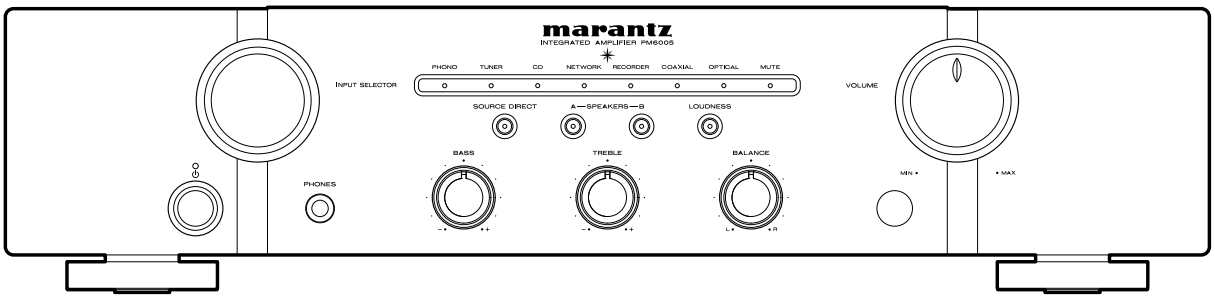
Service Manual

PM6005 /N1B/N1SG/U1B/K1B

Integrated Amplifier



- For purposes of improvement, specifications and design are subject to change without notice.
- Please use this service manual with referring to the operating instructions without fail.
- Some illustrations using in this service manual are slightly different from the actual set.

marantz®

PM6005

Ver. 5

Please refer to the MODIFICATION NOTICE.

S0835-1V05DM/DG1404

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ABOUT THIS MANUAL

Read the following information before using the service manual.

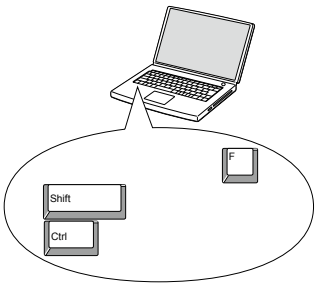
What you can do with this manual

Search for a Ref. No. (phrase) (Ctrl+Shift+F)

You can use the search function in Acrobat Reader to search for a Ref. No. in schematic diagrams, printed wiring board diagrams, block diagrams, and parts lists.

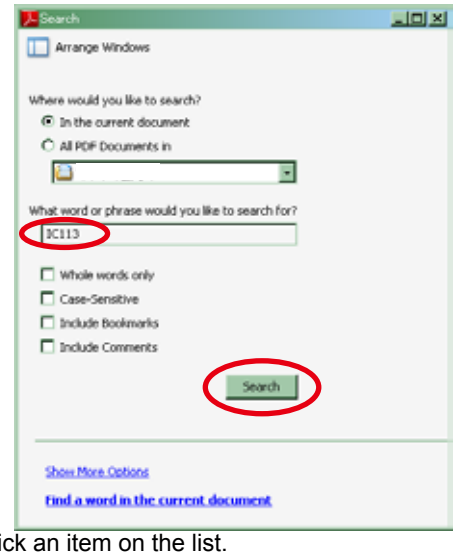
1.Press **Ctrl+Shift+F** on the keyboard.

- The Search window appears.



2.Enter the Ref. No. you want to search for in the Search window, and then click the **Search** button.

•A list of search results appears.



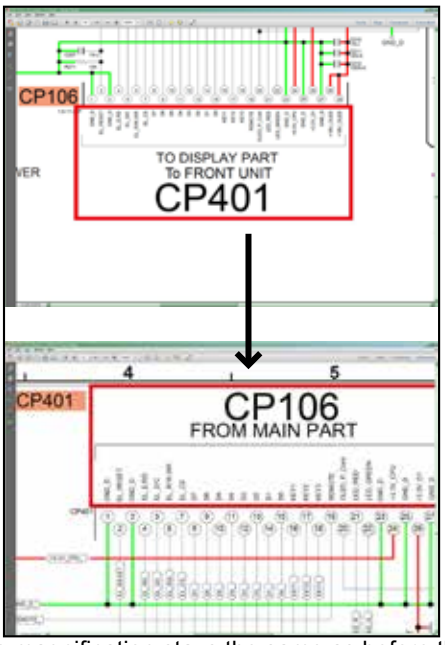
3.Click an item on the list.

• The screen jumps to the page for that item, and the search phrase is displayed.

Jump to the target of a schematic diagram connector

Click the Ref. No. of the target connector in the red box around a schematic diagram connector.

•The screen jumps to the target connector.



•Page magnification stays the same as before the jump.

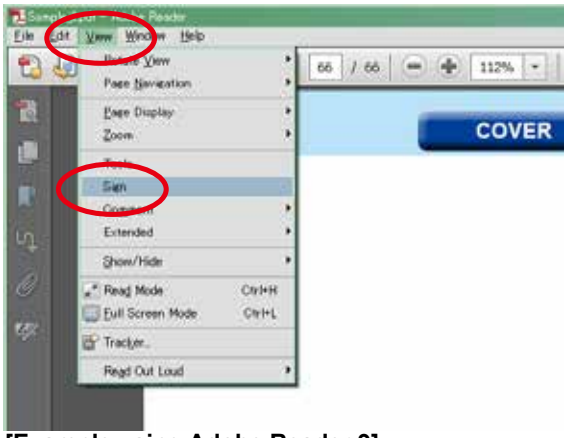
Using Adobe Reader (Windows version)

Add notes to this data (Sign)

The Sign function lets you add notes to the data in this manual.
Save the file once you have finished adding notes.

[Example using Adobe Reader X]
On the **"View"** menu, click **"Sign"**.

- The Sign pane appears.



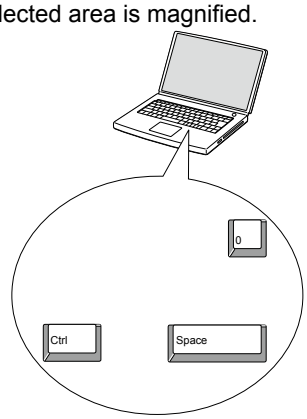
[Example using Adobe Reader 9]
On the **"Document"** menu, click **"Sign"**.

Magnify schematic / printed wiring board diagrams - 1

(Ctrl+Space, mouse operation)

Press **Ctrl+Space** on the keyboard and drag the mouse to select the area you want to view.

- The selected area is magnified.

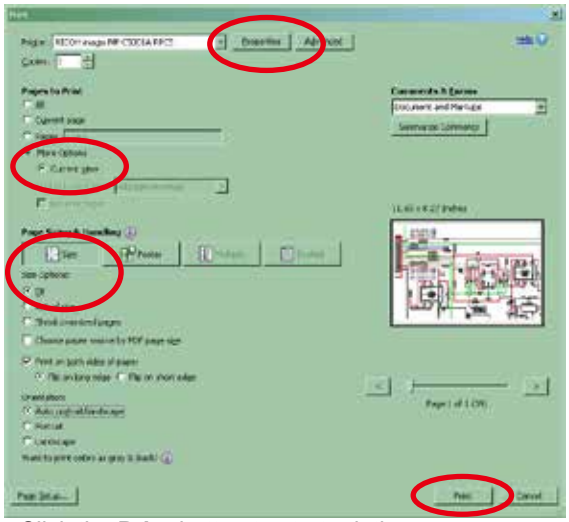


- When you want to move the area shown, hold down **Space** and drag the mouse.
- When you want to show a full page view, press **Ctrl+0** on the keyboard.

Print a magnified part of the manual

The Properties dialog box and functions will vary depending on your printer.

1. Drag the mouse to magnify the part you want to print.
2. On the **"File"** menu, click **"Print"**.
3. Configure the following settings in the Print dialog box.



- **Properties**
  Click this button and check that the printer is set to a suitable paper size.
- **Page to print**
  Select the following checkbox.
  "More Options" : **"Current View"**
- **Page Sizing & Handling**
  Select the following checkbox.
  "Size" / **"Size Options"** : **"Fit"**

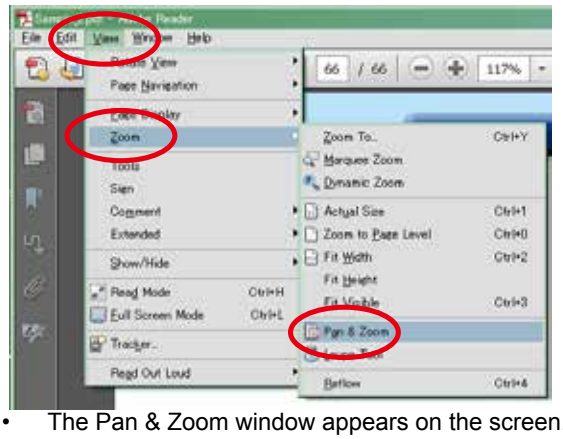
4. Click the **Print** button to start printing.

Magnify schematic / printed wiring board diagrams - 2

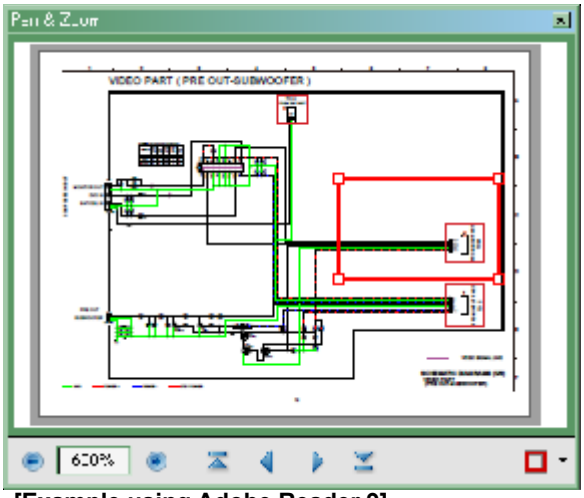
(Pan & Zoom function)

The Pan & Zoom function lets you see which part of a magnified diagram is being shown in a separate window.

[Example using Adobe Reader X]
On the **"View"** menu, point to **"Zoom"**, and then click **"Pan & Zoom"**.



- The Pan & Zoom window appears on the screen.



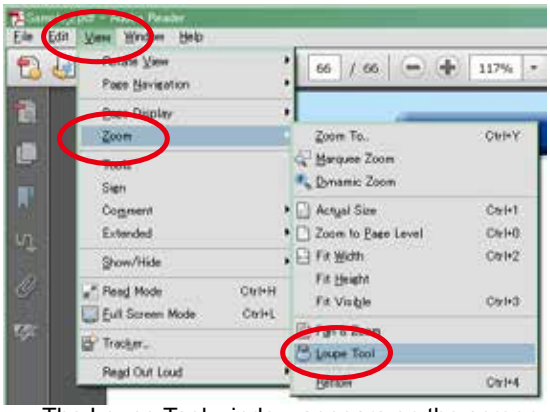
[Example using Adobe Reader 9]
On the **"Tools"** menu, point to **"Select & Zoom"**, and then click **"Pan & Zoom Window"**.

Magnify schematic / printed wiring board diagrams - 3

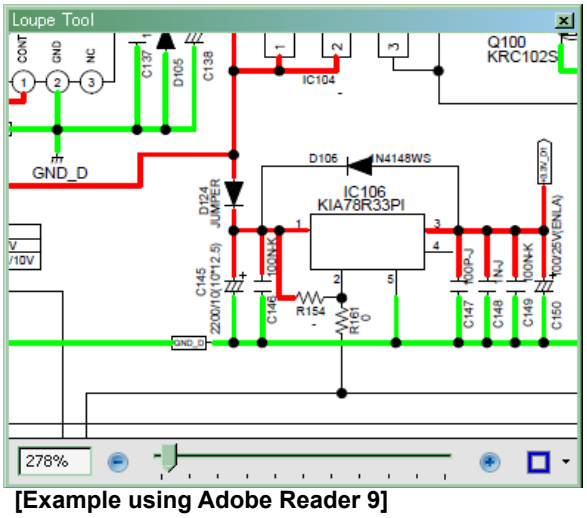
(Loupe Tool function)

The Loupe Tool function lets you magnify a specific part of a diagram in a separate window.

[Example using Adobe Reader X]
On the **"View"** menu, point to **"Zoom"**, and then click **"Loupe Tool"**.



- The Loupe Tool window appears on the screen.



[Example using Adobe Reader 9]
On the **"Tools"** menu, point to **"Select & Zoom"**, and then click **"Loupe Tool Window"**.

SAFETY PRECAUTIONS

The following items should be checked for continued protection of the customer and the service technician.

leakage current check

Before returning the set to the customer, be sure to carry out either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the set is defective.

Be sure to test for leakage current with the AC plug in both polarities, in addition, when the set's power is in each state (on, off and standby mode), if applicable.

CAUTION **Please heed the following cautions and instructions during servicing and inspection.**

◎ **Heed the cautions!**

Cautions which are delicate in particular for servicing are labeled on the cabinets, the parts and the chassis, etc. Be sure to heed these cautions and the cautions described in the handling instructions.

◎ **Cautions concerning electric shock!**

(1) An AC voltage is impressed on this set, so if you touch internal metal parts when the set is energized, you may get an electric shock. Avoid getting an electric shock, by using an isolating transformer and wearing gloves when servicing while the set is energized, or by unplugging the power cord when replacing parts, for example.

(2) There are high voltage parts inside. Handle with extra care when the set is energized.

◎ **Caution concerning disassembly and assembly!**

Through great care is taken when parts were manufactured from sheet metal, there may be burrs on the edges of parts. The burrs could cause injury if fingers are moved across them in some rare cases. Wear gloves to protect your hands.

◎ **Use only designated parts!**

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). Be sure to use parts which have the same properties for replacement. The burrs have the same properties. In particular, for the important safety parts that are indicated by the ⚠ mark on schematic diagrams and parts lists, be sure to use the designated parts.

◎ **Be sure to mount parts and arrange the wires as they were originally placed!**

For safety seasons, some parts use tapes, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires by arranging them and using clamps to keep them away from heating and high voltage parts, so be sure to set everything back as it was originally placed.

◎ **Make a safety check after servicing!**

Check that all screws, parts and wires removed or disconnected when servicing have been put back in their original positions, check that no serviced parts have deteriorate the area around. Then make an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and on the power. Using a 500V insulation resistance tester, check that the insulation resistance value between the inplug and the externally exposed metal parts (antenna terminal, headphones terminal, input terminal, etc.) is 1MΩ or greater. If it is less, the set must be inspected and repaired.

CAUTION **Concerning important safety parts**

Many of the electric and the structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and the use of replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and the parts list in this service manual. Be sure to replace them with the parts which have the designated part number.

(1) Schematic diagrams.....Indicated by the ⚠ mark.

(2) Parts lists.....Indicated by the ⚠ mark.

The use of parts other than the designated parts could cause electric shocks, fires or other dangerous situations.

NOTE FOR SCHEMATIC DIAGRAM

WARNING:

Parts indicated by the ⚠ mark have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the set to the customer, be sure to carry out either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the set is defective.

WARNING:

DO NOT return the set to the customer unless the problem is identified and remedied.

NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM / M=1,000,000 OHM

ALL CAPACITANCE VALUES ARE EXPRESSED IN MICRO FARAD, UNLESS OTHERWISE INDICATED. P INDICATES MICRO-MICRO FARAD. EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

NOTE FOR PARTS LIST

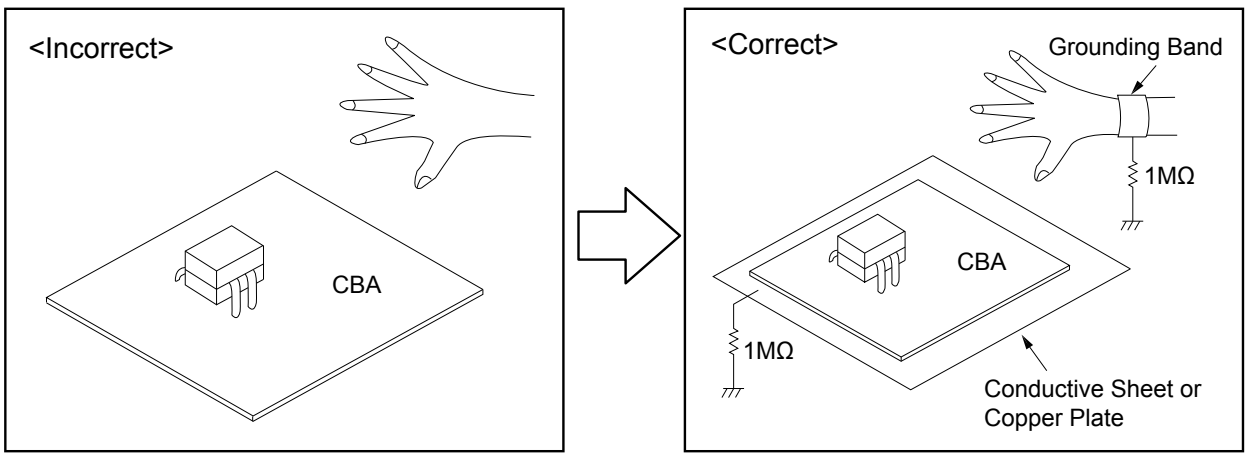
1. Parts indicated by "nsp" on this table cannot be supplied.
2. When ordering a part, make a clear distinction between "1" and "I" (i) to avoid mis-supplying.
3. A part ordered without specifying its part number can not be supplied.
4. Part indicated by "★" mark is not illustrated in the exploded view.
5. General-purpose Carbon Film Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
6. General-purpose Carbon Chip Resistors are not included are not included in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING: Parts indicated by the ⚠ mark have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

INSTRUCTIONS FOR HANDLING SEMI-CONDUCTORS AND OPTICAL UNIT

Electrostatic breakdown of the semi-conductors or optical pickup may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body
   Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.
2. Ground for Workbench
   Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing



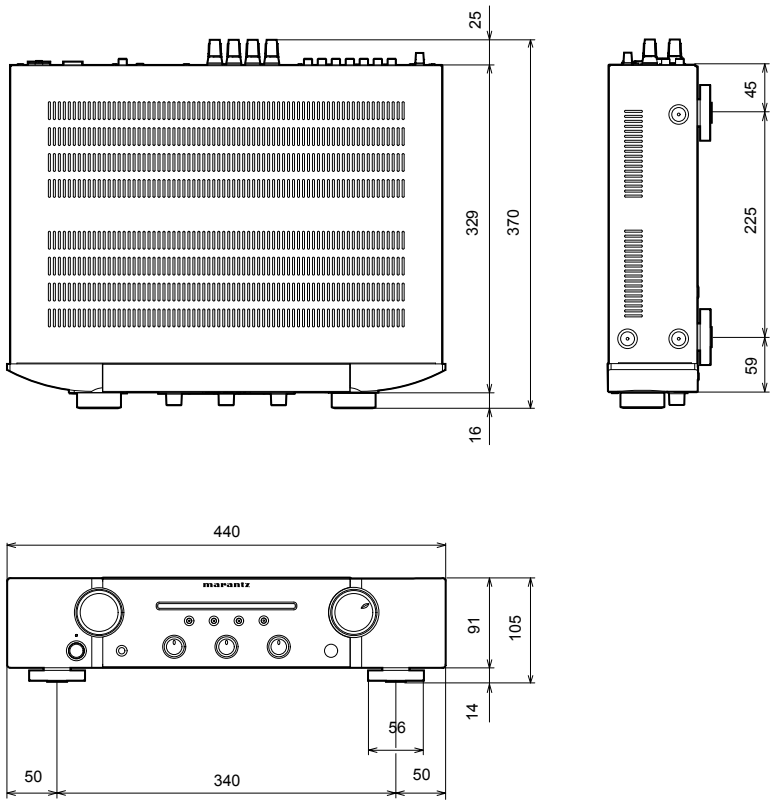
Personal notes:

TECHNICAL SPECIFICATIONS

- **RMS Power output**
  (20 Hz – 20 kHz simultaneous drive of both channels) :
  45 W x 2 (8 Ω/ohms load)
  60 W x 2 (4 Ω/ohms load)
- **Total harmonic distortion**
  (20 Hz – 20 kHz simultaneous drive of both channels, 8 Ω/ohms load) :
  0.08 %
- **Output band width (8 Ω/ohms load, 0.06 %) :**
  10 Hz – 50 kHz
- **Frequency response (CD, 1 W, 8 Ω/ohms load) :**
  10 Hz – 70 kHz +0 dB, –1 dB
- **Dumping factor (8 Ω/ohms load, 40 Hz – 20 kHz) :**
  100
- **Input sensitivity/Input impedance**
  PHONO (MM) : 2.2 mV/47 kΩ/kohms
  CD, TUNER, NETWORK, RECORDER : 200 mV/20 kΩ/kohms
- **Maximum allowable PHONO input level (1 kHz) MM :**
  100 mV
- **RIAA deviation (20 Hz – 20 kHz) :**
  ±1.0 dB
- **S/N (IHF-A, 8 Ω/ohms load)**
  PHONO (MM) : 83 dB (5 mV input, 1 W output)
  CD, TUNER, NETWORK, RECORDER : 102 dB (2 V input, Rated output)
- **Tone control**
  Bass (50 Hz) : ±10 dB
  Treble (15 kHz) : ±10 dB
- **Digital input**
  Coaxial : 0.5 Vp-p
  Optical : –27 dBm or later
  Power requirement (for U model) : AC 120 V, 60 Hz
  Power requirement (for N model) : AC 230 V, 50/60 Hz
  Power requirement (for K model) : AC 220 V, 50 Hz
  Power requirement (for F model) : AC 100 V, 50/60 Hz
  Power consumption : 155 W
  Power consumption during standby : 0.3 W

DIMENSION

Unit : in. (mm)
Weight : 7.6 kg

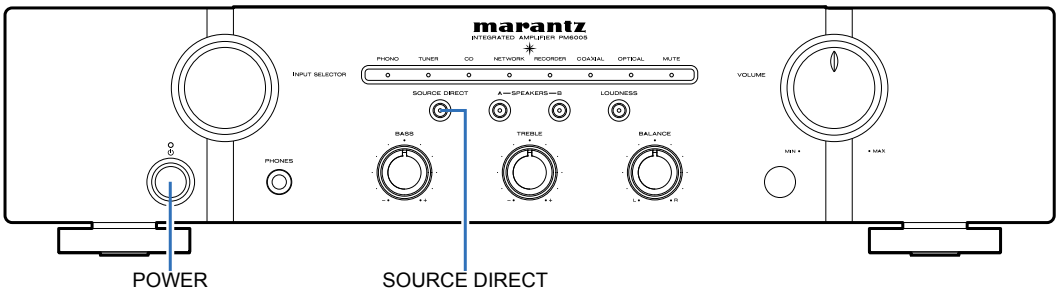


CAUTION IN SERVICING

Initializing INTEGRATED AMPLIFIER

INTEGRATED AMPLIFIER initialization should be performed when the µcom and peripheral parts of µcom were replaced.

1. Turn off the power pressing **"POWER"** button.
2. Press **"POWER"** button while simultaneously while pressing **"SOURCE DIRECT"** buttons.
3. Check the set entered the service mode.(See "SERVICE MODE" 15page.)



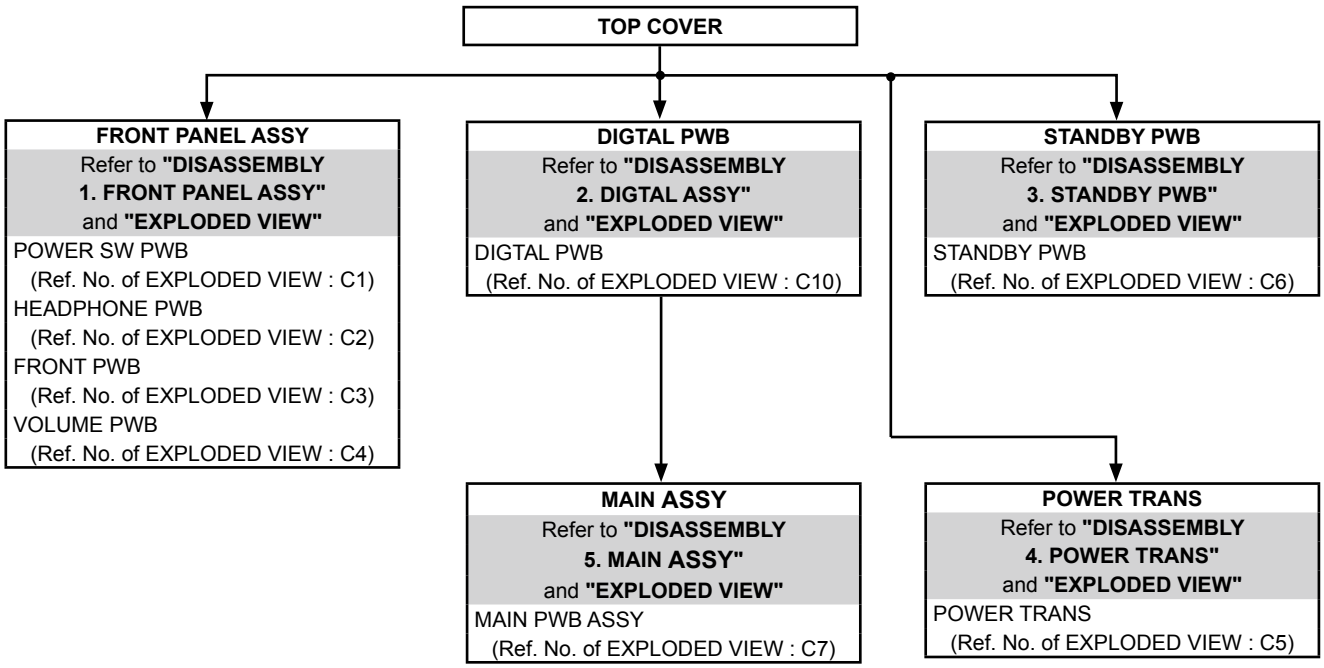
Service Jigs ⚠4
The following jigs are used when updating the firmware.
(RS232C → connector conversion board in this product + 7P cable kit)
Request service from your dealer if necessary.

