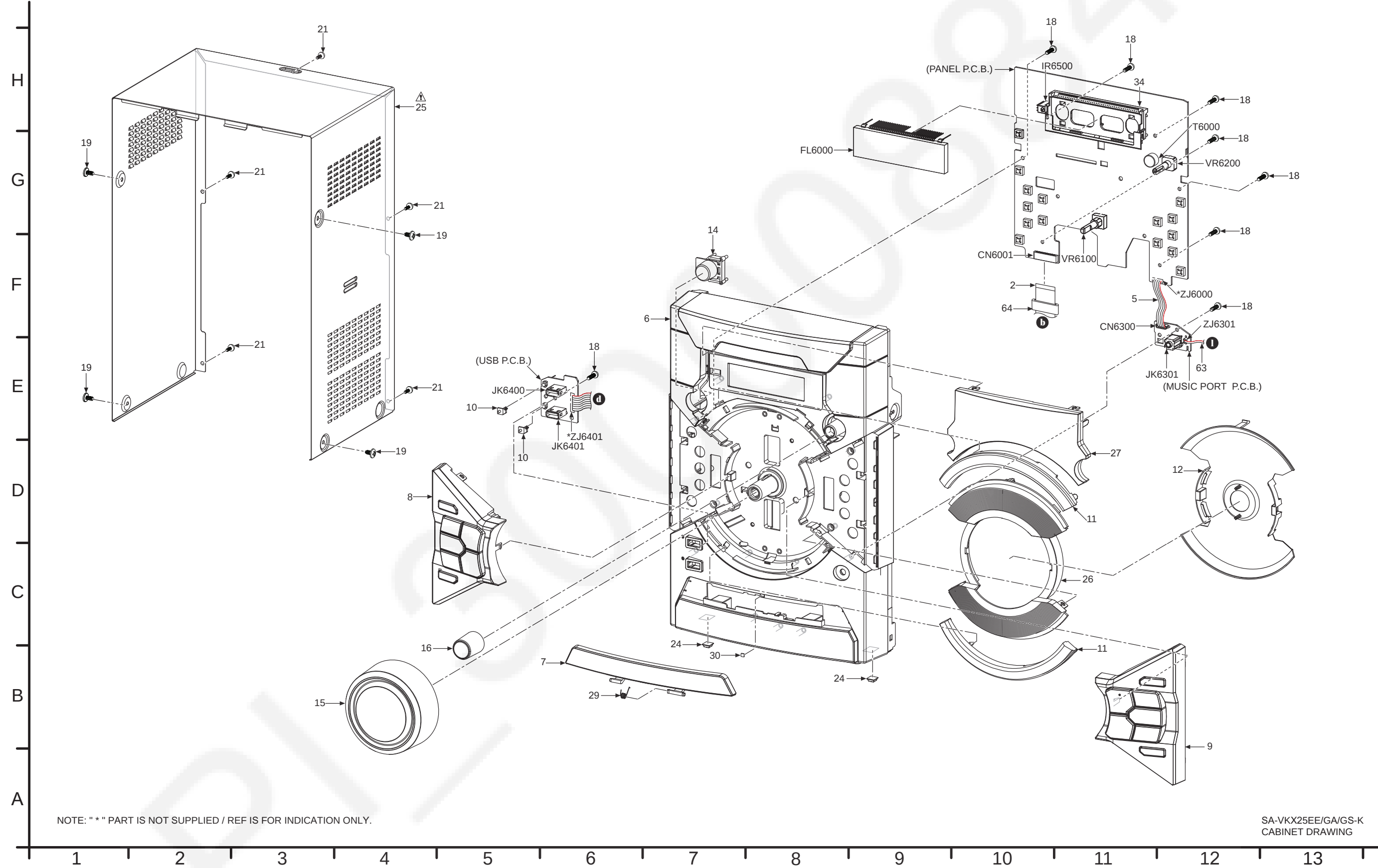
REF NO.	Q6001																			
MODE	E	C	B																	
PLAY	0	15.5	-0.2																	
STANDBY	0	15.5	-0.2																	

SA-VKX25GA/GS/EE PANEL P.C.B.

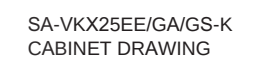
PL/30000884

15 Exploded View and Replacement Parts List

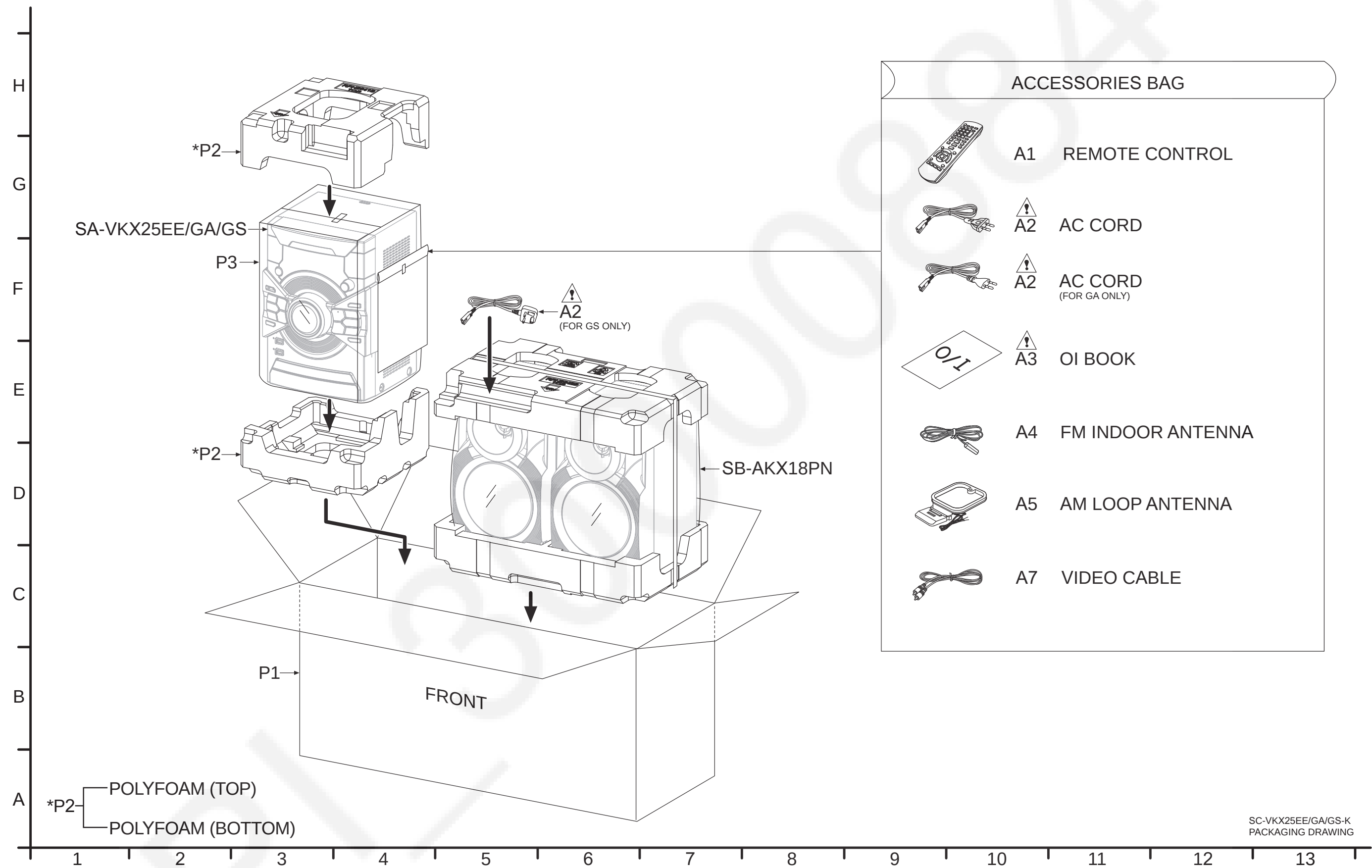
15.1. Cabinet Parts Location 1



A vertical scale with labels A, B, C, D, E, F, G, H from bottom to top.



15.3. Packaging



SC-VKX25EE/GA/GS-K
PACKAGING DRAWING

PI 30000884

15.4. 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	REE2026	30P FFC (MAIN-BACKEND)	1	
	2	REE1921	22P FFC (PANEL-MAIN)	1	
	3	REX1683	9P WIRE (MAIN-SMPS)	1	
	4	REX1688	8P WIRE (USB-MAIN)	1	
	5	REX1734	5P WIRE (MPORT-PANEL)	1	
	6	RGP1692C-K	FRONT PANEL	1	
	7	RGK2544-K	CD LID	1	
	8	RFKNVKK65GAL	LEFT ORNAMENT ASS'Y	1	
	9	RFKNVKK95GAR	RIGHT BUTTON ORNAMENT ASS'Y	1	
	10	RGL0800-Q	USB REC LIGHT PIECE	2	
	11	RGK2449-K	RING ORNAMENT TOP/BOTTOM	2	
	12	RGC0050A-B	VOLUME LIGHT REFLECTOR	1	
⚠	13	RGR0443V-A1A	REAR PANEL	1	GA
⚠	13	RGR0443V-B1A	REAR PANEL	1	GS
⚠	13	RGR0443V-C1A	REAR PANEL	1	EE
	14	RGU2948-K	POWER BUTTON	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	15	RGW0428-1S	VOLUME KNOB	1	
	16	RGW0435-K	SKIP KNOB	1	
	17	RHD26043-1	SCREW	2	
	18	RHD26046-L	SCREW	8	
	19	RHD30007-K2J	SCREW	4	
	20	RHD30111-31	SCREW	12	
	21	RHD30119-S	SCREW	14	
	23	RHDX031008	SCREW	2	
	24	RKAX0042-K	LEG CUSHION	4	
⚠	25	RKM0713-K1	TOP CABINET	1	
	26	RKW1027-Q	CENTER ORNAMENT	1	
	27	RKW1063B-Q	FL WINDOW	1	
	28	RMA2442-1	CHASSIS SUPPORT	2	
	29	RMB0930	CD LID SPRING	1	
	30	RMGX0033A-K	CD LID CUSHION	1	
	31	RMK0837-1	INNER CHASSIS	1	
	32	RMXX1031A-1	BOTTOM CHASSIS	1	
	33	RMNX0298	PCB SPACER	1	
	34	RMNV0079-1	FL HOLDER	1	
	35	RMQ2134	MECHA SUPPORT	2	
	36	RMZX1022-1	PCB SPACER	2	
	41	RSC1295	BACKEND PCB SHIELD	1	
	52	RMX0524	PCB SPACER	1	
	57	REX1799	5P SHIELD WIRE (MAIN-BACKEND)	1	
	61	J0KD00000147	FERRITE CORE	1	
	63	REXX1159-1	2P GROUND WIRE (INNER CHASSIS)	1	
	64	J0KD00000162	FERRITE CORE	1	
	65	RSC1228A	THERMAL PAD	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	66	RMF0742	HIMELON	1	
	67	RMF0743	HIMELON	1	
	68	RMF0465	HIMELON	1	
			TRAVERSE DECK		
⚠	301	RAE2405Z-V	TRAVERSE UNIT	1	
			PACKING MATERIALS		
	P1	RPG0N25	PACKING CASE	1	EE
	P1	RPG0N26	PACKING CASE	1	GA
	P1	RPG0N27	PACKING CASE	1	GS
	P2	RPN2641-1	POLYFOAM	1	
	P3	RPF0198-1	MIRAMAT SHEET	1	
			ACCESSORIES		
	A1	N2QAYB000998	REMOTE CONTROL	1	
⚠	A2	K2CP2YY00061	AC CORD	1	GA
⚠	A2	K2CQ2YY00119	AC CORD	1	
⚠	A2	K2CT2YY00097	AC CORD	1	GS
⚠	A3	RQT9952-B	O/I BOOK (En)	1	GA/GS
⚠	A3	RQT9954-R	O/I BOOK (Ru/Ur)	1	EE
⚠	A3	RQT9968-G	O/I BOOK (Pe/Ar)	1	GS
	A4	RSAX0002	FM INDOOR ANTENNA	1	
	A5	N1DY00000011	AM LOOP ANTENNA	1	
	A7	K2KA2BA00001	VIDEO CABLE	1	

15.5. Electrical Replacement Parts List

Important Safety Notice

Components identified by $\triangle$ 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	RFKB5108C	MAIN P.C.B ASS'Y	1	(E.S.D) EE
	PCB1	RFKB5108A	MAIN P.C.B ASS'Y	1	(E.S.D) GA
	PCB1	RFKB5108B	MAIN P.C.B ASS'Y	1	(E.S.D) GS
	PCB2	RFKB5104B	BACKEND P.C.B ASS'Y	1	
	PCB3	REP5063FA	PANEL P.C.B	1	(RTL)
	PCB4	REP5063FB	USB P.C.B	1	(RTL)
	PCB5	REP5063FA	MUSIC PORT P.C.B	1	(RTL)
$\triangle$	PCB6	N0AC2GK00001	SMPS MODULE	1	
			INTEGRATED CIRCUITS		
	IC52	VUEALLPT087	IC	1	(E.S.D) , JIGS & ADJ
	IC1000	C0DBGYY03909	IC	1	(E.S.D)
	IC1001	C1AB00004188	IC	1	(E.S.D)
	IC1002	C0EBE0000338	IC	1	(E.S.D)
	IC1003	RFKWFKX25GM	IC	1	(E.S.D) , JIGS & ADJ
	IC1004	RFKWEVKX95GM	IC	1	(E.S.D) , JIGS & ADJ
	IC1005	C0JBAR000596	IC	1	(E.S.D)
	IC2100	C0DBAYY01594	IC	1	(E.S.D)
	IC2101	C0DBAYY01594	IC	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC2103	C0DBAYY01594	IC	1	(E.S.D)
	IC2105	C0DAZYY00001	IC	1	(E.S.D)
	IC2107	C0DBGYY00911	IC	1	(E.S.D)
	IC2108	C0DBGYY03909	IC	1	(E.S.D)
	IC2300	RFKWMVKX25GM	IC	1	(E.S.D) , JIGS & ADJ
	IC2301	C3EBFY000044	IC	1	(E.S.D)
	IC3801	C9ZB00000461	IC	1	(E.S.D)
	IC4001	VUEALLPT090	IC	1	(E.S.D) , JIGS & ADJ
	IC4801	C0DBGYY03252	IC	1	(E.S.D)
	IC4803	C1AB00003800	IC	1	(E.S.D)
	IC6000	C0HBB0000057	IC	1	(E.S.D)
	IC6000	C1AB00003994	IC	1	(E.S.D)
	IC6100	C0JBAR000367	IC	1	(E.S.D)
	IC7001	C0DBGYY00969	IC	1	(E.S.D)
	IC8001	MN2DS0018SP	IC	1	(E.S.D)
	IC8051	C3ABFY000090	IC	1	(E.S.D)
	IC8111	C0DBFZG00001	IC	1	(E.S.D)
	IC8251	C0GBY0000117	IC	1	(E.S.D)
	IC8252	C0ABGA000090	IC	1	(E.S.D)
	IC8611	RFKB5104B	IC	1	(E.S.D) , JIGS & ADJ
	IC8651	RFKFVKX95GB	IC	1	(E.S.D) , JIGS & ADJ
	IC8901	C0JBAA000261	IC	1	(E.S.D)
	IC9001	C0JBAS000401	IC	1	(E.S.D)
	IC9001	C0JBAZ002999	IC	1	(E.S.D)
	IC9002	C0DBZYY00716	IC	1	(E.S.D)
	IC9002	C0JBAZ002999	IC	1	(E.S.D)
	IC9003	C0DBZYY00716	IC	1	(E.S.D)
	IC9003	C0JBAB000595	IC	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC9004	C0JBAS000401	IC	1	(E.S.D)
			TRANSISTORS		
	Q1000	B1AAKD000012	TRANSISTOR	1	(E.S.D)
	Q1001	B1ABCF000176	TRANSISTOR	1	(E.S.D)
	Q1002	B1GBCFJ00041	TRANSISTOR	1	(E.S.D)
	Q2801	B1GBCFJN0038	TRANSISTOR	1	(E.S.D)
	Q6001	B1ABCF000011	TRANSISTOR	1	(E.S.D)
	Q6001	B1ABMG000008	TRANSISTOR	1	(E.S.D)
	Q6002	B1ADGD000019	TRANSISTOR	1	(E.S.D)
	Q6007	B1ABCF000011	TRANSISTOR	1	(E.S.D)
	Q6300	B1ABCF000011	TRANSISTOR	1	(E.S.D)
	Q8551	B1ABDF000026	TRANSISTOR	1	(E.S.D)
	Q8552	B1ADGB000008	TRANSISTOR	1	(E.S.D)
	Q8561	B1ABDF000026	TRANSISTOR	1	(E.S.D)
	Q8562	B1ADGB000008	TRANSISTOR	1	(E.S.D)
	Q8563	B1CFHA000002	TRANSISTOR	1	(E.S.D)
	Q8564	B1CFHA000002	TRANSISTOR	1	(E.S.D)
	Q8565	B1ABDF000026	TRANSISTOR	1	(E.S.D)
	Q9003	B1ADCE000012	TRANSISTOR	1	(E.S.D)
	QR1000	B1GBCFJ00051	TRANSISTOR	1	(E.S.D)
	QR2102	B1GBCFLL0037	TRANSISTOR	1	(E.S.D)
	QR6101	B1GBCFJ00040	TRANSISTOR	1	(E.S.D)
	QR9003	B1GBCFGN0016	TRANSISTOR	1	(E.S.D)
			DIODES		
	D1000	B0JCPG000032	DIODE	1	(E.S.D)
	D1001	DZ2J130M0L	DIODE	1	(E.S.D)
	D1002	B0ADDJ000032	DIODE	1	(E.S.D)
	D1005	DZ2J130M0L	DIODE	1	(E.S.D)
	D1007	B0EAKM000117	DIODE	1	(E.S.D)
	D1008	DA2J10100L	DIODE	1	(E.S.D)
	D2107	B0JCPG000032	DIODE	1	(E.S.D)
	D6000	B0ACCK000005	DIODE	1	(E.S.D)
	D6001	B0ACCK000005	DIODE	1	(E.S.D)
