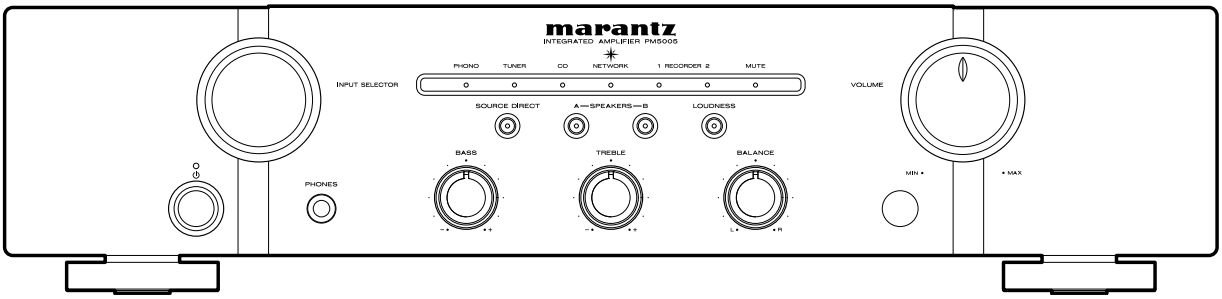
Service Manual

PM5005 /N1B, N1SG, U1B, K1B, K1SG,FN

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®

PM5005

Ver. 2

Please refer to the MODIFICATION NOTICE.

S0872-1V02DM/SG1406

Contents

ABOUT THIS MANUAL

Read the following information before using the service manual.

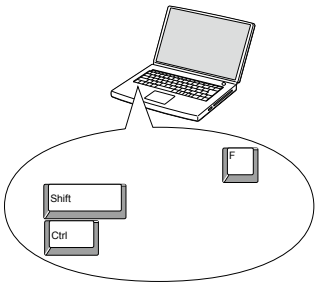
What you can do with this manual

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, block diagrams, and parts lists.

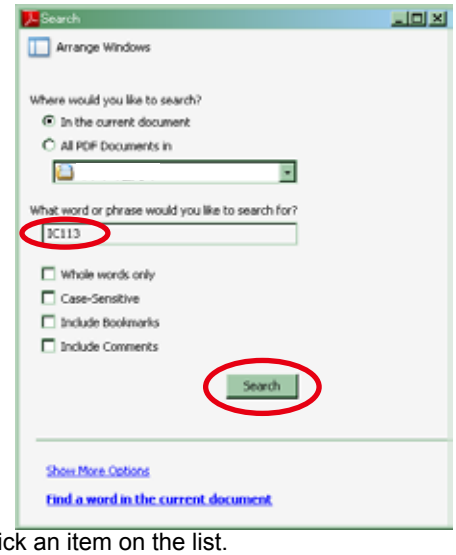
1.Press **Ctrl+Shift+F** on the keyboard.

- 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.



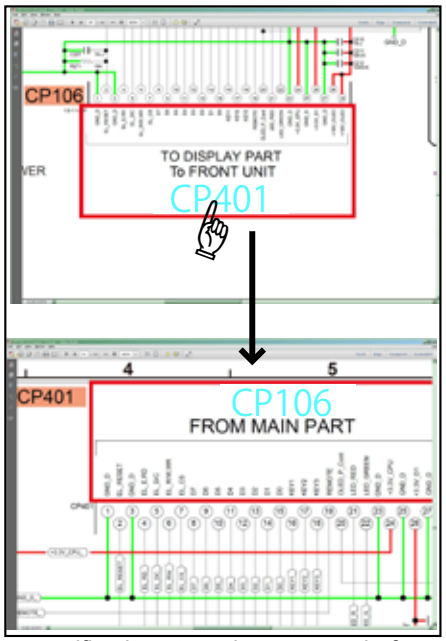
3.Click an item on the list.

• 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.

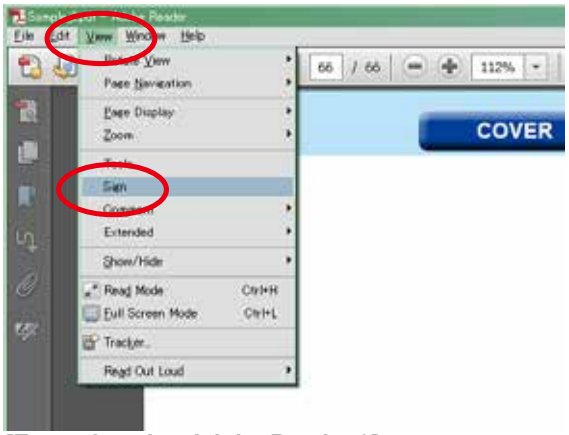
Using Adobe Reader (Windows version)

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.



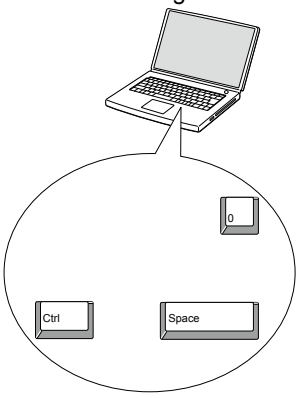
[Example using Adobe Reader 9]
On the **"Document"** menu, click **"Sign"**.

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.

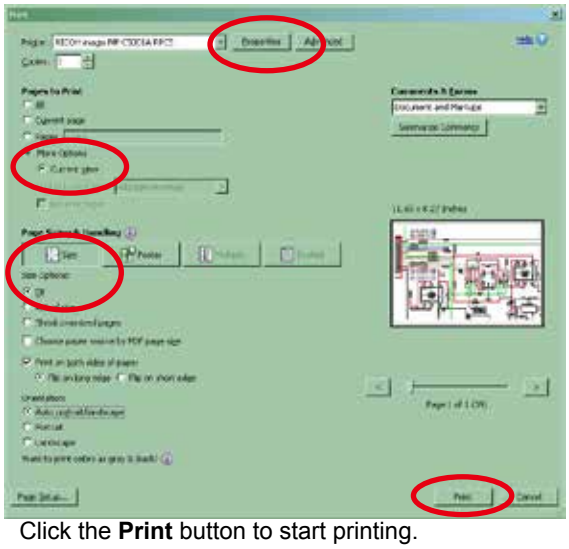


- When you want to move the area shown, hold down **Space** and drag the mouse.
- When you want to show a full page view, press **Ctrl+0** on the keyboard.

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.



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

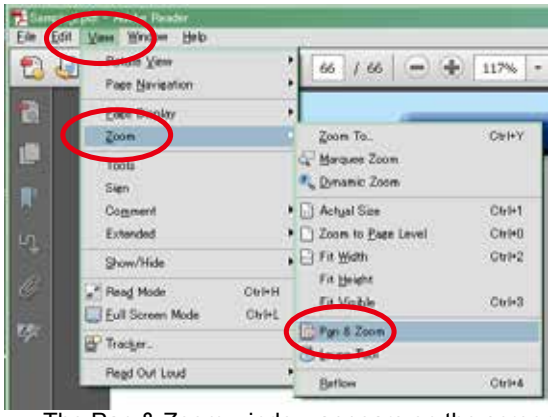
- **Properties**
  Click this button and check that the printer is set to a suitable paper size.
- **Page to print**
  Select the following checkbox.
  "More Options" : **"Current View"**
- **Page Sizing & Handling**
  Select the following checkbox.
  "Size" / **"Size Options"** : **"Fit"**

Magnify schematic / printed wiring board diagrams - 2

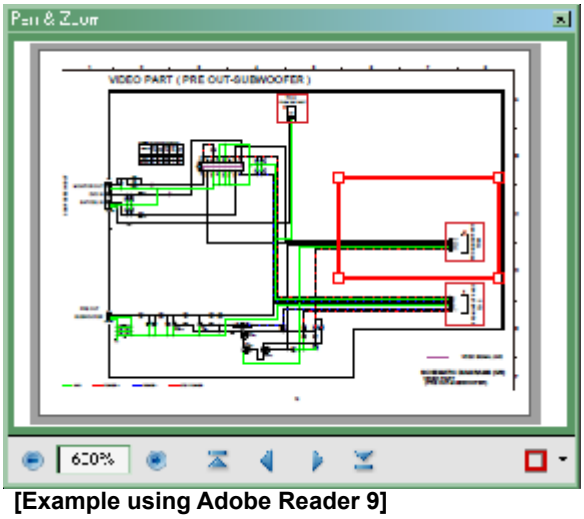
(Pan & Zoom function)

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.



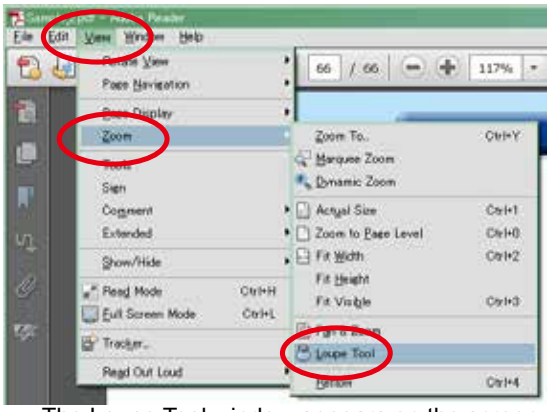
[Example using Adobe Reader 9]
On the **"Tools"** menu, point to **"Select & Zoom"**, and then click **"Pan & Zoom Window"**.

Magnify schematic / printed wiring board diagrams - 3

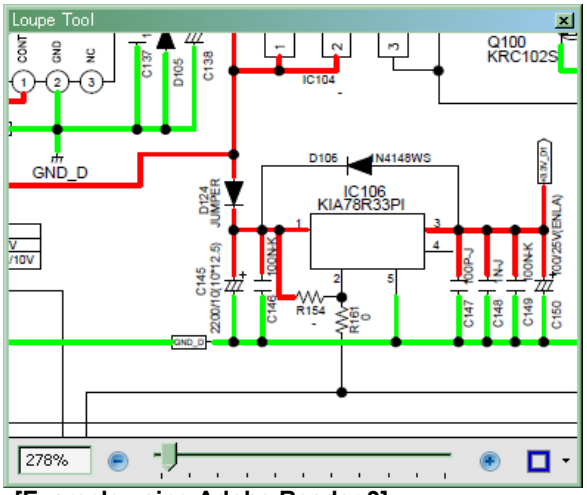
(Loupe Tool function)

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

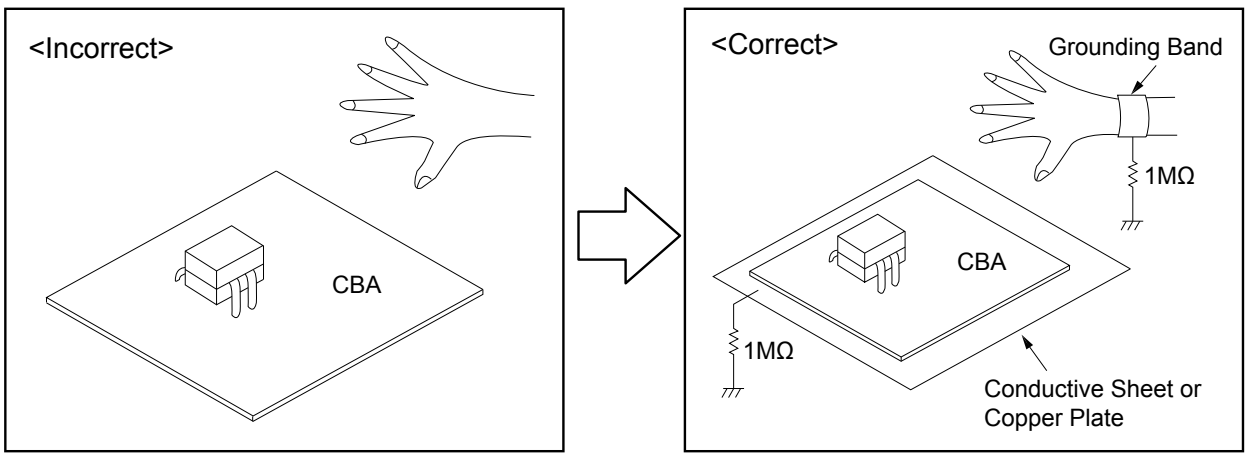
1. Parts indicated by **"nsp"** on this table cannot be supplied.
2. When ordering a part, make a clear distinction between "1" and "I" (i) to avoid mis-supplying.
3. A part ordered without specifying its part number can not be supplied.
4. Part indicated by " ★ " mark is not illustrated in the exploded view.