8U-210100S	:	WRITING KIT	:	1 Set
606050028012P	:	7P FFC (Straight)	:	1 Set

(See "FIRMWARE UPDATE PROCEDURE" 15 page.)

DISASSEMBLY

- Disassemble in order of the arrow in the following figure.
- In the case of the re-assembling, assemble it in order of the reverse of the following flow.
- In the case of the re-assembling, observe "attention of assembling".
- If wire bundles are untied or moved to perform adjustment or replace parts etc., be sure to rearrange them neatly as they were originally bundled or placed afterward.
  Otherwise, incorrect arrangement can be a cause of noise generation.

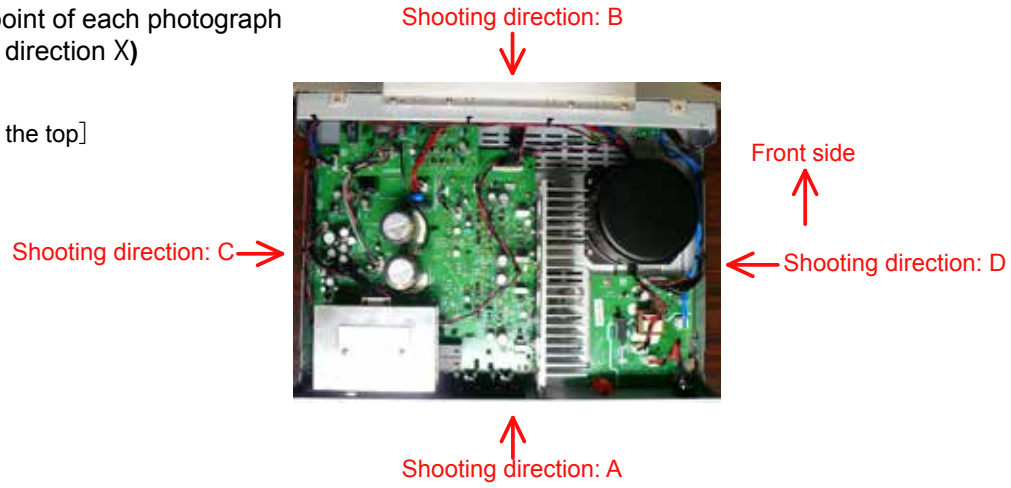


About the photos used for "descriptions of the DISASSEMBLY" section

- The shooting direction of each photograph used herein is indicated on the left side of the respective photograph as "Shooting direction: ***".
- Refer to the diagram below about the shooting direction of each photograph.
- Photographs with no shooting direction indicated were taken from the top of the set.

The viewpoint of each photograph
(Shooting direction X)

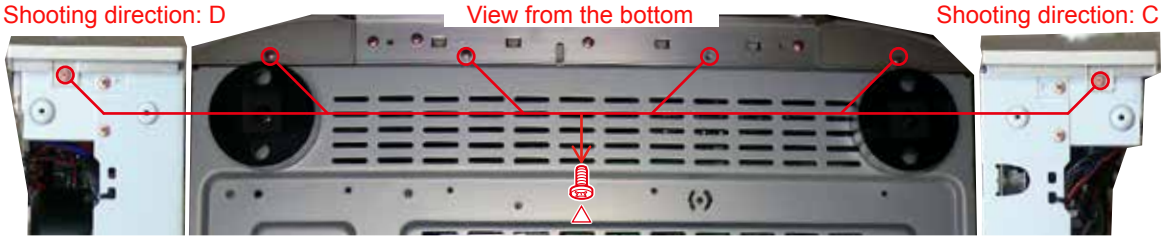
[View from the top]



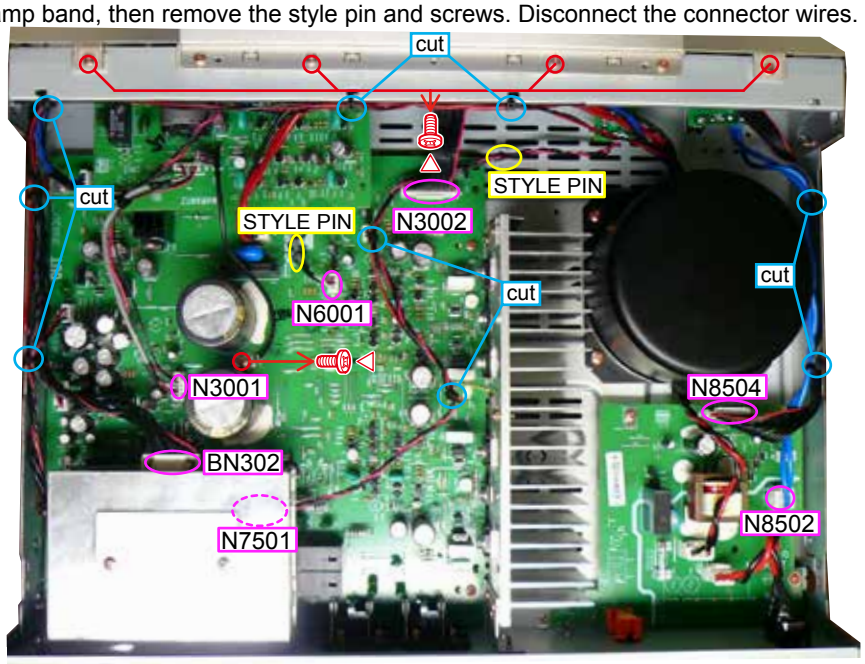
1. FRONT PANEL ASSY

Proceeding : TOP COVER → FRONT PANEL ASSY

(1) Remove the screws.



(2) Cut the wire clamp band, then remove the style pin and screws. Disconnect the connector wires.

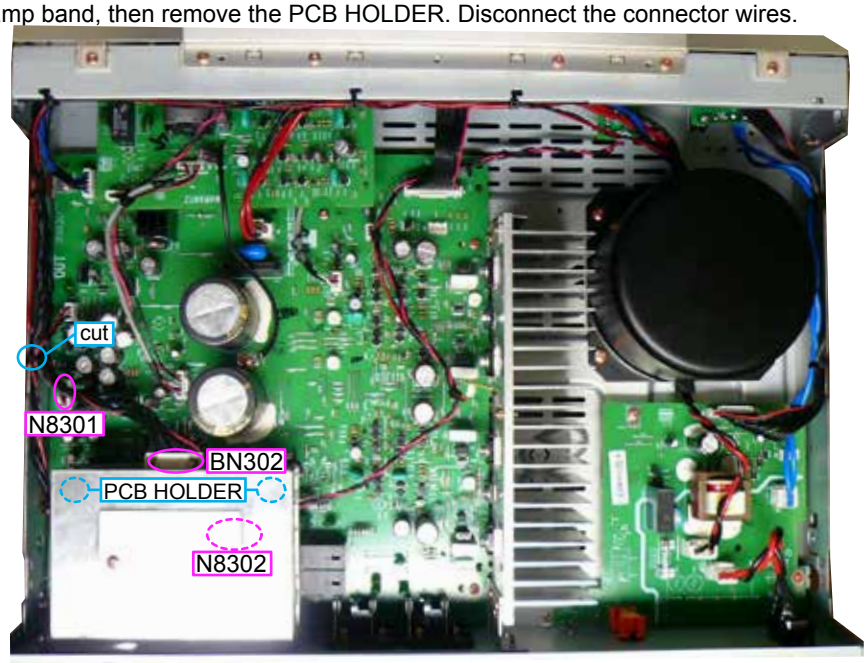


2. DIGTAL ASSY

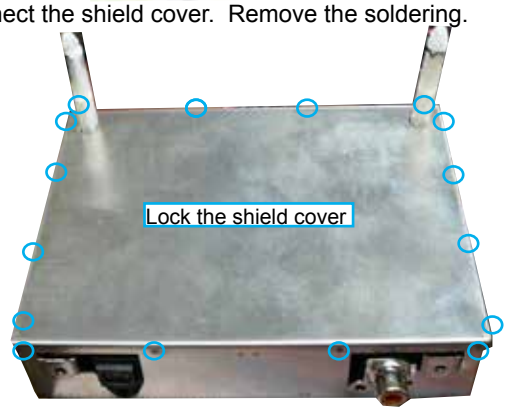
Proceeding : TOP COVER → DIGTAL ASSY

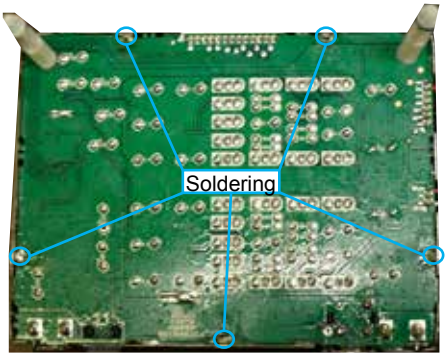
(1) Remove the screws.

(2) Cut the wire clamp band, then remove the PCB HOLDER. Disconnect the connector wires.



(3) Disconnect the shield cover. Remove the soldering.



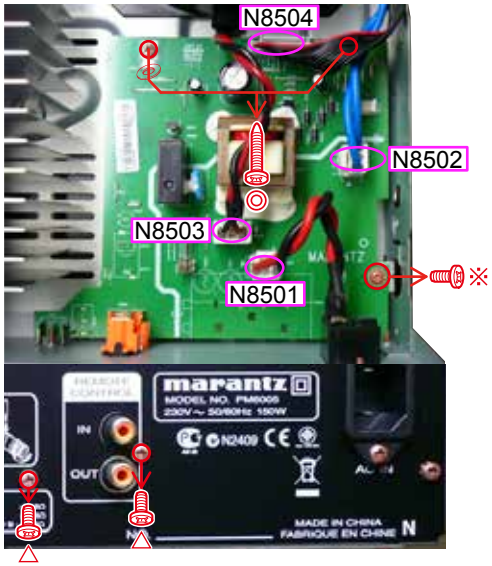


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in DIGITAL ASSY.

3. STANDBY PWB

Proceeding : TOP COVER → **STANDBY PWB**

(1) Remove the screws. Disconnect the connector wires.



4. POWER TRANS

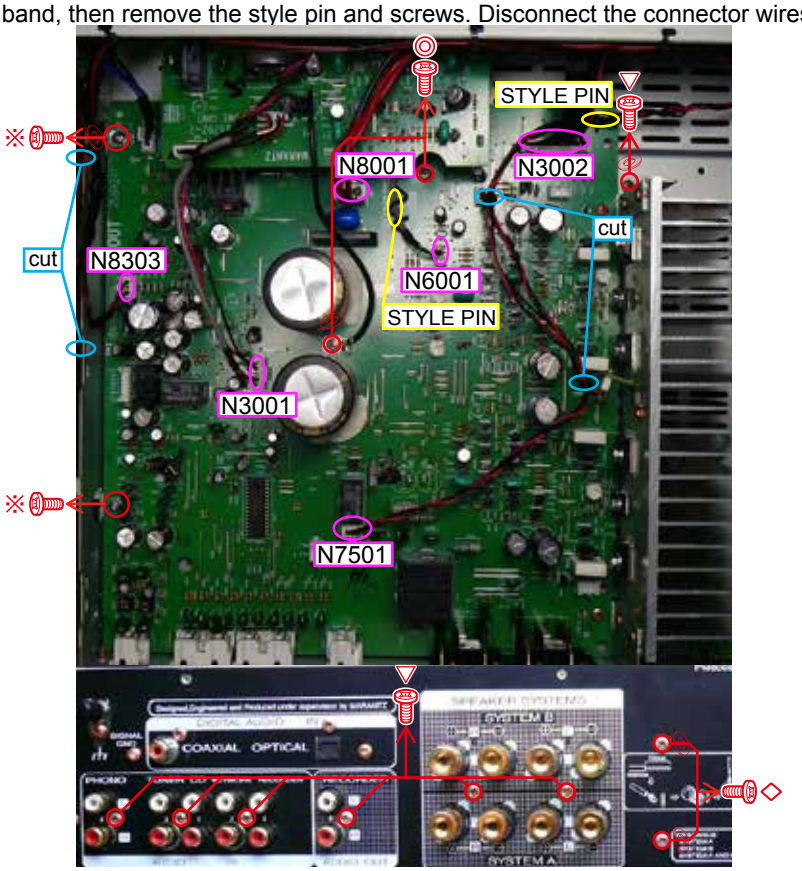
Proceeding : TOP COVER → **POWER TRANS**

Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in POWER TRANS.

5. MAIN ASSY

Proceeding : TOP COVER → DIGTAL ASSY → **MAIN ASSY**

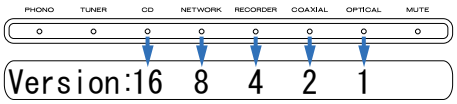
(1) Cut the wire clamp band, then remove the style pin and screws. Disconnect the connector wires.



SERVICE MODE

Microprocessor (U1001) version check

(1) Press the POWER button with pressing the SOURCE DIRECT button on the unit.
(2) The firmware version is displayed on the front LED. (Display time is only for 3 seconds.)
The firmware version is displayed in the lighting position of LED.



Example

Light up OPTICAL [1], Version : 1
Light up OPTICAL [1] and RECORDER [4], Version : 5
Light up OPTICAL [1] and NETWORK [8], Version : 9

(3) Each LED light up then all LED light up.
(4) Turn off the power to quit Service Mode. (The unit to the default status)

PROCEDURE AFTER REPLACING THE MICROPROCESSOR, ETC.

The procedure after replacing the u-COM (microprocessor), flash ROM, etc. is as follows.

PWB Name	Ref. No.	Description	After replaced ⚠4	備考
FRONT	U1001	STM32F100R8T6	B	

Procedure after Replacement

A : The software has been written. The software is not written at the time of replacement.
B : The software has been written. The software may need to be rewritten by version updates. Check the version.
C : The software has not been written. The software needs to be written after replacement. See “Firmware Update Procedure” for information on writing the software.
D : The software has been written. Be sure to rewrite with the latest software for your service region. See “Firmware Update Procedure” for information on writing the software.

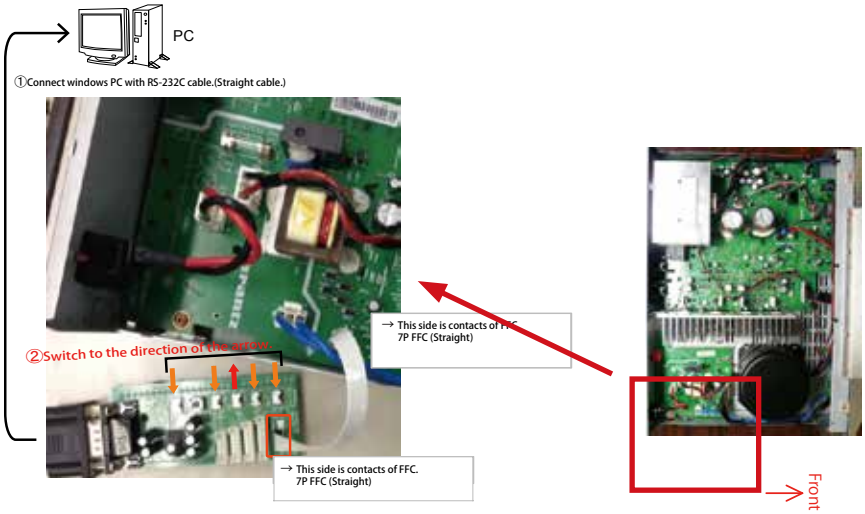
FIRMWARE UPDATE PROCEDURE ⚠4

1. Items to Be Prepared

(1) PC
(2) RS-232C cable (9P (Male), Straight)
(3) 8U- 210100S:WRITING KIT.
606050028012P:7P FFC (Straight)

2. Connecting the WRITING KIT to This Unit

(1) Check that the power of this unit is turned off.
(2) Connect the WRITING KIT to the update terminal of this unit.
(3) Connect the RS-232C cable from PC with the WRITING KIT.

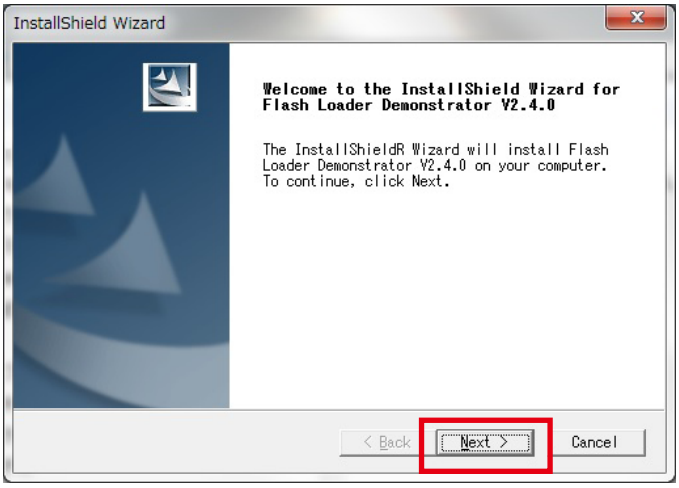


3. Installation of software

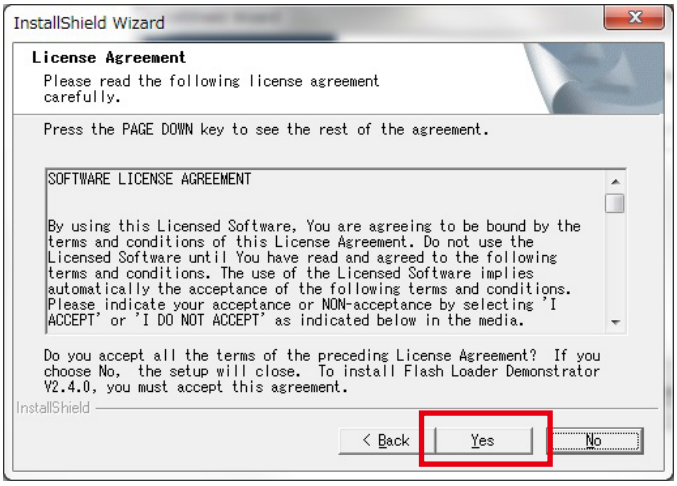
Installed on the PC Flash Loader Demonstrator.

(1) Download Flash Loader Demonstrator from SDI.
(2) Double click the "Flash_Loader_Demonstrator_v2.4.0_Setup.exe".

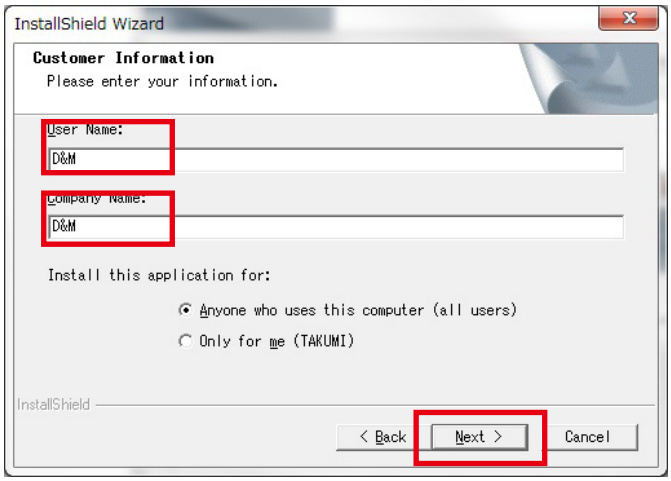
(3) Click "Next".



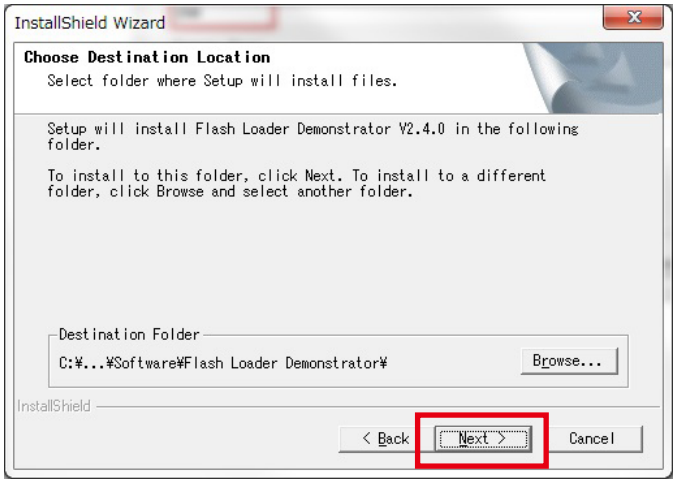
(4) Click "Yes".



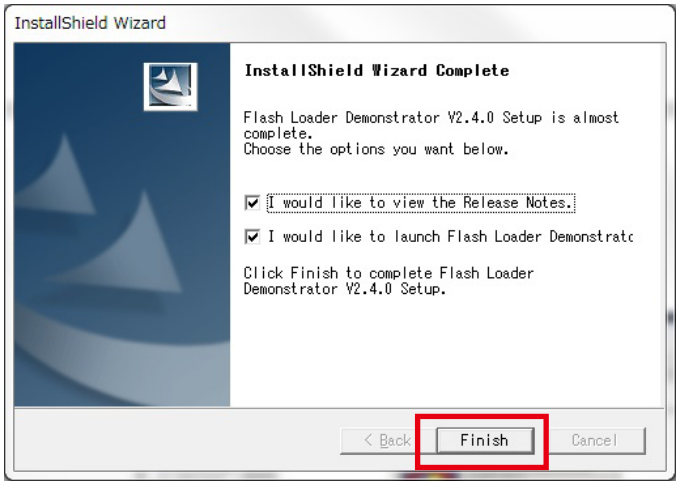
(5) Enter the company name and the name. Click "Next".



(6) Click "Next".



(7) Click "Finish".



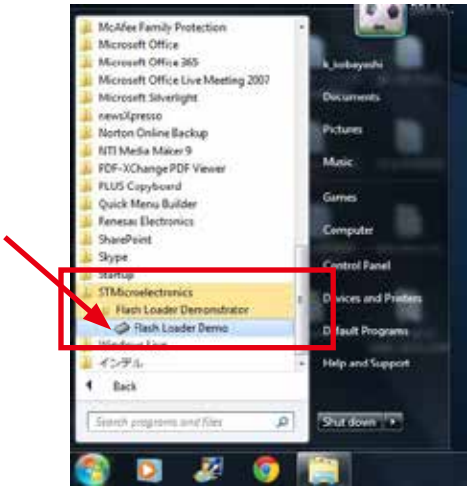
4. Starting This Unit

(1) Press the power button to turn on the power.

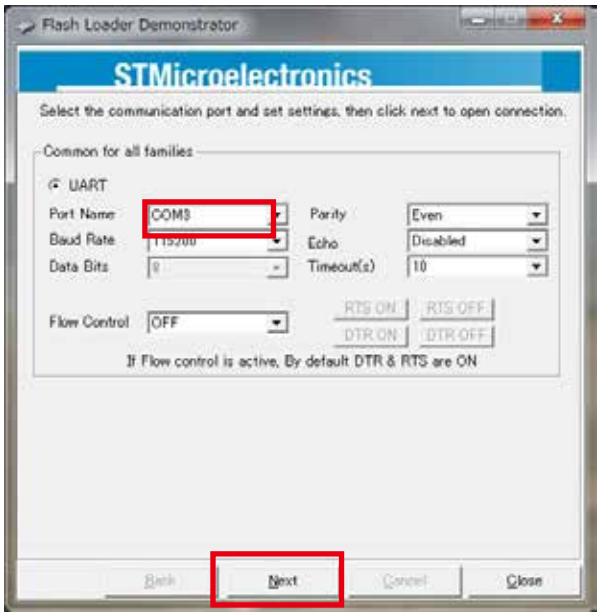
5. Run the Flash Loader Demonstrator

Execute the program "Flash Loader Demonstrator" that was installed on your computer.

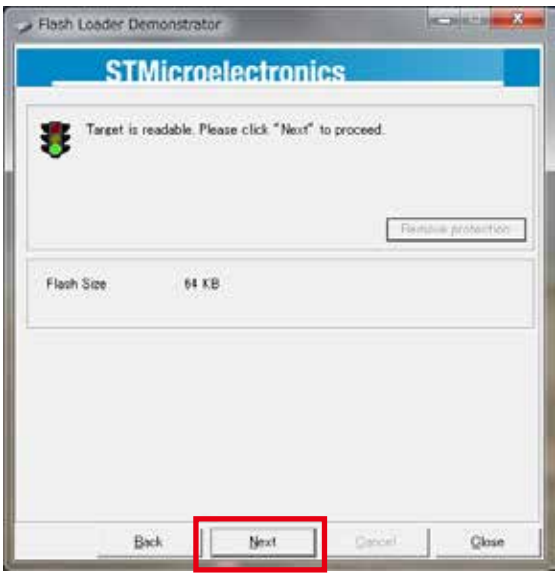
(1) Click "Start" button, "All Programs" "STMicroelectronics", "Flash Loader Demonstrator" and select "Flash Loader Demo".



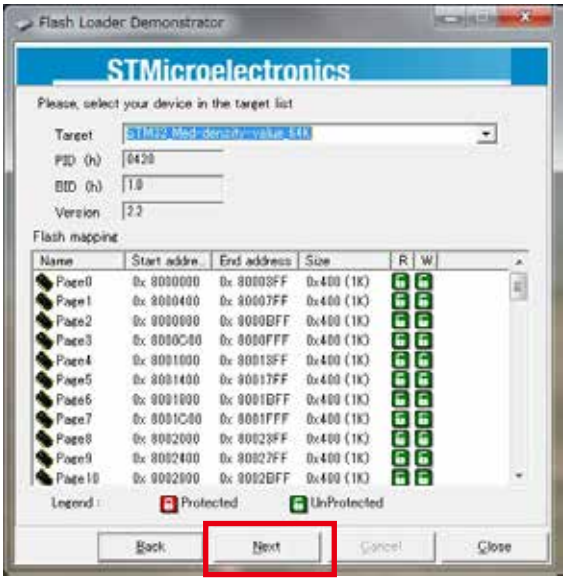
(2) Select the RS-232C serial port number on your computer. Click "Next".