	D6005	B0EAMM000057	DIODE	1	(E.S.D)
	D6006	B0BC033A0282	DIODE	1	(E.S.D)
	D6007	B0EAMM000057	DIODE	1	(E.S.D)
	D6008	B0JAME000114	DIODE	1	(E.S.D)
	D6009	DZ2J24000L	DIODE	1	(E.S.D)
	D6012	B0BC2R4A0006	DIODE	1	(E.S.D)
	D6017	B0EAMM000057	DIODE	1	(E.S.D)
	D6201	DA2J10100L	DIODE	1	(E.S.D)
	D6202	DA2J10100L	DIODE	1	(E.S.D)
	D6203	DA2J10100L	DIODE	1	(E.S.D)
	D6204	DA2J10100L	DIODE	1	(E.S.D)
	D6205	DA2J10100L	DIODE	1	(E.S.D)
	D6206	DA2J10100L	DIODE	1	(E.S.D)
	D6207	DA2J10100L	DIODE	1	(E.S.D)
	D6208	DA2J10100L	DIODE	1	(E.S.D)
	D6209	DA2J10100L	DIODE	1	(E.S.D)
	D6210	DA2J10100L	DIODE	1	(E.S.D)
	D6400	B3AAA0000487	DIODE	1	(E.S.D)
	D6401	B3AAA0000487	DIODE	1	(E.S.D)
	D8211	DA2J10100L	DIODE	1	(E.S.D)
	D9001	B0ECKM000008	DIODE	1	(E.S.D)
	DZ1000	B0JCPD000025	DIODE	1	(E.S.D)
			VARIABLE RESIS- TORS		
	VR6100	EVEKE2F3524B	VOLUME JOG	1	
	VR6200	K9AA012Y0012	ILLUMINATION/ CONTROL JOG	1	
			VARISTOR		
	VA51	EZAEG2A50AX	ESD SUPPRESSOR	1	
			SWITCHES		
	S6200	EVQ21405RJ	SW POWER	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	S6201	EVQ21405RJ	SW OPEN/CLOSE	1	
	S6202	EVQ21405RJ	SW STOP/TUNE MODE	1	
	S6211	EVQ21405RJ	SW DJ JUKEBOX	1	
	S6212	EVQ21405RJ	SW LOCAL/PRESET EQ	1	
	S6213	EVQ21405RJ	SW MANUAL EQ	1	
	S6214	EVQ21405RJ	SW D.BASS	1	
	S6215	EVQ21405RJ	SW USB REC	1	
	S6216	EVQ21405RJ	SW RWD	1	
	S6217	EVQ21405RJ	SW FWD	1	
	S6218	EVQ21405RJ	SW PLAY/PAUSE	1	
	S6219	EVQ21405RJ	SW RADIO/AUX	1	
	S6220	EVQ21405RJ	SW DVD/CD	1	
	S6221	EVQ21405RJ	SW BLUETOOTH/ USB/-PAIRING	1	
	S6222	EVQ21405RJ	SW ALBUM/TRACK	1	
			CONNECTORS		
	CN2003	K1MN10AA0076	10P CONNECTOR	1	
	CN2505	K1KA05AA0051	5P CONNECTOR	1	
	CN2506	K1MN22AA0012	22P CONNECTOR	1	
	CN2511	K1KA08AA0104	8P CONNECTOR	1	
	CN6001	K1MN22B00014	22P CONNECTOR	1	
	CN6300	K1YF05000001	5P CONNECTOR	1	
	FP5001	K1MN30AA0082	30P CONNECTOR	1	
	FP8031	K1MY10AA0021	10P CONNECTOR	1	
	FP8101	K1MN30BA0173	30P CONNECTOR	1	
	FP8251	K1MN06AA0046	6P CONNECTOR	1	
	FP8252	K1MN05AA0046	5P CONNECTOR	1	
	FP8531	K1MN24A00062	24P CONNECTOR	1	
	FP9001	K1KA05BA0014	5P CONNECTOR	1	
	P1002	K1MN08A00048	8P CONNECTOR	1	
			COILS AND INDUC- TORS		
	L51	G1CR18JA0020	INDUCTOR	1	
	L52	G2A380Y00002	COIL	1	
	L54	G1C1R0MA0204	INDUCTOR	1	
	L1000	G1C4R7MA0445	INDUCTOR	1	
	L1002	G1C100MA0291	INDUCTOR	1	
	L1003	G0A100H00018	INDUCTOR	1	
	L2102	G0A100H00018	CHOKE COIL	1	
	L3801	G1C100K00019	INDUCTOR	1	
	L3802	J0JBC0000015	INDUCTOR	1	
	L6000	G0A100K00006	CHOKE COIL	1	
	L6001	G0A100K00006	CHOKE COIL	1	
	L6002	G0A100K00006	CHOKE COIL	1	
	L6003	J0JKB0000020	INDUCTOR	1	
	L6005	G0A100K00006	CHOKE COIL	1	
	L6006	G1C4R7MA0172	INDUCTOR	1	
	L6300	J0JBC0000019	INDUCTOR	1	
	L6301	J0JBC0000019	INDUCTOR	1	
	L6302	J0JBC0000019	INDUCTOR	1	
	L7000	J0JYC0000305	INDUCTOR	1	
	L8201	G1C100M00049	INDUCTOR	1	
	L8251	J0JHC0000117	INDUCTOR	1	
	L8252	J0JHC0000117	INDUCTOR	1	
	L8301	G1C100M00049	INDUCTOR	1	
	L8302	G1C100M00049	INDUCTOR	1	
	L8303	G1C100M00049	INDUCTOR	1	
	L8501	G1C100M00049	INDUCTOR	1	
	L8550	G1C100M00049	INDUCTOR	1	
	LB51	J0JBC0000032	INDUCTOR	1	
	LB52	J0JYC0000118	INDUCTOR	1	
	LB1000	J0JCC0000309	INDUCTOR	1	
	LB1001	J0JBC0000010	INDUCTOR	1	
	LB1002	J0JBC0000010	INDUCTOR	1	
	LB1003	J0JBC0000010	INDUCTOR	1	
	LB1004	J0JBC0000010	INDUCTOR	1	
	LB1006	J0JBC0000010	INDUCTOR	1	
	LB1007	J0JBC0000010	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	LB1008	J0JCC0000286	INDUCTOR	1	
	LB1009	J0JCC0000286	INDUCTOR	1	
	LB1012	J0JCC0000286	INDUCTOR	1	
	LB1013	J0JBC0000010	INDUCTOR	1	
	LB1014	J0JCC0000286	INDUCTOR	1	
	LB1015	J0JCC0000286	INDUCTOR	1	
	LB1028	J0JCC0000286	INDUCTOR	1	
	LB1029	J0JCC0000286	INDUCTOR	1	
	LB1030	J0JBC0000010	INDUCTOR	1	
	LB1031	J0JBC0000010	INDUCTOR	1	
	LB1032	J0JBC0000010	INDUCTOR	1	
	LB1033	J0JBC0000010	INDUCTOR	1	
	LB1036	J0JCC0000286	INDUCTOR	1	
	LB1037	J0JCC0000286	INDUCTOR	1	
	LB1038	J0JCC0000286	INDUCTOR	1	
	LB1039	J0JCC0000286	INDUCTOR	1	
	LB1040	J0JBC0000010	INDUCTOR	1	
	LB1041	J0JCC0000215	INDUCTOR	1	
	LB1042	J0JCC0000215	INDUCTOR	1	
	LB1043	J0JCC0000309	INDUCTOR	1	
	LB1044	J0JCC0000117	INDUCTOR	1	
	LB1045	J0JCC0000117	INDUCTOR	1	
	LB2102	J0JHC0000046	INDUCTOR	1	
	LB2103	J0JHC0000046	INDUCTOR	1	
	LB2524	J0JBC0000010	INDUCTOR	1	
	LB2525	J0JBC0000010	INDUCTOR	1	
	LB4001	J0JBC0000010	INDUCTOR	1	
	LB4002	J0JBC0000010	INDUCTOR	1	
	LB4801	J0JBC0000010	INDUCTOR	1	
	LB4802	J0JBC0000010	INDUCTOR	1	
	LB4805	J0JCC0000287	INDUCTOR	1	
	LB4806	J0JCC0000287	INDUCTOR	1	
	LB4807	J0JCC0000287	INDUCTOR	1	
	LB4808	J0JCC0000287	INDUCTOR	1	
	LB4809	J0JBC0000010	INDUCTOR	1	
	LB6100	J0JBC0000134	INDUCTOR	1	
	LB6101	J0JCC0000317	INDUCTOR	1	
	LB6400	J0JHC0000118	INDUCTOR	1	
	LB6401	J0JHC0000118	INDUCTOR	1	
	LB8001	J0JHC0000045	INDUCTOR	1	
	LB8002	J0JGC0000063	INDUCTOR	1	
	LB8003	J0JHC0000045	INDUCTOR	1	
	LB8004	J0JHC0000045	INDUCTOR	1	
	LB8005	J0JHC0000045	INDUCTOR	1	
	LB8011	J0JHC0000045	INDUCTOR	1	
	LB8012	J0JGC0000063	INDUCTOR	1	
	LB8250	J0JGC0000063	INDUCTOR	1	
	LB8251	J0JGC0000063	INDUCTOR	1	
	LB8252	J0JGC0000063	INDUCTOR	1	
	LB8253	J0JGC0000063	INDUCTOR	1	
	LB8254	J0JGC0000063	INDUCTOR	1	
	LB8255	J0JGC0000063	INDUCTOR	1	
	LB8256	J0JGC0000063	INDUCTOR	1	
	LB8257	J0JGC0000063	INDUCTOR	1	
	LB8258	J0JGC0000063	INDUCTOR	1	
	LB8259	J0JGC0000063	INDUCTOR	1	
	LB8422	J0JDC0000045	INDUCTOR	1	
	LB8530	J0JHC0000045	INDUCTOR	1	
	LB8532	J0JDC0000045	INDUCTOR	1	
	LB8551	J0JDC0000045	INDUCTOR	1	
	LB8561	J0JDC0000045	INDUCTOR	1	
	LB8901	J0JCC0000308	INDUCTOR	1	
	LB9001	J0JCC0000042	INDUCTOR	1	
	LB9002	J0JHC0000117	INDUCTOR	1	
	LB9004	J0JCC0000308	INDUCTOR	1	
	R1003	J0JBC0000010	INDUCTOR	1	
	R1004	J0JYC0000100	INDUCTOR	1	
	R1005	J0JYC0000100	INDUCTOR	1	
	R1006	J0JYC0000100	INDUCTOR	1	
	R1007	J0JYC0000100	INDUCTOR	1	
	R1008	J0JYC0000100	INDUCTOR	1	
	R1009	J0JYC0000100	INDUCTOR	1	
	R1011	J0JCC0000215	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R1013	J0JCC0000215	INDUCTOR	1	
	R1016	J0JCC0000215	INDUCTOR	1	
	R1017	J0JCC0000215	INDUCTOR	1	
	R1018	J0JCC0000215	INDUCTOR	1	
	R1019	J0JCC0000215	INDUCTOR	1	