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



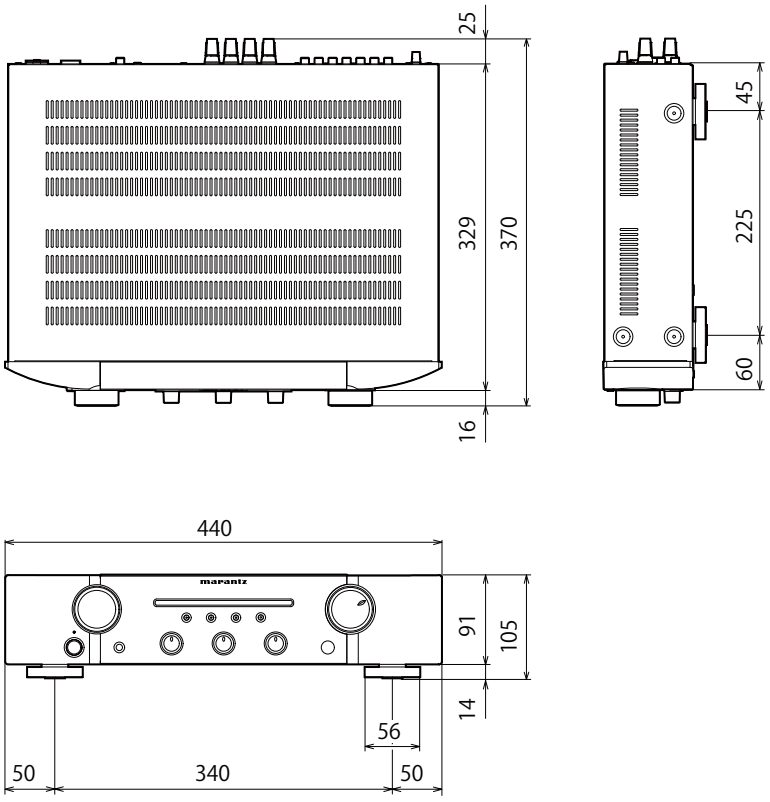
Personal notes:

TECHNICAL SPECIFICATIONS

- **RMS Power output (40 Hz -20 kHz simultaneous drive of bothchannels) :** 40 W x 2 (8 Ω /ohms load)
  55 W x 2 (4 Ω /ohms load)
- **Total harmonic distortion**
  (40 Hz-20 kHz simultaneous drive of bothchannels, 8 Ω/ohms load) : 0.01%
- **Output band width (8 Ω /ohms load, 0.06 %) :** 10 Hz -30 kHz
- **Frequency response (CD, 1 W, 8 Ω/ohms load) :** 10 Hz -50 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 k Ω /kohms
  CD, TUNER, NETWORK, RECORDER : 200 mV/20 k Ω /kohms
- **Maximum allowable PHONO input level (1 kHz) MM :** 110 mV
- **RIAA deviation (40 Hz -20 kHz) :** ± 0.5 dB
- **S/N (IHF-A, 8 Ω /ohms load)**
  PHONO (MM) : 83 dB (5 mV input, 1 W output)
  CD, TUNER, NETWORK, RECORDER : 103 dB (2 V input, Rated output)
- **Tone Control**
  BASS (100 Hz) : ± 10 dB
  TREBLE (10 kHz) : ± 10 dB
- **Power requirement :** (F)AC100V、50/60Hz
  (N)AC230V, 50/60Hz
  (U)AC120V, 60Hz
  (K)AC220V、50Hz
- **Power consumption (EN60065) :** 110W (N, K)
  310W (F including Outlet 200W)
  350W (U including Outlet 240W)
- **Power consumption in standby mode :** 0.3 W

DIMENSION

Unit : mm
Weight: 6.7kg

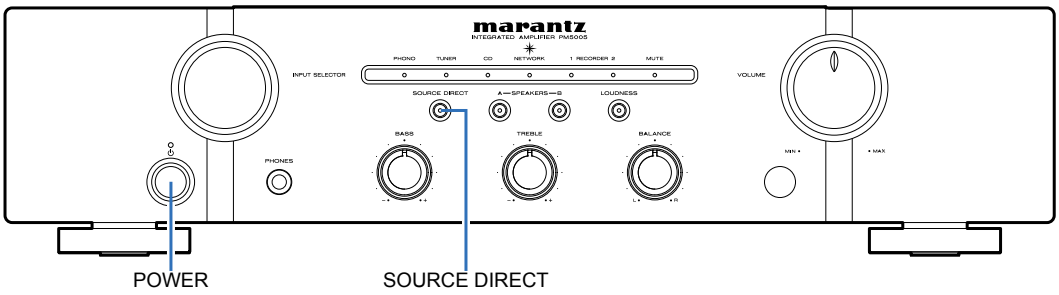


PRECAUTIONS DURING SERVICE

Initializing This Unit

Initialize this unit if you have replaced the microcomputer, one of the parts around the microcomputer.

1. Press the **"power"** button to turn off the power.
2. Hold down buttons "**SOURCE DIRECT**" and press the power button to turn on the power.
3. Check the set entered the service mode.(See 15 page SPECIAL MODE)



Service Jigs

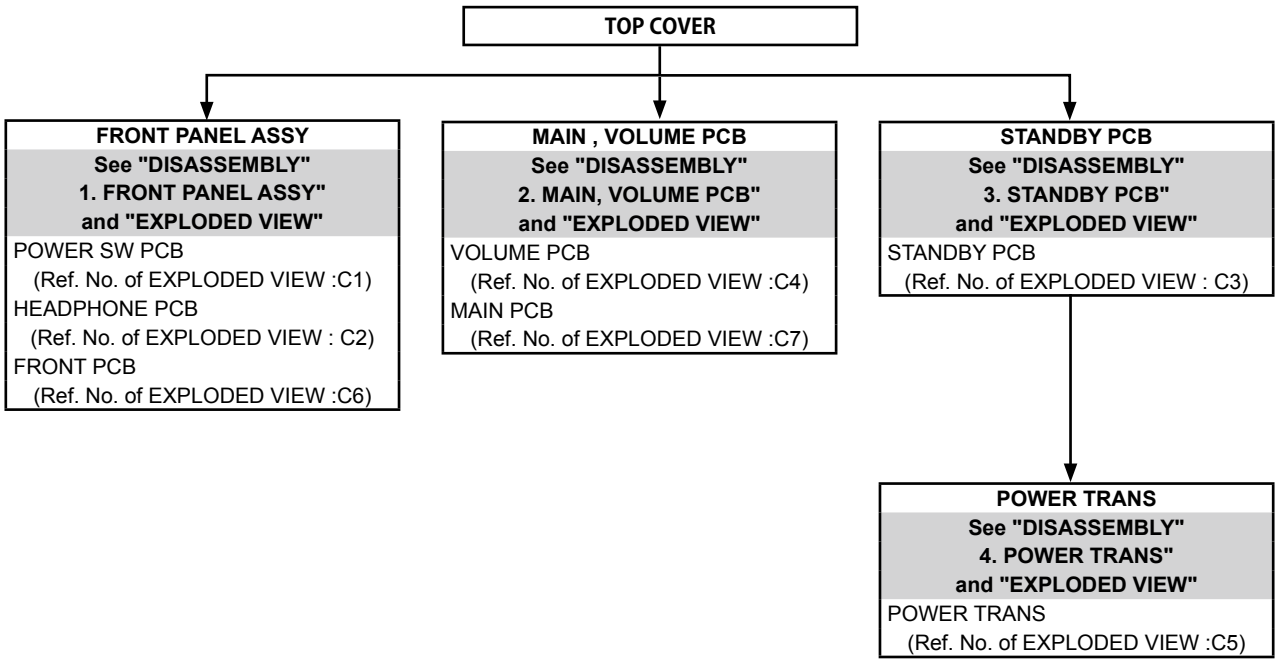
The following jigs are used when updating the firmware
(RS232C → connector conversion PCB in this product + 7P cable kit).
Order the jigs from your dealer if necessary

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

(See 16 page FIRMWARE UPDATE PROCEDURE)

DISASSEMBLY

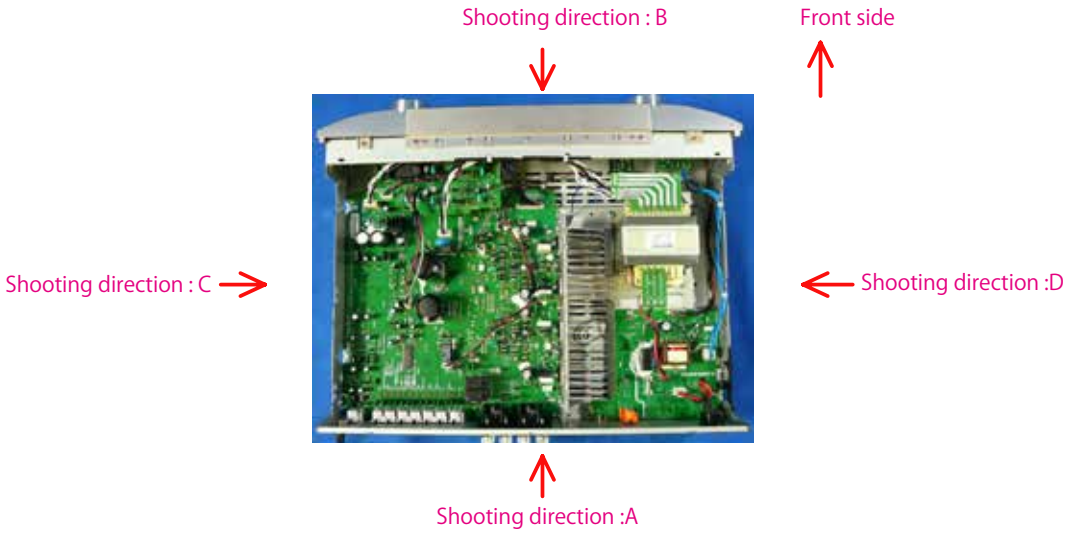
- Remove each part in the order of the arrows below.
- Reassemble removed parts in the reverse order.
- Read "Precautions During Work" before reassembling removed parts.
- If wire bundles are removed or moved during adjustment or part replacement, reshape the wires after completing the work. Failure to shape the wires correctly may cause problems such as noise.



Explanatory Photos for DISASSEMBLY

• The angles from which the photos are taken are shown by "Photo angle A, B, C, D".
• See the diagram below about the shooting direction of each photograph.
• Photographs with no shooting direction indicated were taken from the top of the unit.
• The photograph is PM5005N1G model.

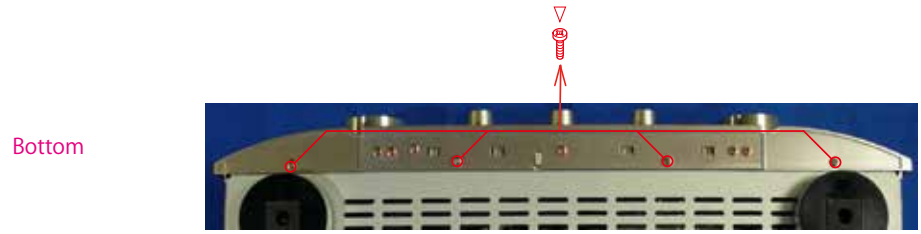
The viewpoint of each photograph
(Shooting direction:X) ［View from the top］



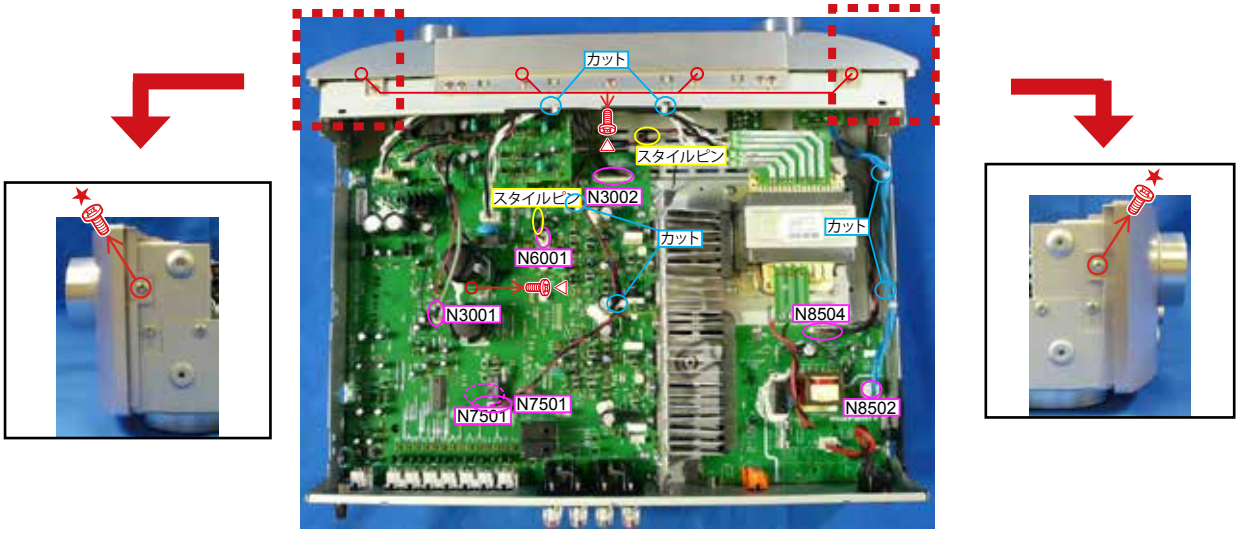
1. FRONT PANEL ASSY

Proceeding : TOP COVER → FRONT PANEL ASSY

(1) Remove the screws.



(2) Cut the wire clamp, remove the screw and style pin .Remove the connector wires.



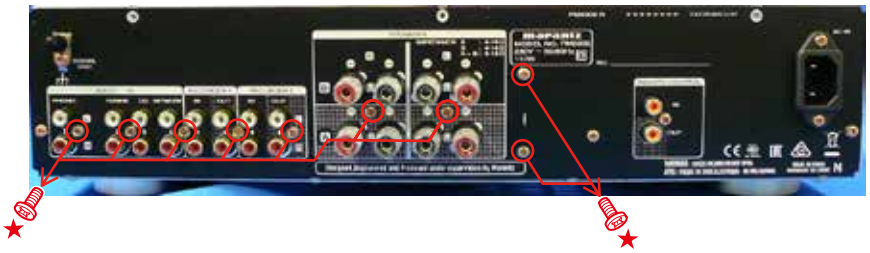
See "EXPLODED VIEW" for instructions on how to remove each PCB of theFRONT PANEL ASSY.

2. MAIN, VOLUME PCB

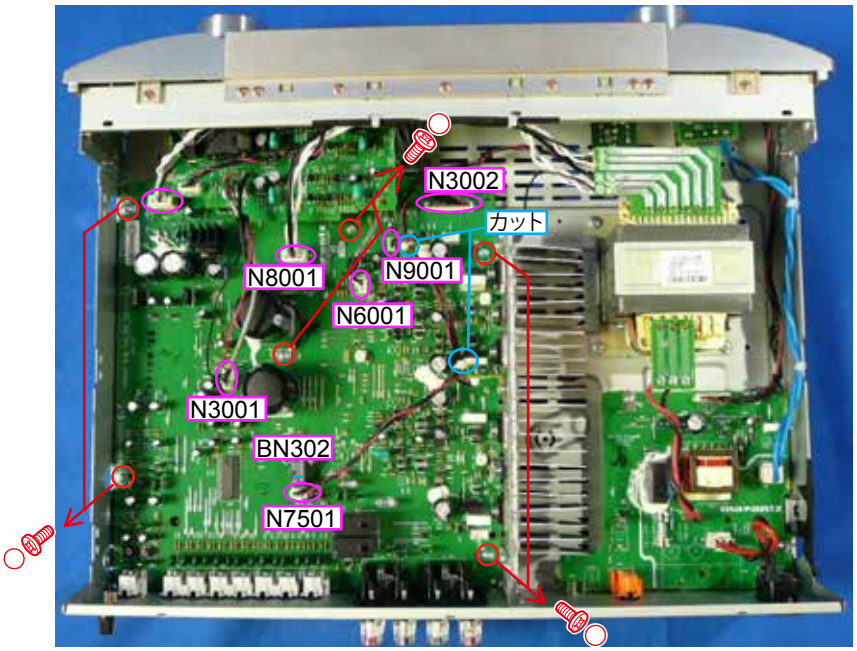
Proceeding : TOP COVER → MAIN, VOLUME PCB

(1) Remove the volume knob. Remove the screws.

(2) Remove the screws.