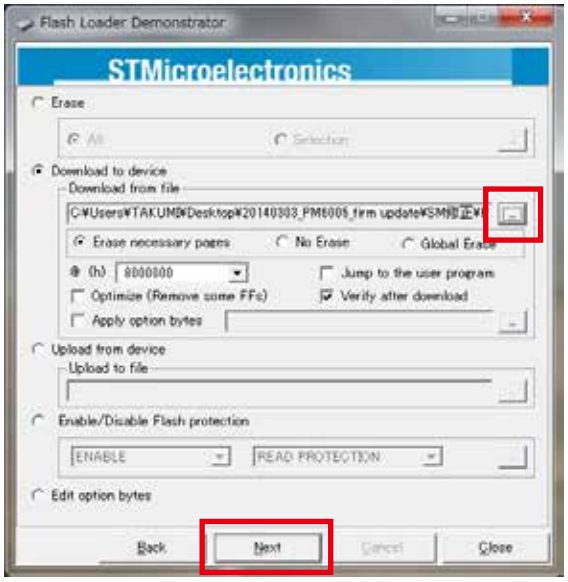
(3) Click "Next"



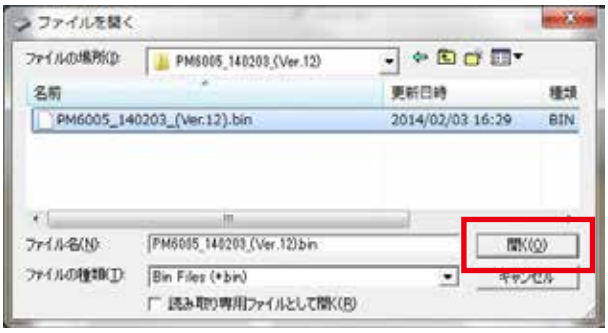
(4) Click "Next"



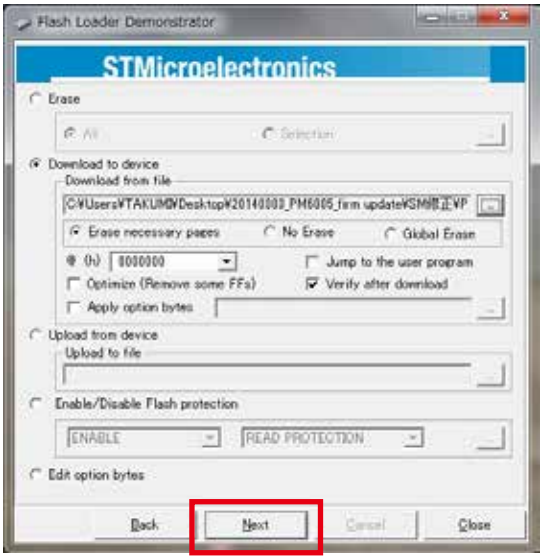
(5) Check the "Download to device".
Click the Open file button.



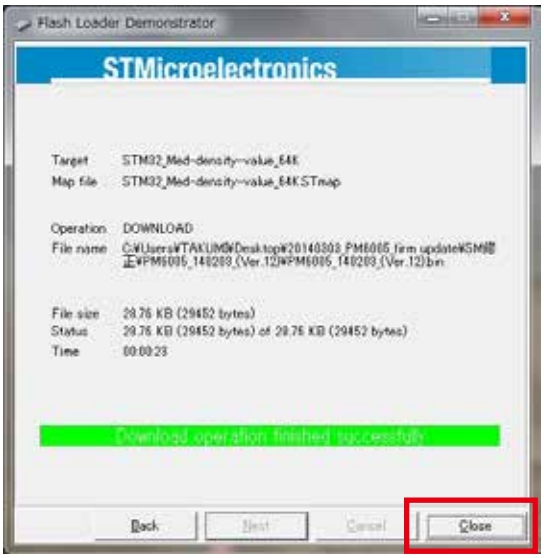
(6) Select the specified update file and click the “Open(O) ” button.



(7) Click "Next"



(8) "Update completed" is displayed when the firmware update finishes normally. Click "Close" button.



(9) Checking the firmware version after an update.
"SERVICE MODE " (Page 15)

Personal notes:

ADJUSTMENT

IDLING CURRENT ALIGNMENT

Adjusting Procedure

Set the power voltage to rated voltage for this adjustment.

(1) Adjust the Idling Current with the variable resistor **V6001** and **V6002** on the PWB **CUP12578Z**.

(2) Turn off the power.

(3) **"+"** of Connect Digital Voltage is connected to the No. 1 pin and connected **"-"** to No. 3 pin of **N6003**.

(4) **"+"** of Connect Digital Voltage is connected to the No. 1 pin and connected **"-"** to No. 3 pin of **N6004**.

(5) Before turning on the power, **V6001** and **V600**2 have been counter clockwise turned with the adjustment driver.

(6) Turn on the power, VOLUME is set as (Ω min.).

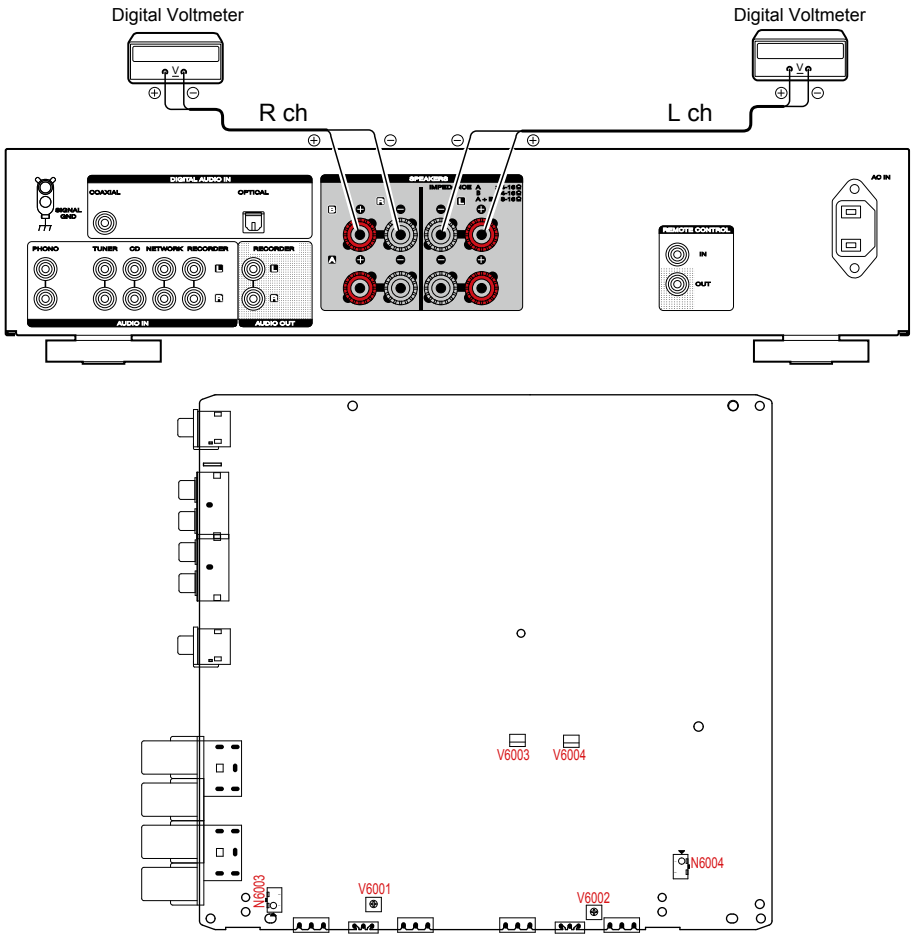
(7) After 2 minutes.
With seeing the digital voltage meter turn the variable resister clockwise slowly to adjust the idling current.
Idling adjustment with **V6001 (V6002)**.
•Turn **V6001 (V6002)** clockwise to increase the idling current.
•The adjustment value of idling current is 10 mV(22.5 mA) ± 0.5 mV(1.1 mA) each.

(8) After 6 minutes.
Repeat the same procedure as 7.
•The adjustment value of idling current is 20 mV(45 mA) ± 0.5 mV(1.1 mA) each.
Adjustment is completed.

(9) Remove connection cable, attach the top cover.

NOTE : Idling current decreases with the temperature rise inside the unit, and it is set to 20 mV (45 mA) of setting value in about 30 minutes after turn on the power.

DC OFFSET VOLTAGE ADJUSTMENT



Adjusting Procedure

DC Offset Voltage Adjustment

(1) Before turning on the power, Insert Digital Voltage Meter between the SPEAKERS SYSTEM A (L CH) **"+"** and **"-"**.
Insert Digital Voltage Meter between the SPEAKERS SYSTEM A (R CH) **"+"** and **"-"**.

(2) Adjust the VOLUME to MIN.

(3) Turn on the power. Then turn the SPAKERS SW to A.
Adjustment is started immediately after a speaker relay turns on.

(4) First L CH is adjusted.
The variable resistor **V6003** on **CUP12578Z** is turned with adjustment driver, and the Digital Voltage Meter is adjusted to **"0 mV ± 3 mV"**.

(5) Then, R CH is adjusted.
The variable resistor **V6004** on **CUP12578Z** is turned with adjustment driver, and the Digital Voltage Meter is adjusted to **"0 mV ± 3 mV"**.

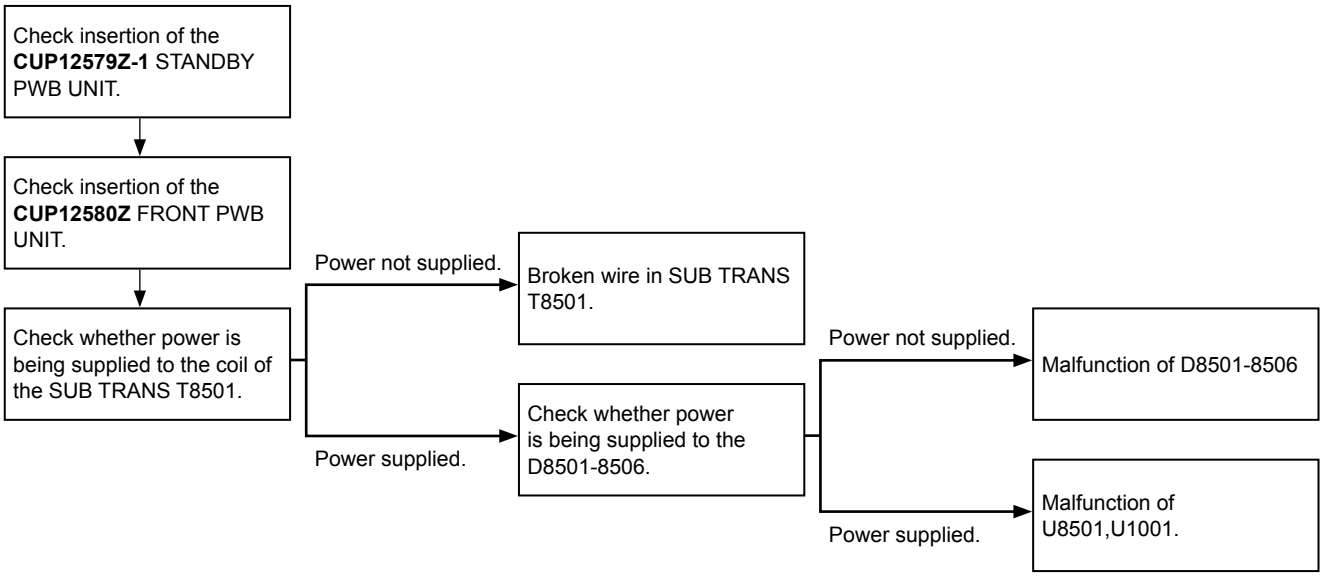
NOTE : DC offset voltage drops when turn the semi-fixed resistor (**V6003** and **V6004**) clockwise. DC offset voltage rises when turn the semi-fixed resistor un-clockwise. Please turn it slowly, because value of Digital Voltage Meter changes slowly.

(6) Although after-adjustment DC offset voltage has some change, Please check that the range of DC offset voltage between L ch (R ch) **"+"** and L ch (R ch) **"-"** terminal of SPEAKERS SYSTEM A is **"0 mV ± 20 mV"**. CHART OF FACTORY MODE.

TROUBLE SHOOTING

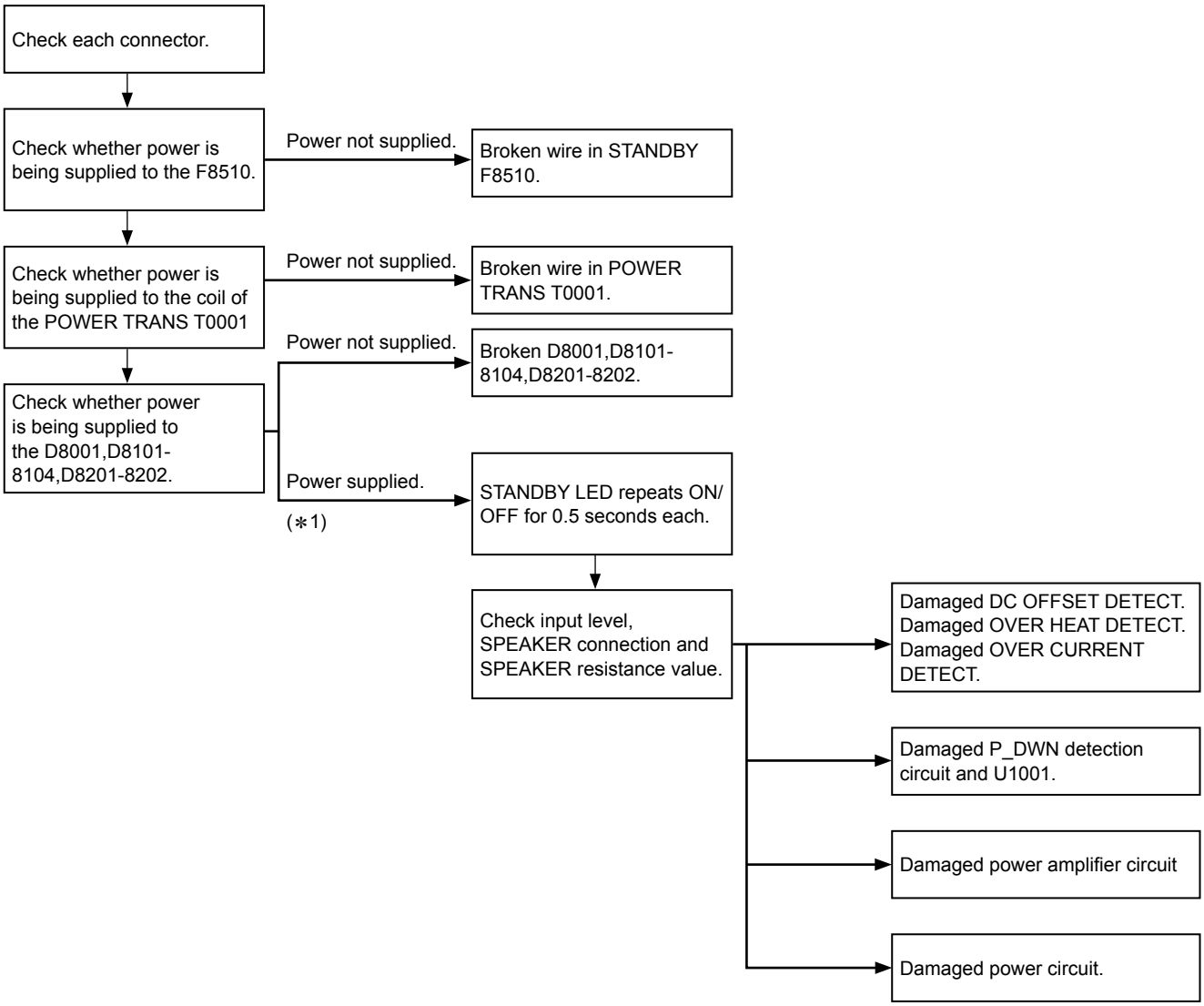
1. The power can not be turned on.

(STANDBY LED does not light (STANDBY MODE))



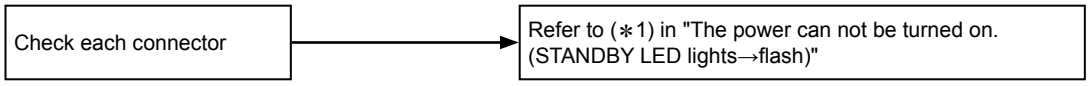
2. The power can not be turned on.

(STANDBY LED lights→flash)



3. STANDBY LED flashes while using unit.

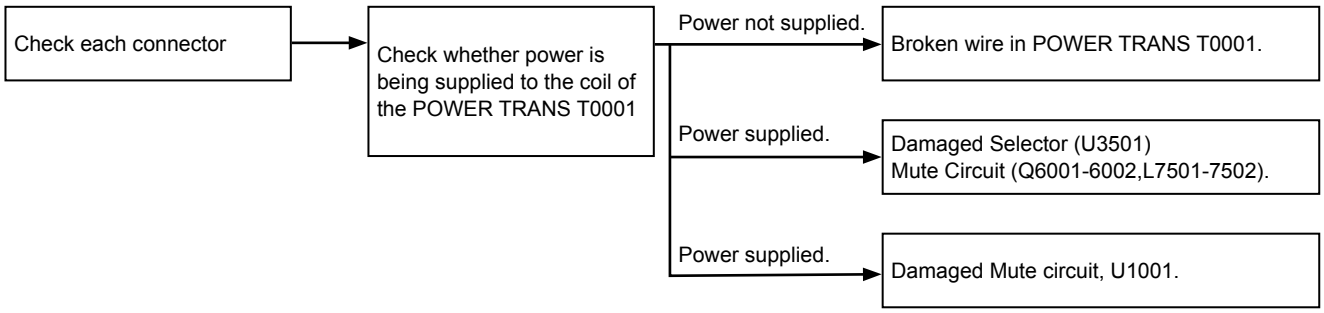
(protection circuit is set)



4. The power turned on, but a sound does not output normally.

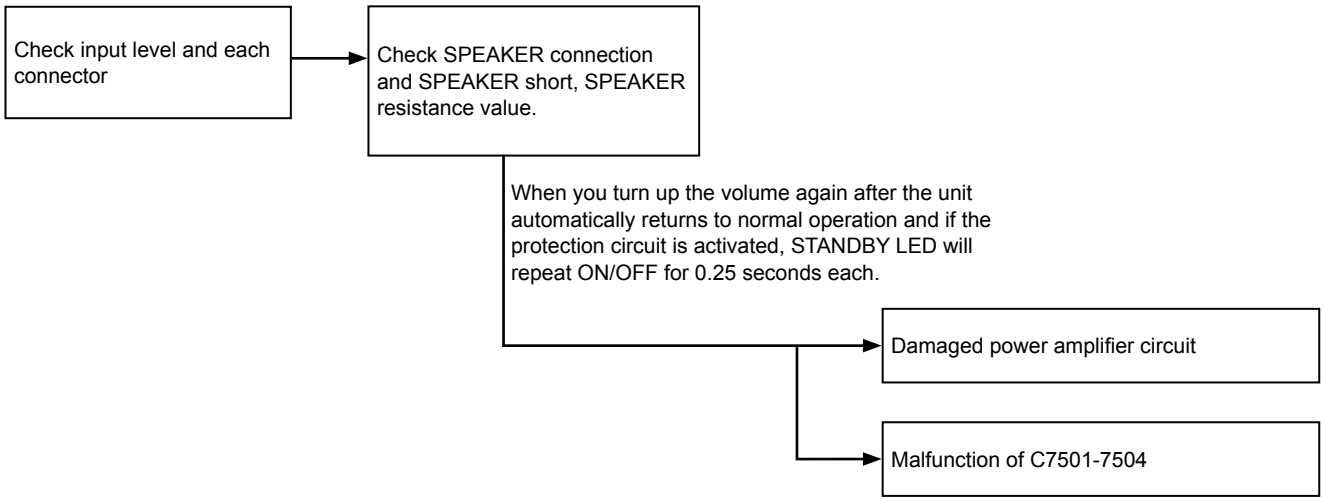
(Both channels)

4.1 STANDBY LED does not flash (protection mode is not set)



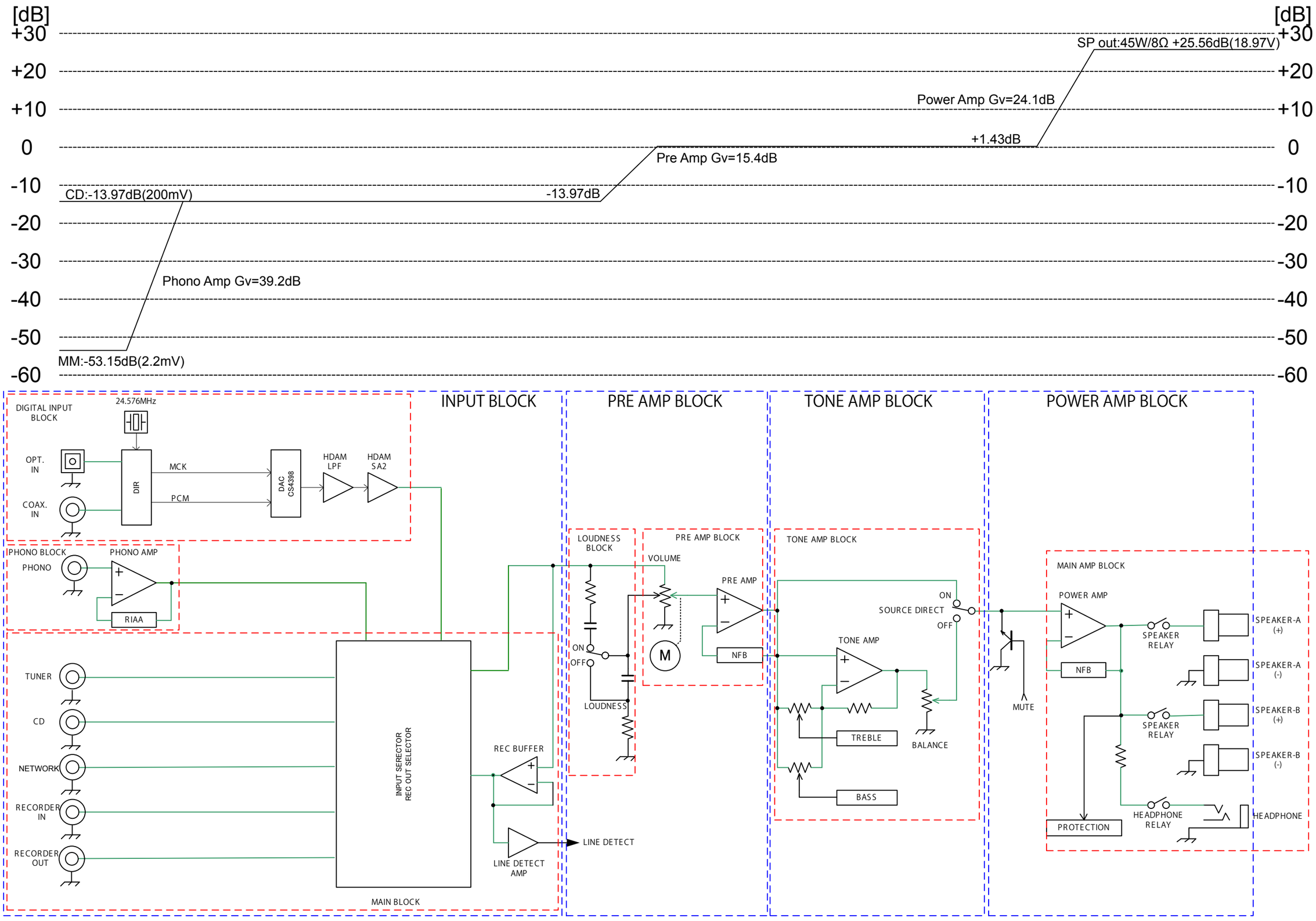
4.2 When the volume is turned up, Mute LED flashes. (protection mode is set)

Repeats ON/OFF for 0.5 second each, and automatically returns to normal operation.