	R1020	J0JBC0000010	INDUCTOR	1	
	R1022	J0JCC0000309	INDUCTOR	1	
	R1028	J0JCC0000215	INDUCTOR	1	
	R1035	J0JBC0000010	INDUCTOR	1	
	R1045	J0JBC0000010	INDUCTOR	1	
	R1046	J0JBC0000010	INDUCTOR	1	
	R1047	J0JBC0000010	INDUCTOR	1	
	R1048	J0JBC0000010	INDUCTOR	1	
	R1049	J0JBC0000010	INDUCTOR	1	
	R1055	J0JCC0000215	INDUCTOR	1	
	R1056	J0JCC0000215	INDUCTOR	1	
	R1057	J0JCC0000215	INDUCTOR	1	
	R1058	J0JCC0000215	INDUCTOR	1	
	R1078	J0JBC0000010	INDUCTOR	1	
	R1100	J0JCC0000215	INDUCTOR	1	
	R1101	J0JBC0000010	INDUCTOR	1	
	R1121	J0JBC0000010	INDUCTOR	1	
	R1122	J0JBC0000010	INDUCTOR	1	
	R1123	J0JBC0000010	INDUCTOR	1	
	R1124	J0JBC0000010	INDUCTOR	1	
	R1125	J0JBC0000010	INDUCTOR	1	
	R1126	J0JBC0000010	INDUCTOR	1	
	R1127	J0JBC0000010	INDUCTOR	1	
	R1128	J0JCC0000215	INDUCTOR	1	
	R1129	J0JBC0000010	INDUCTOR	1	
	R1132	J0JBC0000010	INDUCTOR	1	
	R1133	J0JBC0000010	INDUCTOR	1	
	R1136	J0JBC0000010	INDUCTOR	1	
	R1137	J0JBC0000010	INDUCTOR	1	
	R1152	J0JCC0000215	INDUCTOR	1	
	R2518	J0JCC0000215	INDUCTOR	1	
	R2519	J0JCC0000215	INDUCTOR	1	
	R2520	J0JCC0000215	INDUCTOR	1	
	R2521	J0JCC0000215	INDUCTOR	1	
	R2522	J0JCC0000215	INDUCTOR	1	
	R2523	J0JCC0000215	INDUCTOR	1	
	R4816	J0JCC0000308	INDUCTOR	1	
			TRANSFORMER		
	T6000	G4DYA0000214	SWITCHING TRANSFORMER	1	
			FILTERS		
	T9001	J0ZZB0000182	FILTER	1	
	T9002	J0ZZB0000182	FILTER	1	
			TERMINALS		
	ZJ1002	K1YF10000002	TERMINAL	1	
	ZJ6301	K1ZZ00001238	TERMINAL	1	
			OSCILLATORS		
	X1001	H0J169500036	OSCILLATOR	1	
	X1002	H0A327200191	OSCILLATOR	1	
	X2300	H2D500400006	OSCILLATOR	1	
	X4001	H0J245500110	OSCILLATOR	1	
	X4801	H0J245500110	OSCILLATOR	1	
	X8621	H0J270500131	OSCILLATOR	1	
	X9004	H1A4805B0027	OSCILLATOR	1	
			FL DISPLAY		
	FL6000	A2BB00000184	FL DISPLAY	1	
			JACKS		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	JK51	K4ZZ02000103	JK FM ANTENNA	1	
	JK52	K4AC02B00042	JK AM ANTENNA	1	
	JK3801	K2HA1YYB0022	JK VIDEO OUT	1	
	JK6000	K4AL04B00001	JK SPEAKER	1	
	JK6002	K2HA2YYA0009	JK AUX IN 1	1	
	JK6301	K2HC103A0031	JK AUX IN 2	1	
	JK6400	K1FY104A0034	JK USB PORT A PLAY	1	
	JK6401	K1FY104A0034	JK USB PORT B REC/PLAY	1	
			CHIP JUMPERS		
	K8002	D0GBR00J0004	0 1/10W	1	
	K8007	D0GBR00J0004	0 1/10W	1	
	K8100	D0GBR00J0004	0 1/10W	1	
	K8101	D0GBR00J0004	0 1/10W	1	
	K8103	D0GBR00J0004	0 1/10W	1	
	K8104	D0GBR00J0004	0 1/10W	1	
	K8105	D0GBR00J0004	0 1/10W	1	
	K8107	D0GBR00J0004	0 1/10W	1	
	K8108	D0GBR00J0004	0 1/10W	1	
	K8111	D0GBR00J0004	0 1/10W	1	
	K8251	D0GBR00J0004	0 1/10W	1	
	K8252	D0GBR00J0004	0 1/10W	1	
	K8321	D0GAR00J0005	0 1/16W	1	
	K8325	D0GAR00J0005	0 1/16W	1	
	K8331	D0GAR00J0005	0 1/16W	1	
	K8335	D0GAR00J0005	0 1/16W	1	
	K8341	D0GAR00J0005	0 1/16W	1	
	L53	D0GBR00J0004	0 1/10W	1	
	L6000	D0GBR00J0004	0 1/10W	1	
	LB8424	D0GAR00J0005	0 1/16W	1	
	LB8425	D0GAR00J0005	0 1/16W	1	
	LB8429	D0GAR00J0005	0 1/16W	1	
	LB8531	D0GAR00J0005	0 1/16W	1	
	LB9001	D0GBR00J0004	0 1/10W	1	
	LB9002	D0GBR00J0004	0 1/10W	1	
	LB9003	D0GBR00J0004	0 1/10W	1	
	R50	D0GAR00J0005	0 1/10W	1	
	R6308	D0GAR00J0005	0 1/10W	1	
	R1181	D0GBR00J0004	0 1/10W	1	
	R1183	D0GBR00J0004	0 1/10W	1	GA
	R1184	D0GBR00J0004	0 1/10W	1	GS
	R1185	D0GBR00J0004	0 1/10W	1	EE
	W1	ERJ8GEY0R00V	0 1/4W	1	
	W2	ERJ8GEY0R00V	0 1/4W	1	
	W3	ERJ8GEY0R00V	0 1/4W	1	
	W4	ERJ8GEY0R00V	0 1/4W	1	
	W5	ERJ8GEY0R00V	0 1/4W	1	
	W6	ERJ8GEY0R00V	0 1/4W	1	
	W7	ERJ8GEY0R00V	0 1/4W	1	
	W8	ERJ8GEY0R00V	0 1/4W	1	
	W9	ERJ8GEY0R00V	0 1/4W	1	
	W10	ERJ6GEY0R00V	0 1/8W	1	
	W11	ERJ8GEY0R00V	0 1/4W	1	
	W12	ERJ8GEY0R00V	0 1/4W	1	
	W13	ERJ8GEY0R00V	0 1/4W	1	
	W14	ERJ8GEY0R00V	0 1/4W	1	
	W15	ERJ8GEY0R00V	0 1/4W	1	
	W16	ERJ8GEY0R00V	0 1/4W	1	
	W17	ERJ8GEY0R00V	0 1/4W	1	
	W18	ERJ8GEY0R00V	0 1/4W	1	
	W19	ERJ8GEY0R00V	0 1/4W	1	
	W20	ERJ8GEY0R00V	0 1/4W	1	
	W21	ERJ8GEY0R00V	0 1/4W	1	
	W22	ERJ8GEY0R00V	0 1/4W	1	
	W23	ERJ6GEY0R00V	0 1/8W	1	
	W24	ERJ6GEY0R00V	0 1/8W	1	
	W25	ERJ3GEY0R00V	0 1/10W	1	
	W26	ERJ8GEY0R00V	0 1/4W	1	
	W27	ERJ8GEY0R00V	0 1/4W	1	
	W28	ERJ8GEY0R00V	0 1/4W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	W29	ERJ8GEY0R00V	0 1/4W	1	
	W30	ERJ8GEY0R00V	0 1/4W	1	
	W31	ERJ8GEY0R00V	0 1/4W	1	
	W32	ERJ8GEY0R00V	0 1/4W	1	
	W33	ERJ6GEY0R00V	0 1/8W	1	
	W34	ERJ6GEY0R00V	0 1/8W	1	
	W35	ERJ8GEY0R00V	0 1/4W	1	
	W36	ERJ8GEY0R00V	0 1/4W	1	
	W37	ERJ6GEY0R00V	0 1/8W	1	
	W38	ERJ6GEY0R00V	0 1/8W	1	
	W39	ERJ3GEY0R00V	0 1/10W	1	
	W40	ERJ3GEY0R00V	0 1/10W	1	
	W41	ERJ6GEY0R00V	0 1/8W	1	
	W42	ERJ6GEY0R00V	0 1/8W	1	
	W43	ERJ8GEY0R00V	0 1/4W	1	
	W44	ERJ8GEY0R00V	0 1/4W	1	
	W45	ERJ8GEY0R00V	0 1/4W	1	
	W46	ERJ8GEY0R00V	0 1/4W	1	
	W47	ERJ8GEY0R00V	0 1/4W	1	
	W48	ERJ8GEY0R00V	0 1/4W	1	
	W49	ERJ8GEY0R00V	0 1/4W	1	
	W50	ERJ8GEY0R00V	0 1/4W	1	
	W51	ERJ8GEY0R00V	0 1/4W	1	
	W52	ERJ8GEY0R00V	0 1/4W	1	
	W53	ERJ8GEY0R00V	0 1/4W	1	
	W54	ERJ8GEY0R00V	0 1/4W	1	
	W55	ERJ8GEY0R00V	0 1/4W	1	
	W56	ERJ8GEY0R00V	0 1/4W	1	
	W57	ERJ8GEY0R00V	0 1/4W	1	
	W58	ERJ8GEY0R00V	0 1/4W	1	
	W59	ERJ8GEY0R00V	0 1/4W	1	
	W60	ERJ8GEY0R00V	0 1/4W	1	
	W61	ERJ3GEY0R00V	0 1/10W	1	
	W62	ERJ3GEY0R00V	0 1/10W	1	
	W63	ERJ8GEY0R00V	0 1/4W	1	
	W64	ERJ8GEY0R00V	0 1/4W	1	
	W65	ERJ8GEY0R00V	0 1/4W	1	
	W66	ERJ8GEY0R00V	0 1/4W	1	
	W67	ERJ8GEY0R00V	0 1/4W	1	
	W68	ERJ8GEY0R00V	0 1/4W	1	
	W69	ERJ8GEY0R00V	0 1/4W	1	
	W70	ERJ8GEY0R00V	0 1/4W	1	
	W71	ERJ8GEY0R00V	0 1/4W	1	
	W72	ERJ6GEY0R00V	0 1/8W	1	
	W73	ERJ8GEY0R00V	0 1/4W	1	
	W74	ERJ8GEY0R00V	0 1/4W	1	
	W75	ERJ8GEY0R00V	0 1/4W	1	
	W76	ERJ8GEY0R00V	0 1/4W	1	
	W77	ERJ8GEY0R00V	0 1/4W	1	
	W78	ERJ8GEY0R00V	0 1/4W	1	
	W79	ERJ8GEY0R00V	0 1/4W	1	
	W80	ERJ8GEY0R00V	0 1/4W	1	
	W81	ERJ8GEY0R00V	0 1/4W	1	
	W82	ERJ8GEY0R00V	0 1/4W	1	
	W83	ERJ8GEY0R00V	0 1/4W	1	
	W84	ERJ8GEY0R00V	0 1/4W	1	
	W85	ERJ8GEY0R00V	0 1/4W	1	
	W86	ERJ8GEY0R00V	0 1/4W	1	
	W87	ERJ8GEY0R00V	0 1/4W	1	
	W88	ERJ8GEY0R00V	0 1/4W	1	
	W89	ERJ8GEY0R00V	0 1/4W	1	
	W90	ERJ8GEY0R00V	0 1/4W	1	
	W91	ERJ8GEY0R00V	0 1/4W	1	
	W92	ERJ8GEY0R00V	0 1/4W	1	
	W93	ERJ6GEY0R00V	0 1/8W	1	
	W94	ERJ8GEY0R00V	0 1/4W	1	
	W95	ERJ6GEY0R00V	0 1/8W	1	
	W96	ERJ6GEY0R00V	0 1/8W	1	
	W97	ERJ8GEY0R00V	0 1/4W	1	
	W98	ERJ8GEY0R00V	0 1/4W	1	
	W99	ERJ8GEY0R00V	0 1/4W	1	