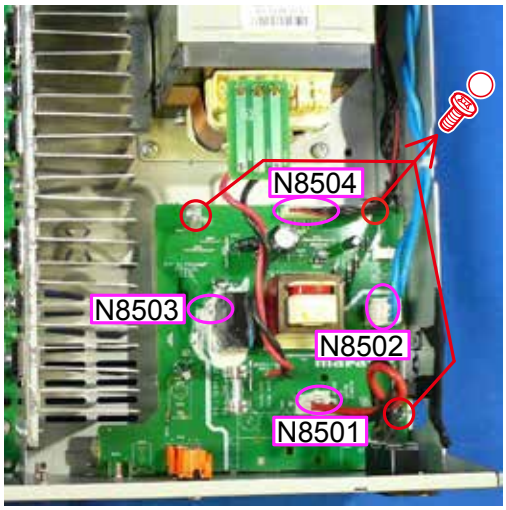
(2) Cut the wire clamp and remove the PCB HOLDER. Remove the connector wires.



3. STANDBY PCB

Proceeding : TOP COVER → STANDBY PCB

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

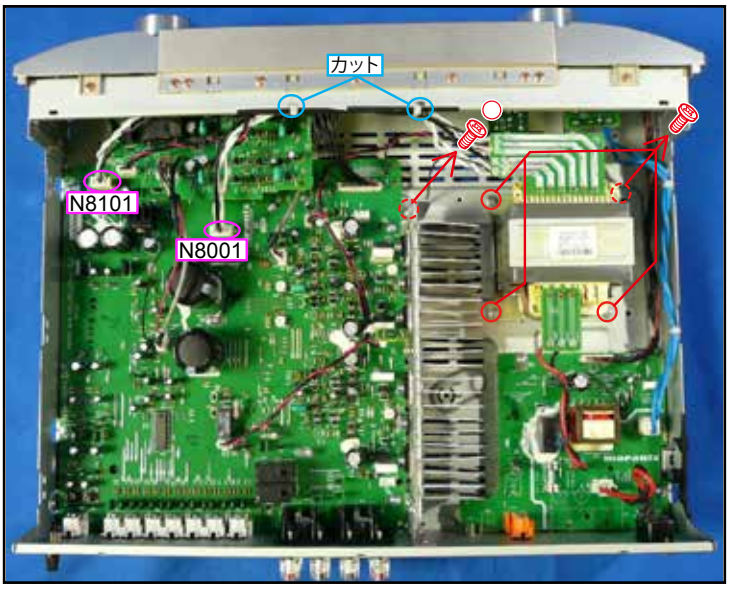


(3) Remove the screws.

4. POWER TRANS

Proceeding : TOP COVER → STANDBY PCB → POWER TRANS

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



SPECIAL MODE

Version display, LED test and initialization runs in order.

Operation

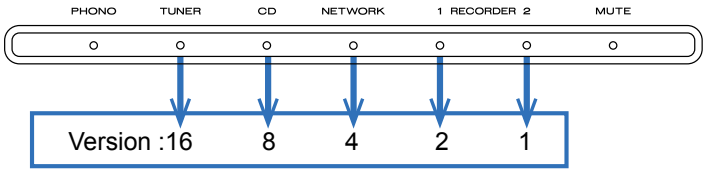
press the " **SOURCE DIREC** " while pressing the power button to turn the power on.

Actions

(1)The firmware version is displayed on the front LED. (Display time is only 3 seconds.)
(2) Each LED light up then all LED light up.
(3) Turn off the power by remote control to quit Service Mode. (The unit to the default status.)

How to read the version display (Microprocessor, U1001)

The firmware version is displayed in the lighting position of LED.



Exsample:

Light up RECORDER 2 [1], Version : 1
Light up RECORDER 2 [1] and NETWORK [4], Version : 5
Light up RECORDER 2 [1] and CD [8], Version : 9

PROCEDURE AFTER REPLACING THE MICROPROCESSOR, ETC.

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

PCB Name	Ref. No.	Description	Procedure after Replacement	Remark
FRONT	U1001	CVITMP86FH47BUG	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

1. Items to be Prepared

(1) PC

(2) RS-232C cable (9P (Male), Straight).

(3) 8U- 210100S:WRITING KIT.
606050028012P:7P FFC (Straight)

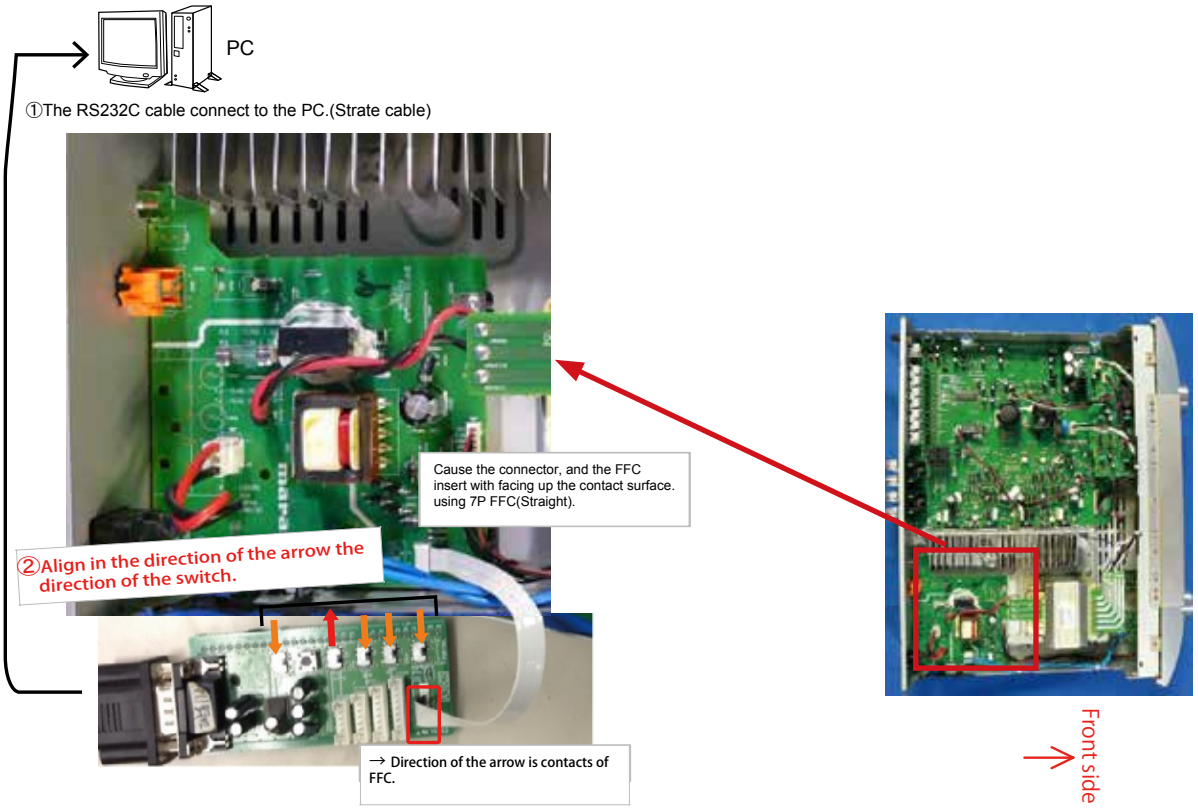
(4) Writing tools and some files. (FlashProg.exe, etc... in TM86FH47 pass folder)

2. Connecting the WRITING KIT to the unit

(1) Disconnect the AC plug of this unit to turn the power off.

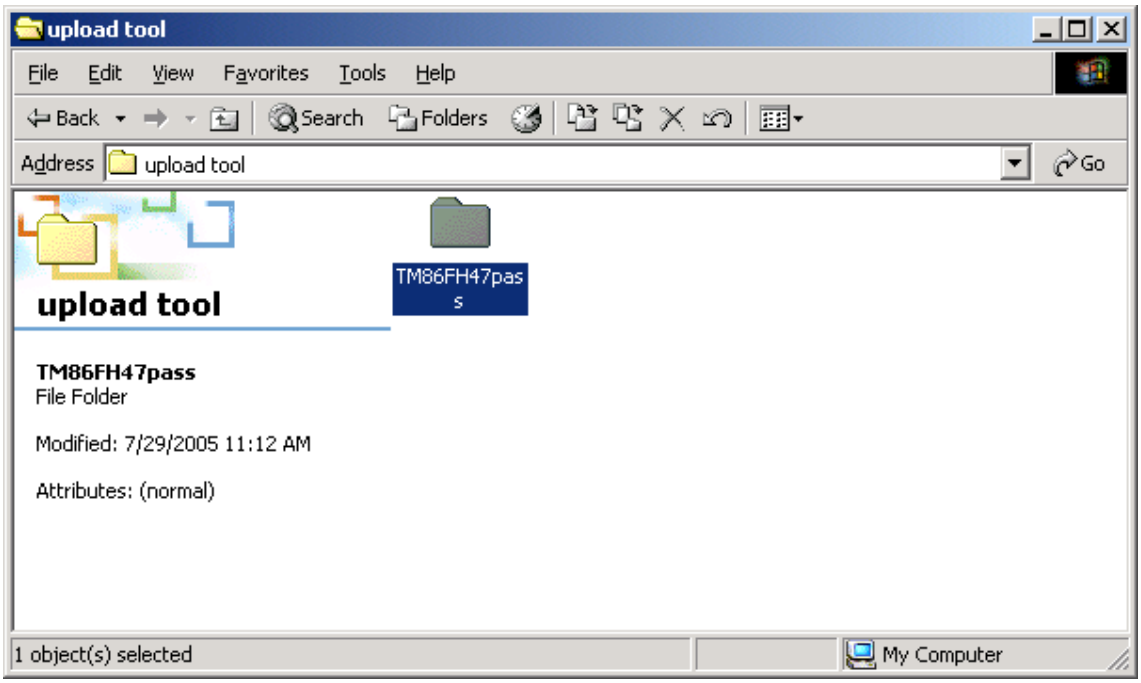
(2) Connect the RS-232C cable from PC with the WRITING KIT.

(3) Connect the WRITING KIT to the update terminal of the unit.

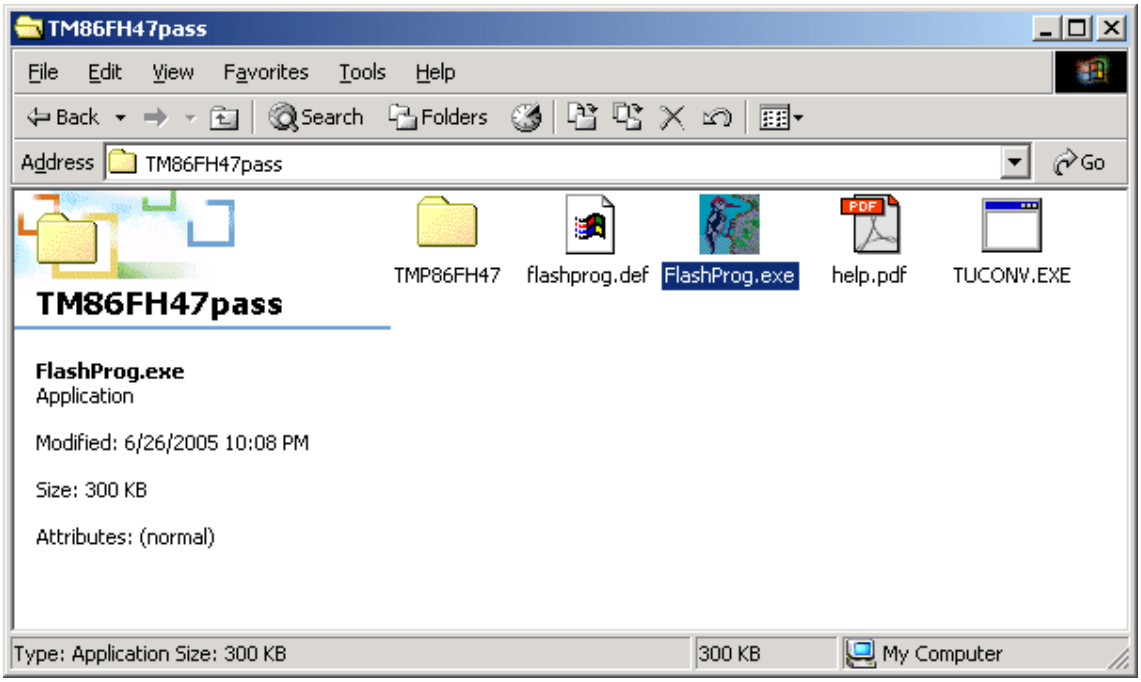


3. Writing procedure

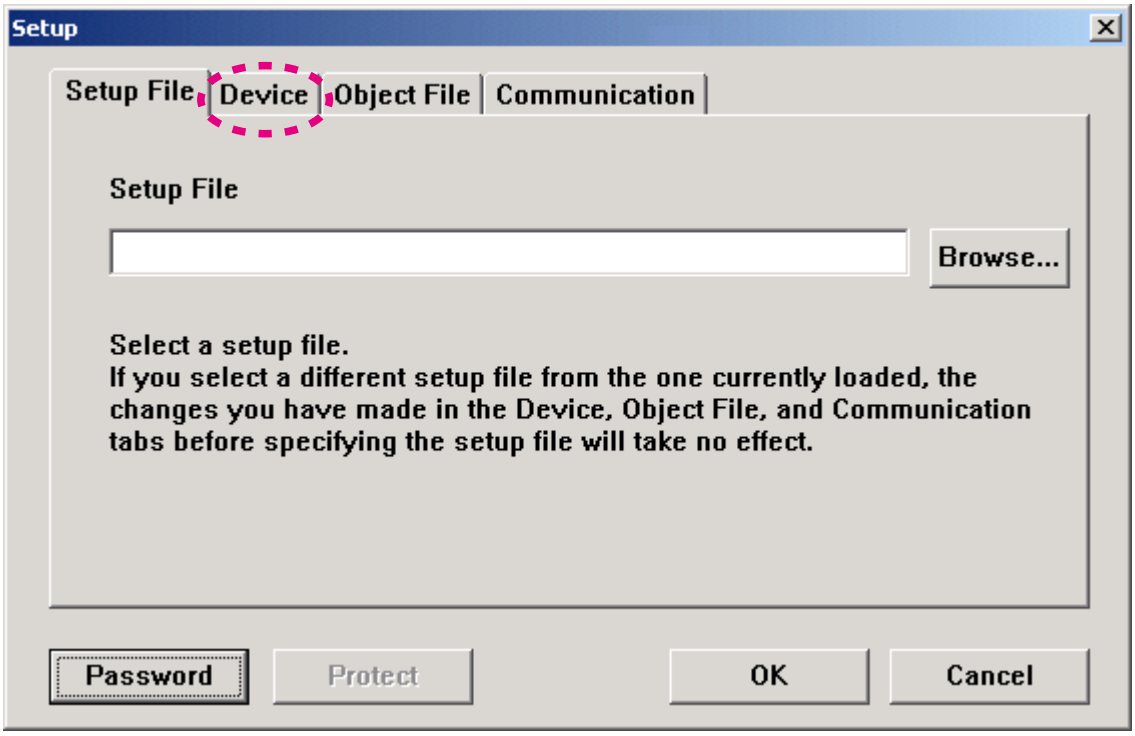
(1) Inserting the AC plug to consent.
(2) Copy the " **TM86FH47pass**" folder to a Windows PC.
(3) Double click the TM86FH47pass folder.