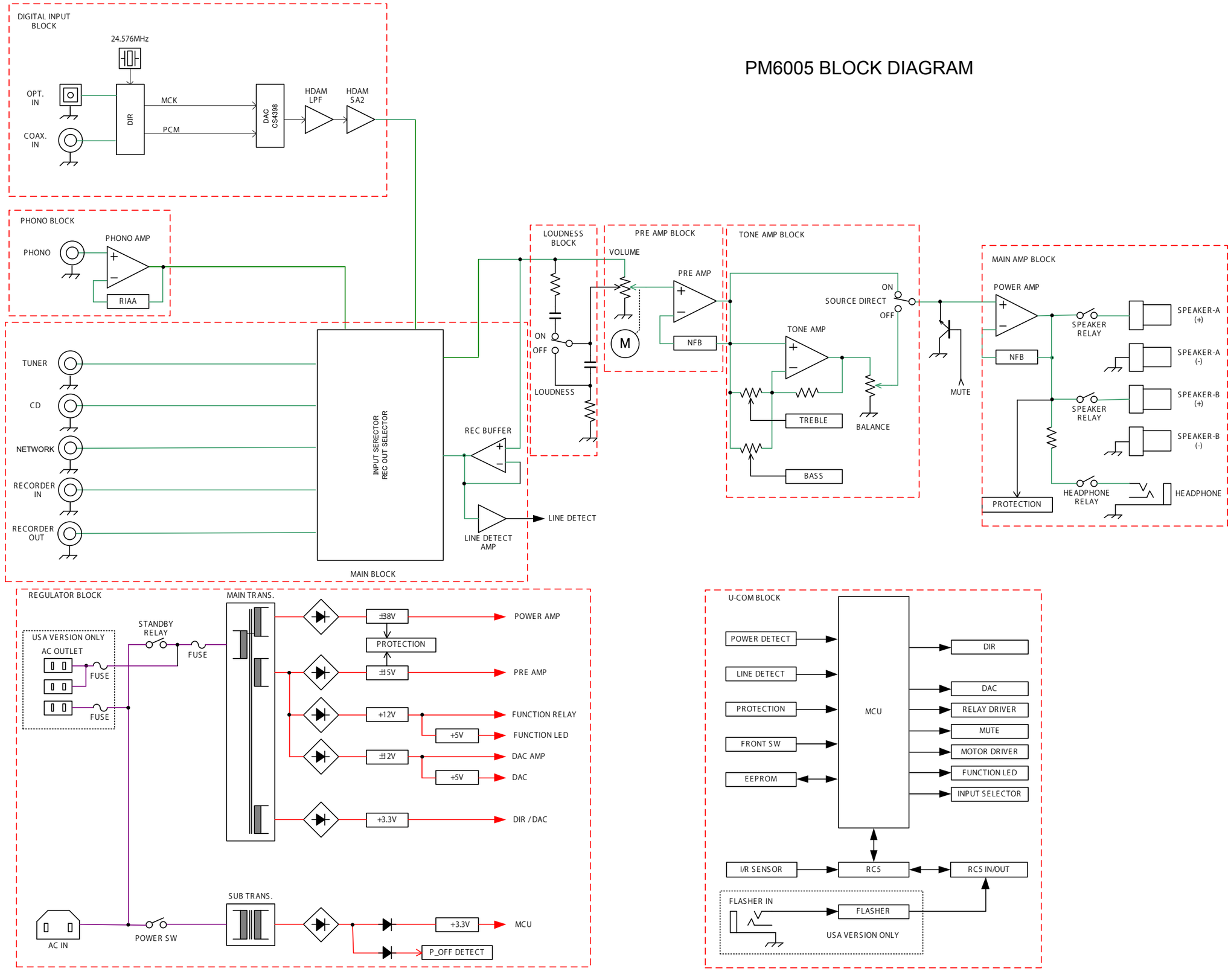
Personal notes:

LEVEL DIAGRAM

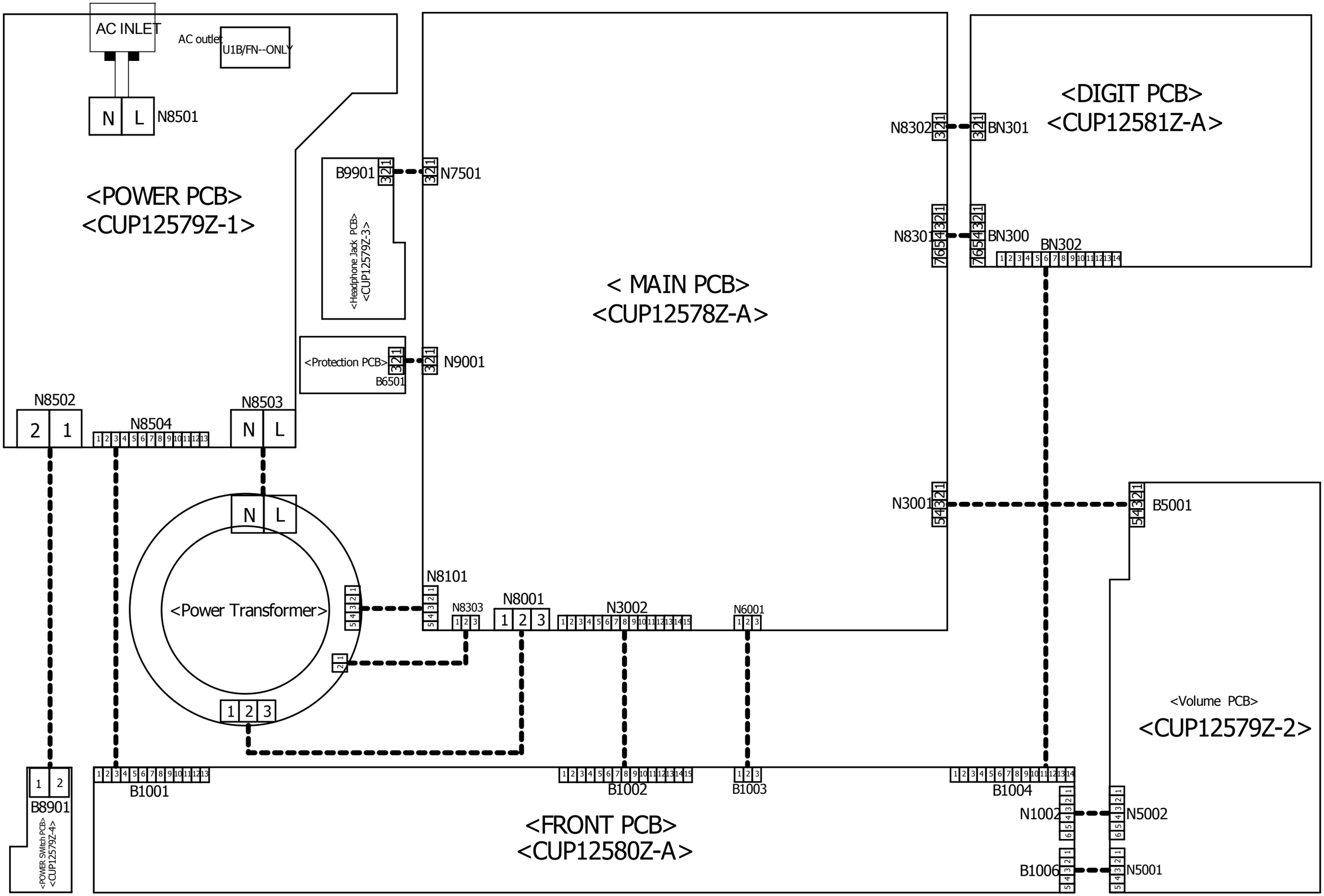


POWER DIAGRAM

PM6005 BLOCK DIAGRAM



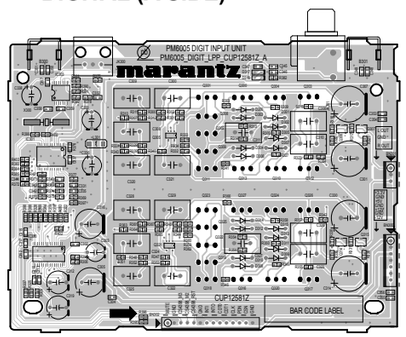
WIRING DIAGRAM



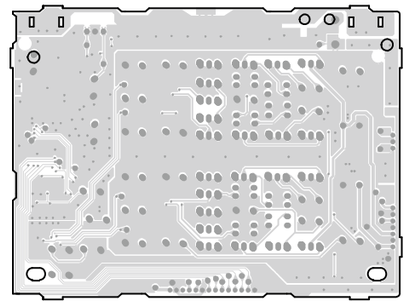
PRINTED WIRING BOARDS

Lead-free Solder
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

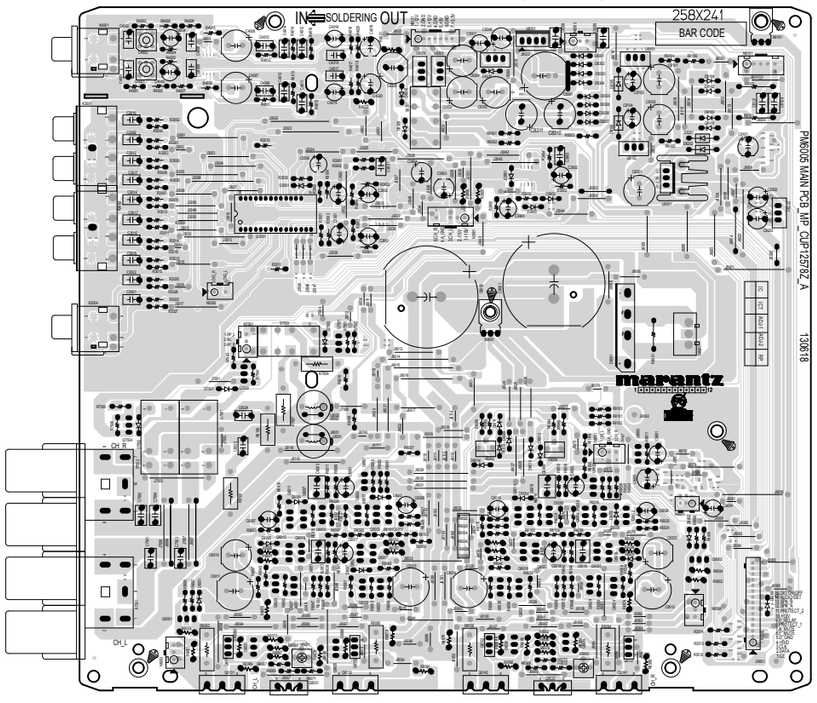
DIGITAL (A SIDE)



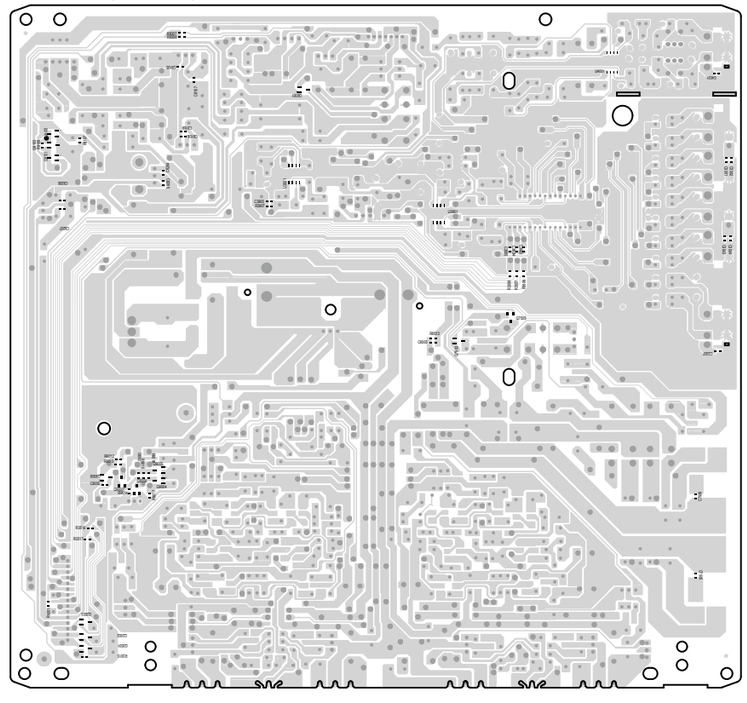
DIGITAL (B SIDE)



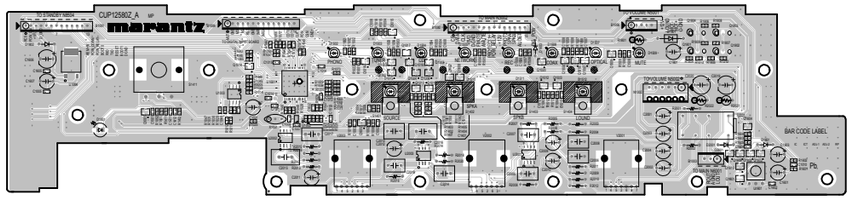
MAIN (A SIDE)



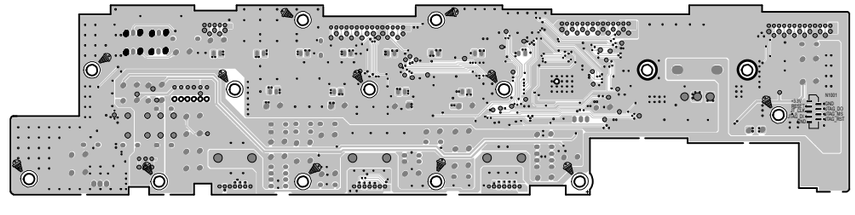
MAIN (B SIDE)



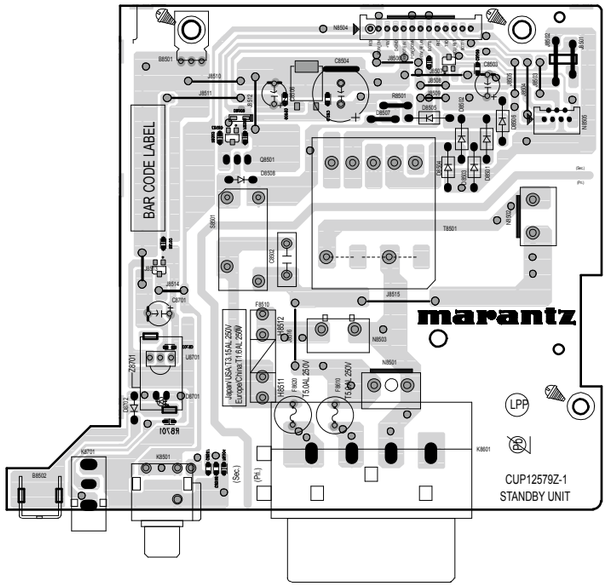
FRONT (A SIDE)



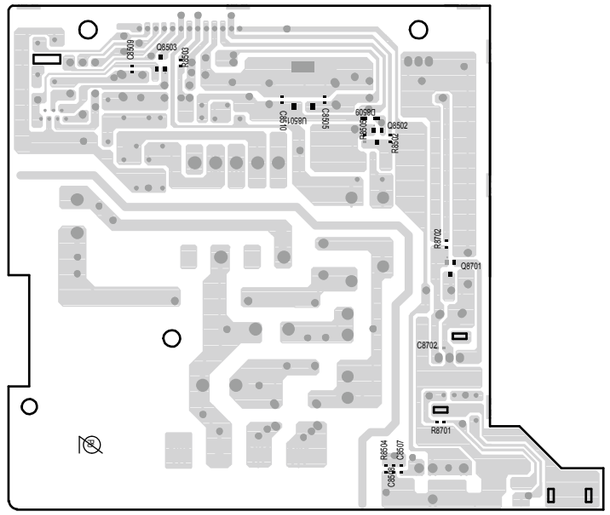
FRONT (B SIDE)



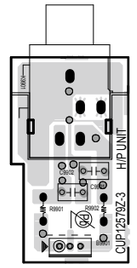
STANDBY (A SIDE)



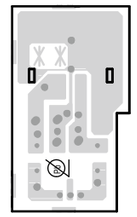
STANDBY (B SIDE)



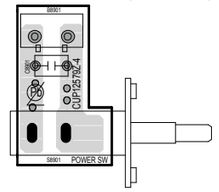
HEADPHONE (A SIDE)



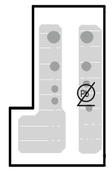
HEADPHONE (B SIDE)



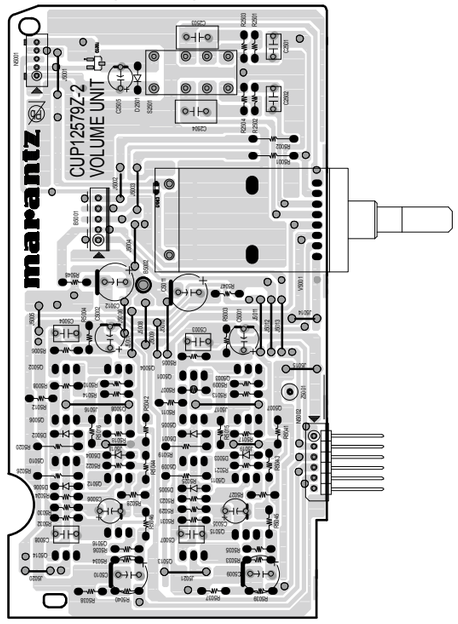
POWER SW (A SIDE)



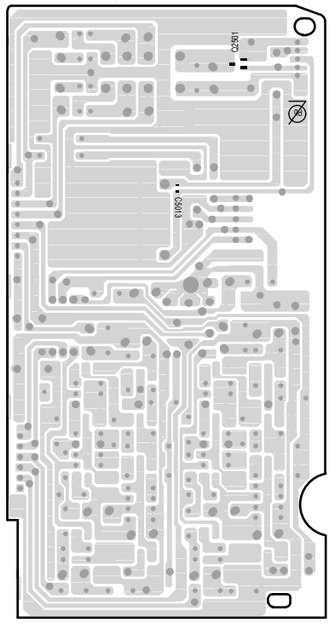
POWER SW (B SIDE)



VOLUME (A SIDE)

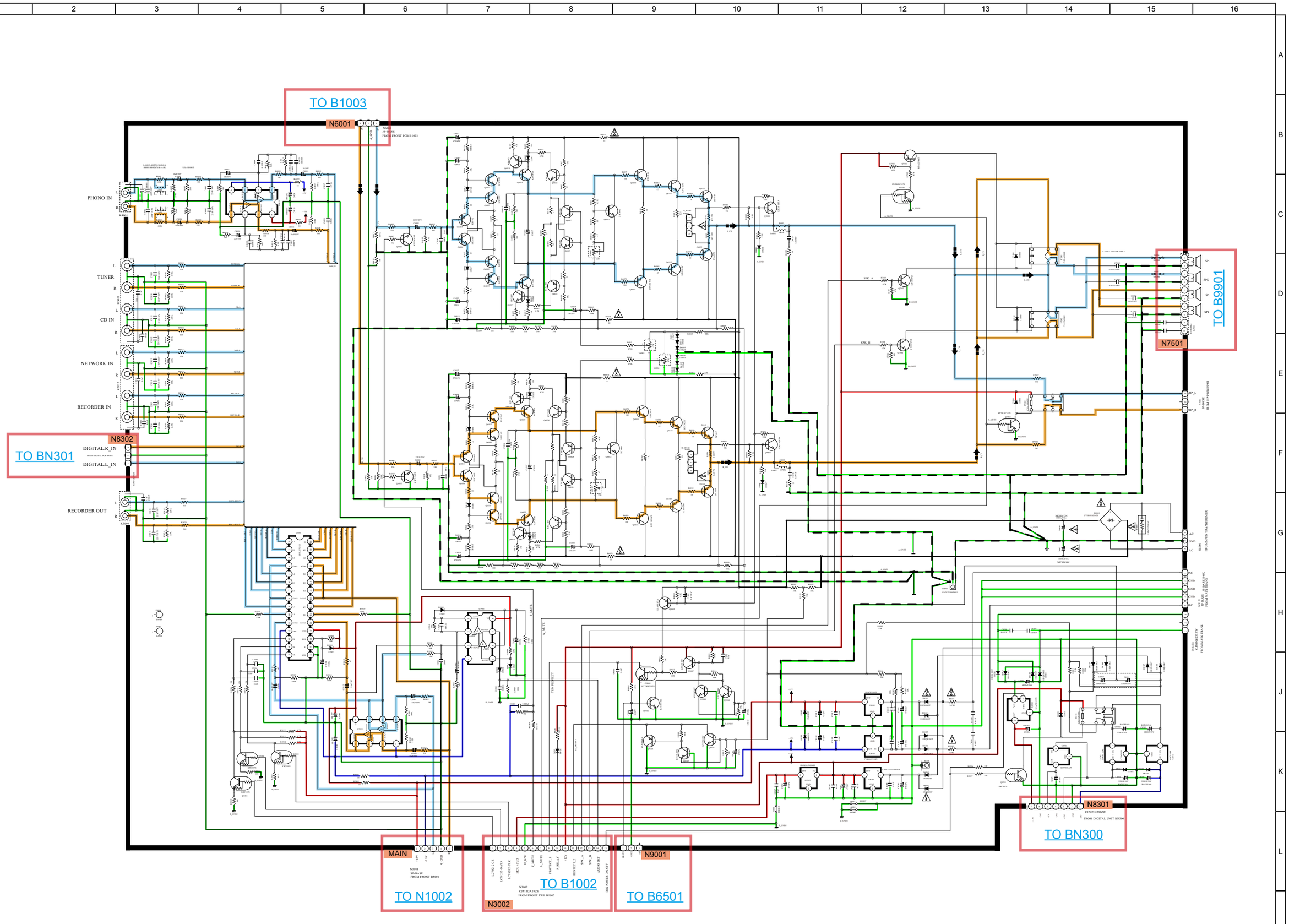


VOLUME (B SIDE)



POSISTER (A SIDE)

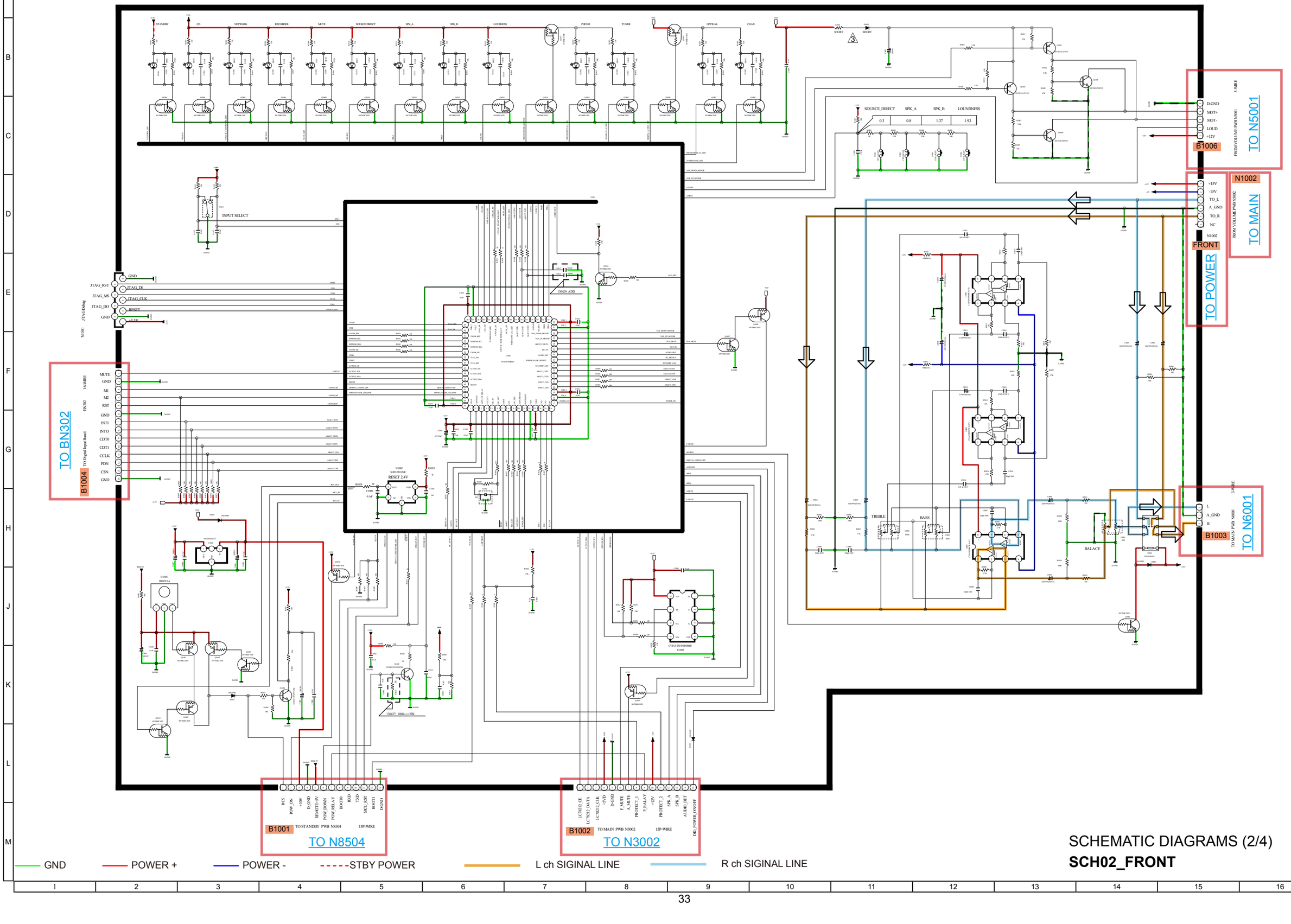
POSISTER (B SIDE)