	W100	ERJ6GEY0R00V	0 1/8W	1	
	W101	ERJ8GEY0R00V	0 1/4W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	W102	ERJ8GEY0R00V	0 1/4W	1	
	W103	ERJ6GEY0R00V	0 1/8W	1	
	W104	ERJ8GEY0R00V	0 1/4W	1	
	W105	ERJ8GEY0R00V	0 1/4W	1	
	W106	ERJ6GEY0R00V	0 1/8W	1	
	W107	ERJ8GEY0R00V	0 1/4W	1	
	W108	ERJ3GEY0R00V	0 1/10W	1	
	W109	ERJ8GEY0R00V	0 1/4W	1	
	W110	ERJ6GEY0R00V	0 1/8W	1	
	W111	ERJ3GEY0R00V	0 1/10W	1	
	W112	ERJ3GEY0R00V	0 1/10W	1	
	W113	ERJ8GEY0R00V	0 1/4W	1	
	W114	ERJ8GEY0R00V	0 1/4W	1	
	W115	ERJ8GEY0R00V	0 1/4W	1	
	W116	ERJ8GEY0R00V	0 1/4W	1	
	W117	ERJ8GEY0R00V	0 1/4W	1	
	W118	ERJ3GEY0R00V	0 1/10W	1	
	W119	ERJ8GEY0R00V	0 1/4W	1	
	W120	ERJ8GEY0R00V	0 1/4W	1	
	W121	ERJ8GEY0R00V	0 1/4W	1	
	W122	ERJ8GEY0R00V	0 1/4W	1	
	W123	ERJ8GEY0R00V	0 1/4W	1	
	W124	ERJ8GEY0R00V	0 1/4W	1	
	W125	ERJ8GEY0R00V	0 1/4W	1	
	W126	ERJ8GEY0R00V	0 1/4W	1	
	W127	ERJ8GEY0R00V	0 1/4W	1	
	W128	ERJ3GEY0R00V	0 1/10W	1	
	W129	ERJ6GEY0R00V	0 1/8W	1	
	W130	ERJ8GEY0R00V	0 1/4W	1	
	W131	ERJ8GEY0R00V	0 1/4W	1	
	W132	ERJ8GEY0R00V	0 1/4W	1	
	W133	ERJ8GEY0R00V	0 1/4W	1	
	W134	ERJ8GEY0R00V	0 1/4W	1	
	W135	ERJ8GEY0R00V	0 1/4W	1	
	W136	ERJ8GEY0R00V	0 1/4W	1	
	W137	ERJ8GEY0R00V	0 1/4W	1	
	W138	ERJ8GEY0R00V	0 1/4W	1	
	W139	ERJ8GEY0R00V	0 1/4W	1	
	W140	ERJ8GEY0R00V	0 1/4W	1	
	W141	ERJ8GEY0R00V	0 1/4W	1	
	W142	ERJ8GEY0R00V	0 1/4W	1	
	W143	ERJ8GEY0R00V	0 1/4W	1	
	W144	ERJ8GEY0R00V	0 1/4W	1	
	W145	ERJ3GEY0R00V	0 1/10W	1	
	W146	ERJ8GEY0R00V	0 1/4W	1	
	W147	ERJ8GEY0R00V	0 1/4W	1	
	W148	ERJ8GEY0R00V	0 1/4W	1	
	W149	ERJ8GEY0R00V	0 1/4W	1	
	W150	ERJ8GEY0R00V	0 1/4W	1	
	W151	ERJ6GEY0R00V	0 1/8W	1	
	W152	ERJ6GEY0R00V	0 1/8W	1	
	W153	ERJ8GEY0R00V	0 1/4W	1	
	W154	ERJ8GEY0R00V	0 1/4W	1	
	W155	ERJ8GEY0R00V	0 1/4W	1	
	W156	ERJ8GEY0R00V	0 1/4W	1	
	W157	ERJ8GEY0R00V	0 1/4W	1	
	W158	ERJ6GEY0R00V	0 1/8W	1	
	W159	ERJ8GEY0R00V	0 1/4W	1	
	W160	ERJ6GEY0R00V	0 1/8W	1	
	W161	ERJ8GEY0R00V	0 1/4W	1	
	W162	ERJ8GEY0R00V	0 1/4W	1	
	W163	ERJ8GEY0R00V	0 1/4W	1	
	W164	ERJ8GEY0R00V	0 1/4W	1	
	W165	ERJ8GEY0R00V	0 1/4W	1	
	W166	ERJ6GEY0R00V	0 1/8W	1	
	W167	ERJ8GEY0R00V	0 1/4W	1	
			REMOTE SENSOR		
	IR6500	B3RAD0000204	REMOTE SENSOR	1	
			RESISTORS		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	LB1005	D0GB100JA065	10 1/10W	1	
	LB8691	D0GA101JA023	100 1/16W	1	
	LB8692	D0GA101JA023	100 1/16W	1	
	LB8693	D0GA101JA023	100 1/16W	1	
	R51	D0GB222JA065	2.2K 1/10W	1	
	R52	D0GB561JA065	560 1/10W	1	
	R53	D0GA472JA023	4.7K 1/16W	1	
	R54	D0GA472JA023	4.7K 1/16W	1	
	R55	D0GA221JA023	220 1/16W	1	
	R56	D0GB221JA065	220 1/10W	1	
	R57	D0GA102JA023	1K 1/16W	1	
	R59	D0GB222JA065	2.2K 1/10W	1	
	R60	D0GB222JA065	2.2K 1/10W	1	
	R73	D0GBR00J0004	0 1/10W	1	
	R74	D0GBR00J0004	0 1/10W	1	
	R75	D0GBR00J0004	0 1/10W	1	
	R76	D0GBR00J0004	0 1/10W	1	
	R77	D0GBR00J0004	0 1/10W	1	
	R78	D0GBR00J0004	0 1/10W	1	
	R79	D0GBR00J0004	0 1/10W	1	
	R80	D0GBR00J0004	0 1/10W	1	
	R81	D0GFR00J0005	0 1/4W	1	
	R1002	D0GB222JA065	2.2K 1/10W	1	
	R1012	D0GB101JA065	100 1/10W	1	
	R1014	D0GB221JA065	220 1/10W	1	
	R1015	D0GB102JA065	1K 1/10W	1	
	R1021	D0GB101JA065	100 1/10W	1	
	R1023	D0GB101JA065	100 1/10W	1	
	R1024	D0GB101JA065	100 1/10W	1	
	R1025	D0GB105JA065	1M 1/10W	1	
	R1026	D0GB224JA065	220K 1/10W	1	
	R1027	D0GB106JA065	10M 1/10W	1	
	R1029	D0GB823JA065	82K 1/10W	1	
	R1031	D0GB103JA065	10K 1/10W	1	
	R1032	D0GB103JA065	10K 1/10W	1	
	R1033	D0GB272JA065	2.7K 1/10W	1	GS
	R1033	D0GB682JA065	6.8K 1/10W	1	EE
	R1033	D0GBR00J0004	0 1/10W	1	GA
	R1034	D0GB272JA065	2.7K 1/10W	1	
	R1038	D0GA103JA023	10K 1/16W	1	
	R1043	D0GB103JA065	10K 1/10W	1	
	R1044	D0GB333JA065	33K 1/10W	1	
	R1064	D0GB103JA065	10K 1/10W	1	
	R1065	D0GB330JA065	33 1/10W	1	
	R1066	D0GB330JA065	33 1/10W	1	
	R1067	ERJ3RBD683V	68K 1/16W	1	
	R1068	ERJ3RBD153V	15K 1/16W	1	
	R1069	D0GBR00J0004	0 1/10W	1	
	R1070	D0GB222JA065	2.2K 1/10W	1	
	R1071	D0GBR00J0004	0 1/10W	1	
	R1095	D0GB123JA065	12K 1/10W	1	
	R1096	D0GBR00J0004	0 1/8W	1	
	R1105	D0GB103JA065	10K 1/10W	1	
	R1106	D0GB334JA065	330K 1/10W	1	
	R1107	D0GB222JA065	2.2K 1/10W	1	
	R1108	D0GB222JA065	2.2K 1/10W	1	
	R1109	D0GB103JA065	10K 1/10W	1	
	R1114	D0GB103JA065	10K 1/10W	1	
	R1115	D0GB102JA065	1K 1/10W	1	
	R1117	D0GB103JA065	10K 1/10W	1	
	R1119	D0GB122JA065	1.2K 1/10W	1	
	R1138	D0GB103JA065	10K 1/10W	1	
	R1139	D0GB103JA065	10K 1/10W	1	
	R1144	D0GB101JA065	100 1/10W	1	
	R1145	D0GB101JA065	100 1/10W	1	
	R1146	D0GBR00J0004	0 1/10W	1	
	R1151	D0GB101JA065	100 1/10W	1	
	R1153	D0GB103JA065	10K 1/10W	1	
	R1154	D0GB103JA065	10K 1/10W	1	
	R1155	D0GB473JA065	47K 1/10W	1	
	R1156	D0GB473JA065	47K 1/10W	1	
	R1159	D0GB272JA065	2.7K 1/10W	1	
	R1160	D0GB272JA065	2.7K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R1170	D0GB103JA065	10K 1/10W	1	
	R1171	D0GB103JA065	10K 1/10W	1	
	R1174	D0GB103JA065	10K 1/10W	1	
	R1175	D0GB103JA065	10K 1/10W	1	
	R1176	D0GB103JA065	10K 1/10W	1	
	R1178	D0GB103JA065	10K 1/10W	1	
	R2102	D0GB563JA065	56K 1/10W	1	
	R2103	D0GB153JA065	15K 1/10W	1	
	R2104	D0GB4R7JA065	4.7 1/10W	1	
	R2105	D1BB3002A074	30K 1/10W	1	
	R2106	D1BB3002A074	30K 1/10W	1	
	R2107	D1BB1002A074	10K 1/10W	1	
	R2108	ERG2SJ470E	47 2W	1	
	R2175	D1BB1002A074	10K 1/10W	1	
	R2176	D1BB1002A074	10K 1/10W	1	
	R2177	D1BB4302A074	43K 1/10W	1	
	R2178	D0GB563JA065	56K 1/10W	1	
	R2179	D0GB153JA065	15K 1/10W	1	
	R2181	D0GBR00J0004	0 1/10W	1	
	R2301	D0GB103JA065	10K 1/10W	1	
	R2302	D0GB122JA065	1.2K 1/10W	1	GA
	R2302	D0GB332JA065	3.3K 1/10W	1	GS
	R2302	D0GB562JA065	5.6K 1/10W	1	EE
	R2303	D0GB103JA065	10K 1/10W	1	
	R2304	D0GB122JA065	1.2K 1/10W	1	
	R2309	D0GA101JA023	100 1/16W	1	
	R2310	D0GA101JA023	100 1/16W	1	
	R2311	D0GA103JA023	10K 1/16W	1	
	R2312	D0GA103JA023	10K 1/16W	1	
	R2313	D0GA103JA023	10K 1/16W	1	
	R2314	D0GA101JA023	100 1/16W	1	
	R2315	D0GA103JA023	10K 1/16W	1	
	R2316	D0GA103JA023	10K 1/16W	1	
	R2317	D0GA103JA023	10K 1/16W	1	
	R2318	D0GA103JA023	10K 1/16W	1	
	R2325	D0GA103JA023	10K 1/16W	1	
	R2326	D0GA103JA023	10K 1/16W	1	
	R2327	D0GA103JA023	10K 1/16W	1	
	R2332	D0GA473JA023	47K 1/16W	1	
	R2333	D0GA473JA023	47K 1/16W	1	
	R2334	D0GA473JA023	47K 1/16W	1	