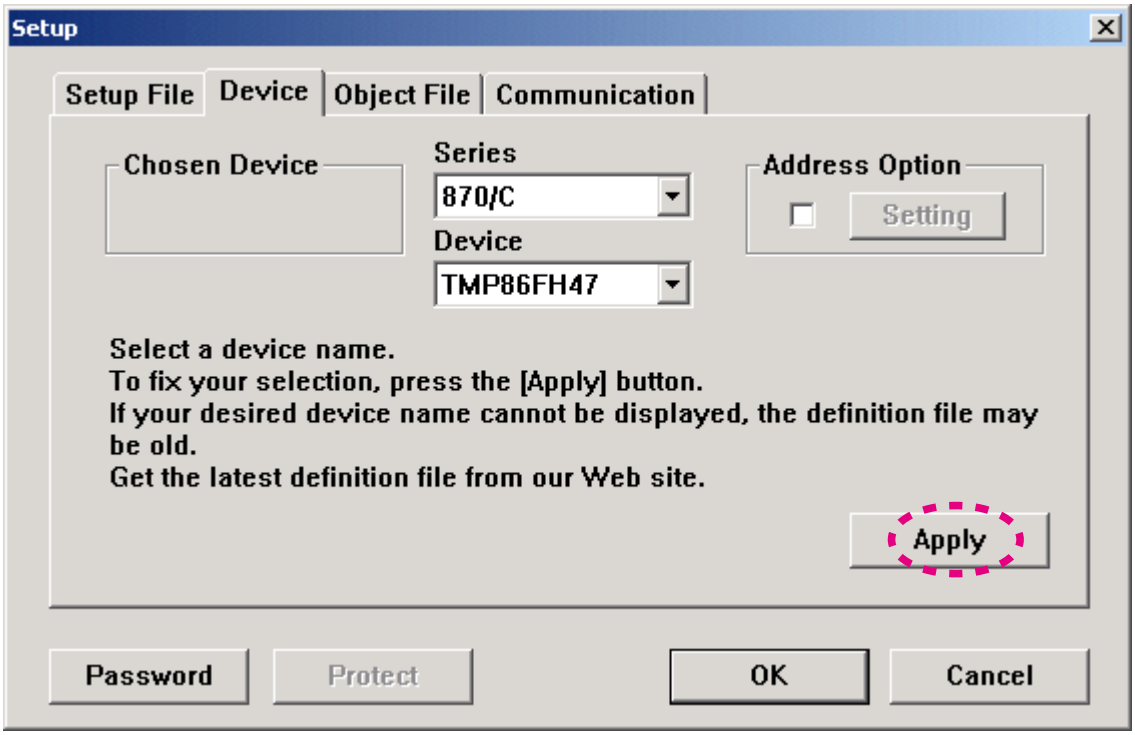
(4) Double click FlashProg.exe.



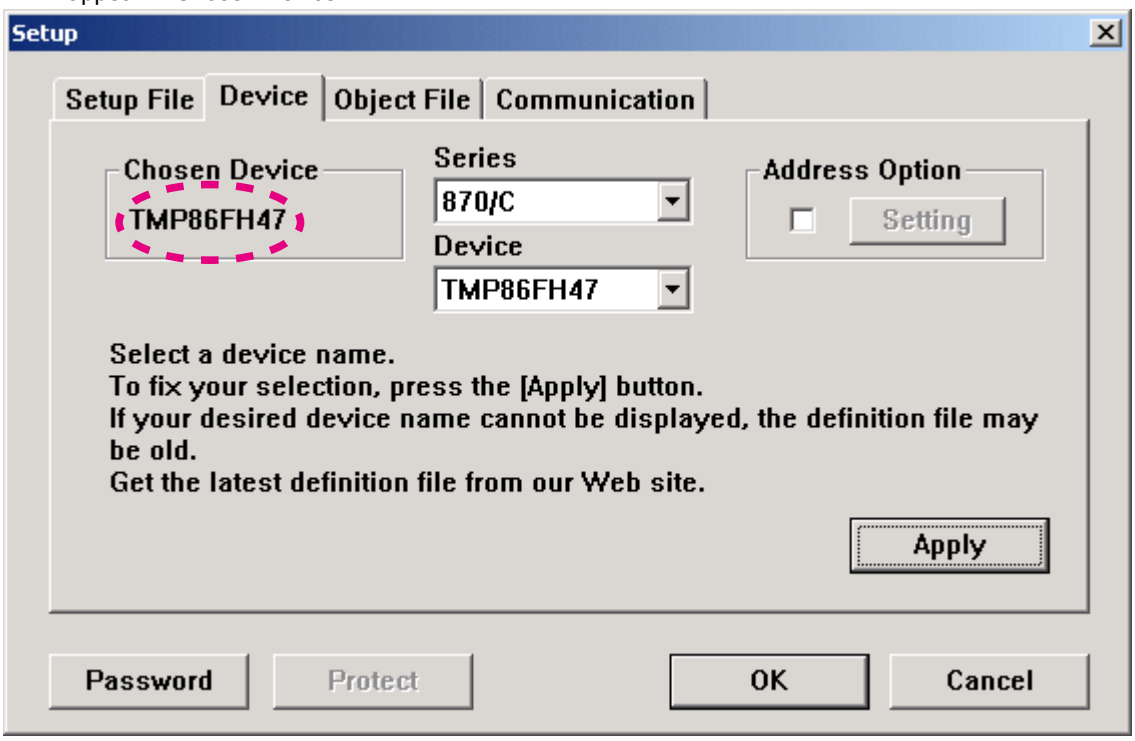
(5) Click Device.



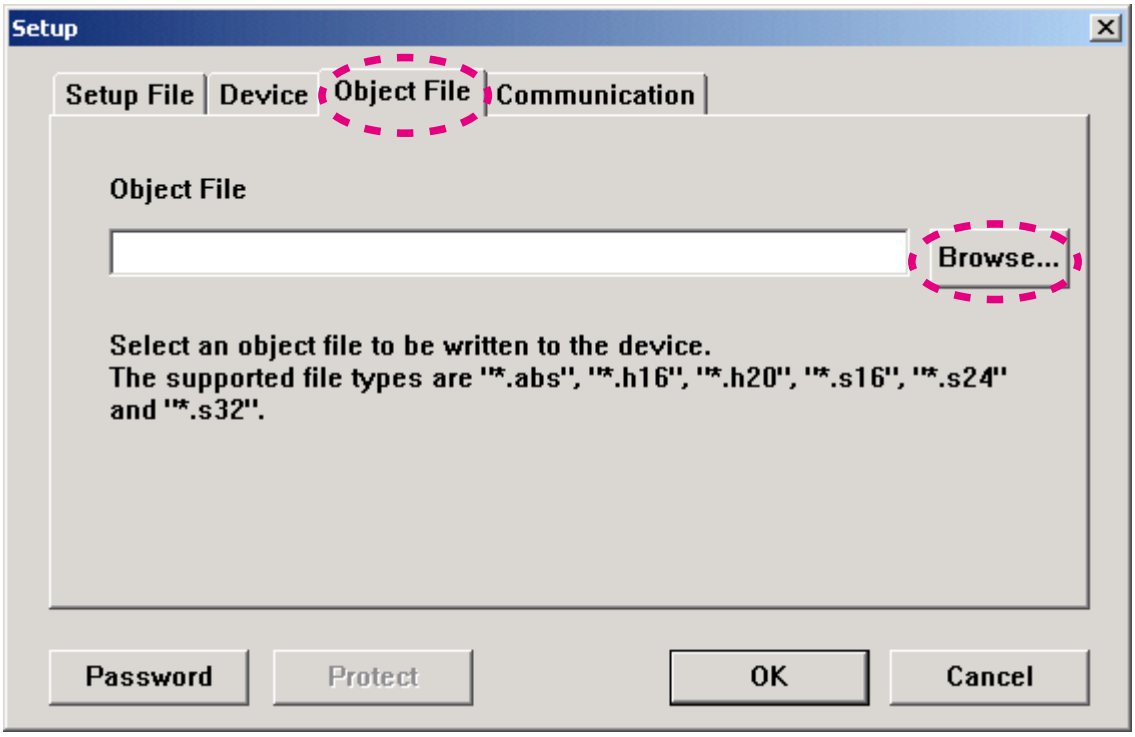
(6) Click Apply.



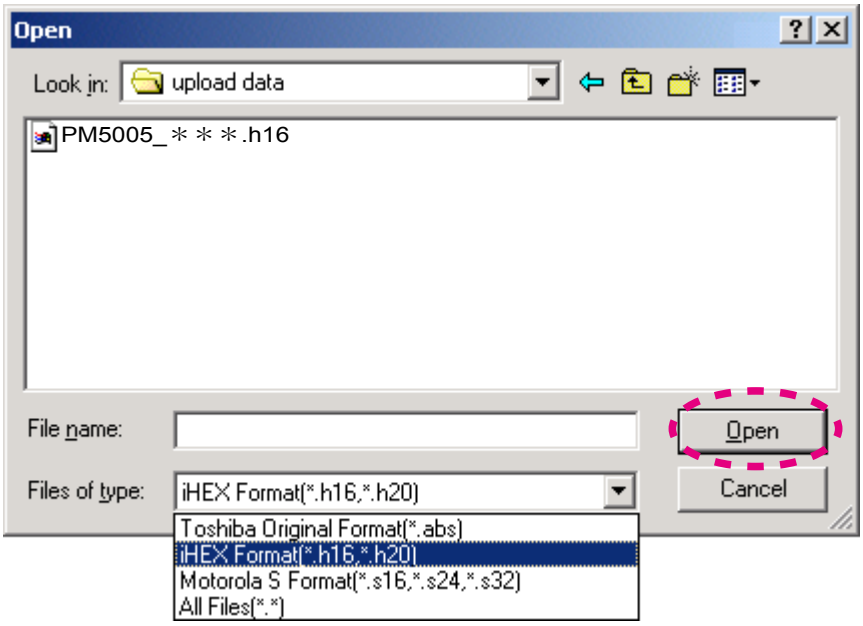
(7) TMP86FH47 appear in Chosen Device.



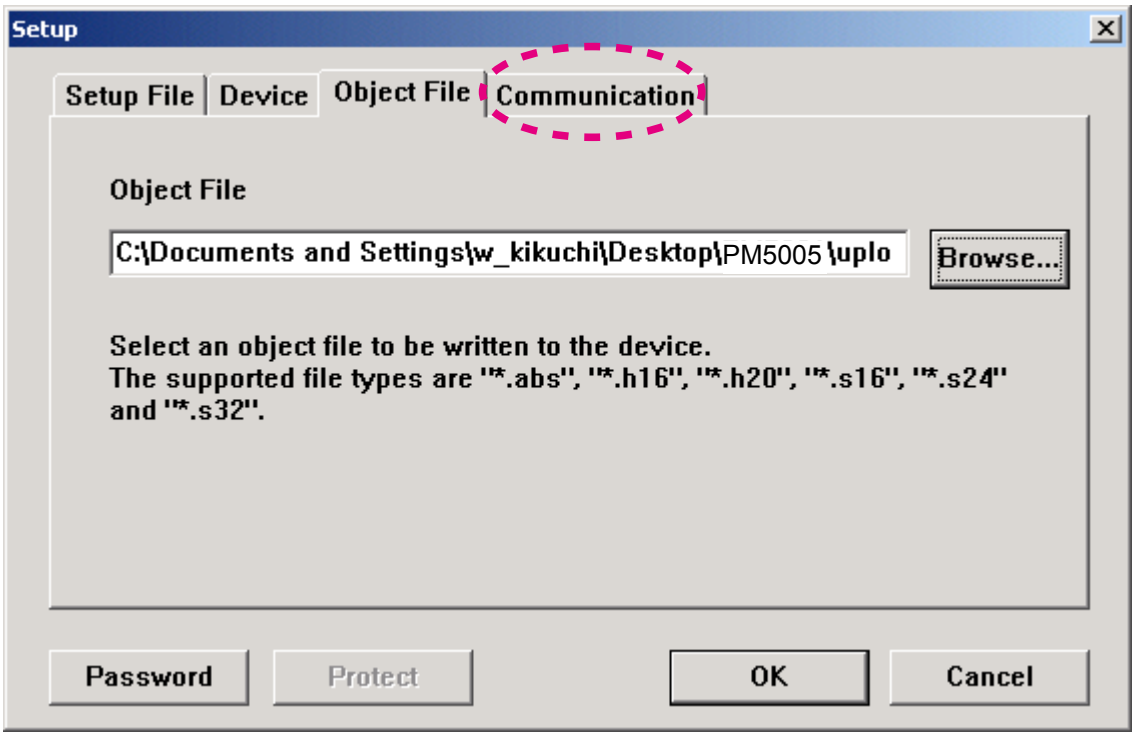
(8) Click Object File, and click Browse...