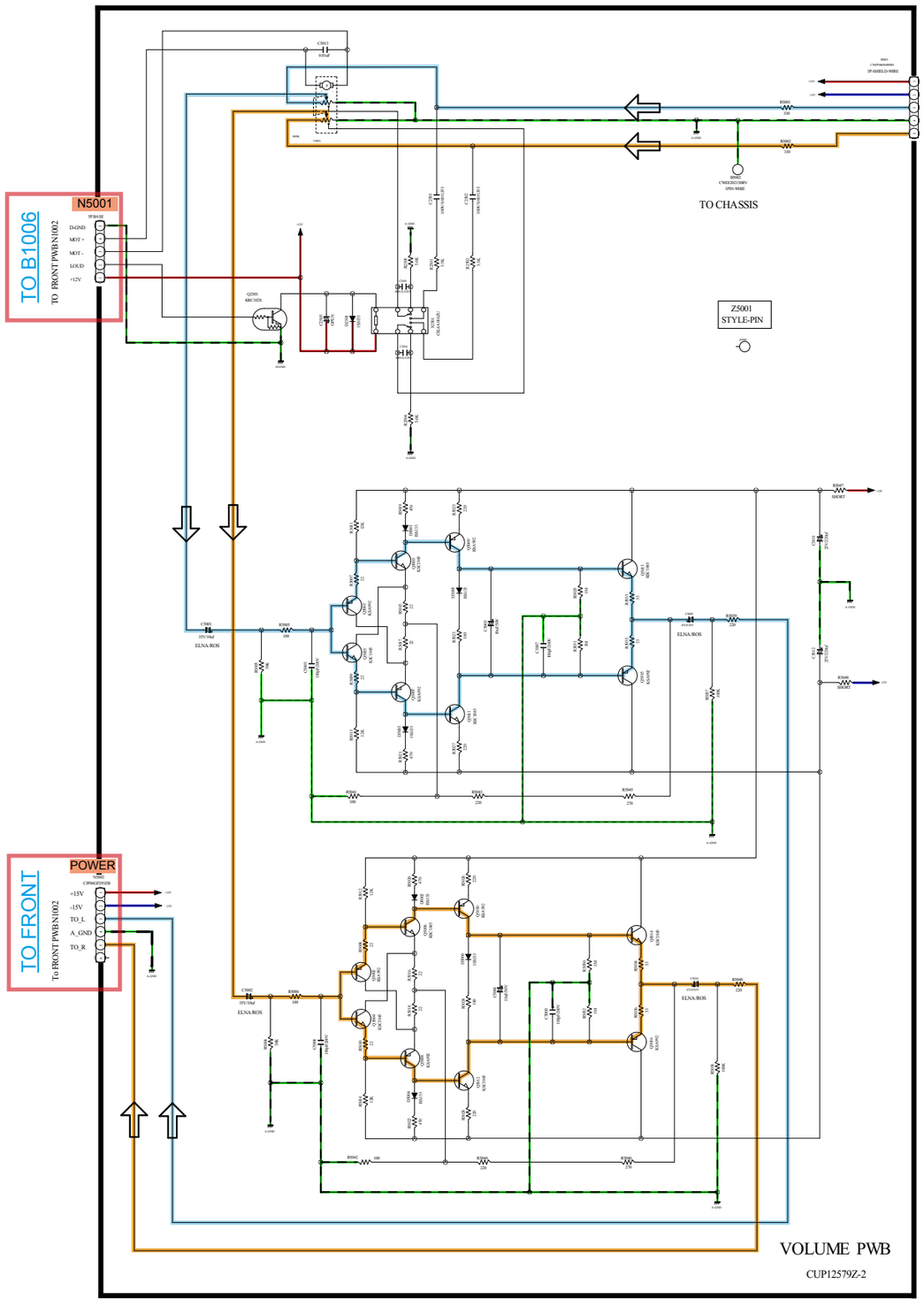


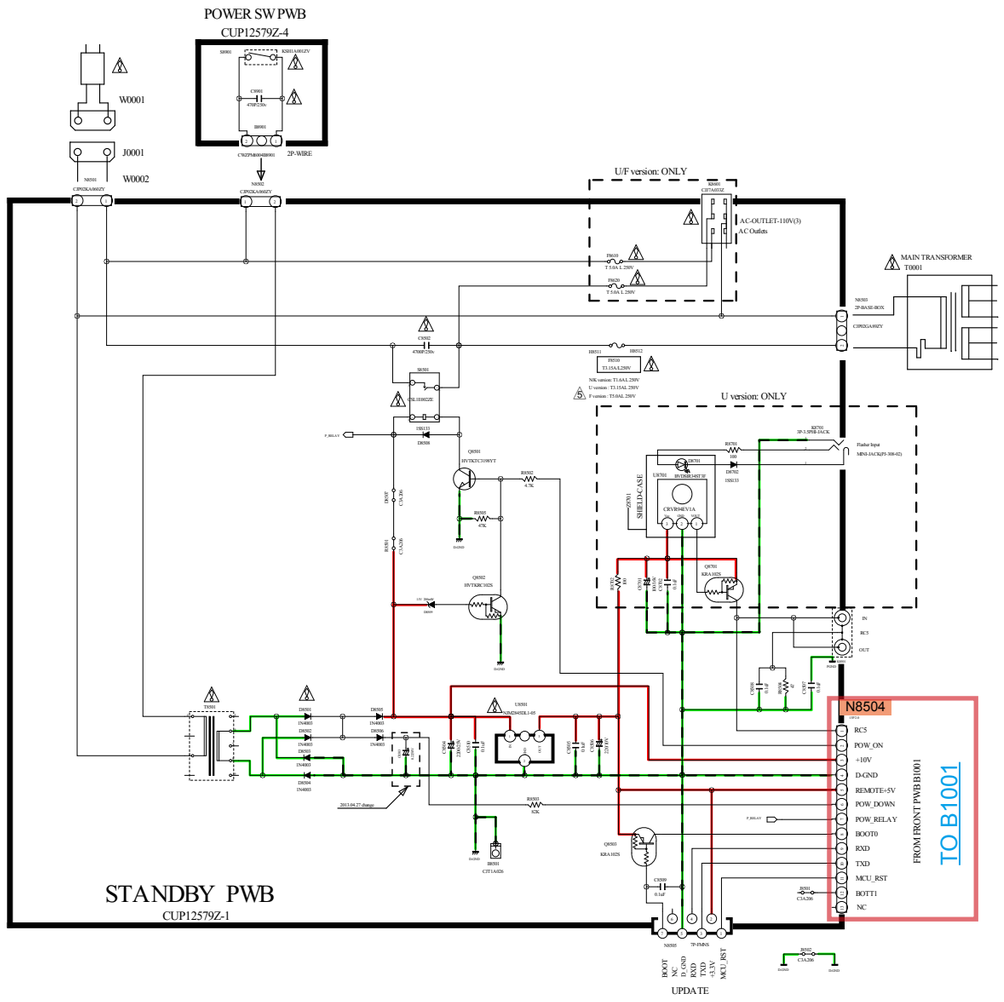
GND — POWER + — POWER - — STBY POWER — L ch SIGINAL LINE — R ch SIGINAL LINE

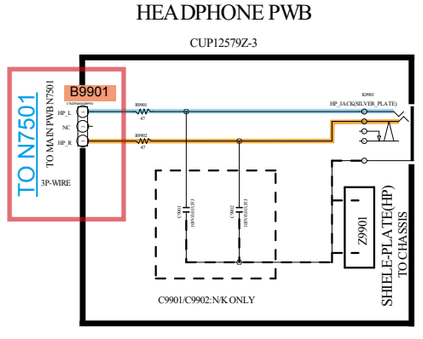
SCHEMATIC DIAGRAMS (1/4)

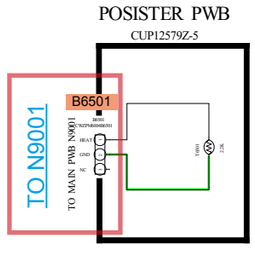
SCH01_MAIN


STANDBY
CD
NETWORK
RECORDER
MUTE
SOURCE DIRECT
SPK_A
SPK_B
LOUDNESS
PHONO
TUNER
OPTICAL
COAX
SOURCE_DIRECT SPK_A SPK_B LOUDNESS
0.3 0.8 1.37 1.93
INPUT SELECT
D-GND
MOT+
MOT-
LOUD
+12V
B1006
TO N5001
FROM VOLUME PWB N5001
S-WIRE
N1002
+15V
-15V
TO_L
A_GND
TO_R
NC
FRONT
TO POWER
TO MAIN
FROM VOLUME PWB N5002
JTAG/Debug
GND
JTAG_RST
JTAG_DI
JTAG_MS
JTAG_CLK
JTAG_DO
RESET
3.3V
TO BN302
B1004
TO D.digital Input Board
16-WIRE
MUTE
MI
M2
RST
INT1
INT0
CDT0
CDT1
CCLK
PDN
CSN
TREBLE
BASS
BALACE
L
R
B1003
TO N6001
TO MAIN PWB N6001
RC5
POW_ON
+10V
D_GND
REMOTE+5V
POW_DOWN
POW_RELAY
BOOT0
RXD
TXD
MCU_RST
BOOT1
DGND
B1001
TO STANDBY PWB N8504
13P-WIRE
TO N8504
LC78212_CE
LC78212_DATA
LC78212_CLK
+5VD
DA.GND
F_MUTE
A_MUTE
PROTECT_1
P_RELAY
+12V
PROTECT_2
SPK_A
SPK_B
AUDIO_DET
DIG_POWER_GND/4V
B1002
TO MAIN PWB N3002
15P-WIRE
TO N3002
SCHEMATIC DIAGRAMS (2/4)
SCH02_FRONT
GND
POWER +
POWER -
STBY POWER
L ch SIGINAL LINE
R ch SIGINAL LINE





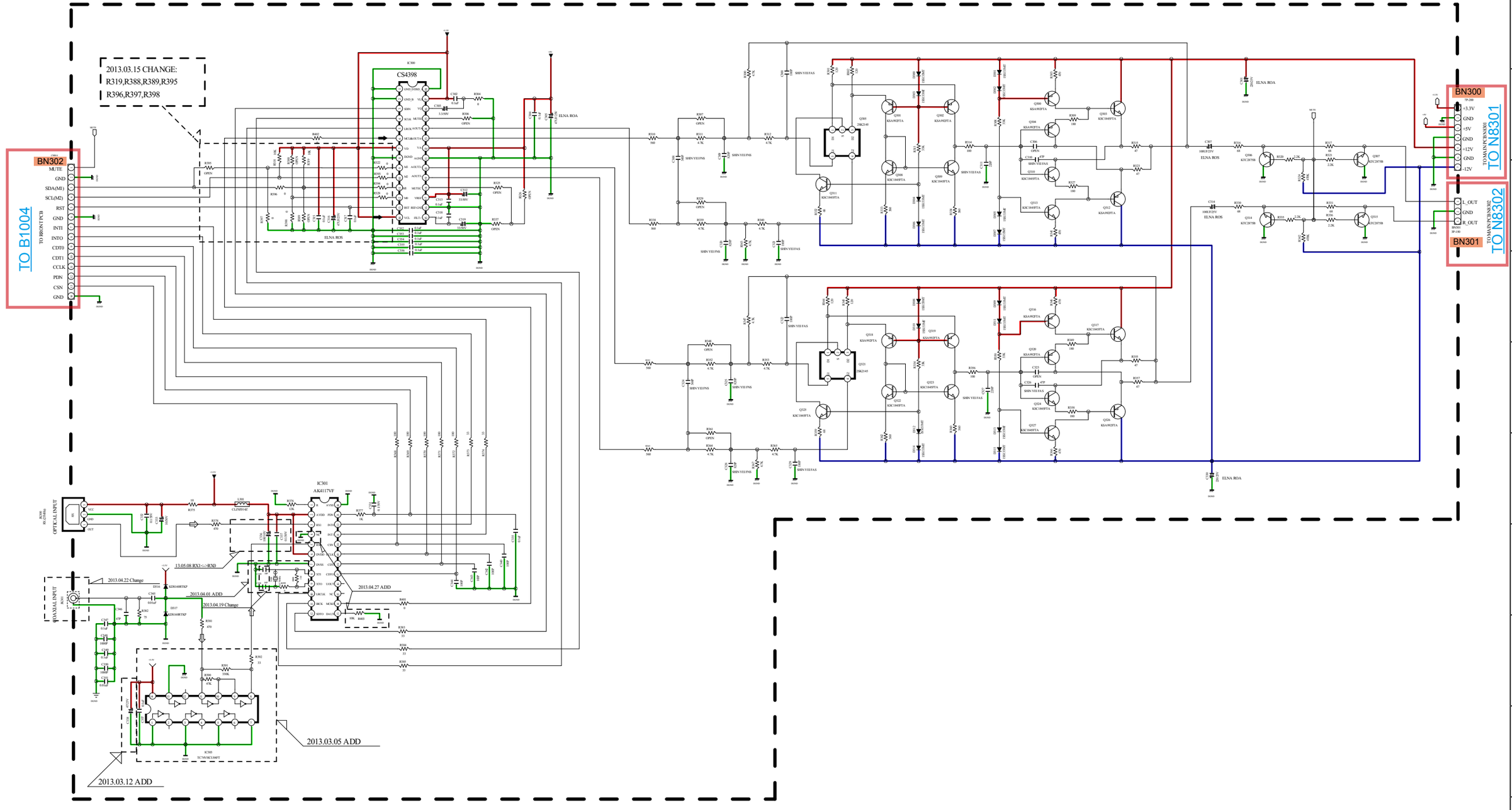




GND POWER + POWER - STBY POWER L ch SIGINAL LINE R ch SIGINAL LINE

SCHEMATIC DIAGRAMS (3/4)

SCH03_POWER



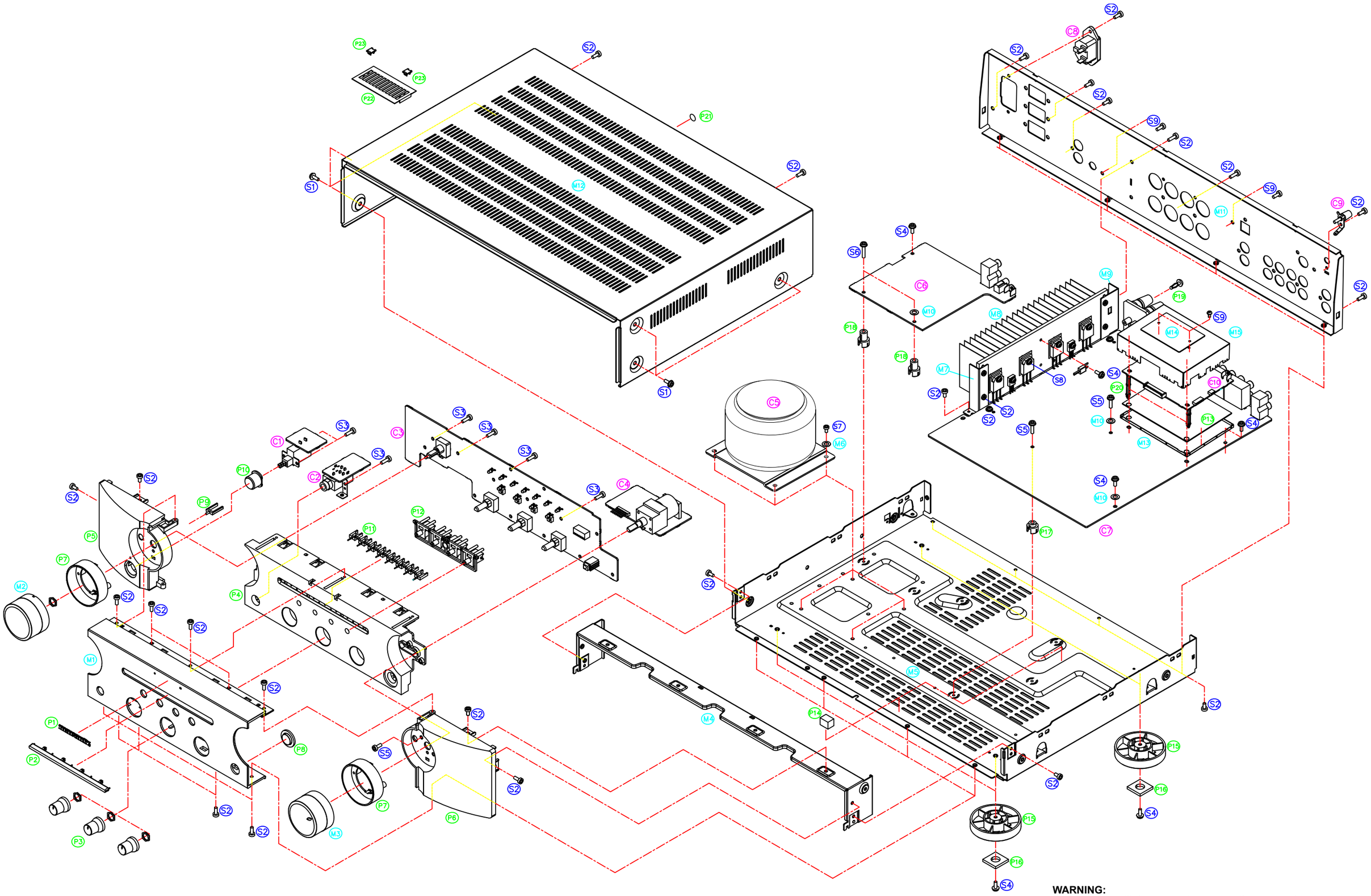
OPTICAL/COAXIAL INPUT UNIT

SCHEMATIC DIAGRAMS (4/4)

SCH04_DIGITAL

EXPLODED VIEW

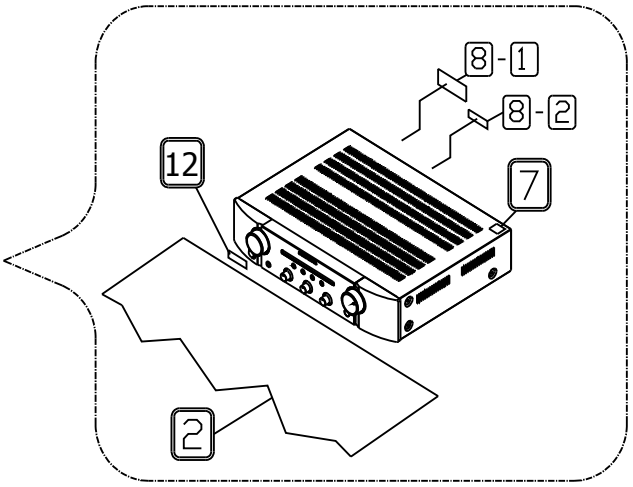
Please refer to the last chapter for the part list.

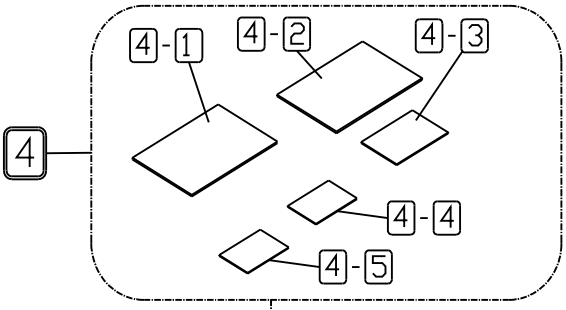


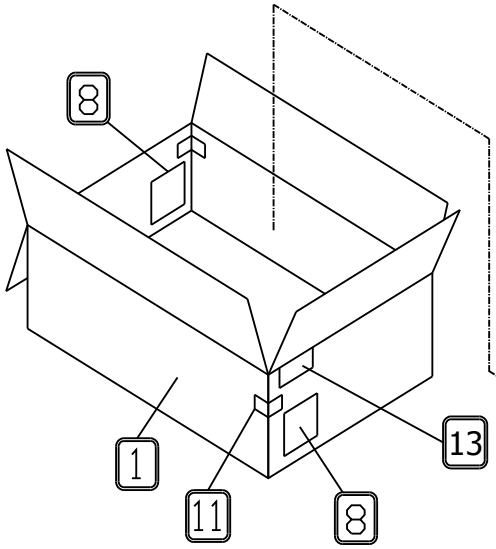
WARNING:
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

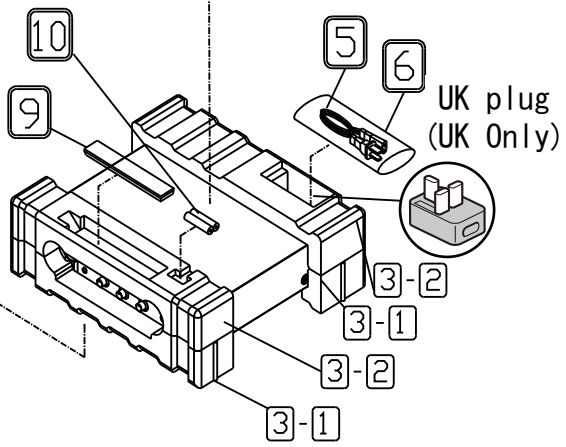
PACKING VIEW

Please refer to the last chapter for the part list.







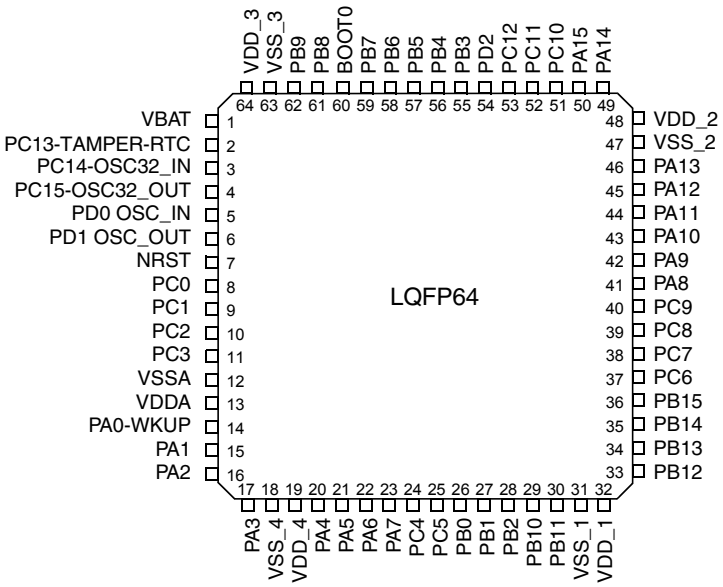


SEMICONDUCTORS

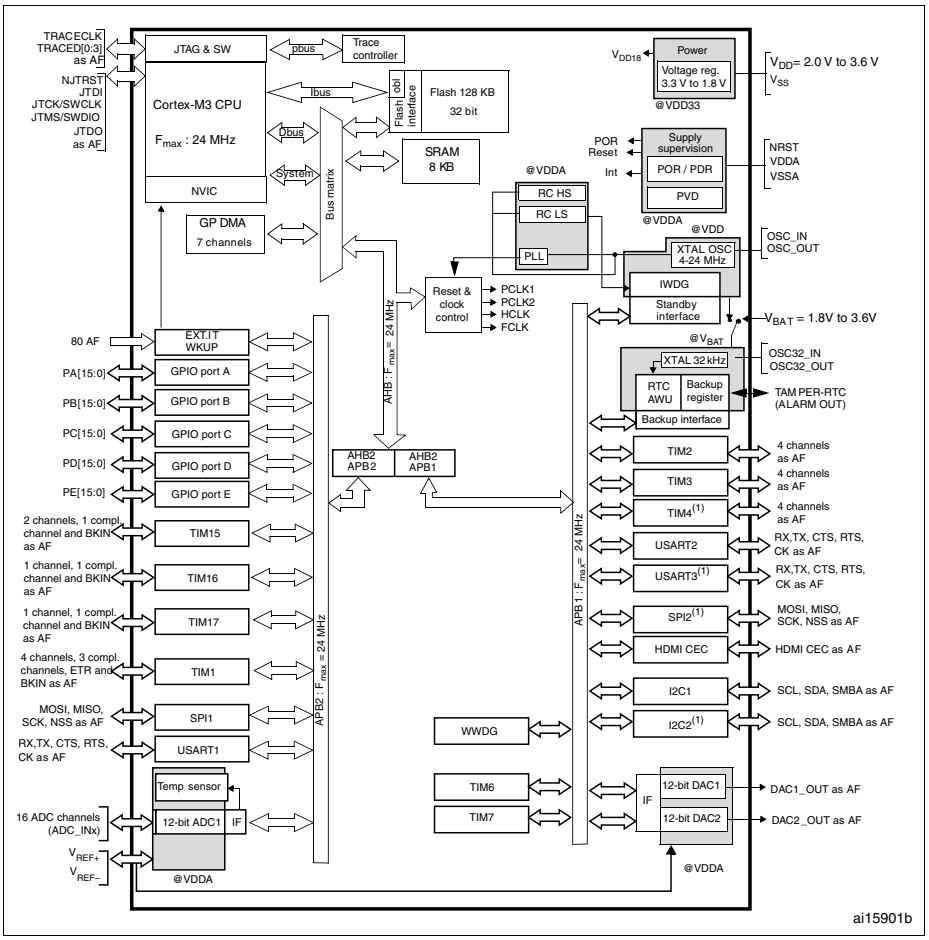
Only major semiconductors are shown, general semiconductors etc. are omitted to list.
The semiconductor which described a detailed drawing in a schematic diagram are omitted to list.

1. IC's

STM32F100R8T6 (U1001)



Block Diagram

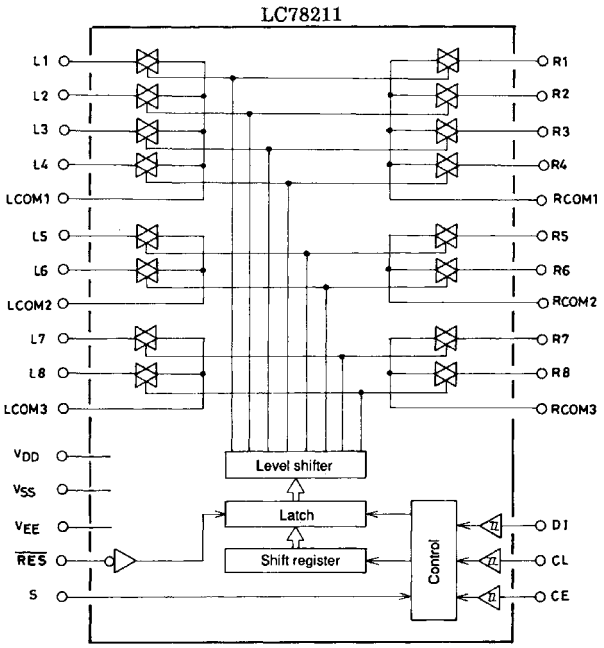


1. Peripherals not present in low-density value line devices.
2. AF = alternate function on I/O port pin.
3. T_A = –40 °C to +85 °C (junction temperature up to 105 °C) or T_A = –40 °C to +105 °C (junction temperature up to 125 °C).