	R2335	D0GA101JA023	100 1/16W	1	
	R2343	D0GA473JA023	47K 1/16W	1	
	R2348	D0GA154JA023	150K 1/16W	1	
	R2353	D0GA101JA023	100 1/16W	1	
	R2354	D0GA101JA023	100 1/16W	1	
	R2355	D0GA101JA023	100 1/16W	1	
	R2359	D0GA101JA023	100 1/16W	1	
	R2360	D0GA101JA023	100 1/16W	1	
	R2361	D0GA101JA023	100 1/16W	1	
	R2362	D0GA101JA023	100 1/16W	1	
	R2363	D0GA101JA023	100 1/16W	1	
	R2381	D0GB222JA065	2.2K 1/10W	1	
	R2382	D0GB563JA065	56K 1/10W	1	
	R2384	D0GB153JA065	15K 1/10W	1	
	R2385	D0GB4R7JA065	4.7 1/10W	1	
	R2386	D0GB683JA065	68K 1/10W	1	
	R2387	D0GB124JA065	120K 1/10W	1	
	R2388	D1BB1002A074	10K 1/10W	1	
	R2391	D0GBR00J0004	0 1/10W	1	
	R2392	D0GBR00J0004	0 1/10W	1	
	R2393	D0GB391JA065	390 1/10W	1	
	R2395	D0GB203JA065	20K 1/10W	1	
	R2396	D0GB103JA065	10K 1/10W	1	
	R2397	D0GBR00J0004	0 1/10W	1	
	R2398	D0GB4R7JA065	4.7 1/10W	1	
	R2399	D0GB222JA065	2.2K 1/10W	1	
	R2401	D0GFR00J0005	0 1/4W	1	
	R2511	D0GBR00J0004	0 1/10W	1	
	R2512	D0GBR00J0004	0 1/10W	1	
	R2513	D0GBR00J0004	0 1/10W	1	
	R2514	D0GBR00J0004	0 1/10W	1	
	R2516	D0GBR00J0004	0 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2517	D0GBR00J0004	0 1/10W	1	
	R2524	D0GBR00J0004	0 1/10W	1	
	R2525	D0GBR00J0004	0 1/10W	1	
	R2526	D0GBR00J0004	0 1/10W	1	
	R3801	D0GAR00J0005	0 1/16W	1	
	R3802	D0GAR00J0005	0 1/16W	1	
	R3803	D0GAR00J0005	0 1/16W	1	
	R3804	D0GA102JA023	1K 1/16W	1	
	R3805	D0GAR00J0005	0 1/16W	1	
	R3806	D0GAR00J0005	0 1/16W	1	
	R3807	D0GAR00J0005	0 1/16W	1	
	R3808	D0GB750JA065	75 1/10W	1	
	R4001	D0GB152JA065	1.5K 1/10W	1	
	R4002	D0GB105JA065	1M 1/10W	1	
	R4003	D0GAR00J0005	0 1/16W	1	
	R4004	D0GAR00J0005	0 1/16W	1	
	R4005	D0GA103JA023	10K 1/16W	1	
	R4006	D0GAR00J0005	0 1/16W	1	
	R4007	D0GB101JA065	100 1/10W	1	
	R4008	D0GB101JA065	100 1/10W	1	
	R4009	D0GB101JA065	100 1/10W	1	
	R4010	D0GB101JA065	100 1/10W	1	
	R4013	D0GB103JA065	10K 1/10W	1	
	R4014	D0GB103JA065	10K 1/10W	1	
	R4024	D0GA103JA023	10K 1/16W	1	
	R4025	D0GB101JA065	100 1/10W	1	
	R4026	D0GB101JA065	100 1/10W	1	
	R4029	D0GB101JA065	100 1/10W	1	
	R4030	D0GB101JA065	100 1/10W	1	
	R4048	D0GB681JA065	680 1/10W	1	
	R4049	D0GB104JA065	100K 1/10W	1	
	R4105	D0GA101JA023	100 1/16W	1	
	R4582	D0GBR00J0004	0 1/10W	1	
	R4584	D0GA103JA023	10K 1/16W	1	
	R4585	D0GA103JA023	10K 1/16W	1	
	R4587	D0GB103JA065	10K 1/10W	1	
	R4801	D0GB152JA065	1.5K 1/10W	1	
	R4802	D0GB105JA065	1M 1/10W	1	
	R4803	D0GA473JA023	47K 1/16W	1	
	R4804	D0GA473JA023	47K 1/16W	1	
	R4805	D0GA103JA023	10K 1/16W	1	
	R4806	D0GA103JA023	10K 1/16W	1	
	R4807	D0GA103JA023	10K 1/16W	1	
	R4808	D0GA221JA023	220 1/16W	1	
	R4809	D0GA330JA023	33 1/16W	1	
	R4810	D0GA330JA023	33 1/16W	1	
	R4811	D0GA221JA023	220 1/16W	1	
	R4860	D0GBR00J0004	0 1/10W	1	
	R6006	D0GB103JA065	10K 1/10W	1	
	R6007	D0GB100JA065	10 1/10W	1	
	R6007	D0GB103JA065	10K 1/10W	1	
	R6008	D0GB103JA065	10K 1/10W	1	
	R6009	D0GB103JA065	10K 1/10W	1	
	R6010	D0GBR00J0004	0 1/10W	1	
	R6011	D0GB100JA065	10 1/10W	1	
	R6016	D0GB221JA065	220 1/10W	1	
	R6017	D0GB471JA065	470 1/10W	1	
	R6018	D0GB221JA065	220 1/10W	1	
	R6023	D0GB823JA065	82K 1/10W	1	
	R6025	D0GB562JA065	5.6K 1/10W	1	
	R6026	D0GB220JA065	22 1/10W	1	
	R6028	D0GB1R0JA065	1.0 1/10W	1	
	R6029	D0GB473JA065	47K 1/10W	1	
	R6030	D0GB1R0JA065	1.0 1/10W	1	
	R6032	D0GB100JA065	10 1/10W	1	
	R6033	D0GB223JA065	22K 1/10W	1	
	R6037	D0GBR00J0004	0 1/10W	1	
	R6038	D0GB103JA065	10K 1/10W	1	
	R6046	D0GB223JA065	22K 1/10W	1	
	R6050	D0GB100JA065	10 1/10W	1	
	R6054	D0GB563JA065	56K 1/10W	1	
	R6055	D0GB473JA065	47K 1/10W	1	
	R6056	D0GB472JA065	4.7K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R6057	D0GB224JA065	220K 1/10W	1	
	R6058	D0GB3R3JA065	3.3 1/10W	1	
	R6060	D0GB3R3JA065	3.3 1/10W	1	
	R6061	D0GB3R3JA065	3.3 1/10W	1	
	R6062	D0GB3R3JA065	3.3 1/10W	1	
	R6066	D0GB104JA065	100K 1/10W	1	
	R6067	D0GB104JA065	100K 1/10W	1	
	R6068	D0GB104JA065	100K 1/10W	1	
	R6069	D0GB104JA065	100K 1/10W	1	
	R6070	D0GB123JA065	12K 1/10W	1	
	R6072	D0GB103JA065	10K 1/10W	1	
	R6080	D0GFR00J0005	0 1/4W	1	
	R6100	D0GB103JA065	10K 1/10W	1	
	R6101	D0GB472JA065	4.7K 1/10W	1	
	R6104	D0GB103JA065	10K 1/10W	1	
	R6105	D0GB472JA065	4.7K 1/10W	1	
	R6106	D0GB472JA065	4.7K 1/10W	1	
	R6107	D0GB472JA065	4.7K 1/10W	1	
	R6108	D0GB102JA065	1K 1/10W	1	
	R6109	D0GB102JA065	1K 1/10W	1	
	R6109	D0GB123JA065	12K 1/10W	1	
	R6110	D0GB223JA065	22K 1/10W	1	
	R6111	D0GB103JA065	10K 1/10W	1	
	R6112	D0GB102JA065	1K 1/10W	1	
	R6113	D0GB102JA065	1K 1/10W	1	
	R6116	D0GBR00J0004	0 1/10W	1	
	R6117	D0GB103JA065	10K 1/10W	1	
	R6118	D0GB103JA065	10K 1/10W	1	
	R6123	D0GB473JA065	47K 1/10W	1	
	R6124	D0GB473JA065	47K 1/10W	1	
	R6125	D0GB103JA065	10K 1/10W	1	
	R6126	D0GB103JA065	10K 1/10W	1	
	R6132	D0GB224JA065	220K 1/10W	1	
	R6201	D0GB222JA065	2.2K 1/10W	1	
	R6202	D0GB392JA065	3.9K 1/10W	1	
	R6208	D0GB223JA065	22K 1/10W	1	
	R6209	D0GB123JA065	12K 1/10W	1	
	R6300	D0GFR00J0005	0 1/4W	1	
	R6301	D0GBR00J0004	0 1/10W	1	
	R6301	D0GFR00J0005	0 1/4W	1	
	R6302	D0GFR00J0005	0 1/4W	1	
	R6303	D0GFR00J0005	0 1/4W	1	
	R6304	D0GFR00J0005	0 1/4W	1	
	R6305	D0GFR00J0005	0 1/4W	1	
	R6306	D0GFR00J0005	0 1/4W	1	
	R6307	D0GFR00J0005	0 1/4W	1	
	R6309	D0GFR00J0005	0 1/4W	1	
	R6400	D0GB331JA065	330 1/10W	1	
	R6401	ERJ8GEYJ474V	470K 1/4W	1	
	R6402	ERJ8GEYJ474V	470K 1/4W	1	
	R7001	D0GB222JA065	2.2K 1/10W	1	
	R8001	D0GA103JA023	10K 1/16W	1	
	R8003	D0GA103JA023	10K 1/16W	1	
	R8011	D0GA220JA023	22 1/16W	1	
	R8012	D0GA220JA023	22 1/16W	1	
	R8013	D0GA220JA023	22 1/16W	1	
	R8211	D0GA103JA023	10K 1/16W	1	
	R8221	D0GA333JA023	33K 1/16W	1	
	R8225	D0GA333JA023	33K 1/16W	1	
	R8230	D0GA222JA023	2.2K 1/16W	1	
	R8231	D0GA242JA023	2.4K 1/16W	1	
	R8232	D0GA562JA023	5.6K 1/16W	1	
	R8258	ERJ2RHD6191X	6.19K 1/16W	1	
	R8259	D0GA103JA023	10K 1/16W	1	
	R8260	D0GA103JA023	10K 1/16W	1	
	R8261	D0GA103JA023	10K 1/16W	1	
	R8262	D0GA103JA023	10K 1/16W	1	
	R8263	D0GA472JA023	4.7K 1/16W	1	
	R8264	ERJ2RHD1001X	1K 1/16W	1	
	R8265	ERJ2RHD1001X	1K 1/16W	1	
	R8267	D0GA683JA023	68K 1/16W	1	
	R8268	ERJ2GEJ183X	18K 1/16W	1	
	R8269	D0GA683JA023	68K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R8270	ERJ2GEJ183X	18K 1/16W	1	