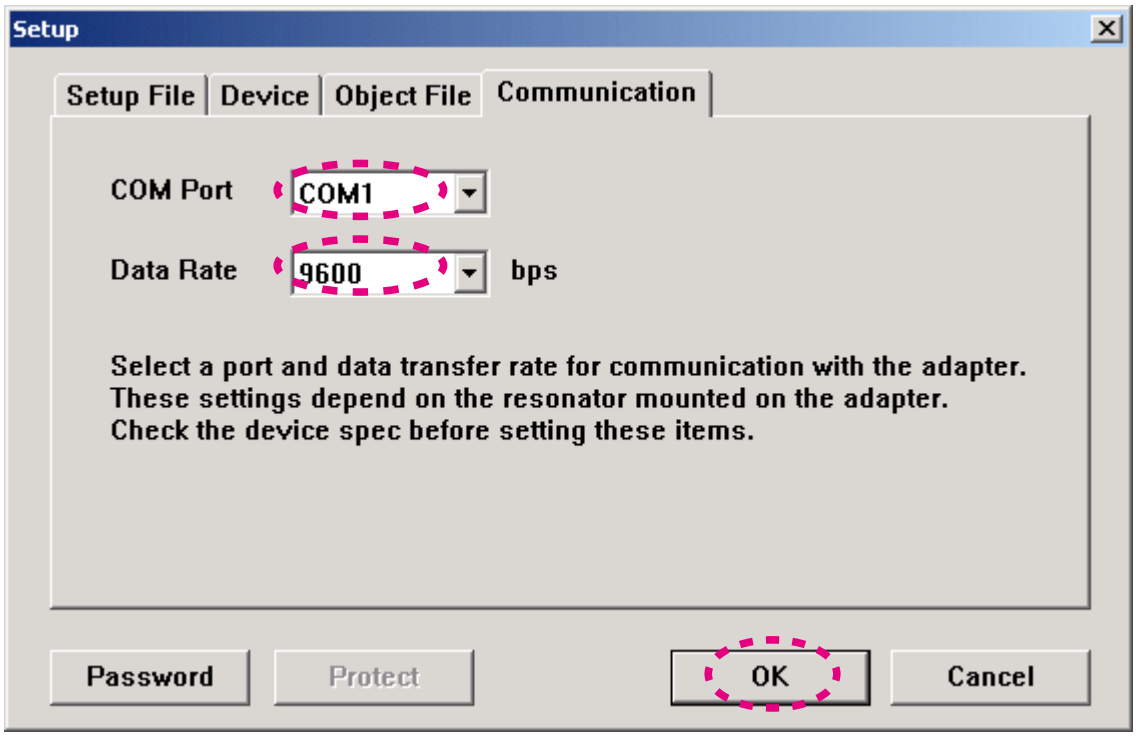
(9) Choose iHEX Fomat[*.h16,*.h20] in Files of type.Choose writing data, and click Open.



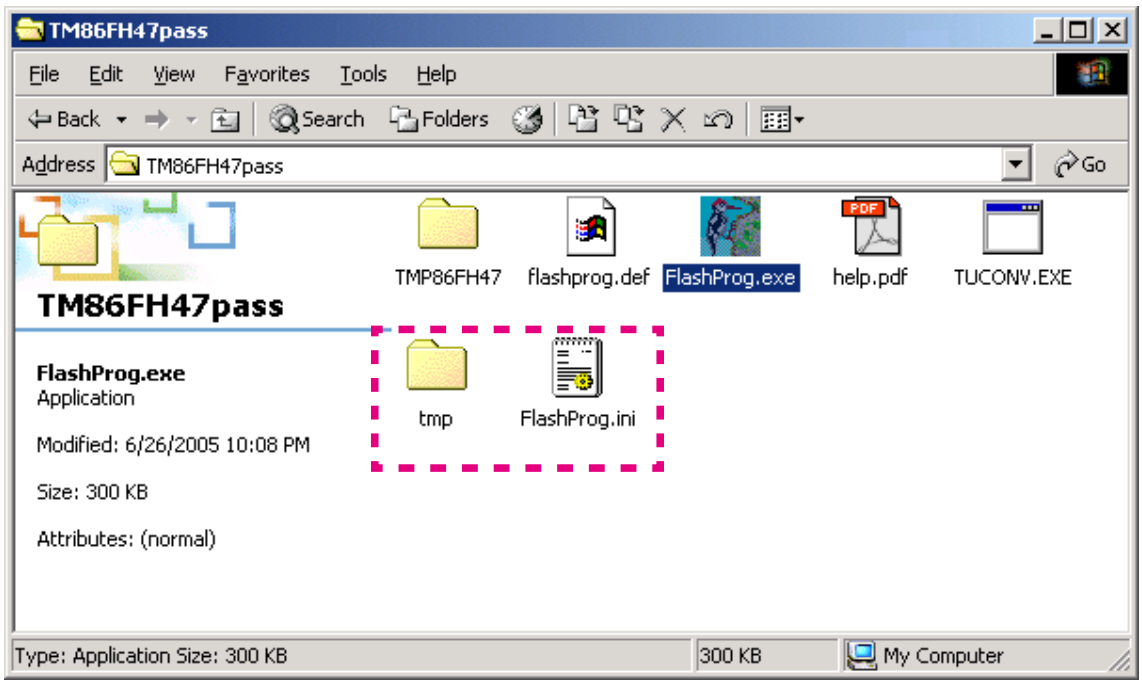
(10) Click Communication.



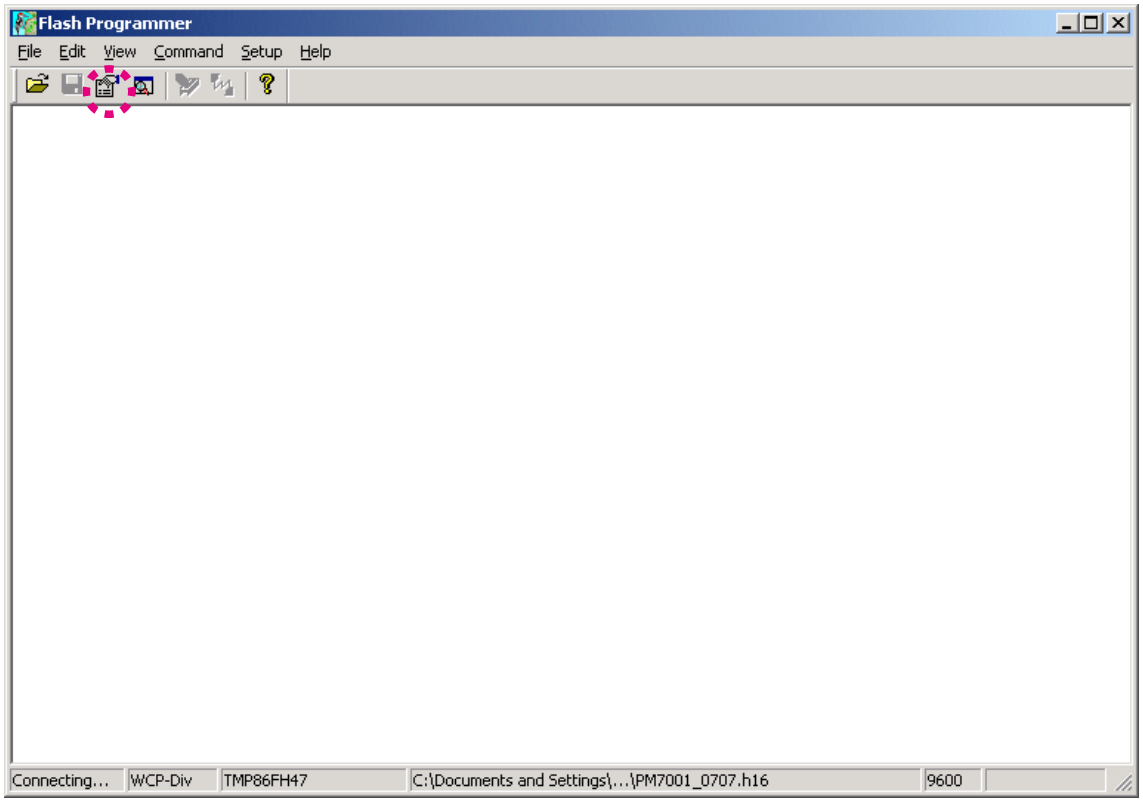
(11) Choose COM port number in COM port.
Choose 9600 in Data Rate.
Click OK.



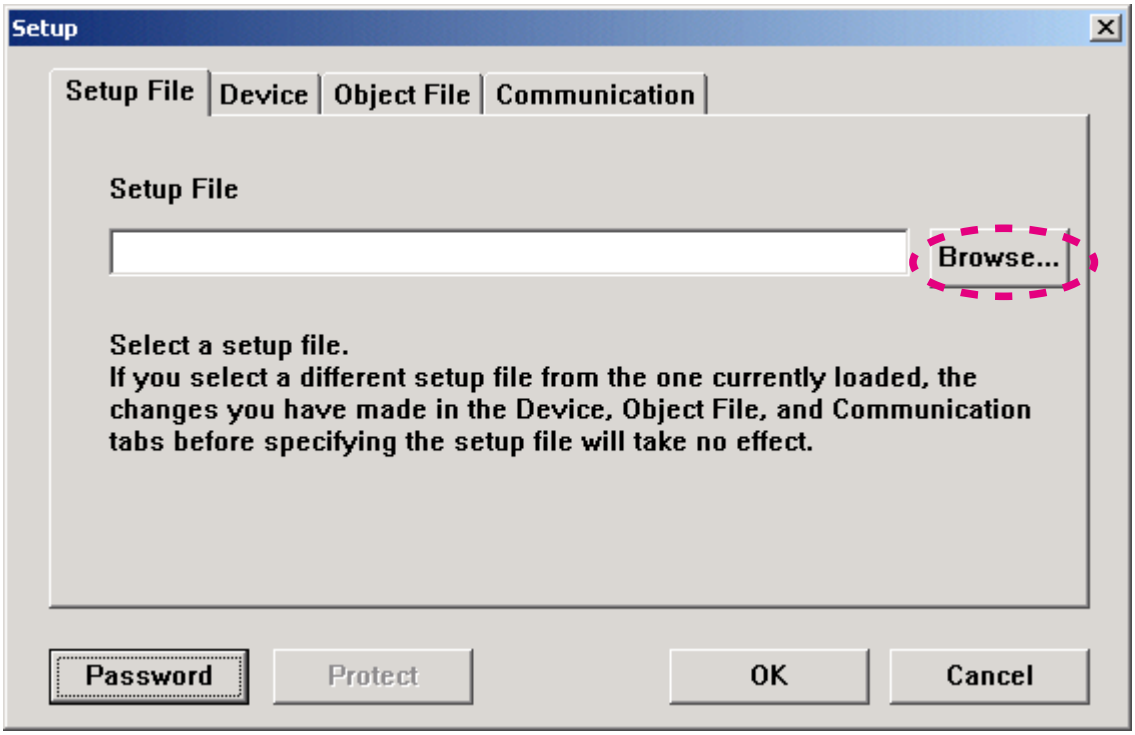
(12) When Setup window is closed, the tmp folder and FlashProg.ini file are created simultaneously.
NOTE : These are the original set-up configuration files for that PC. They do not operate, if these files moved to another PC. When you make it operate with other PC, delete the tmp folder and the FlashProg.ini file and redo a setup.



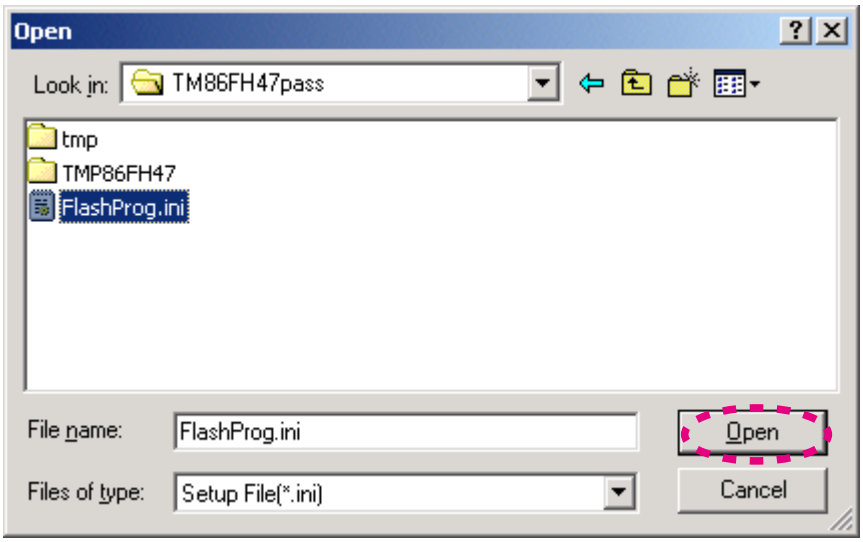
(13) The Flash Programmer is launched.
Click setup icon.



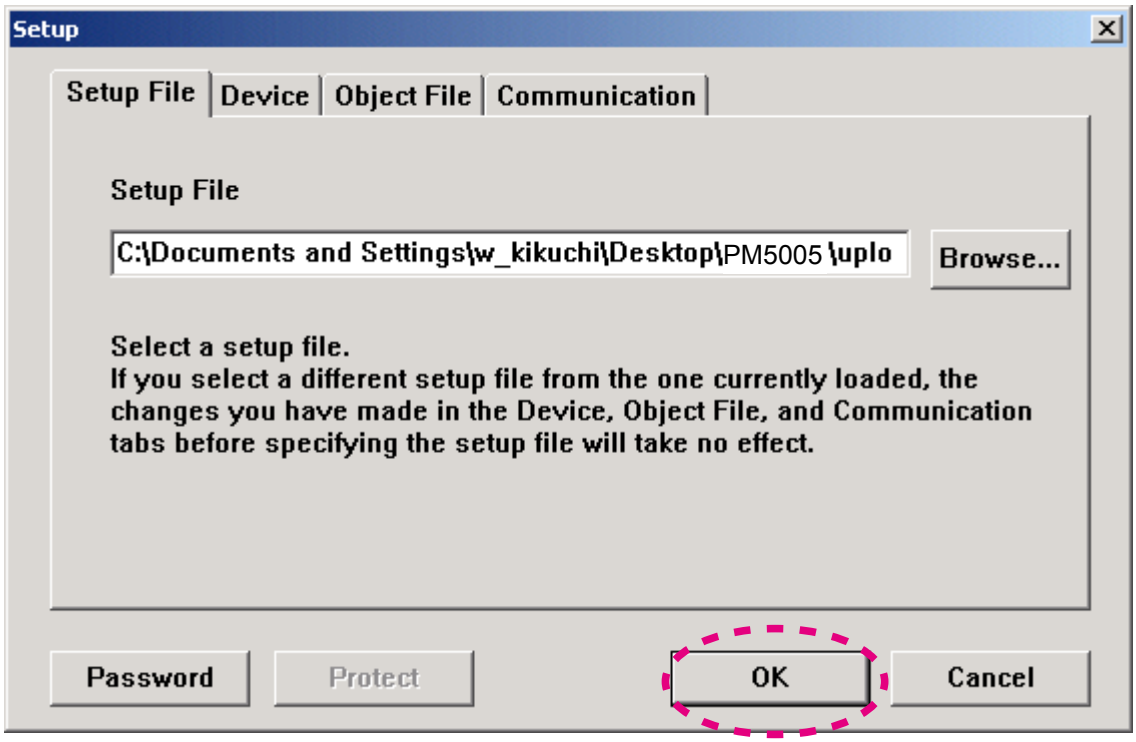
(14) Click Browse....