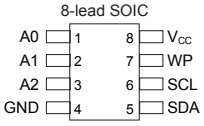
Terminal Functions

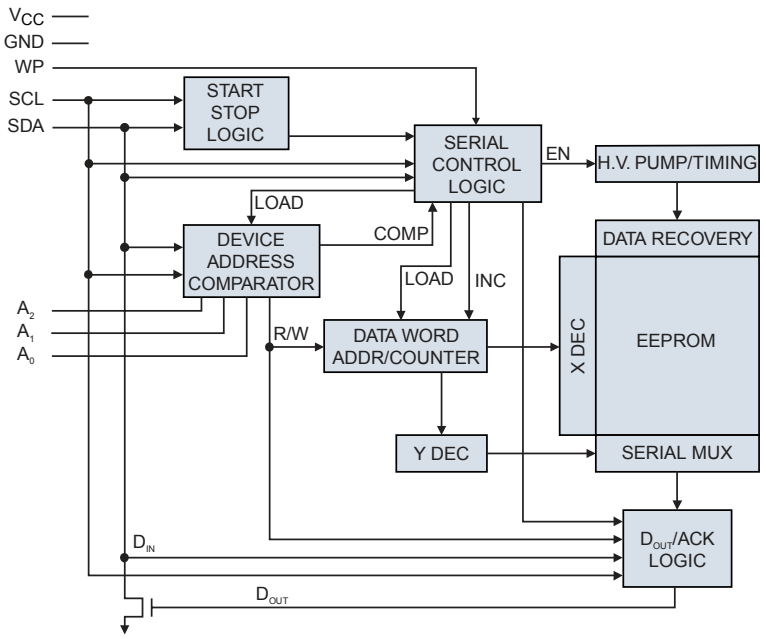
Pin	Symbol	Pin Name	I/O	Pu/ Pd	STBY	Description
1	VBAT	VBAT(VDD +3.3V)	S		_	3.3V power supply
2	PC13/TAMPER-RTC	CS4398_M3	I/O		L	CS4398 m3
3	PC14-OCS32-IN	AMP_MUTE_EAR_ON	I/O		L	enable SPKA,SPKB,EARPHONE RELAY power supply
4	PC15-OCS32-OUT	RC5_OUT	I/O		L	RC5_OUT
5	PD0/OSC_IN	8MHz_OSC_IN	I		_	System 8MHz_OSC_IN
6	PD1/OSC_OUT	8MHz_OSC_OUT	O		_	System 8MHz_OSC_IN
7	NRST	RESET#	I/O		H	RESET
8	PC0	ADKEY	I/O	pu	H	Detect press key voltage
9	PC1	REC_LED	I/O		L	Recorder status output high enable tr,other status low disable tr
10	PC2	AMP_PROT	I/O	pu	H	power on and working short circuit/high temperature protect Detect
11	PC3	POWER_DET	O/O		L	AC IN detect
12	VSSA	GND	S		_	GND
13	VDDA	+3.3V	S		_	3.3V power supply
14	PA0-WKUP	ENC+	I/O	pu	H	input select control
15	PA1	ENC-	I/O	pu	H	input select control
16	PA2	KILL_IR	I/O		H	keyboard remote recive signal control
17	PA3	POWER_ON	I/O		H	power on output enable tr control relay
18	VSS_4	GND	S		_	GND
19	VDD_4	+3.3V	S		_	3.3V power supply
20	PA4	AK4117_CSN	I/O	pu	H	ak4117 chip select
21	PA5	AK4117_CLK	I/O	pu	H	ak4117 clock
22	PA6	AK4117_CDT0	I/O	pu	H	ak4117 cdt0
23	PA7	AK4117_CDT1	I/O	pu	H	ak4117 cdt1
24	PC4	STB_LED	I/O		H	standby status enable tr on,power on disable tr tr off
25	PC5	DC_DETECT	I/O	pu	L	detect power on +5v voltage
26	PB0	AUDIO_DET	I/O	pu	H	detect no signal power off
27	PB1	RC5_IN	I/O		H	RC5 signal input
28	PB2/BOOT1	BOOT1	I/O		L	updata set low,working status mute control
29	PB10	VOL_UP_MOTOR	I/O	pu	L	Remotecontrol volume motor up
30	PB11	VOL_DOWN_MOTOR	I/O	pu	L	remotecontrol volume motor down
31	VSS_1	GND	S		_	GND
32	VDD_1	+3.3V	S		_	3.3V power supply
33	PB12	SPKA	I/O		L	output high control speaker A channel output
34	PB13	SPKB	I/O		L	output high control speaker B channel output
35	PB14	SOURE	I/O		L	output high control source direct
36	PB15	LOUND	I/O		L	output high control loundness
37	PC6	AK4117_INTO	I/O	pu	L	ak4117 int0 control pin
38	PC7	AK4117_INTI	I/O	pu	L	ak4117 int1 control pin
39	PC8	AK4117_PDN	I/O	pu	H	ak41117 power down control pin
40	PC9	PHONE_LED	I/O		L	phono status output high enable tr,other status low disable tr
41	PA8	MUTE_LED	I/O		L	mute status output high enable tr,optial/coax status no signal blinking
42	PA9	UPDATE_TX	I/O		L	updata tx pin / network status led control pin
43	PA10	UPDATE_RX	I/O		H	updata rx
44	PA11	TUNER_LED	I/O		L	tuner status output high enable tr,other status low disable tr
45	PA12	CD_LED	I/O		L	cd status output high enable tr,other status low disable tr
46	JTMS	JTMS	I/O		H	jtag debug port
47	VSS_2	GND	S		_	GND
48	VDD_2	+3.3V	S		_	3.3V power supply
49	PA14/JTCK	JTAG_JTCK	I/O		L	jtag debug port
50	PA15/JTDI	JTAG_JTDI	I/O		H	jtag debug port
51	PC10	CS4398_RST	I/O		H	cs4398 reset
52	PC11	EEPROM_SCL	I/O	PU	H	eeprom clock
53	PC12	EEPROM_SDA	I/O	pu	H	eeprom data port
54	PD2	CS44398_M2	I/O	pu	H	cs4398 m2
55	PB3/JTDO	JTAG_JTDO	I/O		L	jtag debug port
56	PB4/JNTRST	JTAG_RST	I/O		H	jtag debug port
57	PB5	LC78212_CE	I/O		H	channel chip select
58	PB6	LC78212_SCL	I/O		H	channel chip clock
59	PB7	LC78212_SDA	I/O		H	channel chip data
60	BOOT0	BOOT0	I		L	updata nedd high level select
61	PB8	OPTICAL_LED	I/O		L	optial status output high enable tr,other status low disable tr
62	PB9	COAX_LED	I/O		L	coax status output high enable tr,other status low disable tr
63	VSS_3	GND	S		_	GND
64	VDD_3	+3.3V	S		_	3.3V power supply

LC78212 (U3501)



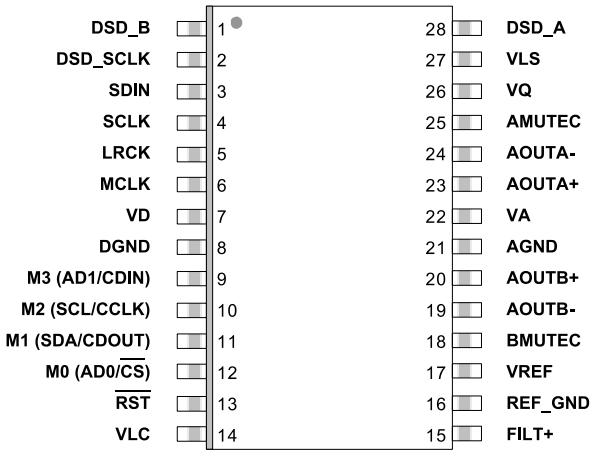
U1003 AT24C04BN



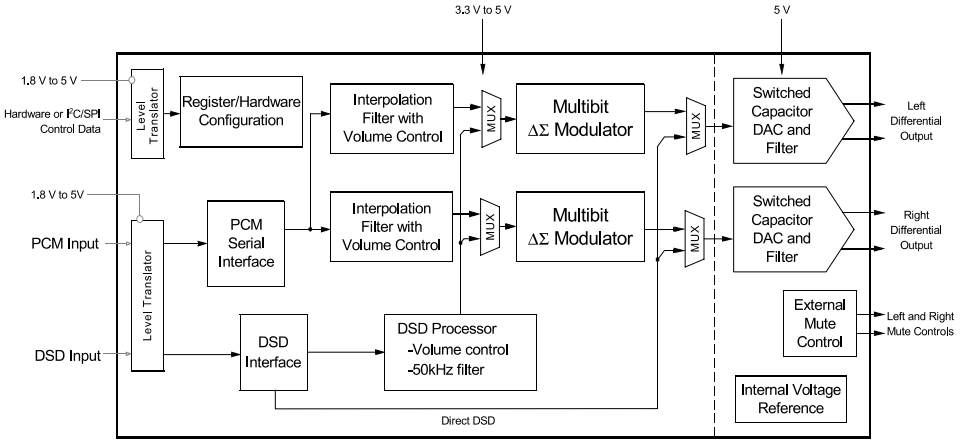


Pin Name	Description
A0 – A2	Address Inputs
SDA	Serial Data
SCL	Serial Clock Input
WP	Write Protect
NC	No Connect
GND	Ground
V_{CC}	Power Supply

IC300 CS4398



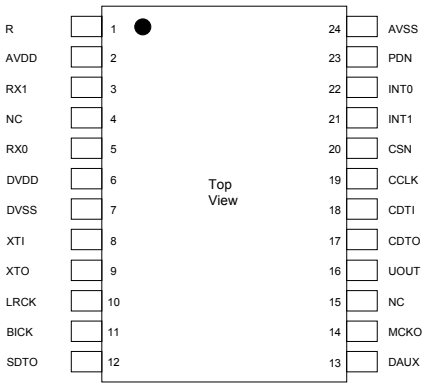
Block Diagram



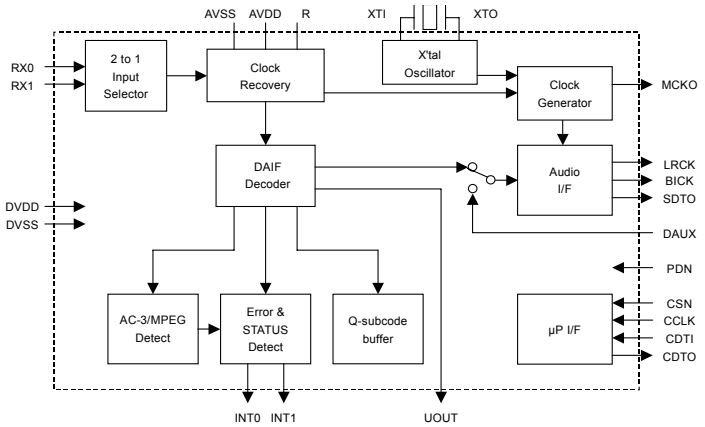
Terminal Functions

Pin Name	Pin #	Pin Description
DSD_A DSD_B	28 1	**Direct Stream Digital Input** (*Input*) - Input for Direct Stream Digital serial audio data.
DSD_SCLK	2	**DSD Serial Clock** (*Input*) - Serial clock for the Direct Stream Digital audio interface.
SDIN	3	**Serial Audio Data Input** (*Input*) - Input for two's complement serial audio data.
SCLK	4	**Serial Clock** (*Input*) - Serial clock for the serial audio interface.
LRCK	5	**Left Right Clock** (*Input*) - Determines which channel, Left or Right, is currently active on the serial audio data line.
MCLK	6	**Master Clock** (*Input*) - Clock source for the delta-sigma modulator and digital filters.
VD	7	**Digital Power** (*Input*) - Positive power for the digital section.
DGND	8	**Digital Ground** (*Input*) - Ground reference for the digital section.
RST	13	**Reset** (*Input*) - The device enters system reset when enabled.
VLC	14	**Control Port Power** (*Input*) - Positive power for Control Port I/O.
FILT+	15	**Positive Voltage Reference** (*Output*) - Positive reference voltage for the internal sampling circuits.
REF_GND	16	**Reference Ground** (*Input*) - Ground reference for the internal sampling circuits.
VREF	17	**Voltage Reference** (*Input*) - Positive voltage reference for the internal sampling circuits.
BMUTEC AMUTEC	18 25	**Mute Control** (*Output*) - The Mute Control pin is active during power-up initialization, muting, power-down or if the master clock to left/right clock frequency ratio is incorrect. During reset, these outputs are set to a high impedance.
AOUTB+ AOUTB-	20 19	**Differential Right Channel Analog Output** (*Output*) - The full-scale differential analog output level is specified in the Analog Characteristics specification table.
AGND	21	**Analog Ground** (*Input*) - Ground reference for the analog section.
VA	22	**Analog Power** (*Input*) - Positive power for the analog section.
AOUTA+ AOUTA-	23 24	**Differential Left Channel Analog Output** (*Output*) - The full-scale differential analog output level is specified in the Analog Characteristics specification table.
VQ	26	**Quiescent Voltage** (*Output*) - Filter connection for internal quiescent voltage.
VLS	27	**Serial Audio Interface Power** (*Input*) - Positive power for serial audio interface I/O.
Stand-Alone Mode Definitions		
M3 M2 M1 M0	9 10 11 12	**Mode Selection** (*Input*) - Determines the operational mode of the device.
Control Port Mode Definitions		
AD1/CDIN	9	**Address Bit 1 (I²C) / Control Data Input (SPI)** (*Input*) - AD1 is a chip address pin in I²C mode; CDIN is the input data line for the Control Port interface in SPI mode.
SCL/CCLK	10	**Serial Control Port Clock** (*Input*) - Serial clock for the serial Control Port.
SDA/CDOUT	11	**Serial Control Data (I²C) / Control Data Output (SPI)** (*Input/Output*) - SDA is a data I/O line in I²C mode. CDOUT is the output data line for the Control Port interface in SPI mode.
AD0/$\overline{CS}$	12	**Address Bit 0 (I²C) / Control Port Chip Select (SPI)** (*Input*) - AD0 is a chip address pin in I²C mode; $\overline{CS}$ is the chip select signal for SPI format.

IC301 AK4117



Block Diagram



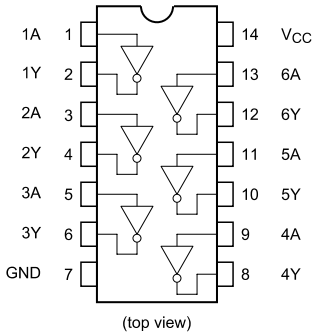
Terminal Functions

No.	Pin Name	I/O	Function
1	R	-	External Resistor Pin 12kΩ-5% ~ 13kΩ+5% resistor to AVSS externally.
2	AVDD	-	Analog Power Supply Pin
3	RX1	I	Receiver Channel 1 (Internal Biased Pin)
4	NC	-	No Connect No internal bonding.
5	RX0	I	Receiver Channel 0 (Internal Biased Pin)
6	DVDD	-	Digital Power Supply Pin
7	DVSS	-	Digital Ground Pin
8	XTI	I	X'tal Input Pin
9	XTO	O	X'tal Output Pin
10	LRCK	O	Output Channel Clock Pin
11	BICK	O	Audio Serial Data Clock Pin
12	SDTO	O	Audio Serial Data Output Pin
13	DAUX	I	Auxiliary Audio Data Input Pin
14	MCKO	O	Master Clock Output Pin
15	NC	-	No Connect No internal bonding.
16	UOUT	O	U-bit Output Pin When UOUTE bit = "0", UOUT pin = "L".
17	CDTO	O	Control Data Output Pin
18	CDTI	I	Control Data Input Pin
19	CCLK	I	Control Data Clock Pin
20	CSN	I	Chip Select Pin
21	INT1	O	Interrupt 1 Pin
22	INT0	O	Interrupt 0 Pin
23	PDN	I	Power-Down & Reset Pin When "L", the AK4117 is powered-down and reset, and all output pins go to "L" and the control registers are reset to default state.
24	AVSS	-	Analog Ground Pin

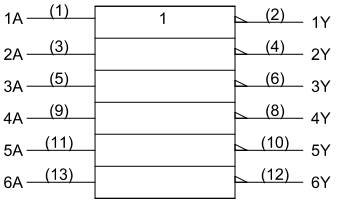
Note 1: All input pins except internal biased pins should not be left floating.

IC303 TC74VHC04FT

Pin Assignment



IEC Logic Symbol



Truth Table

A	Y
L	H
H	L

FRONT PCB ASS'Y

NOTE:The symbols in the column Remarks indicate the following destinations.
U : North America model N : Europe model K : China model F : Japan model
B : Black model SG : Silver gold model

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	SEMICONDUCTORS GROUP							
	D1501	90M-HI101040R	L.E.D , RED		HVD342VCTB7T089	1		
	D1502 -1508	943176100140M	LED,BLUE (2.54MM PITCH)		CVD1L034XB12E0CTT02	7	*	
	D1509	943176100150M	LED, RED(3.5PIE, 2.5MM PITCH, 330MCD)		CVDSLI343V8RCT32	1	*	
	D1510 -1513	943176100140M	LED,BLUE (2.54MM PITCH)		CVD1L034XB12E0CTT02	4	*	
	D1601	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D1603	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D1801	-	-	-	-	-		3
	D1802	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D2001	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	Q1001 -1013	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	13		
	Q1014 ,1015	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	2		
	Q1016	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q1017	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	1		
	Q1018	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q1019	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	1		
	Q1020	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q1601 -1603	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	3		
	Q1604 ,1605	00D2730464901	T.R , CHIP , SOT-23		HVTKTC3875SYRTK	2		
	Q1607	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q1608	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	1		
	Q1609 ,1610	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	2		
	Q1801 ,1802	00MHT600141B1	T.R		HVTKTA1271YT	2		
	Q1803 ,1804	00MHT800951B0	T.R		HVTKTC3203YT	2		
	Q2001	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	U1001	943243101870M	IC,MCU 32BIT 64K FLASH LQFP-64		CVISTM32F100R8T6	1	*	
	U1002	943234009290S	I.C , RESET 2.4V (200ms,C-MOS,SOT23-5P)		CVIS80124CLMCJIJT2	1		
	U1003	943236000650S	I.C , EEPROM(4K, JEDEC SOIC)		CVIAT24C04BNSHB	1		
	U1004	943239010400S	I.C, REGULATOR(3.3V/TO-252)		CVINJM2845DL133	1		
	U1601	262010007707S	REMOTE SENSOR , R94EV1A		CRVR94EV1A	1		
	U2001 -2003	00D2631289900	I.C , OPAMP(DUAL/LOW NOISE)_Copper		CVIAZ4580MTR-E1-CU	3		
	RESISTOR GROUP							
	R1001	nsp	RES, CHIP(1608/5%/22Kohm)		CRJ10DJ223T	1		
	R1002	nsp	RES, CHIP(1608/5%/1Kohm)		CRJ10DJ102T	1		
	R1004	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R1005 ,1006	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	2		
	R1008	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1010 -1014	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	5		
	R1015 ,1016	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	2		
	R1017 ,1018	nsp	RES, CHIP(1608/5%/22Kohm)		CRJ10DJ223T	2		
	R1020 -1022	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	3		
	R1024 -1027	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	4		
	R1028	nsp	RES, CHIP(1608/5%/10ohm)		CRJ10DJ100T	1		
	R1029	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1030 -1047	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	18		
	R1048	nsp	RES, CHIP(1608/5%/220ohm)		CRJ10DJ221T	1		
	R1049	nsp	RES, CHIP(1608/5%/1Mohm)		CRJ10DJ105T	1		
	R1050	nsp	RES, CHIP(1608/5%/33ohm)		CRJ10DJ330T	1		
	R1051	nsp	RES, CHIP(1608/5%/1Kohm)		CRJ10DJ102T	1		
	R1052 -1059	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	8		
	R1061 -1064	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	4		
	R1066 -1071	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	6		
	R1073	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	1		
	R1212	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1401	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1402	nsp	RES, CHIP(1608/5%/1Kohm)		CRJ10DJ102T	1		
	R1403	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	1		
	R1404	nsp	RES, CHIP(1608/5%/3.9Kohm)		CRJ10DJ392T	1		
	R1405	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1411 ,1412	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R1501	nsp	RES, CHIP(1608/5%/150ohm)		CRJ10DJ151T	1		
	R1502 -1513	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	12		
	R1601 ,1602	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	2		
	R1603	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R1604	nsp	RES, CHIP(1608/5%/18Kohm)		CRJ10DJ183T	1		
	R1605	nsp	RES, CHIP(1608/5%/33Kohm)		CRJ10DJ333T	1		
	R1801	-	-	-	-	-		3
	R1802 -1807	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	6		
	R1808 ,1809	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R2001 ,2002	nsp	RES, CARBON(1/5W,56Kohm,J)		CRD20TJ563T	2		
	R2003 ,2004	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R2005 -2008	nsp	RES, CARBON(1/5W,2.7Kohm,J)		CRD20TJ272T	4		
	R2009 ,2010	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R2011 ,2012	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R2013 -2016	nsp	RES, CARBON(1/5W,1.2Kohm,J)		CRD20TJ122T	4		
	R2017 ,2018	nsp	RES, CARBON(1/5W,56Kohm,J)		CRD20TJ563T	2		
	R2019 ,2020	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	2		
!	R2021 ,2022	00MGG0510016X	RES , CFPS1/4CMHTA100J		CRG14SANJ100CLPS	2		
	CAPACIITORS GROUP							
	C1001	943134502680M	CAP , ELECT(10uF/63V)		CCEA1JH100T	1	*	
	C1002 -1006	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	5		
	C1007	nsp	CAP, CHIP(1608, 10V/1uF)		CCUS1A105KC	1		
	C1008 -1016	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	9		
	C1017 ,1018	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	2		
	C1401	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	1		
	C1411 ,1412	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	2		
	C1502 -1508	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	7		
	C1510 -1515	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	6		
	C1601	13405012940AS	CAP, ELECT(16V/100uF)		CCEA1CH101T	1		
	C1602	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C1603	13405012940AS	CAP, ELECT(16V/100uF)		CCEA1CH101T	1		
	C1603	13405012940AS	CAP, ELECT(16V/100uF)		CCEA1CH101T	1		
	C1604 ,1605	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	2		
	C1606	00MOA10702520	CAP, ELECT(25V/100uF)		CCEA1EH101T	1		
	C1607	13405012940AS	CAP, ELECT(16V/100uF)		CCEA1CH101T	1		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	C1801	nsp	CAP, ELECT(10V/220uF)		CCEA1AH221T	1		
	C2001 -2004	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	4		
	C2005 -2008	943133000580S	CAP , POLYPROPYLENE (WIMA 220PF/100VDC)		CCMP2A221JA02T	4		
	C2009 ,2010	00MOA22605020	CAP, ELECT(ELNA/RA-2, 50V/22UF)		CCEA1HRA220T	2		
	C2011 ,2012	nsp	CAP, ELECT(50V/2.2uF)		CCEA1HH2R2T	2		
	C2013 ,2014	943133501610M	CAP , MYLAR(100V/0.01uF/J)		CCQI2A103JZT	2	*	
	C2015 ,2016	943133501650M	CAP , MYLAR(100V/0.068uF/J)		CCQI2A683JZT	2	*	
	C2017 ,2018	943133000580S	CAP , POLYPROPYLENE (WIMA 220PF/100VDC)		CCMP2A221JA02T	2		
	C2019 ,2020	00D2544574919	CAP, ELECT(50V/47uF),ELNA/RA3		CCEA1HRA3470T	2		
	OTHER PARTS GROUP							
	B1001	nsp	ROCKING TYPE WIRE ASSY(13P, 300MM, 2.0MM)		CWB1B01330047	1		
	B1002	nsp	WIRE ASS'Y(15P, 120MM, 2.0MM)		CWB1B01512047	1		
	B1003	nsp	WIRE ASS'Y (3PIN,160MM,61301000200AS)		CWZPM6004B1003	1		
	B1004	nsp	Wire ass'y (14P,600mm,2.0mm)		CWB1B01460047	1		
	B1006	nsp	WIRE ASS'Y (5PIN,160MM,61205000900AS)		CWZPM6004B1006	1		
	N1002	nsp	LOCKING TYPE , STRAIGHT WAFER , 2.5MM 10PIN		CJP06HA292ZY	1		
	S1401 -1404	00D9430004402	SW , TACT		CST1A012ZT	4		
	S1411	90M-SR000290R	VR , ENCODER		CSR2A034Z	1		
	S2001	943682000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
	V2001	90M-RB000060R	RES , VARIABLE BALANCE		CVV2X11M203Z	1		
	V2002 ,2003	90M-RB000050R	RES , VARIABLE TONE		CVV2X10B103Z	2		
	X1001	00MFQ08004061	RESONATOR , CERAMIC(8MHz 47PF)		CVFCSTLS8M00G56A0T	1		

MAIN PCB ASS'Y

NOTE:The symbols in the column Remarks indicate the following destinations.
U : North America model N : Europe model K : China model F : Japan model
B : Black model SG : Silver gold model