	R8311	D1BA2401A022	2.4K 1/16W	1	
	R8312	D1BA1001A022	1K 1/16W	1	
	R8313	D1BA1502A022	15K 1/16W	1	
	R8314	D1BA1502A022	15K 1/16W	1	
	R8315	ERJ2RKD240X	24 1/16W	1	
	R8316	ERJ2RKD240X	24 1/16W	1	
	R8317	D0GA153JA023	15K 1/16W	1	
	R8318	D0GA153JA023	15K 1/16W	1	
	R8321	ERJ3RBD201V	200 1/16W	1	
	R8325	ERJ3RBD201V	200 1/16W	1	
	R8401	D0GA101JA023	100 1/16W	1	
	R8402	D0GA101JA023	100 1/16W	1	
	R8403	D0GA101JA023	100 1/16W	1	
	R8408	D0GA103JA023	10K 1/16W	1	
	R8409	D0GA103JA023	10K 1/16W	1	
	R8410	D0GA103JA023	10K 1/16W	1	
	R8422	D0GAR00J0005	0 1/16W	1	
	R8501	D0GA103JA023	10K 1/16W	1	
	R8502	D0GA103JA023	10K 1/16W	1	
	R8503	D0GA103JA023	10K 1/16W	1	
	R8504	D0GA103JA023	10K 1/16W	1	
	R8531	D0GA152JA023	1.5K 1/16W	1	
	R8532	D0GA222JA023	2.2K 1/16W	1	
	R8533	D0GAR00J0005	0 1/16W	1	
	R8534	D0GA103JA023	10K 1/16W	1	
	R8535	D0GA104JA023	100K 1/16W	1	
	R8536	D0GA103JA023	10K 1/16W	1	
	R8537	D0GAR00J0005	0 1/16W	1	
	R8538	D0GAR00J0005	0 1/16W	1	
	R8539	D0GAR00J0005	0 1/16W	1	
	R8541	D0GA153JA023	15K 1/16W	1	
	R8542	D0GAR00J0005	0 1/16W	1	
	R8551	D0GAR00J0005	0 1/16W	1	
	R8552	D0GA102JA023	1K 1/16W	1	
	R8553	D0GA102JA023	1K 1/16W	1	
	R8554	D0GA680JA023	68 1/16W	1	
	R8555	D0GA2R2JA023	2.2 1/16W	1	
	R8556	D0GB560JA065	56 1/10W	1	
	R8557	D0GB510JA065	51 1/10W	1	
	R8558	D0GA473JA023	47K 1/16W	1	
	R8559	D0GA153JA023	15K 1/16W	1	
	R8561	D0GAR00J0005	0 1/16W	1	
	R8562	D0GA102JA023	1K 1/16W	1	
	R8563	D0GA102JA023	1K 1/16W	1	
	R8564	D0GA220JA023	22 1/16W	1	
	R8565	D0GA2R2JA023	2.2 1/16W	1	
	R8566	D0GB560JA065	56 1/10W	1	
	R8567	D0GB510JA065	51 1/10W	1	
	R8568	D0GA473JA023	47K 1/16W	1	
	R8601	D0GA104JA023	100K 1/16W	1	
	R8602	D0GAR00J0005	0 1/16W	1	
	R8611	D0GA101JA023	100 1/16W	1	
	R8613	D0GA101JA023	100 1/16W	1	
	R8621	D0GA105JA023	1M 1/16W	1	
	R8622	D1BA1001A022	1K 1/16W	1	
	R8901	D0GA100JA023	10 1/16W	1	
	R9001	D0GAR00J0005	0 1/16W	1	
	R9002	D0GAR00J0005	0 1/16W	1	
	R9003	D0GB222JA065	2.2K 1/10W	1	
	R9007	D0GA103JA023	10K 1/16W	1	
	R9008	D0GA105JA023	1M 1/16W	1	
	R9008	D0GB331JA065	330 1/10W	1	
	R9009	D0GA152JA023	1.5K 1/16W	1	
	R9009	D0GB104JA065	100K 1/10W	1	
	R9010	D0GA100JA023	10 1/16W	1	
	R9012	D0GB222JA065	2.2K 1/10W	1	
	R9013	D0GBR00J0004	0 1/10W	1	
	R9016	D0GBR00J0004	0 1/10W	1	
	R9017	D0GB474JA065	470K 1/10W	1	
	R9018	D0GB474JA065	470K 1/10W	1	
	R9019	D0GB222JA065	2.2K 1/10W	1	
	R9020	D0GB222JA065	2.2K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R9023	D0GA103JA023	10K 1/16W	1	
	R9040	D0GA103JA023	10K 1/16W	1	
	R9041	D0GA103JA023	10K 1/16W	1	
	R9043	D0GA103JA023	10K 1/16W	1	
	R9044	D0GA103JA023	10K 1/16W	1	
	R9045	D0GA103JA023	10K 1/16W	1	
	R9046	D0GA103JA023	10K 1/16W	1	
	R9047	D0GA103JA023	10K 1/16W	1	
	R9048	D0GA103JA023	10K 1/16W	1	
	R9049	D0GA103JA023	10K 1/16W	1	
	R9055	D0GA472JA023	4.7K 1/16W	1	
	R9080	D0GA103JA023	10K 1/16W	1	
	R9083	D0GA470JA023	47 1/16W	1	
	R9084	D0GA470JA023	47 1/16W	1	
	R9085	D0GA470JA023	47 1/16W	1	
	R9086	D0GA470JA023	47 1/16W	1	
	R9087	D0GA470JA023	47 1/16W	1	
	R9088	D0GA470JA023	47 1/16W	1	
	R9089	D0GA103JA023	10K 1/16W	1	
			RESISTOR NET- WORKS		
	RX2301	D1H81034A042	RESISTOR NETWORK	1	
	RX2302	D1H81014A042	RESISTOR NETWORK	1	
	RX2303	D1H81014A042	RESISTOR NETWORK	1	
	RX2304	D1H81034A042	RESISTOR NETWORK	1	
	RX2305	D1H41012A014	RESISTOR NETWORK	1	
	RX2306	D1H81014A042	RESISTOR NETWORK	1	
	RX2307	D1H81014A042	RESISTOR NETWORK	1	
	RX2308	D1H81014A042	RESISTOR NETWORK	1	
	RX4801	D1H82214A042	RESISTOR NETWORK	1	
	RX4804	D1H83304A042	RESISTOR NETWORK	1	
	RX4805	D1H81014A042	RESISTOR NETWORK	1	
	RX8001	D1H41032A014	RESISTOR NETWORK	1	
	RX8011	D1H88204A043	RESISTOR NETWORK	1	
	RX8012	D1H88204A043	RESISTOR NETWORK	1	
	RX8013	D1H88204A043	RESISTOR NETWORK	1	
	RX8014	D1H88204A043	RESISTOR NETWORK	1	
	RX8015	D1H88204A043	RESISTOR NETWORK	1	
	RX8016	D1H88204A043	RESISTOR NETWORK	1	
	RX8017	D1H88204A043	RESISTOR NETWORK	1	
	RX8018	D1H42202A014	RESISTOR NETWORK	1	
	RX8019	D1H42202A014	RESISTOR NETWORK	1	
	RX8020	D1H42202A014	RESISTOR NETWORK	1	
	RX8031	D1H44722A014	RESISTOR NETWORK	1	
	RX8032	D1H44722A014	RESISTOR NETWORK	1	
	RX8401	D1H41012A014	RESISTOR NETWORK	1	
	RX8402	D1H41012A014	RESISTOR NETWORK	1	
	RX8531	D1H45602A014	RESISTOR NETWORK	1	
	RX8532	D1H45602A014	RESISTOR NETWORK	1	
	RX8533	D1H45602A014	RESISTOR NETWORK	1	
	RX8611	D1H44722A014	RESISTOR NETWORK	1	
	RX9014	D1H85604A043	RESISTOR NETWORK	1	
	RX9015	D1H85604A043	RESISTOR NETWORK	1	
	RX9016	D1H85604A043	RESISTOR NETWORK	1	
	RX9017	D1H85604A043	RESISTOR NETWORK	1	
	RX9018	D1H44722A014	RESISTOR NETWORK	1	
	RX9020	D1H44722A014	RESISTOR NETWORK	1	
			CAPACITORS		
	C51	F1H1H102B047	1000pF 50V	1	
	C52	F1H1A474A107	0.47uF 10V	1	
	C61	F1H1H104B047	0.1uF 50V	1	
	C62	F1H1H104B047	0.1uF 50V	1	
	C63	F1H1H6R0B050	6.0pF 50V	1	
	C64	F1H1H3R0B050	3.0pF 50V	1	
	C65	F1H1H3R0B050	3.0pF 50V	1	
	C66	F1H1H330B052	33pF 50V	1	
	C67	F1H1H3R0B050	3.0pF 50V	1	
	C1000	F1J1A106A043	10uF 10V	1	
	C1001	F1H1H104B047	0.1uF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C1002	F1J1A106A043	10uF 10V	1	
	C1003	F1H1C104A178	0.1uF 16V	1	
	C1004	F1H1C104A178	0.1uF 16V	1	
	C1005	F1H1C104A178	0.1uF 16V	1	
	C1006	F1H1C104A178	0.1uF 16V	1	
	C1007	F1H1C104A178	0.1uF 16V	1	
	C1008	F1H1C104A178	0.1uF 16V	1	
	C1009	F1H1C104A178	0.1uF 16V	1	
	C1010	F1H1C104A178	0.1uF 16V	1	
	C1013	F1H1H470B052	47pF 50V	1	
	C1016	F1H1H681B052	680pF 50V	1	
	C1017	F2A0J331A183	330uF 6.3V	1	
	C1019	F1H1C104A178	0.1uF 16V	1	
	C1020	F1H0J1060006	10uF 6.3V	1	
	C1021	F1H0J1060006	10uF 6.3V	1	
	C1022	F1H0J1060006	10uF 6.3V	1	
	C1023	F1H0J1060006	10uF 6.3V	1	
	C1024	F1H0J1060006	10uF 6.3V	1	
	C1025	F1H0J1060012	10uF 6.3V	1	
	C1026	F1H1H180B052	18pF 50V	1	
	C1027	F1H1H180B052	18pF 50V	1	
	C1028	F1H1H220B052	22pF 50V	1	
	C1029	F1H1H270B052	27pF 50V	1	
	C1030	F1H1H101B052	100pF 50V	1	
	C1031	F1H1H102B047	1000pF 50V	1	
	C1032	F1H1H102B047	1000pF 50V	1	
	C1033	F1H1H102B047	1000pF 50V	1	
	C1034	F1H1H102B047	1000pF 50V	1	
	C1035	F1H1H102B047	1000pF 50V	1	