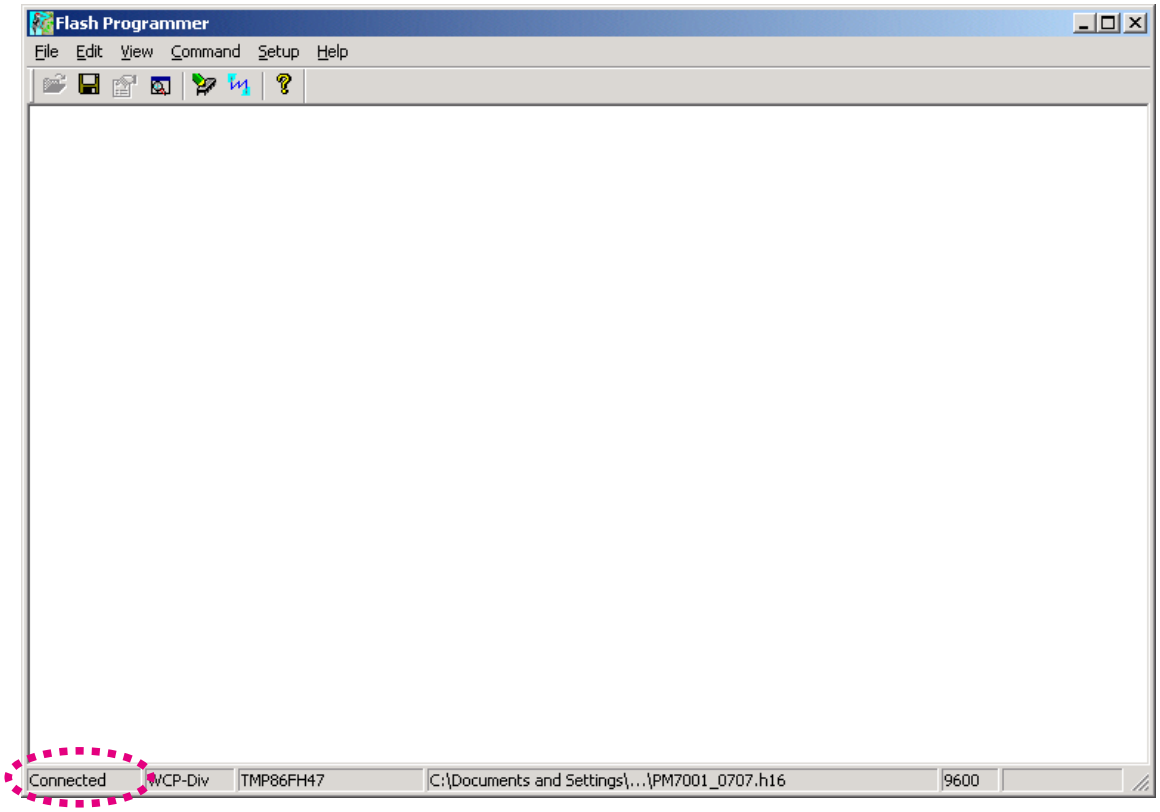
(15) Choose FlashProg.ini in TM86FH47pass folder, and click Open.



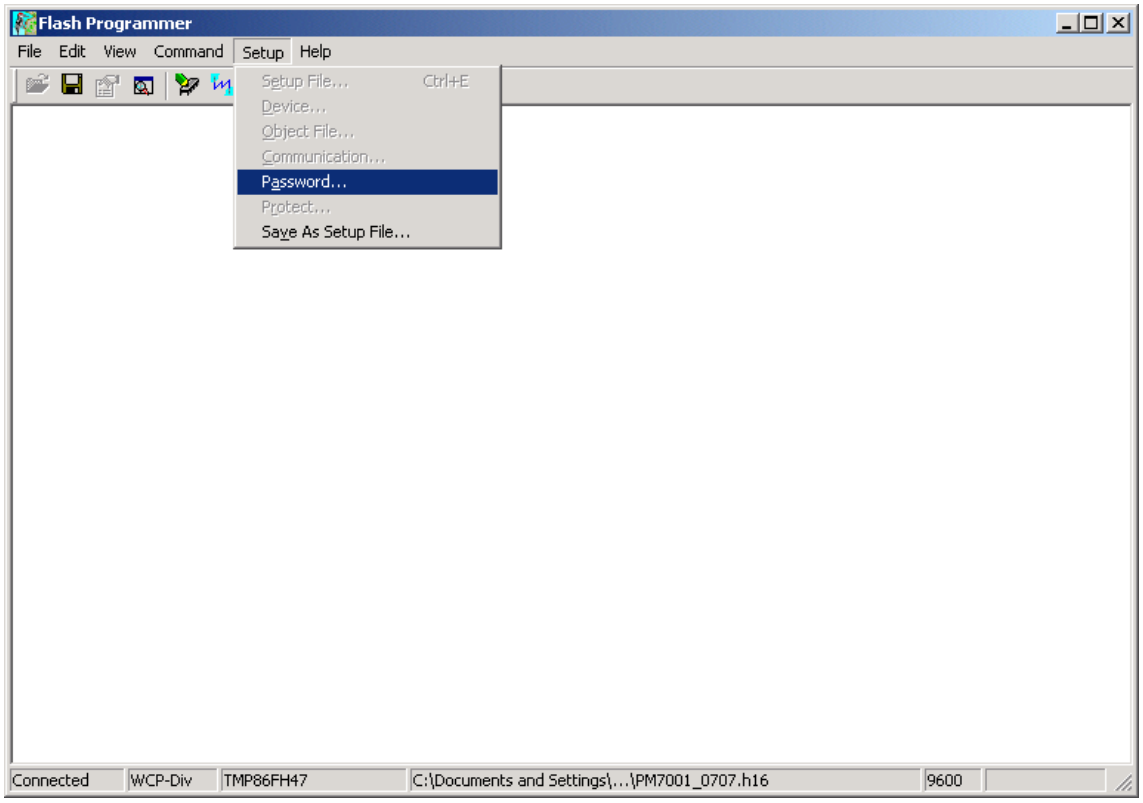
(16) Click OK.



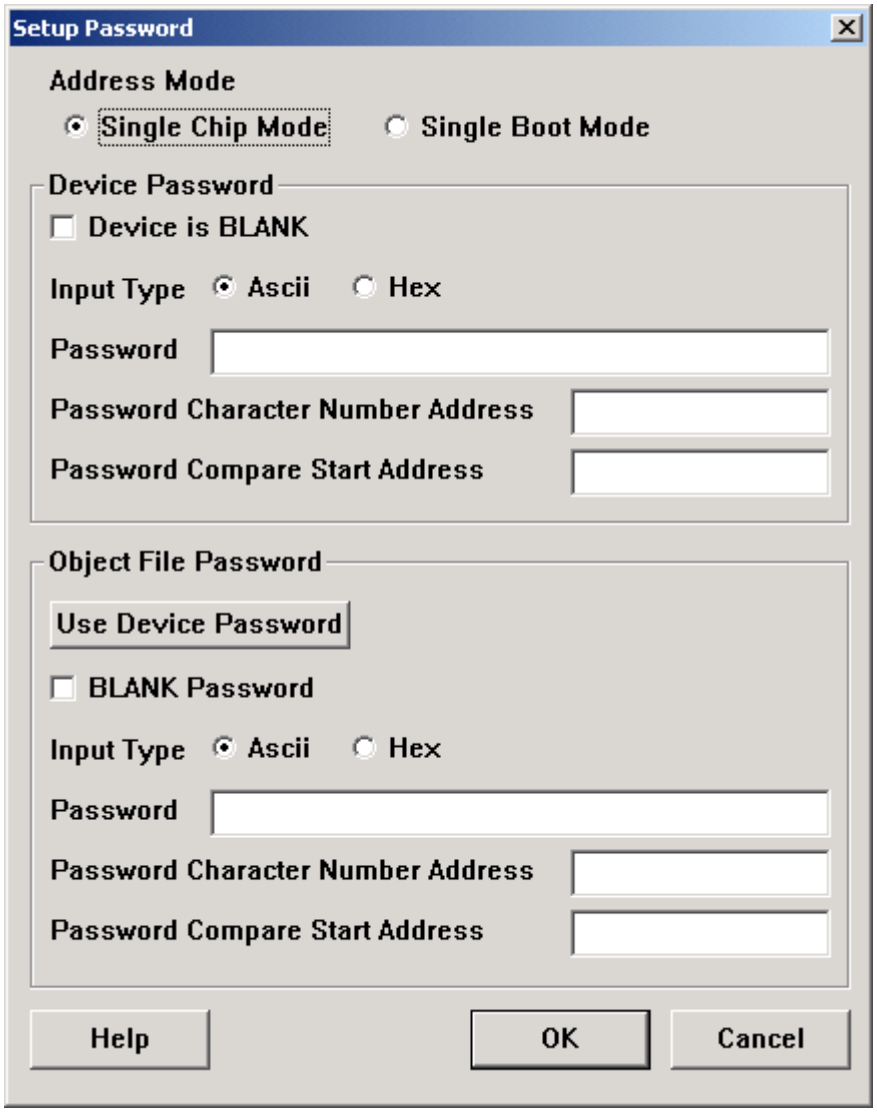
(17) Press the POWER ON/OFF button, and turn on the unit. Status indication at lower left in Flash Programming window is changed to "Connected" from "Connecting". When it did not changed, check the connection of FPC or RS-232C cable.



(18) Select Password in Setup.



(19) Setup Password opens.



- **When writing in a blank microprocessor**
  See next page
- **When writing (update) in the already written-in microprocessor**
  See 27page When writing in the already written-in microcomputer (update)

When writing in a blank microprocessor

Check Single Boot Mode in Address Mode.

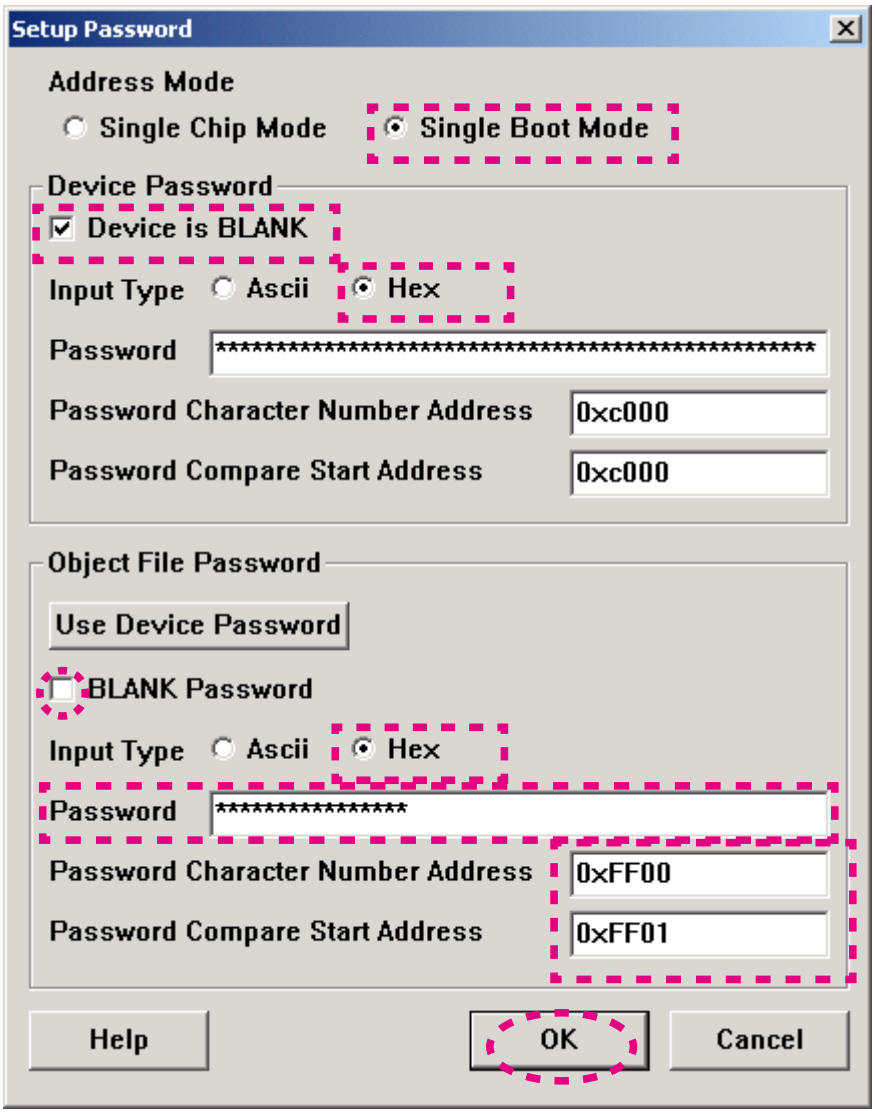
Setting in Device Password

- Check Device is BLANK.
- Check Hex in input type.
- Since they are inputted automatically, please do not change text box of "Password", "Password Character Number Address" and “Password Compare Start Address”

Setting in Object File Password

- Do not check BLANK password.
- Check Hex in Input Type.
- Type 0102030405060708 into Password.
- Type 0xFF00 into Password Character Number Address.
- Type 0xFF01 into Password Compare Start Address.

Click OK.



When writing in the already written-in microcomputer (update)

Check Single Boot Mode in Address Mode.