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	SEMICONDUCTORS GROUP							
	D3501	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D3901 -3903	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	3		
	D6001 -6014	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	14		
	D7501 -7503	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	3		
!	D8001	00MHE20030290	DIODE, BRIDGE 30A		CVDD30XBN20	1		
!	D8101 -8104	00MHD20055100	DIODE , SCHOTTKY (100V/1A)		CVD11EQS10GT	4		
	D8105 ,8106	00D9430182502	DIODE , RECT		CVD1N4003T	2		
!	D8201 ,8202	00D9430182502	DIODE , RECT		CVD1N4003T	2		
!	D8301 -8308	00MHD20055100	DIODE , SCHOTTKY (100V/1A)		CVD11EQS10GT	8		
	D8309 -8311	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	3		
	D9001 ,9002	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	2		
	Q3501 -3503	00D9630121606	T.R , CHIP , SOT-23		HVTKRC107S	3		
	Q6001 ,6002	00MHT805501B0	T.R , MUTE		HVTKTC2874BT	2		
	Q6003 ,6004	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	2		
	Q6005 -6008	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	4		
	Q6009 ,6010	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	2		
	Q6011 ,6012	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	2		
	Q6013 -6016	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	4		
	Q6017 ,6018	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	2		
	Q6019 ,6020	00D2710314903	T.R		HVTKTA1024YT	2		
	Q6021 ,6022	00D2730471907	T.R		HVTKTC3206YAT	2		
	Q6023 ,6024	00D9430154404	T.R		HVTKTC3198YT	2		
	Q6025 -6028	90M-HT600010R	T.R		HVTKTA1266YT	4		
	Q6029 ,6030	00D9430154404	T.R		HVTKTC3198YT	2		
!	Q6031 ,6032	943219005820S	T.R(FM20-TO220F)		CVT2SC4495	2		
!	Q6033 ,6034	00D2730471907	T.R		HVTKTC3206YAT	2		
!	Q6035 ,6036	00D2710314903	T.R		HVTKTA1024YT	2		
!	Q6111	90M-HT300820R	T.R , PRE DRIVE		HVTKTC3423Y	1		
!	Q6112	90M-HT100540R	T.R , PRE DRIVE		HVTKTA1360Y	1		
!	Q6121	90M-HT300820R	T.R , PRE DRIVE		HVTKTC3423Y	1		
!	Q6122	90M-HT100540R	T.R , PRE DRIVE		HVTKTA1360Y	1		
!	Q6131	90M-HT300950R	T.R , POWER		HVT2SC4467-OKM	1		
!	Q6132	90M-HT100700R	T.R , POWER		HVT2SA1694-OKM	1		
!	Q6141	90M-HT300950R	T.R , POWER		HVT2SC4467-OKM	1		
!	Q6142	90M-HT100700R	T.R , POWER		HVT2SA1694-OKM	1		
	Q7501	90M-HT600010R	T.R		HVTKTA1266YT	1		
	Q7502	00D9630121606	T.R , CHIP , SOT-23		HVTKRC107S	1		
	Q7503 ,7504	00D9430154404	T.R		HVTKTC3198YT	2		
	Q7505	00D9630121606	T.R , CHIP , SOT-23		HVTKRC107S	1		
	Q8301	00D9630121606	T.R , CHIP , SOT-23		HVTKRC107S	1		
	Q9001 ,9002	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	2		
	Q9003	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	1		
	Q9004 -9006	00D2730464901	T.R , CHIP , SOT-23		HVTKTC3875SYRTK	3		
	Q9007	00D9430058908	T.R , CHIP , SOT-23		HVTKTA1504SYRTK	1		
	Q9008	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q9101 ,9102	00D2730464901	T.R , CHIP , SOT-23		HVTKTC3875SYRTK	2		
	Q9103	00D9430058908	T.R , CHIP , SOT-23		HVTKTA1504SYRTK	1		
	U3501	00MHC10309030	I.C , FUNCTION		HVILC78212	1		
	U3801	00D2631289900	I.C , OPAMP(DUAL/LOW NOISE)_Copper		CVIAZ4580MTR-E1-CU	1		
	U3901	00D2631289900	I.C , OPAMP(DUAL/LOW NOISE)_Copper		CVIAZ4580MTR-E1-CU	1		
	U4001	00MHC10102090	I.C , OP AMP (JRC)		HVINJM2068MDTE1	1		
	U8101	00MHC3891599F	I.C,REGULATOR(+15V,TO-220IS-4)		CVIKIA7815APIUPF	1		
	U8102	00MHC3991599F	I.C,REGULATOR(-15V,T0220IS)		CVIKIA7915PI	1		
	U8201	nsp	I.C HEATSINK ASS'Y(CMY1A338)		CVIKIA7812APIBSA	1		
	U8201A	nsp	HEAT SINK 25MM		CMY1A338	1		
	U8201B	nsp	SCREW		CTB3+8FFB	1		
	U8201C	00D2631100021	I.C,REGULATOR(+12V,T0220IS)		HVIKIA7812API	1		
	U8201D	nsp	COMPOUND , SILICONE		K8AYG6260	0.2		
!	U8202	00MHC3890599F	I.C,REGULATOR(+5V,T0220IS)		HVIKIA7805API	1		
	U8301	90M-HC300740R	REGULATOR(3.3V OUTPUT LOWDROP)		HVIKIA278R33PI	1		
	U8302	00D2631100021	I.C,REGULATOR(+12V,T0220IS)		HVIKIA7812API	1		
	U8303	00D9430183909	I.C , REGULATOR		HVIKIA7912PI	1		
!	U8304	00MHC3890599F	I.C,REGULATOR(+5V,T0220IS)		HVIKIA7805API	1		
	RESISTOR GROUP							
	R3001 ,3002	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3003 ,3004	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R3005 ,3006	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3007 ,3008	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R3009 ,3010	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3011 ,3012	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R3013 ,3014	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3015 ,3016	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R3025 ,3026	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3027 ,3028	nsp	RES, CARBON(1/5W,560ohm,J)		CRD20TJ561T	2		
	R3501 ,3502	nsp	RES, CARBON(1/5W,47ohm,J)		CRD20TJ470T	2		
	R3503 ,3504	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R3505	nsp	RES, CARBON(1/5W,10Kohm,J)		CRD20TJ103T	1		
	R3506 -3508	nsp	RES, CHIP(1608/5%/120ohm)		CRJ10DJ121T	3		
	R3510 ,3511	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3512 -3514	nsp	RES, CARBON(1/5W,4.7Kohm,J)		CRD20TJ472T	3		
	R3515 -3517	nsp	RES, CHIP(1608/5%/220ohm)		CRJ10DJ221T	3		
	R3801 ,3802	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R3803 ,3804	nsp	RES, CARBON(1/5W,1Kohm,J)		CRD20TJ102T	2		
!	R3805 ,3806	00MGG0510016X	RES, CFPS1/4CMHTA100J		CRG14SANJ100CLPS	2		
	R3901 ,3902	nsp	RES, CARBON(1/5W,10Kohm,J)		CRD20TJ103T	2		
	R3903	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	1		
	R3904	nsp	RES, CARBON(1/5W,39Kohm,J)		CRD20TJ393T	1		
	R3905	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	1		
	R3906	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	1		
	R3907	nsp	RES, CHIP(1608/5%/100Kohm)		CRJ10DJ104T	1		
	R4001 ,4002	nsp	WIRE, COPPER(D0.6)	U/F	C3A206	2		
	R4001 ,4002	nsp	RES, CARBON(1/5W,6.8Kohm,J)	N/K	CRD20TJ682T	2		
	R4003 ,4004	nsp	RES, CARBON(1/5W,330Kohm,J)		CRD20TJ334T	2		
	R4005 ,4006	nsp	RES, CARBON(1/5W,56Kohm,J)		CRD20TJ563T	2		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	R4007 -4010	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	4		
	R4011 ,4012	nsp	RES, CARBON(1/5W,82Kohm,J)		CRD20TJ823T	2		
	R4013 ,4014	nsp	RES, CARBON(1/5W,6.8Kohm,J)		CRD20TJ682T	2		
	R4015 ,4016	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
	R4017 ,4018	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R4019 ,4020	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
!	R4021 ,4022	00MGG0510016X	RES , CFPS1/4CMHTA100J		CRG14SANJ100CLPS	2		
	R6001 ,6002	nsp	RES, CARBON(1/5W,10ohm,J)		CRD20TJ100T	2		
	R6003 ,6004	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R6005 ,6006	nsp	RES, CARBON(1/5W,330ohm,J)		CRD20TJ331T	2		
	R6007 ,6008	nsp	RES, CARBON(1/5W,1Kohm,J)		CRD20TJ102T	2		
	R6009 ,6010	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	2		
	R6011 ,6012	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
	R6013	nsp	RES, CHIP(1608/5%/1Mohm)		CRJ10DJ105T	1		
	R6015 -6018	nsp	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	4		
	R6019 -6022	nsp	RES, CARBON(1/5W,33Kohm,J)		CRD20TJ333T	4		
	R6023 -6026	nsp	WIRE, COPPER(D0.6)		C3A206	4		
	R6027 -6030	nsp	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	4		
!	R6031 -6034	00MGG0547116X	RES , CFPS1/4CMHTA471J		CRG14SANJ471CLPS	4		
!	R6035 -6038	00MGG0515116X	RES , CFPS1/4CMHTA151J		CRG14SANJ151CLPS	4		
	R6039 -6042	nsp	RES, CARBON(1/5W,1Mohm,J)		CRD20TJ105T	4		
	R6043 -6046	nsp	RES, CARBON(1/5W,4.7Kohm,J)		CRD20TJ472T	4		
	R6047 -6056	nsp	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	10		
	R6057 -6060	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	4		
	R6061 ,6062	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R6063 ,6064	nsp	RES, CARBON(1/5W,470Kohm,J)		CRD20TJ474T	2		
	R6065 ,6066	nsp	RES, CARBON(1/5W,22Kohm,J)		CRD20TJ223T	2		
	R6067 ,6068	nsp	RES, CARBON(1/5W,6.2Kohm,J)		CRD20TJ622T	2		
	R6069 ,6070	nsp	RES, CARBON(1/5W,820ohm,J)		CRD20TJ821T	2		
	R6071 ,6072	nsp	RES, CARBON(1/5W,47ohm,J)		CRD20TJ470T	2		
!	R6073 -6076	00MGG0522016X	RES , CFPS1/4CMHTA220J		CRG14SANJ220CLPS	4		
!	R6077 -6080	00MGG0510116X	RES, FLAME RETARDANT(1/4W 5% 100 OHM) CFPS1/4CMHT		CRG14SANJ101CLPS	4		
!	R6081 ,6082	00MGG0510216X	RES , CFPS1/4CMHTA102J		CRG14SANJ102CLPS	2		
!	R6083 -6086	00MGG0547016X	RES , CFPS1/4CMHTA470J		CRG14SANJ470CLPS	4		
!	R6087 ,6088	00MGG0522116X	RES, FLAME RETARDANT(1/4W 5% 220 OHM) CFPS1/4CMHT		CRG14SANJ221CLPS	2		
!	R6089 -6092	00MGG0510016X	RES , CFPS1/4CMHTA100J		CRG14SANJ100CLPS	4		
!	R6093 -6096	943129500920M	RES , CEMENT		CRF5EKR22	4	*	
!	R6097 ,6098	00D2412396928	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
!	R6099 -6102	00D2412397943	RES, CARBON(1/5W,330ohm,J)		CRD20TJ331T	4		
!	R6103 ,6104	00D2412397969	RES, CARBON(1/5W,390ohm,J)		CRD20TJ391T	2		
!	R6105 ,6106	943124500360M	RES , METAL OXIDE FILM MINI , 2W, 10 ohm , 5%		CRG2SANJ100HU	2	*	
	R6108	nsp	WIRE, COPPER(D0.6)		C3A206	0.02		
	R6109 ,6110	00D2412397969	RES, CARBON(1/5W,390ohm,J)		CRD20TJ391T	2		
	R7501	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	1		
	R7502 ,7503	nsp	RES, CARBON(1/5W,4.7Kohm,J)		CRD20TJ472T	2		
	R7504	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	1		
	R7505	nsp	RES, CARBON(1/5W,4.7Kohm,J)		CRD20TJ472T	1		
	R7506	nsp	RES, CARBON(1/5W,47Kohm,J)		CRD20TJ473T	1		
	R7507 ,7508	943124500370M	RES , METAL OXIDE FILM MINI , 2W, 330 ohm , 5%		CRG2SANJ331HU	2	*	
!	R8001	943129500910M	AC CAPACITOR RC NETWORK, 125VAC		CCKDHCR684KB	1	*	
!	R8101 ,8102	943121500450M	RES , CFPB1/2CL12.5A1R0J		CRG12SANJ1R0CLPB	2	*	
	R8301 -8303	nsp	RES, CARBON(1/5W,22Kohm,J)		CRD20TJ223T	3		
	R8306	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R8307	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	1		
	R9001 ,9002	00MGG0510216X	RES , CFPS1/4CMHTA102J		CRG14SANJ102CLPS	2		
	R9003 ,9004	00MGG0515216X	RES, FLAME RETARDANT(1/4W 5% 1.5KOHM) CFPS1/4CMHT		CRG14SANJ152CLPS	2		
	R9005 -9008	nsp	RES, CARBON(1/5W,22Kohm,J)		CRD20TJ223T	4		
	R9009 ,9010	nsp	RES, CARBON(1/5W,82Kohm,J)		CRD20TJ823T	2		
	R9011	nsp	RES, CARBON(1/5W,6.8Kohm,J)		CRD20TJ682T	1		
	R9012 -9014	nsp	RES, CHIP(1608/5%/22Kohm)		CRJ10DJ223T	3		
	R9015	nsp	RES, CHIP(1608/5%/100Kohm)		CRJ10DJ104T	1		
	R9016	nsp	RES, CHIP(1608/5%/68Kohm)		CRJ10DJ683T	1		
	R9017	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R9101 -9103	nsp	RES, CARBON(1/5W,33Kohm,J)		CRD20TJ333T	3		
	R9104 -9106	nsp	RES, CARBON(1/5W,22Kohm,J)		CRD20TJ223T	3		
	R9107	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R9108	nsp	RES, CHIP(1608/5%/68Kohm)		CRJ10DJ683T	1		
	CAPACIITORS GROUP							
	C3001 -3004	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	4		
	C3007	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	1		
	C3009 -3016	943133501630M	CAP , MYLAR(100V/220PF/J)	N/K	CCQI2A221JZTS	8	*	
	C3021 ,3022	943133501630M	CAP , MYLAR(100V/220PF/J)	N/K	CCQI2A221JZTS	2	*	
	C3501 ,3502	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	2		
	C3503 -3505	nsp	CAP, CHIP(1608, 50V/330pF)		CCUS1H331JA	3		
	C3506	nsp	CAP, ELECT(50V/4.7uF)		CCEA1HH4R7T	1		
	C3801 ,3802	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	2		
	C3803 ,3804	00D9430188700	CAP, ELECT(25V/100uF,ELNA/RA3)		CCEA1ERA3101T	2		2
	C3901	943133501630M	CAP , MYLAR(100V/220PF/J)	N/K	CCQI2A221JZTS	1	*	
	C3902	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	1		
	C3904	943134502680M	CAP , ELECT(10uF/63V)		CCEA1JH100T	1	*	
	C4001 ,4002	943133501630M	CAP , MYLAR(100V/220PF/J)	N/K	CCQI2A221JZTS	2	*	
	C4003 ,4004	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	2		
	C4005 ,4006	943133501630M	CAP , MYLAR(100V/220PF/J)		CCQI2A221JZTS	2	*	
	C4007 ,4008	943134502700M	CAP , ELECT (220uF/35V, RA2, ELNA)		CCEA1VRA2221T	2	*	
	C4009 ,4010	943133501640M	CAP , MYLAR(100V/0.039uF/J)		CCQI2A393JZT	2	*	
	C4011 ,4012	943133501600M	CAP , MYLAR(100V/0.001uF/J)		CCQI2A102JZT	2	*	
	C4013 ,4014	943133501610M	CAP , MYLAR(100V/0.01uF/J)		CCQI2A103JZT	2	*	
	C4015 ,4016	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	2		
	C4019 ,4020	00D9430188700	CAP, ELECT(25V/100uF,ELNA/RA3)		CCEA1ERA3101T	2		2
	C4021	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	1		
	C6001 ,6002	943134502660M	CAP, ELECT (22uF/25V, ROS, ELNA)		CCEA1EROS220T	2	*	
	C6003 ,6004	00MOF55101591	CAP , POLYPROPYLENE(FAS(133)-200V-101K)		CCMP2B101KS17T	2		
	C6005	nsp	CAP, CHIP(1608, 50V/0.022uF)		CCUS1H223KC	1		
	C6011 -6014	943134502690M	CAP, ELECT(470UF/63V, RA2, ELNA)		CCEA1JRA2471E	4	*	
	C6015 ,6016	00MOF55331381	CAP , POLYPROPYLENE(FNS(135)-100V-331K)		CCMP2A331KS13T	2		
	C6017 ,6018	943134502640M	CAP, ELECT(16V/47uF,ELNA/RA2, 5X11)		CCEA1ERA470T	2	*	
	C6019 ,6020	943134502700M	CAP , ELECT (220uF/35V, RA2, ELNA)		CCEA1VRA2221T	2	*	
	C6023 ,6024	943133501640M	CAP , MYLAR(100V/0.039uF/J)		CCQI2A393JZT	2	*	
	C7501 ,7504	943133501610M	CAP , MYLAR(100V/0.01uF/J)	N/K	CCQI2A103JZT	4	*	
	C7505 ,7506	nsp	CAP, CHIP(1608, 50V/0.01uF, MURATA GRM18)		CCUMUS1H103KC	2		
!	C8001 ,8002	943134502720M	CAP,ELECT (NICHICON,10000UF/63V,35X50)		CCET63VLKS103N	2	*	
	C8101 ,8102	00MOA47703520	CAP, ELECT(35V/470uF)		CCEA1VH471E	2		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	C8103 ,8104	943134502640M	CAP, ELECT(16V/47uF,ELNA/RA2, 5X11)		CCEA1ERA470T	2	*	
	C8105 -8108	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	4		
	C8109 ,8110	943133501610M	CAP , MYLAR(100V/0.01uF/J)		CCQI2A103JZT	2	*	
	C8201	943134502620M	CAP, ELECT(470UF/25V, RA2, ELNA)		CCEA1ERA2471E	1	*	
	C8202 ,8203	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	2		
	C8204 -8207	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	4		
	C8301	00MOA68801620	CAP, ELECT(16V/6800uF)		CCEA1CH682E	1		
	C8302 -8305	943134502700M	CAP , ELECT (220uF/35V, RA2, ELNA)		CCEA1VRA2221T	4	*	
	C8306	943134010570S	CAP, ELECT(16V/220uF)		CCEA1CH221T	1		
	C8307	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	1		
	C8308 ,8309	943133501610M	CAP , MYLAR(100V/0.01uF/J)		CCQI2A103JZT	2	*	
	C8310 ,8311	943134502700M	CAP , ELECT (220uF/35V, RA2, ELNA)		CCEA1VRA2221T	2	*	
	C9001	nsp	CAP, ELECT(50V/0.47uF)		CCEA1HHR47T	1		
	C9002	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	1		
	C9003	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	1		
	C9004	943134502680M	CAP , ELECT(10uF/63V)		CCEA1JH100T	1	*	
	C9005	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	1		
	C9101	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	1		
	OTHER PARTS GROUP							
	B8001	nsp	PLATE , EARTH(TRONIC ELECTRONICS)		CJT1A026	1		
	B8101	nsp	PLATE , EARTH(TRONIC ELECTRONICS)		CJT1A026	1		
	K3001 ,3002	943643102620M	JACK RCA, 4P(W/R*2), VERTICAL,GOLD		CJJ4P081Z	2	*	
	K3004	943643102600M	JACK RCA, 2P(W/R), VERTICAL, GOLD		CJJ4N101Z	1	*	
	K4001	943643102600M	JACK RCA, 2P(W/R), VERTICAL, GOLD		CJJ4N101Z	1	*	
	K7501	90M-YT005410R	TERMINAL , SPEAKER 8P SCREW		CJJ5Q015Z	1		
	N3001	nsp	LOCKING TYPE , STRAIGHT WAFER , 2.5MM		CJP05GI237ZW	1		
	N3002	nsp	LOCKING TYPE , STRAIGHT WAFER (2mm)		CJP15GI236ZW	1		
	N6001	nsp	LOCKING TYPE , STRAIGHT WAFER, 2.5MM		CJP03GI237ZW	1		
	N6003 ,6004	nsp	LOCKING TYPE , STRAIGHT WAFER, 2.5MM		CJP03GI237ZW	2		
	N7501	nsp	LOCKING TYPE , STRAIGHT WAFER, 2.5MM		CJP03GI237ZW	1		
	N8001	nsp	WAFER,YW396-03B(3.96mm)		CJP03GA90ZY	1		
	N8101	nsp	LOCKING TYPE , STRAIGHT WAFER , 2.5MM		CJP05GI237ZW	1		
	N8301	nsp	LOCKING TYPE , STRAIGHT WAFER , 2MM		CJP07GI236ZW	1		
	N8302	nsp	LOCKING TYPE , STRAIGHT WAFER , 2MM		CJP03GI236ZW	1		
	N8303	nsp	LOCKING TYPE , STRAIGHT WAFER, 2.5MM		CJP03GI237ZW	1		
	N9001	nsp	WAFER , STRAIGHT(3PIN)		CJP03GA19ZY	1		
	L4001,4002	00D9430193601	COIL, TOROIDAL	N/K	CLU9S004Z	2		
	S7501 ,7502	943682010300S	RELAY,G5PA-28-MC,DC12V,2C1P		CSL3A018ZE	2		
	S7503	943682000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
	S8301	943682000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
	TW91	nsp	2P WIRE ASS'Y(100MM)		CWZPM5003TW91	1		
	V6001 ,6002	943161009370S	RES , SEMI FIXED (220 OHM)		CVN12A221B03T	2		
	V6003 ,6004	943161100150D	RES , SEMI FIXED (4.7K , B CURVE)		CVN12A472B03T	2		2
	Z4001 ,4002	nsp	WIRE ASS'Y (1P, 80MM,BLK,#22)		CWE5202080A	2		

POWER PCB ASS'Y

NOTE:The symbols in the column Remarks indicate the following destinations.
U : North America model N : Europe model K : China model F : Japan model
B : Black model SG : Silver gold model

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	SEMICONDUCTORS GROUP							
	D2501	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D5001 -5006	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	6		
!	D8501 -8506	00D9430182502	DIODE , RECT		CVD1N4003T	6		
	D8507	nsp	WIRE, COPPER(D0.6)		C3A206	0.02		
	D8508	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D8509	943202500770M	DIODE, CHIP ZENER(11V,200MW)		CVDUDZS11BSR	1	*	
	D8701	90M-HI200020R	INFRARED L.E.D		BVDSIR34ST3F	1		
	D8702	00D9430182609	DIODE , SWITCHING	U	CVD1SS133MT	1		
	Q2501	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q5001 ,5002	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	2		
	Q5003 -5006	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	4		
	Q5007 -5010	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	4		
	Q5011 -5014	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	4		
	Q5015 ,5016	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	2		
	Q8501	00D9430154404	T.R		HVTKTC3198YT	1		
	Q8502	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q8503	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	1		
	Q8701	00D2690184907	T.R , CHIP , SOT-23	U	HVTKRA102S	1		
!	U8501	943219500140M	I.C, REGULATOR(5.0V/TO-252)		CVINJM2845DL1-05	1	*	
	U8701	262010007707S	REMOTE SENSOR , R94EV1A	U	CRVR94EV1A	1		
	RESISTOR GROUP							
	R2501 ,2502	nsp	RES, CARBON(1/5W,3.3Kohm,J)		CRD20TJ332T	2		
	R2503 ,2504	nsp	RES, CARBON(1/5W,5.6Kohm,J)		CRD20TJ562T	2		
	R5001 ,5002	nsp	RES, CARBON(1/5W,330ohm,J)		CRD20TJ331T	2		
	R5003 ,5004	nsp	RES, CARBON(1/5W,56Kohm,J)		CRD20TJ563T	2		
	R5005 ,5006	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
	R5007 -5010	nsp	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	4		
	R5011 -5014	nsp	RES, CARBON(1/5W,12Kohm,J)		CRD20TJ123T	4		
	R5015 -5018	nsp	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	4		
	R5019 -5022	nsp	RES, CARBON(1/5W,470ohm,J)		CRD20TJ471T	4		
	R5023 ,5024	nsp	RES, CARBON(1/5W,180ohm,J)		CRD20TJ181T	2		
	R5025 -5028	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	4		
	R5029 -5032	nsp	RES, CARBON(1/5W,1Mohm,J)		CRD20TJ105T	4		
	R5033 -5036	nsp	RES, CARBON(1/5W,33ohm,J)		CRD20TJ330T	4		
	R5037 ,5038	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		
	R5039 ,5040	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R5041 ,5042	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
	R5043 ,5044	nsp	RES, CARBON(1/5W,220ohm,J)		CRD20TJ221T	2		
	R5045 ,5046	nsp	RES, CARBON(1/5W,270ohm,J)		CRD20TJ271T	2		
	R5047 ,5048	nsp	WIRE, COPPER(D0.6)		C3A206	2		
	R8501	nsp	WIRE, COPPER(D0.6)		C3A206	0.02		
	R8502	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	1		
	R8503	nsp	RES, CHIP(1608/5%/82Kohm)		CRJ10DJ823T	1		
	R8504	nsp	RES, CHIP(1608/5%/47ohm)		CRJ10DJ470T	1		
	R8505	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R8701 ,8702	nsp	RES, CHIP(1608/5%/100ohm)	U	CRJ10DJ101T	2		
	R9901 ,9902	nsp	RES, CARBON(1/5W,47ohm,J)		CRD20TJ470T	2		
	CAPACIITORS GROUP							
	C2501 ,2502	943133501600M	CAP , MYLAR(100V/0.001uF/J)		CCQI2A102JZT	2	*	
	C2503 ,2504	943133501620M	CAP , MYLAR(100V/0.1uF/J)		CCQI2A104JZT	2	*	
	C5001 ,5002	943134502710M	CAP, ELECT(10UF/35V, ROS, ELNA)		CCEA1VROS100T	2	*	
	C5003 ,5004	nsp	CAP , POLYPROPYLENE(FAS(133)-200V-101K)		CCMP2B101KS17T	2		
	C5005 ,5006	00MOA10605020	ELECT , CAP(ELNA/RA-2)		HCEA1HRA100T	2		
	C5007 ,5008	nsp	CAP , POLYPROPYLENE(FAS(133)-200V-101K)		CCMP2B101KS17T	2		
	C5009 ,5010	943134502670M	CAP, ELECT(47UF/25V, ROS, ELNA)		CCEA1EROS470T	2	*	
	C5011 ,5012	943134005720M	CAP, ELECT (220UF/25V, 8*11.5, RA2)		CCEA1ERA221T	2		
	C5013	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	1		
!	C8502	00D9430024408	CAP , CERAMIC(X1/Y2/SC)		KCKDKS472ME	1		
	C8503	nsp	CAP, ELECT(50V/0.22uF)		CCEA1HHR22T	1		
	C8504	13405013120AS	CAP, ELECT(25V/2200uF)		CCEA1EH222E	1		
	C8505	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C8506	nsp	CAP, ELECT(10V/220uF)		CCEA1AH221T	1		
	C8507 -8510	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	4		
	C8701	13405012940AS	CAP, ELECT(16V/100uF)	U	CCEA1CH101T	1		
	C8702	nsp	CAP, CHIP(1608, 50V/0.1uF)	U	CCUS1H104KC	1		
!	C8901	90M-DK100800R	CAP , CERAMIC(KH TYPE)		KCKDKS471ME	1		
	C9901 ,9902	943133501610M	CAP , MYLAR(100V/0.01uF/J)	N/K	CCQI2A103JZT	2	*	
	OTHER PARTS GROUP							
	B5001	nsp	WIRE ASS'Y (5PIN,160MM,61301000300AS)		CWZPM6004B5001	1		
	B5002	nsp	WIRE ASS'Y		CWE8202150RV	1		
	B6501	nsp	WIRE ASS'Y (3PIN,120MM,61205000800AS)		CWZPM6004B6501	1		
	B8501	nsp	PLATE , EARTH(TRONIC ELECTRONICS)		CJT1A026	1		
	B8502	nsp	BRACKET , PCB		CMD1A569-V1	1		
	B8901	nsp	WIRE ASS'Y (2PIN,240MM,61205000600AS)		CWZPM6004B8901	1		
	B9901	nsp	WIRE ASS'Y (3PIN,400MM,61205000700AS)		CWZPM6004B9901	1		
!	F8510	90M-FS001420R	FUSE(218Series, 250V/3.15A)	U	KBA2C3150TLEY	1		4
!	F8510	943652500320M	FUSE(218Series, 250V/1.6A)	N/K	KBA2C1600TLEY	1	*	
!	F8510	0520100170060	# T5A L 250V 0218005.MXP	F	KBA2C5000TLEY	1		4
!	F8610	943652500310M	FUSE(372 Series/5A/TR5)	U/F	CBA2D5000A3EYT	1	*	
!	F8620	943652500310M	FUSE(372 Series/5A/TR5)	U/F	CBA2D5000A3EYT	1	*	
	H8511 ,8512	nsp	HOLDER , FUSE	K/U/F	KJCFC5S	2		
	H8511 ,8512	nsp	HOLDER , FUSE	N/K	CJCFC5S	2		
	J8511	nsp	WIRE, COPPER(D0.6)	U		1		
	J8514	nsp	WIRE, COPPER(D0.6)	U	C3A206	1		
	K8501	943643102610M	JACK RCA, 2P(O/O), VERTICAL, SILVER		CJJ4N102Z	1	*	
!	K8601	943641500290M	AC OUTLET(USA, 1P, AC-183-UL-12V)	U/F	CJJ7A033Z	1	*	
	K8701	90M-YT004860R	JACK, STEREO (BLK MOLD)	U	CJJ2D008Z	1		
	K9901	90M-YT004500R	JACK, PHONES(6.35mm,SILVER)		CJJ2E026Z	1		
	N5001	nsp	WAFER , STRAIGHT		CJP05GA19ZY	1		
	N5002	nsp	PIN HEADER , 6P ANGLE(P/H2.54,1X6X90, L=16.5)		CJP06GF293ZB	1		
	N8501 ,8502	nsp	WAFER, 2P, 3.96mm		CJP02KA060ZY	2		
	N8503	nsp	WAFER, 2P, 7.92mm		CJP02GA89ZY	1		
	N8504	nsp	LOCKING TYPE , STRAIGHT WAFER , 2MM		CJP13GI236ZW	1		
	N8505	nsp	WAFER, FFC(7P-1mm, ANGLE)		CJP07GB113ZY	1		
	S2501	9436820000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
!	S8501	00D9430194900	RELAY,G5PA-1,DC6V,1C1P		CSL1E002ZE	1		
!	S8901	90M-SP001250R	SW , PUSH (MOMS) CN		KSH1A001ZV	1		
	T6501	943252100170M	POSISTOR , PTFM04BC222Q2N34B0		CRTPTH9M04BC222TS2F	1	*	