	C1036	F1H1C104A178	0.1uF 16V	1	
	C1037	F1H1C104A178	0.1uF 16V	1	
	C1040	F1H1C104A178	0.1uF 16V	1	
	C1041	F1H1C104A178	0.1uF 16V	1	
	C1042	F1H1A334A036	0.33uF 10V	1	
	C1043	F1H1E223A161	0.022uF 25V	1	
	C1046	F1H1H102B047	1000pF 50V	1	
	C1047	F1H1C104A178	0.1uF 16V	1	
	C1048	F1J1A106A043	10uF 10V	1	
	C1049	F1H1H104B047	0.1uF 50V	1	
	C1050	F1H1H104B047	0.1uF 50V	1	
	C2101	F1K1H475A256	4.7uF 50V	1	
	C2102	F1H1H103B047	0.01uF 50V	1	
	C2103	F1H1H104B047	0.1uF 50V	1	
	C2104	F1H1H821B052	820pF 50V	1	
	C2105	F1H1H182B047	1800pF 50V	1	
	C2106	F1J1A106A043	10uF 10V	1	
	C2107	F1J1A106A043	10uF 10V	1	
	C2110	F1H1H104B047	0.1uF 50V	1	
	C2148	F1K1H475A256	4.7uF 50V	1	
	C2149	F1K1E1060009	10uF 25V	1	
	C2150	F1H1H103B047	0.01uF 50V	1	
	C2151	F1H1H102B047	1000pF 50V	1	
	C2152	F1H1H104B047	0.1uF 50V	1	
	C2153	F1H1H470B052	47pF 50V	1	
	C2155	F2A1A221B161	220uF 10V	1	
	C2157	F1H1H104B047	0.1uF 50V	1	
	C2158	F2A1C221B456	220uF 16V	1	
	C2180	F1H1H104B047	0.1uF 50V	1	
	C2181	F1H1H104B047	0.1uF 50V	1	
	C2303	F1H0J105A051	1uF 6.3V	1	
	C2304	F1H1H104B055	0.1uF 50V	1	
	C2305	F1H1H104B055	0.1uF 50V	1	
	C2306	F1H1H104B055	0.1uF 50V	1	
	C2307	F1H1H104B055	0.1uF 50V	1	
	C2308	F1H0J105A051	1uF 6.3V	1	
	C2309	F1H0J105A051	1uF 6.3V	1	
	C2310	F1H0J105A051	1uF 6.3V	1	
	C2312	F1H1H104B055	0.1uF 50V	1	
	C2381	F1H1H104B047	0.1uF 50V	1	
	C2382	F2A1H220A216	22uF 50V	1	
	C2383	F1H1H103B047	0.01uF 50V	1	
	C2384	F1H1H104B047	0.1uF 50V	1	
	C2385	F1H1H102A831	1000pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C2386	F1H1H470B052	47pF 50V	1	
	C2387	F1H1H681B052	680pF 50V	1	
	C2388	F1K1E1060001	10uF 25V	1	
	C2389	F1H1H104B047	0.1uF 50V	1	
	C2390	F1H1H103B047	0.01uF 50V	1	
	C2391	F2A1C101A208	100uF 16V	1	
	C2392	F1H1H104B047	0.1uF 50V	1	
	C2393	F2A0J471B035	470uF 6.3V	1	
	C2502	F1H1H102B047	1000pF 50V	1	
	C2506	F1H1H102B047	1000pF 50V	1	
	C2512	F1H1H102A831	1000pF 50V	1	
	C2513	F1H1H102A831	1000pF 50V	1	
	C2527	F1H1H102B047	1000pF 50V	1	
	C2530	F1H1H104B047	0.1uF 50V	1	
	C2531	F1H1H104B047	0.1uF 50V	1	
	C2532	F1H1H104B047	0.1uF 50V	1	
	C2542	F1H1H102B047	1000pF 50V	1	
	C2543	F1H1H220B052	22pF 50V	1	
	C2547	F1H1H102B047	1000pF 50V	1	
	C2548	F1H1H102B047	1000pF 50V	1	
	C2549	F1H1H102B047	1000pF 50V	1	
	C2550	F1H1H102B047	1000pF 50V	1	
	C2551	F1H1H102B047	1000pF 50V	1	
	C2552	F1H1H102B047	1000pF 50V	1	
	C2554	F1H1H102B047	1000pF 50V	1	
	C2555	F1H1H102B047	1000pF 50V	1	
	C2556	F1H1H102B047	1000pF 50V	1	
	C2557	F1H1H102B047	1000pF 50V	1	
	C2558	F1H1H102B047	1000pF 50V	1	
	C2559	F1H1H102B047	1000pF 50V	1	
	C2560	F1H1H102B047	1000pF 50V	1	
	C2562	F1H1H102B047	1000pF 50V	1	
	C2701	F1H1A105A028	1uF 10V	1	
	C2702	F1H1A105A028	1uF 10V	1	
	C2801	F1J1A106A043	10uF 10V	1	
	C2802	F1J1A106A043	10uF 10V	1	
	C2804	F1H1H182B047	1800pF 50V	1	
	C3801	EEH0B0J102UP	1000uF 6.3V	1	
	C3802	F1H1H103B047	0.01uF 50V	1	
	C3803	EEH0B0J101P	100uF 6.3V	1	
	C3804	EEH0B0J220R	22uF 6.3V	1	
	C3805	F1H1H103B047	0.01uF 50V	1	
	C3806	F1H1H104B047	0.1uF 50V	1	
	C3807	F1H1H101B052	100pF 50V	1	
	C4002	F1H0J105A051	1uF 6.3V	1	
	C4003	F1H0J105A051	1uF 6.3V	1	
	C4004	F1H1C474A178	0.47uF 16V	1	
	C4005	F1H1H150B052	15pF 50V	1	
	C4006	F1H1H150B052	15pF 50V	1	
	C4007	F1H0J105A051	1uF 6.3V	1	
	C4008	F1H0J105A051	1uF 6.3V	1	
	C4009	F1H0J105A051	1uF 6.3V	1	
	C4010	F1H1H102B047	1000pF 50V	1	
	C4011	F1H1H102B047	1000pF 50V	1	
	C4014	F1H0J1060012	10uF 6.3V	1	
	C4015	F1H0J1060012	10uF 6.3V	1	
	C4016	F1H0J1060012	10uF 6.3V	1	
	C4017	F1H0J1060012	10uF 6.3V	1	
	C4018	F2A1C470A155	47uF 16V	1	
	C4019	F2A1C220A243	22uF 16V	1	
	C4020	F2A1C220A243	22uF 16V	1	
	C4041	F1H1H473A748	0.047uF 50V	1	
	C4042	F1H1H473A748	0.047uF 50V	1	
	C4043	F1H1H473A748	0.047uF 50V	1	
	C4044	F1H1H473A748	0.047uF 50V	1	
	C4801	F1H0J1060006	10uF 6.3V	1	
	C4802	F1H1H102B047	1000pF 50V	1	
	C4803	F1H0J1060006	10uF 6.3V	1	
	C4804	F1H1C104A041	0.1uF 16V	1	
	C4805	F1H0J1060006	10uF 6.3V	1	
	C4806	F1H1H102B047	1000pF 50V	1	
	C4807	F1H0J1060006	10uF 6.3V	1	
	C4808	F1H1A105A028	1uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C4809	F1H1H1200004	12pF 50V	1	
	C4810	F1H1H1500009	15pF 50V	1	
	C4811	F1H1H102B047	1000pF 50V	1	
	C4812	F1H1H102B047	1000pF 50V	1	
	C4815	F1H1C104A041	0.1uF 16V	1	
	C4826	F1H1A105A028	1uF 10V	1	
	C4827	F1H1A105A028	1uF 10V	1	
	C4854	F1H1E105A153	1uF 25V	1	
	C4855	F1H1H102B047	1000pF 50V	1	
	C6002	F1K1E1060009	10uF 25V	1	
	C6003	F1H1H102B047	1000pF 50V	1	
	C6004	F1H1H102B047	1000pF 50V	1	
	C6005	F1H1H102B047	1000pF 50V	1	
	C6005	F1J1C106A059	10uF 16V	1	
	C6006	F1H1H102B047	1000pF 50V	1	
	C6007	F1H1H102B047	1000pF 50V	1	
	C6008	F1H1H331B052	330pF 50V	1	
	C6009	F1H1H102B047	1000pF 50V	1	
	C6010	F1H1H331B052	330pF 50V	1	
	C6011	F1H1H102A219	1000pF 50V	1	
	C6012	F1H1H331B052	330pF 50V	1	
	C6013	F1H1H102B047	1000pF 50V	1	
	C6014	F1H1H102B047	1000pF 50V	1	
	C6015	F1H1H102B047	1000pF 50V	1	
	C6016	F1H1H102B047	1000pF 50V	1	
	C6017	F1H1H103A219	0.01uF 50V	1	
	C6018	F1H1H102B047	1000pF 50V	1	
	C6018	F1H1H104B047	0.1uF 50V	1	
	C6019	F1H1H104B047	0.1uF 50V	1	
	C6020	F1H1E105A153	1uF 25V	1	
	C6021	F1H1H104B047	0.1uF 50V	1	
	C6021	F2A1E221B422	220uF 25V	1	
	C6022	F1H1E105A153	1uF 25V	1	
	C6022	F1H1H472A219	4700pF 50V	1	
	C6023	F1H1H104B047	0.1uF 50V	1	
	C6023	F2A1H101A147	100uF 50V	1	
	C6024	F1H1H333B055	0.033uF 50V	1	
	C6024	F2A1C101A115	100uF 16V	1	
	C6025	F1H1H333B055	0.033uF 50V	1	
	C6025	F1K1E1060009	10uF 25V	1	
	C6027	F1H1H104B047	0.1uF 50V	1	
	C6028	F1H1H333B055	0.033uF 50V	1	
	C6030	F1H1H333B055	0.033uF 50V	1	
	C6031	F1J1H105A918	1uF 50V	1	
	C6032	F1H1H104B047	0.1uF 50V	1	
	C6033	F2A1H102A201	1000uF 50V	1	
	C6036	F1H1H104B047	0.1uF 50V	1	
	C6039	F1J1H105A918	1uF 50V	1	
	C6045	ECQV1H105JL3	1uF 50V	1	
	C6046	ECQV1H105JL3	1uF 50V	1	
	C6047	ECQV1H105JL3	1uF 50V	1	
	C6048	ECQV1H105JL3	1uF 50V	1	
	C6061	F1H1H103B047	0.01uF 50V	1	
	C6062	F1H1H103B047	0.01uF 50V	1	
	C6063	F1H1H103B047	0.01uF 50V	1	
	C6064	F1H1H103B047	0.01uF 50V	1	
	C6068	F1J1A106A043	10uF 10V	1	
	C6069	F1H1H104B047	0.1uF 50V	1	