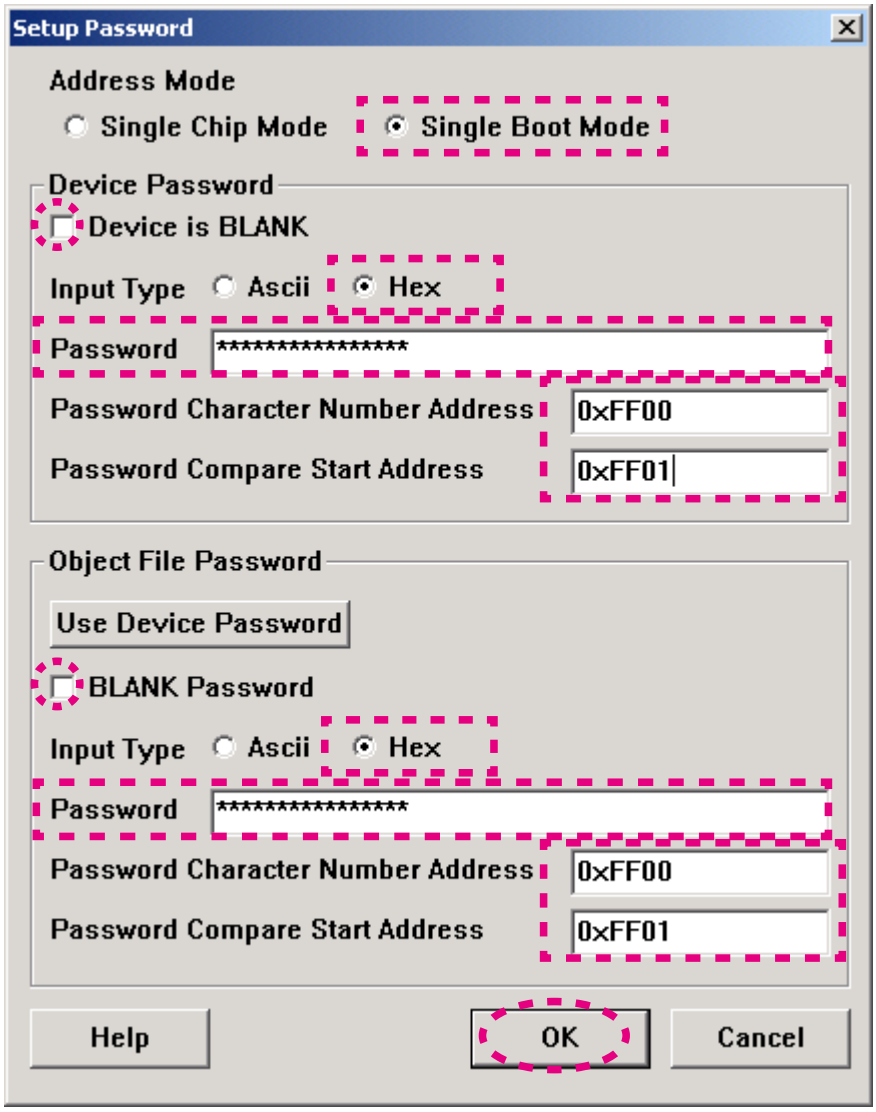
Setting in Device Password

- Do not check Device is BLANK.
- Check Hex in Input Type.
- Type 0102030405060708 into Password.
- Type 0xFF00 into Password Character Number Address.
- Type 0xFF01 into Password Compare StartAddress.

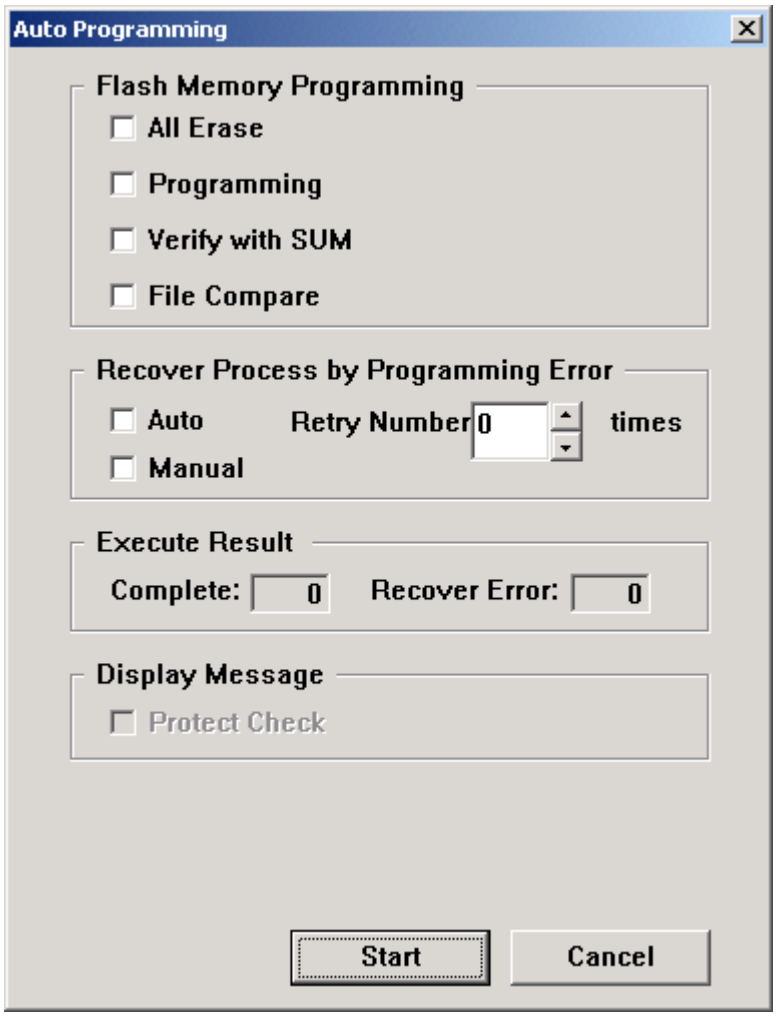
Setting in Object File Password

- Do not check BLANK password.
- Check Hex in Input Type.
- Type 0102030405060708 into Password.
- Type 0xFF00 into Password Character Number Address.
- Type 0xFF01 into Password Compare Start Address.

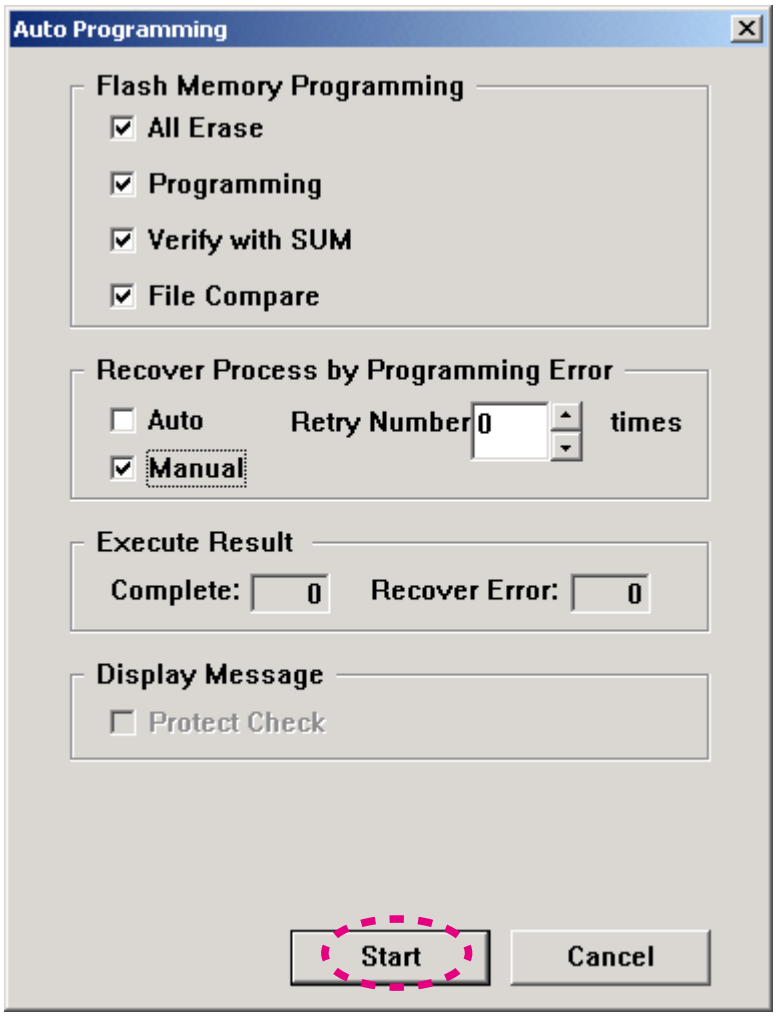
Click OK.



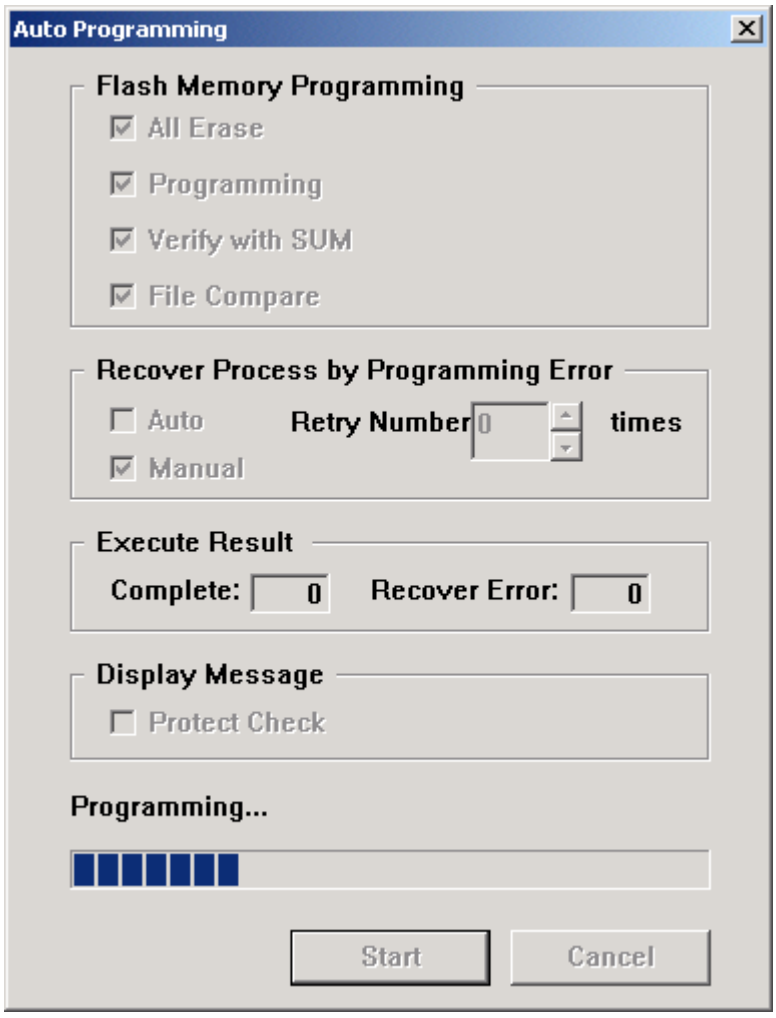
(20) Auto Programming opens.



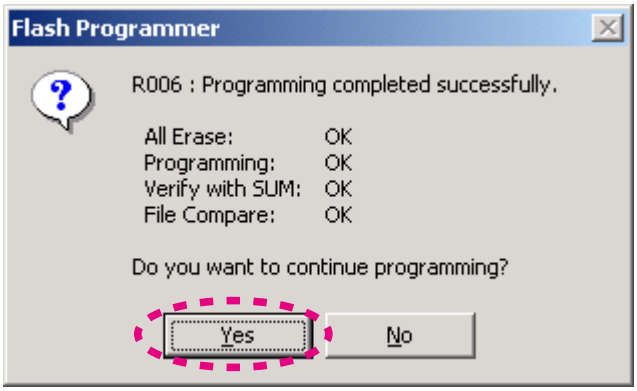
(21) Check All Erase, Programming, Verify with SUM and File Compare in Flash Memory Programming.
Check Manual in Recover Process by Programming Error.
Click Start.



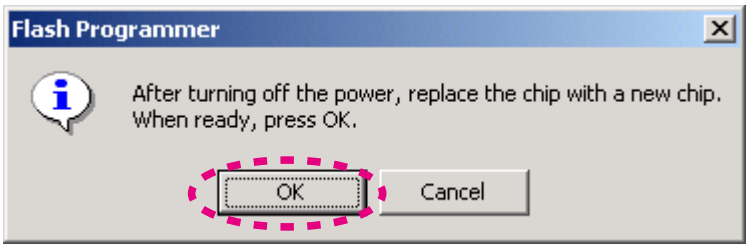
(22) Writing data is written into the microprocessor. (U1001)



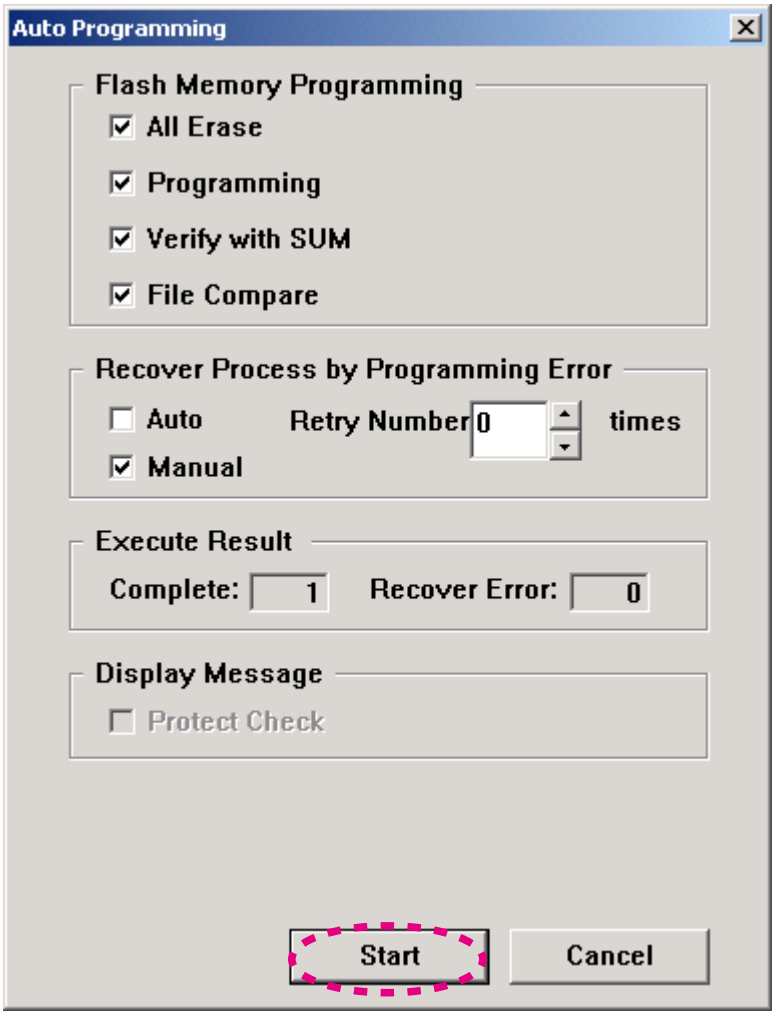
(23) Click Yes, when writing is successful.