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
!	T8501	943101002880M	TRANS , SUB C515	U	CLT5I009ZU	1		
!	T8501	90M-TS003170R	TRANS , SUB CD6002/F	F	CLT5I009ZJ	1		
!	T8501	943101007210M	TRANS , SUB CD6003/K	K	CLT5I009ZH	1		
!	T8501	90M-TS003180R	TRANS , SUB CD6002/N	N	CLT5I009ZE	1		2
	V5001	00D9430197305	VOLUME , MOTOR		CVV9Y13B503Z	1		
	Z1602	nsp	CUSHION , IR		CHG1A448	1		
	Z5001	nsp	WIRE ASS'Y (1P, 80MM,BLK,#22)		CWE5202080A	1		
	Z6501	nsp	TUBE , UL (0.8PIE , 3mm , BLACK)		C4B120R82	2		
	Z8701	nsp	SHIELD , CASE FLASHER	U	CMC1A441	1		
	Z9901	nsp	PLATE , SHIELD(HP)		CMC1A346-V1	1		

DIGIT PCB ASS'Y

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U : North America model N : Europe model K : China model F : Japan model
B : Black model SG : Silver gold model

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	SEMICONDUCTORS GROUP							
	D300 -315	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	16		
	D316 ,317	201310001503S	DIODE, ULTRA-HIGH SPEED		CVDKDS160RTKP	2		
	IC300	90M-HC109330R	AUDIO DAC (TSSOP-28 PACKAGE)		HVICS4398CZ	1		
	IC301	943239101140M	I.C, Low Power 192kHz Digital Audio Receiver		CVIAK4117VF	1	*	
	IC303	00D2623077900	I.C, HEX INVERTER		HVITC74VHCU04FT	1		
	Q300 -302	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	3		
	Q303	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	1		
	Q304	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	1		
	Q305	943222500200D	F.E.T , 2SK2145 (N-CH, 2-3L1C, LOW NOISE, TOSHIBA		CVT2SK2145	1		
	Q306 ,307	00D9430072502	T.R , CHIP , SOT-23		HVTKTC2875B	2		
	Q308 -311	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	4		
	Q312	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	1		
	Q313	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	1		
	Q314 ,315	00D9430072502	T.R , CHIP , SOT-23		HVTKTC2875B	2		
	Q316	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	1		
	Q317	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	1		
	Q318 -320	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	3		
	Q321	943222500200D	F.E.T , 2SK2145 (N-CH, 2-3L1C, LOW NOISE, TOSHIBA		CVT2SK2145	1		
	Q322 -325	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	4		
	Q326	943211500150S	PNP, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSA992FTA	1		
	Q327	943213500150S	NPN, TO-92, LOW NOISE, HFE:300-600, FAILCHILD		CVTKSC1845FTA	1		
	RESISTOR GROUP							
	R300	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	1		
	R301 ,302	nsp	RES, CHIP(1608/5%/120ohm)		CRJ10DJ121T	2		
	R303	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R304	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	1		
	R308	nsp	RES, CHIP(1608/5%/33Kohm)		CRJ10DJ333T	1		
	R309	nsp	RES, CHIP(1608/5%/180ohm)		CRJ10DJ181T	1		
	R310	nsp	RES, CHIP(1608/5%/560ohm)		CRJ10DJ561T	1		
	R311 ,312	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	2		
	R313	nsp	RES, CHIP(1608/5%/33Kohm)		CRJ10DJ333T	1		
	R314	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	1		
	R315	nsp	RES, CHIP(1608/5%/47ohm)		CRJ10DJ470T	1		
	R316 ,317	nsp	RES, CHIP(1608/5%/68ohm)		CRJ10DJ680T	2		
	R318 ,319	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	2		
	R320 ,321	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	2		
	R322	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	1		
	R323	nsp	RES, CHIP(1608/5%/47ohm)		CRJ10DJ470T	1		
	R324	nsp	RES, CHIP(1608/5%/470Kohm)		CRJ10DJ474T	1		
	R327	nsp	RES, CHIP(1608/5%/180ohm)		CRJ10DJ181T	1		
	R328	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	1		
	R330 -332	nsp	RES, CHIP(1608/5%/68ohm)		CRJ10DJ680T	3		
	R333 ,334	nsp	RES, CHIP(1608/5%/560ohm)		CRJ10DJ561T	2		
	R335 ,336	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	2		
	R338	nsp	RES, CHIP(1608/5%/560ohm)		CRJ10DJ561T	1		
	R339 ,340	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	2		
	R341	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R342	nsp	RES, CHIP(1608/5%/470Kohm)		CRJ10DJ474T	1		
	R343	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	1		
	R344 ,345	nsp	RES, CHIP(1608/5%/120ohm)		CRJ10DJ121T	2		
	R346	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R347	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	1		
	R349	nsp	RES, CHIP(1608/5%/180ohm)		CRJ10DJ181T	1		
	R350	nsp	RES, CHIP(1608/5%/33Kohm)		CRJ10DJ333T	1		
	R351	nsp	RES, CHIP(1608/5%/560ohm)		CRJ10DJ561T	1		
	R352 ,353	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	2		
	R354	nsp	RES, CHIP(1608/5%/33Kohm)		CRJ10DJ333T	1		
	R355	nsp	RES, CHIP(1608/5%/47ohm)		CRJ10DJ470T	1		
	R356	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	1		
	R357	nsp	RES, CHIP(1608/5%/47ohm)		CRJ10DJ470T	1		
	R358	nsp	RES, CHIP(1608/5%/180ohm)		CRJ10DJ181T	1		
	R359	nsp	RES, CHIP(1608/5%/68ohm)		CRJ10DJ680T	1		
	R360	nsp	RES, CHIP(1608/5%/560ohm)		CRJ10DJ561T	1		
	R362 ,363	nsp	RES, CHIP(1608/5%/560ohm)		CRJ10DJ561T	2		
	R364 ,365	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	2		
	R366	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R367	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	1		
	R368 -372	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	5		
	R373 ,374	nsp	RES, CHIP(1608/5%/33ohm)		CRJ10DJ330T	2		
	R375	nsp	RES, CHIP(1608/5%/10ohm)		CRJ10DJ100T	1		
	R376	nsp	RES, CHIP(1608/5%/12Kohm)		CRJ10DJ123T	1		
	R377	nsp	RES, CHIP(1608/5%/1Kohm)		CRJ10DJ102T	1		
	R378	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R381	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R382	nsp	RES, CHIP(1608/5%/75ohm)		CRJ10DJ750T	1		
	R383 -385	nsp	RES, CHIP(1608/5%/33ohm)		CRJ10DJ330T	3		
	R390	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R391	nsp	RES, CHIP(1608/5%/330Kohm)		CRJ10DJ334T	1		
	R392	nsp	RES, CHIP(1608/5%/33ohm)		CRJ10DJ330T	1		
	R393 ,394	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	2		
	R396 -399	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	4		
	R400	nsp	RES, CHIP(1608/5%/1Mohm)		CRJ10DJ105T	1		
	R401 ,402	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	2		
	R403	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	CAPACIITORS GROUP							
	C300	943133501570M	CAP , POLYPROPYLENE(FAS(133)-200V-181K)		CCMP2B181KS17T	1	*	
	C301	943134005720M	CAP, ELECT (220UF/25V, 8*11.5, RA2)		CCEA1ERA221T	1		
	C302	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C303	00MOA33505020	CAP, ELECT(50V/3.3uF)		CCEA1HH3R3T	1		
	C304	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C305	943134502650M	CAP, ELECT (47uF/25V, ROA, ELNA)		CCEA1EROA470T	1	*	
	C307	943134502730M	CAP , ELECT (ELNA/R0S, 25V/100UF)		HCEA1ER101T	1	*	
	C308	943133501550M	CAP , POLYPROPYLENE(FNS(135)-100VDC-561J)		CCMP2A561JS13T	1	*	
	C309	943133501560M	CAP , POLYPROPYLENE(FNS(135)-100VDC-821J)		CCMP2A821JS13T	1	*	

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	C310	943133501590M	CAP , POLYPROPYLENE (FAS(133)-200VDC 470KTP		CCMP2B470KS17T	1	*	
	C311	943133501580M	CAP , POLYPROPYLENE(FAS(133)-200V-221K)		CCMP2B221KS17T	1	*	
	C312	nsp	CAP, ELECT(50V/33uF)		CCEA1HH330T	1		
	C313	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C314	943134502730M	CAP , ELECT (ELNA/R0S, 25V/100UF)		HCEA1ER101T	1	*	
	C315	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C316	943134502670M	CAP, ELECT(47UF/25V, ROS, ELNA)		CCEA1EROS470T	1	*	
	C317 ,318	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	2		
	C319	nsp	CAP, ELECT(50V/33uF)		CCEA1HH330T	1		
	C320	943133501560M	CAP , POLYPROPYLENE(FNS(135)-100VDC-821J)		CCMP2A821JS13T	1	*	
	C321 ,322	943133501570M	CAP , POLYPROPYLENE(FAS(133)-200V-181K)		CCMP2B181KS17T	2	*	
	C324	943133501550M	CAP , POLYPROPYLENE(FNS(135)-100VDC-561J)		CCMP2A561JS13T	1	*	
	C325	943133501560M	CAP , POLYPROPYLENE(FNS(135)-100VDC-821J)		CCMP2A821JS13T	1	*	
	C326	943133501590M	CAP , POLYPROPYLENE (FAS(133)-200VDC 470KTP		CCMP2B470KS17T	1	*	
	C327	943133501580M	CAP , POLYPROPYLENE(FAS(133)-200V-221K)		CCMP2B221KS17T	1	*	
	C328	943133501560M	CAP , POLYPROPYLENE(FNS(135)-100VDC-821J)		CCMP2A821JS13T	1	*	
	C329	943133501570M	CAP , POLYPROPYLENE(FAS(133)-200V-181K)		CCMP2B181KS17T	1	*	
	C330	943134005720M	CAP, ELECT (220UF/25V, 8*11.5, RA2)		CCEA1ERA221T	1		
	C331 ,332	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	2		
	C333	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	1		
	C335	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C336	13405012840AS	CAP, ELECT(10V/100uF)		CCEA1AH101T	1		
	C337	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C338	00D9430175001	CAP, ELECT(25V/47uF)		CCEA1EH470T	1		
	C340	nsp	CAP, CHIP(1608, 50V/100pF)		CCUS1H101JA	1		
	C342 -344	nsp	CAP, CHIP(1608, 50V/100pF)		CCUS1H101JA	3		
	C345	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	1		
	C346	nsp	CAP, CHIP(1608, 50V/47pF)		CCUS1H470JA	1		
	C347	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C348	nsp	CAP, CHIP(1608, 50V/1000pF)		CCUS1H102KC	1		
	C349	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C350	nsp	CAP, CHIP(1608, 50V/1000pF)		CCUS1H102KC	1		
	C351	nsp	CAP, CHIP(1608, 50V/0.01uF)		CCUS1H103KC	1		
	C352 -357	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	6		
	C358 ,359	nsp	CAP, CHIP(1608, 50V/18pF)		CCUS1H180JA	2		
	OTHER PARTS GROUP							
	BN300	nsp	Wire ass'y (7P,120mm,ANGLE 2.0mm)		CWB1B00712046	1		
	BN301	nsp	Wire ass'y (3P,150mm,ANGLE 2.0mm)		CWB1B00315046001	1		
	BN302	nsp	WAFER (14P LOCK ANGLE 2.0mm)		CJP14GJ288ZY	1		
	JK300	943643102630M	MODULE , OPTICAL(RX 25MHz)		CJSJSR2124-00-BBBN	1	*	
	JK301	943643102590M	JACK, 1P(BK),SEPA-GND,GOLD		CJJ4M085Z	1	*	
	L301	nsp	FERRITE CHIP BEAD(4516/60R)		CLZ9Z014Z	1		
	RT01	00MYJ04002640	RECEPTACLE , AC(15A/250V,R-301,B21)		CJJ8A006ZW	1		
	TW91	nsp	2P WIRE ASS'Y(100MM)		CWZPM5003TW91	1		
	X300	943141100900S	X-TAL, HC-49/S SMD , 24.576MHz, 12PF		COX24576E120ST	1		

EXPLODED

NOTE:The symbols in the column Remarks indicate the following destinations.
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	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	C1	nsp	POWER S/W PCB ASS'Y		CUP12579Z-4	1		
	C2	nsp	POWER H/P PCB ASS'Y		CUP12579Z-3	1		
	C3	nsp	PM6005/N FRONT PCB ASS'Y		CUP12580Z	1		
	C4	nsp	POWER VOLUME PCB ASS'Y		CUP12579Z-2	1		
!	C5	943101102270M	POWER TRANS(U)	U	CLT5Z030ZU	1	*	
!	C5	943101102271M	POWER TRANS(N)	N	CLT5Z030ZE	1	*	
!	C5	943101102272M	POWER TRANS(K)	K	CLT5Z030ZH	1	*	
!	C5	943101102273M	POWER TRANS(F)	F	CLT5Z030ZJ	1	*	
	C6	nsp	POWER STANDBY PCB ASS'Y		CUP12579Z-1	1		
	C7	nsp	PM6005/U MAIN PCB ASS'Y		CUP12578Z	1		
!	C8	00MYJ04002640	AC INLET ASSY		CJJ8A006ZW	1		
	C9	nsp	TERMINAL , GROUND		CMA1A006	1		
	C10	nsp	PM6005/N DIGIT PCB ASS'Y		CUP12581Z	1		
	P1	421410006004M	BADGE , MARANTZ		CGB1A206	1		
	P2	943416101120M	WINDOW , FUNCTION		CGU1A479A12	1	*	
	P3	943412101130M	KNOB , ROTARY	BK	CBN1A278	3	*	
	P3	943412101140M	KNOB , ROTARY	SG	CBN1A278RMD10	3	*	
	P4	nsp	PANEL SUB	BK	CGW1A546	1		
	P4	nsp	PANEL SUB	SG	CGW1A546RMD10	1		
	P5	943404100570M	PANEL , SIDE L	BK	CGW3A467RNVB37	1	*	
	P5	943404100580M	PANEL , SIDE L	SG	CGW3A467ROUD10	1	*	
	P6	943422003990M	PANEL , SIDE R PM5003/N1B	BK	CGW1A466RNZB37	1		
	P6	943422004000M	PANEL , SIDE R PM5003/N1SG	SG	CGW1A466ROYD10	1		
	P7	943412002830M	ORNAMENT , RING	BK	CGR1A456B37	2		
	P7	943412002840M	ORNAMENT , RING	SG	CGR1A456RMD10	2		
	P8	481510004009M	WINDOW , IR	BK	CGU1A424A12	1		
	P8	481510004047M	WINDOW , IR	SG	CGU1A424	1		
	P9	481510003006M	INDICATOR , POWER		CGL1A274	1		
	P10	411510016027M	KNOB , PUSH POWER AV8003/N BK	BK	CBC1A166	1		
	P10	943411001970M	KNOB , POWER	SG	CBC1A166RMD10	1		
	P11	943411102830M	INDICATOR , FUNCTION		CGL1A307	1	*	
	P12	943411102820M	TACK KNOB ASS'Y	BK	CBT1A1085XA	1	*	
	P12	943411102810M	TACK KNOB ASS'Y	SG	CBT1A1085WA	1	*	
	P13	nsp	PC SHEET		CMX1A331	1		
	P14	nsp	CUSHION , EVA		CHG1A104	2		
	P15	00M243W057210	FOOT , FRONT		CKL2A042H46	4		
	P16	00M32CW107010	CUSHION , FOOT		CHG1A360	4		
	P17	nsp	HOLDER , PCB		CHE170	2		
	P18	nsp	HOLDER , PCB		CHE2A030	2		
	P19	nsp	LOCKER		CRE1A037	8		
	P20	nsp	SPACER , PCB(KCA-34)		CRE1A108	2		
	P21	nsp	SHEET , SCREW		CGX1A439	1		
	P22	943416101140M	SHEET , TOP	BK	CGX1A436Z	1	*	
	P22	943416101130M	SHEET , TOP	SG	CGX1A436Y	1	*	
	P23	45451000500AM	STOPPER , SHEET	BK	CMH1A306Z	2		
	P23	45451000501AM	STOPPER , SHEET	SG	CMH1A306Y	2		
	M1	943402104090M	PANEL , AL FRONT	BK	CKM1A204RC23	1	*	
	M1	943402104080M	PANEL , AL FRONT	SG	CKM1A204QC62	1	*	
	M2	943412002810M	PM5003/N1B INPUT KNOB ASS'Y	BK	CGK1A138ZA	1		
	M2	943412002820M	PM5003/N1SG INPUT KNOB ASS'Y	SG	CGK1A138YA	1		
	M3	943412004010M	PM5003/N1B VOLUME KNOB ASS'Y	BK	CGK1A137ZA	1		
	M3	943412004020M	PM5003/N1SG VOLUME KNOB ASS'Y	SG	CGK1A137YA	1		
	M4	nsp	FRAME , FRONT		CUF2A004	1		
	M5	nsp	CHASSIS , BOTTOM		CUA1A288	1		
	M6	nsp	WASHER		CNW1A051	4		
	M7	nsp	BRACKET(F) , HEAT SINK		CMD1A366-V1	1		
	M8	nsp	HEAT SINK		CMY3A286	1		
	M9	nsp	BRACKET(F) , HEAT SINK		CMD1A367-V1	1		
	M10	nsp	WASHER , GROUND		CNW1A035	4		
	M11	nsp	PANEL REAR	U	CKF3A391N	1		
	M11	nsp	PANEL REAR	F	CKF5A391L	1		
	M11	nsp	PANEL REAR	K	CKF4A391M	1		
	M11	nsp	PANEL REAR	N	CKF4A391P	1		
	M12	943401002850M	CABINET , TOP PM5003/N1B	BK	CKC1A187K117	1		
	M12	943401002860M	CABINET , TOP PM5003/N1SG	SG	CKC1A187D11	1		
	M13	nsp	SHIELD BRACKET		CMD1A844	1		
	M14	nsp	SHIELD PLATE		CMD1A857	1		
	M15	nsp	SHIELD CHASSIS		CMD1A845	1		
	S1	nsp	SCREW	BK	CTW3+8JFZR	6		
	S1	nsp	SCREW	SG	CTW3+8JFC	6		
	S2	nsp	SCREW		CTB3+8JFB	50		
	S3	nsp	SCREW		CTB3+10JFB	17		
	S4	nsp	SCREW		CTW3+8JFB	7		
	S5	nsp	SCREW		CTB3+12JFB	4		
	S6	nsp	SCREW		CTB3+18JFB	2		
	S7	nsp	SCREW		CTBR4+8FFB	4		
	S8	nsp	SCREW , SPECIAL		CHD1A012ZR	6		
	S9	nsp	SCREW		CTB3+6FFB	5		
	★	nsp	HEAT SINK ASS'Y		CMYPM6005	1		
	★	nsp	COMPOUND , SILICONE		K8AYG6260	4		
		nsp	CLAMPER		CHR301-V1	11		
		nsp	BRACKET , PCB		CMD1A569-V1	2		
		nsp	2P WIRE ASS'Y(100MM)		CWZPM5003TW91A	1		

PACKING

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	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	1	943531103910M	BOX OUT CARTON		CPG1A994Y	1	*	
	2	nsp	BAG , POLY(SET)		CPB1A213	1		
	3-1	943533101990M	PAD , SNOW BOTTOM(F/R)		CPS1A964	1	*	
	3-2	943533101980M	SNOW PAD(FRONT-TOP)		CPS1A962	1	*	
	4	-	INSTRUCTION MANUAL ASS'Y		CQXPM6005/U	1		
	4-1	35201026900AM	CD MANUAL ASS'Y	N	CFT1A115ZA	1	*	
	4-1	35201029100AM	CD MANUAL ASS'Y	K	CFT1A117ZA	1	*	
	4-1	54111109100AM	MANUAL, INSTRUCTION	F	CQX1A1797Z	1	*	
	4-1	35201028900AM	CD MANUAL ASS'Y	U	CFT1A116ZA	1	*	
	4-2	54311027300AM	SAFETY INSTRUCTION	N	CQE1A636Z	1		
	4-2	54311028500AM	SAFETY INSTRUCTION	K	CQE1A639Z	1		
	4-2	54111093410AD	SAFETY INSTRUCTION	F	CQE1A638Z	1		
	4-2	54311028500AM	SAFETY INSTRUCTION	U	CQE1A637Z	1		2
	4-3	54111111100AM	MANUAL , GETTI NG START	N	CQX1A1792Z	1	*	
	4-3	54111111400AM	MANUAL , GETTI NG START	K	CQX1A1795Z	1	*	
	4-3	54111111300AM	MANUAL , GETTI NG START	F	CQX1A1794Z	1	*	
	4-3	54111111200AM	MANUAL , GETTI NG START	U	CQX1A1793Z	1	*	
	4-4	nsp	SHEET , GOST	N	CQE1A643Z	1		
	4-4	nsp	CARD FOR CHINA INDENTIFICATION	K	CQE1A450Z	1		
	4-4	nsp	CARD , USER (JAPAN)	F	CQE1A139S	1		
	4-4	nsp	CARD , WARRANTY	U	CQE1A131V	1		
	4-5	nsp	WARRANTY CANADA	U	CQE1A132V	1		
!	5	90M-ZC000320R	CORD , POWER(DETACHABLE/EUR)	N	CJA2B054Z	1		
!	5	90M-ZC000650R	CORD , POWER	K	CJA2N075Z	1		
!	5	6110500280075	CORD , POWER JPN INLET TYPE (250V)	F	CJA2J115ZV	1		
!	5	90M-ZC000310R	CORD , POWER(PLUG+SOCKET)UL	U	CJA2A070Z	1		
	6	nsp	BAG , POLY		CPB1A008Z	1		
	7	nsp	LABEL , HOT		CQB1A906Z	1		
	8	nsp	LABEL , CONTROL		CQB2A993Z	1		
	8-1	nsp	LABEL , CONTROL		CQB2A993Z-1	1		
	8-2	nsp	LABEL , CONTROL		CQB2A993Z-2	1		
	9	30701015400AM	RC001PMCD		CARTPMCD6005	1		
	10	nsp	BATTERY , AAA 2PCS IN PACK		CABR03PPB	2		
	11	nsp	LABEL , WHITE M1 SG	SG	CQB1A908Z	2		
	12	nsp	CARD , WARRANTY CHINA	K	CQE1A449X	1		
	12	nsp	CARD , WARRANTY (JAPAN)	F	CQE1A123W	1		
	13	nsp	LABEL , POWER	K	CQB1A1200Z	1		