	C6070	F1H1H104B047	0.1uF 50V	1	
	C6071	F1H1H104B047	0.1uF 50V	1	
	C6074	F1H1H104B047	0.1uF 50V	1	
	C6075	D0GBR00J0004	0 1/10W	1	
	C6076	D0GBR00J0004	0 1/10W	1	
	C6081	F1H1H102B047	1000pF 50V	1	
	C6082	F1H1H102B047	1000pF 50V	1	
	C6083	F1H1H102B047	1000pF 50V	1	
	C6084	F1H1H102B047	1000pF 50V	1	
	C6101	F1H1C104A178	0.1uF 16V	1	
	C6101	F1H1H101B052	100pF 50V	1	
	C6102	F1H1H101B052	100pF 50V	1	
	C6102	F1H1H561B052	560pF 50V	1	
	C6103	F1H1H561B052	560pF 50V	1	
	C6106	F1H1A105A113	1uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C6107	F1H1A105A113	1uF 10V	1	
	C6108	F1H1A105A113	1uF 10V	1	
	C6109	F1H1A105A113	1uF 10V	1	
	C6120	F1H1H221B047	220pF 50V	1	
	C6121	F1H1H221B047	220pF 50V	1	
	C6122	F1H1A105A113	1uF 10V	1	
	C6123	F1H1A105A113	1uF 10V	1	
	C6124	F1H1H681B047	680pF 50V	1	
	C6125	F1H1H681B047	680pF 50V	1	
	C6126	F1L1C476A098	47uF 16V	1	
	C6127	F1H1A105A113	1uF 10V	1	
	C6201	F1H1H101B052	100pF 50V	1	
	C6202	F1H1H101B052	100pF 50V	1	
	C6317	F1H1H104B047	0.1uF 50V	1	
	C6318	F1H1H331B052	330pF 50V	1	
	C6319	F1H1H331B052	330pF 50V	1	
	C6320	F1H1H103B047	0.01uF 50V	1	
	C6321	F1H1H103B047	0.01uF 50V	1	
	C6322	F1H1H104B047	0.1uF 50V	1	
	C6323	F1H1H391A219	390pF 50V	1	
	C6324	D0GBR00J0004	0 1/10W	1	
	C6325	D0GBR00J0004	0 1/10W	1	
	C6400	F1H1H104B047	0.1uF 50V	1	
	C6401	F1H1H104B047	0.1uF 50V	1	
	C6402	F1H1H100B051	10pF 50V	1	
	C6403	F1H1H100B051	10pF 50V	1	
	C6405	F1H1H100B051	10pF 50V	1	
	C6406	F1H1H100B051	10pF 50V	1	
	C6500	F1H1H101B052	100pF 50V	1	
	C6501	F1H1H102A219	1000pF 50V	1	
	C6502	F1J1A106A043	10uF 10V	1	
	C7000	F1H1H104B047	0.1uF 50V	1	
	C7001	F1H1A105A113	1uF 10V	1	
	C7002	F1H1A105A113	1uF 10V	1	
	C7003	F1H1H104B047	0.1uF 50V	1	
	C8001	EEE0GA331WP	330uF 4V	1	
	C8003	F1G1C104A146	0.1uF 16V	1	
	C8004	F1G1C104A146	0.1uF 16V	1	
	C8005	F1G1C104A146	0.1uF 16V	1	
	C8006	F1G1C104A146	0.1uF 16V	1	
	C8007	F1G1C104A146	0.1uF 16V	1	
	C8011	F2G0J101A031	100uF 6.3V	1	
	C8012	F1G1C104A146	0.1uF 16V	1	
	C8013	F1G1C104A146	0.1uF 16V	1	
	C8014	F1G1C104A146	0.1uF 16V	1	
	C8015	F1G1C104A146	0.1uF 16V	1	
	C8016	F1G1C104A146	0.1uF 16V	1	
	C8018	F1G1C104A146	0.1uF 16V	1	
	C8020	F1G1C104A146	0.1uF 16V	1	
	C8021	F1G1C104A146	0.1uF 16V	1	
	C8022	F1G1C104A146	0.1uF 16V	1	
	C8023	F1G1C104A146	0.1uF 16V	1	
	C8026	F1G1C104A146	0.1uF 16V	1	
	C8051	F1H0J105A051	1uF 6.3V	1	
	C8052	F1G1A1040006	0.1uF 10V	1	
	C8053	F1G1C104A146	0.1uF 16V	1	
	C8054	F1G1H221A834	220pF 50V	1	
	C8055	F1H0J105A051	1uF 6.3V	1	
	C8056	F1G1H222A830	2200pF 50V	1	
	C8057	F1H0J105A051	1uF 6.3V	1	
	C8111	F1J1A106A043	10uF 10V	1	
	C8112	F1H0J105A051	1uF 6.3V	1	
	C8113	F1G1H222A830	2200pF 50V	1	
	C8151	F1H0J4750005	4.7uF 6.3V	1	
	C8152	F1G1C104A146	0.1uF 16V	1	
	C8201	F2G0J101A031	100uF 6.3V	1	
	C8202	F1G1A1040006	0.1uF 10V	1	
	C8211	F1G1E122A144	1200pF 25V	1	
	C8221	F1G1E102A144	1000pF 25V	1	
	C8222	F1G1H561A541	560pF 50V	1	
	C8225	F1G1E102A144	1000pF 25V	1	
	C8226	F1G1H681A830	680pF 50V	1	
	C8231	F1G1A1040006	0.1uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C8232	F1G1A823A032	0.082uF 10V	1	
	C8251	F2G0J101A031	100uF 6.3V	1	
	C8252	F2G1C4700061	47uF 16V	1	
	C8256	F1G1A1040006	0.1uF 10V	1	
	C8301	F2G0J2210020	220uF 6.3V	1	
	C8302	F2G0J330A031	33uF 6.3V	1	
	C8303	F1G1A1040006	0.1uF 10V	1	
	C8304	F1G1A1040006	0.1uF 10V	1	
	C8305	F1G1A1040006	0.1uF 10V	1	
	C8311	F1G1A1040006	0.1uF 10V	1	
	C8312	F1H0J105A051	1uF 6.3V	1	
	C8313	F1H0J105A051	1uF 6.3V	1	
	C8320	F1G1C104A146	0.1uF 16V	1	
	C8429	F1G1C104A146	0.1uF 16V	1	
	C8501	F2G0J101A031	100uF 6.3V	1	
	C8502	F1G1C104A146	0.1uF 16V	1	
	C8503	F1G1C104A146	0.1uF 16V	1	
	C8504	F1G1C104A146	0.1uF 16V	1	
	C8505	F1G1C104A146	0.1uF 16V	1	
	C8506	F1G1C104A146	0.1uF 16V	1	
	C8511	F1H0J105A051	1uF 6.3V	1	
	C8512	F1H0J105A051	1uF 6.3V	1	
	C8513	F1G1A1040006	0.1uF 10V	1	
	C8514	F1G1A1040006	0.1uF 10V	1	
	C8515	F1G1A1040006	0.1uF 10V	1	
	C8516	F1G1A1040006	0.1uF 10V	1	
	C8521	F1G1A1040006	0.1uF 10V	1	
	C8522	F1G1A1040006	0.1uF 10V	1	
	C8523	F1G1C104A146	0.1uF 16V	1	
	C8524	F1G1C104A146	0.1uF 16V	1	
	C8525	F1G1C562A146	5600pF 16V	1	
	C8526	F1G1C183A146	0.018uF 16V	1	
	C8527	F1G1A333A069	0.033uF 10V	1	
	C8528	F1H0J105A051	1uF 6.3V	1	
	C8529	F1H0J105A051	1uF 6.3V	1	
	C8530	F1G1C104A146	0.1uF 16V	1	
	C8531	F1G1H101A541	100pF 50V	1	
	C8532	F1G1H221A834	220pF 50V	1	
	C8533	F1G1C104A146	0.1uF 16V	1	
	C8541	F1G1E472A144	4700pF 25V	1	
	C8550	F2G1C1000054	10uF 16V	1	
	C8551	F1G1C104A146	0.1uF 16V	1	
	C8552	F2G1C1000054	10uF 16V	1	
	C8553	F2G0J470A031	47uF 6.3V	1	
	C8554	F1H0J105A051	1uF 6.3V	1	
	C8557	F1G1A1040006	0.1uF 10V	1	
	C8561	F1G1C104A146	0.1uF 16V	1	
	C8562	F2G1C1000054	10uF 16V	1	
	C8563	F2G0J470A031	47uF 6.3V	1	
	C8564	F1H0J105A051	1uF 6.3V	1	
	C8602	F1G1C153A146	0.015uF 16V	1	
	C8611	F1G1C104A146	0.1uF 16V	1	
	C8621	F1G1H8R0A833	8.0pF 50V	1	
	C8622	F1G1H100A834	10pF 50V	1	
	C8651	F1G1C104A146	0.1uF 16V	1	
	C8652	F1G1C104A146	0.1uF 16V	1	
	C8901	F1G1C104A146	0.1uF 16V	1	
	C9001	F1H1C104A178	0.1uF 16V	1	
	C9002	F1G1C104A146	0.1uF 16V	1	
	C9002	F1H1C104A178	0.1uF 16V	1	
	C9003	F1G1C104A146	0.1uF 16V	1	
	C9003	F1H1C104A178	0.1uF 16V	1	
	C9004	F1G1H7R00009	7.0pF 50V	1	
	C9004	F1H1C104A178	0.1uF 16V	1	
	C9005	F1G1H8R0A833	8.0pF 50V	1	
	C9005	F1H1C104A178	0.1uF 16V	1	
	C9006	F1H1C104A178	0.1uF 16V	1	
	C9007	F1G1C104A146	0.1uF 16V	1	
	C9100	F1G1H221A834	220pF 50V	1	
	C9101	F1G1H221A834	220pF 50V	1	
	C9102	F1G1H221A834	220pF 50V	1	
	C9103	F1G1H221A834	220pF 50V	1	
	C9104	F1G1H221A834	220pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C9105	F1G1H221A834	220pF 50V	1	
	C9106	F1G1H221A834	220pF 50V	1	
	C9107	F1G1H221A834	220pF 50V	1	
	C9108	F1G1H221A834	220pF 50V	1	
	C9109	F1G1H221A834	220pF 50V	1	
	C9110	F1G1H221A834	220pF 50V	1	
	C9111	F1G1H221A834	220pF 50V	1	
	C9112	F1G1H221A834	220pF 50V	1	
	C9113	F1G1H221A834	220pF 50V	1	
	C9114	F1G1H221A834	220pF 50V	1	
	C9115	F1G1H221A834	220pF 50V	1	
	C9116	F1G1H221A834	220pF 50V	1	
	C9117	F1G1H221A834	220pF 50V	1	
	FL8102	F1H0J1050018	1uF 6.3V	1	
	K8116	F1H1H101B052	100pF 50V	1	

MMH1409