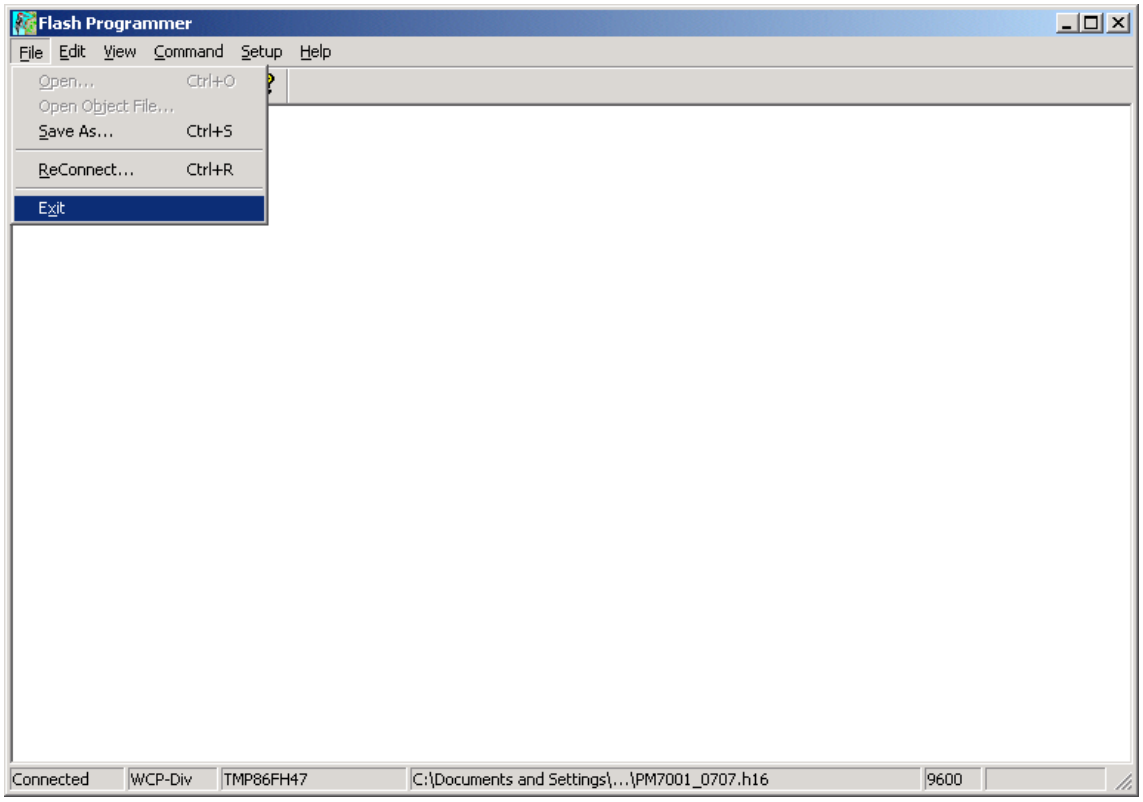
(24) Click Cancel.



(25) Click Cancel.



(26) Select the Exit in File, and finish.



(27) Press the POWER ON/OFF button, and turn off the unit.
Disconnect each cable.

(28) Check the software version.
See 15page SPECIAL MODE"3. SPECIAL MODE"

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 **CUP12665Z**.

(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.).

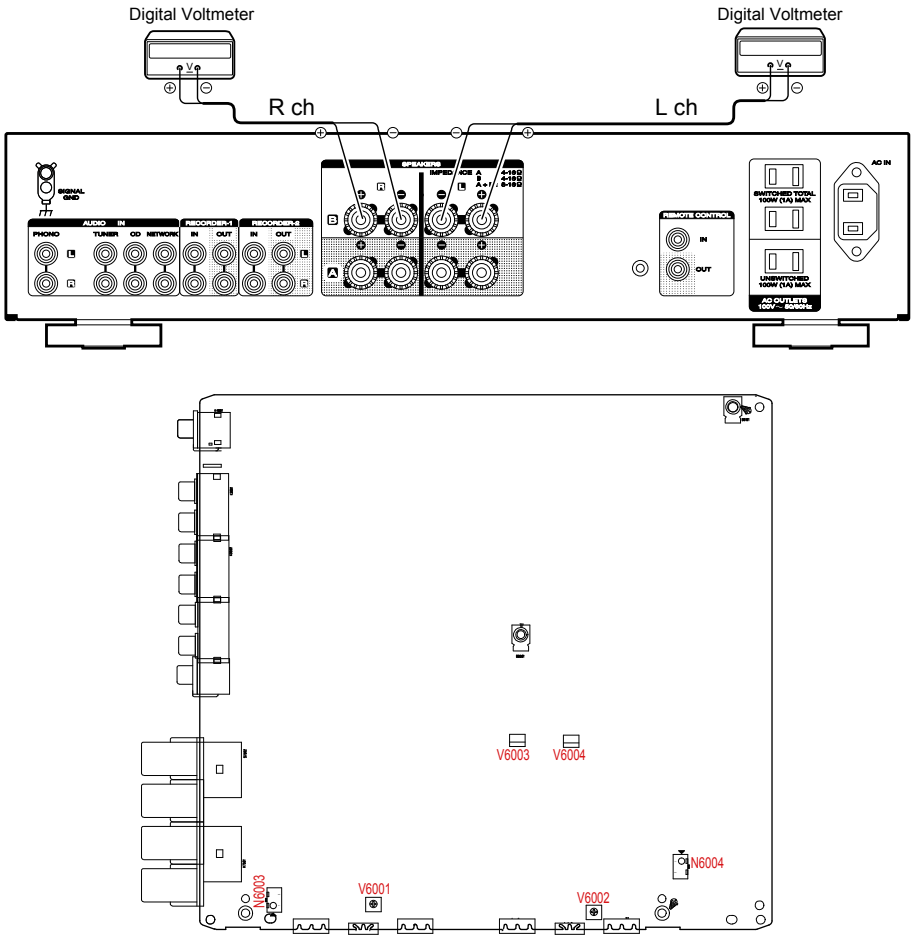
(7) After 2 minutes.
With seeing the digital voltage meter turn the variable resister clockwise slowly to adjust the idling current.
Idling adjustment with **V6001 (V6002)**.
•Turn **V6001 (V6002)** clockwise to increase the idling current.
•The adjustment value of idling current is 10 mV(22.5 mA) ± 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 **CUP12665Z** 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 **CUP12665Z** is turned with adjustment driver, and the Digital Voltage Meter is adjusted to **"0 mV ± 3 mV"**.

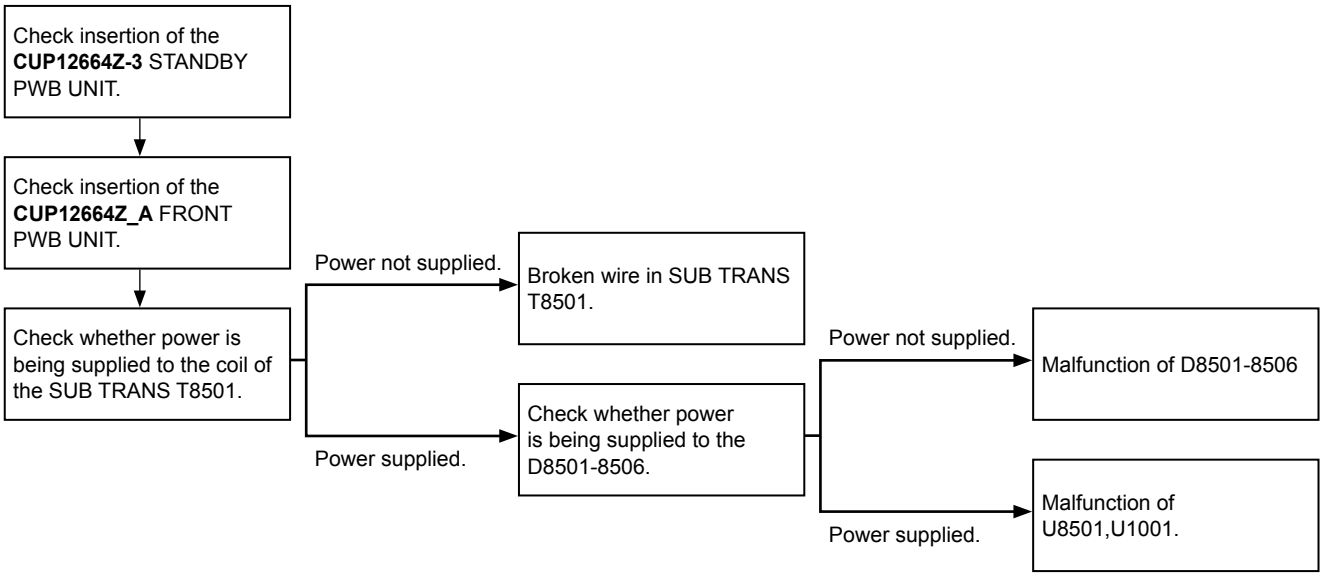
NOTE : DC offset voltage drops when turn the semi-fixed resistor (**V6003** and **V6004**) clockwise. DC offset voltage rises when turn the semi-fixed resistor un-clockwise. Please turn it slowly, because value of Digital Voltage Meter changes slowly.

(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

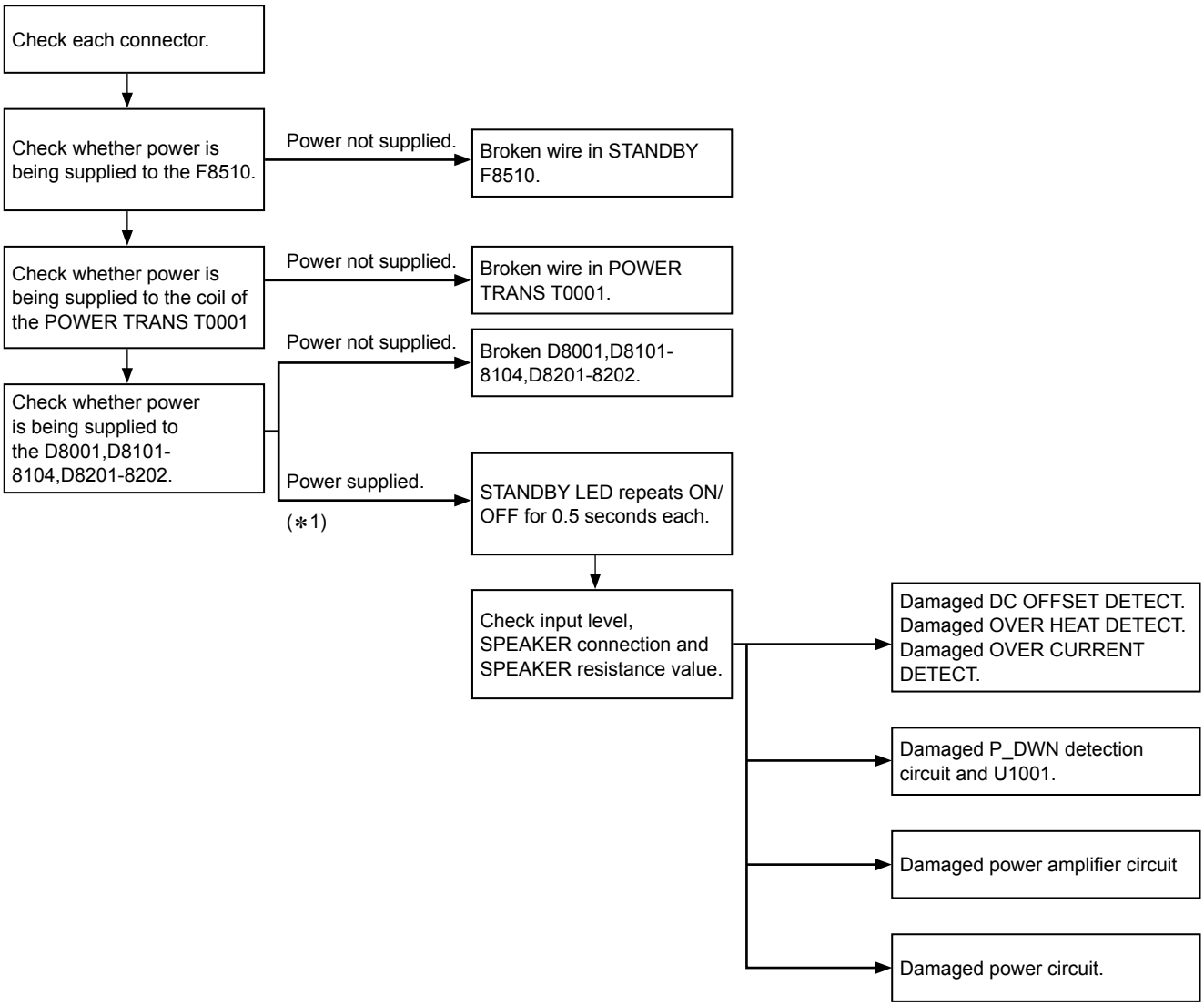
1. The power can not be turned on.

(STANDBY LED does not light (STANDBY MODE))



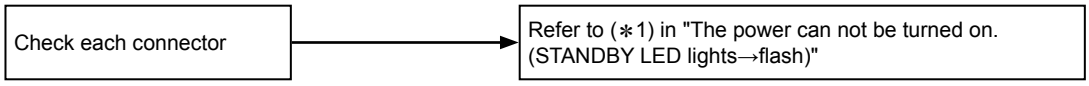
2. The power can not be turned on.

(STANDBY LED lights→flash)



3. STANDBY LED flashes while using unit.

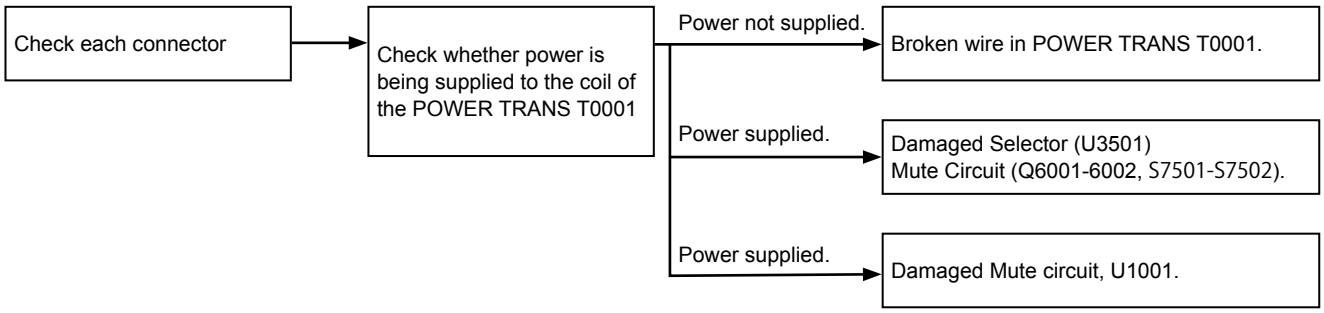
(protection circuit is set)



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

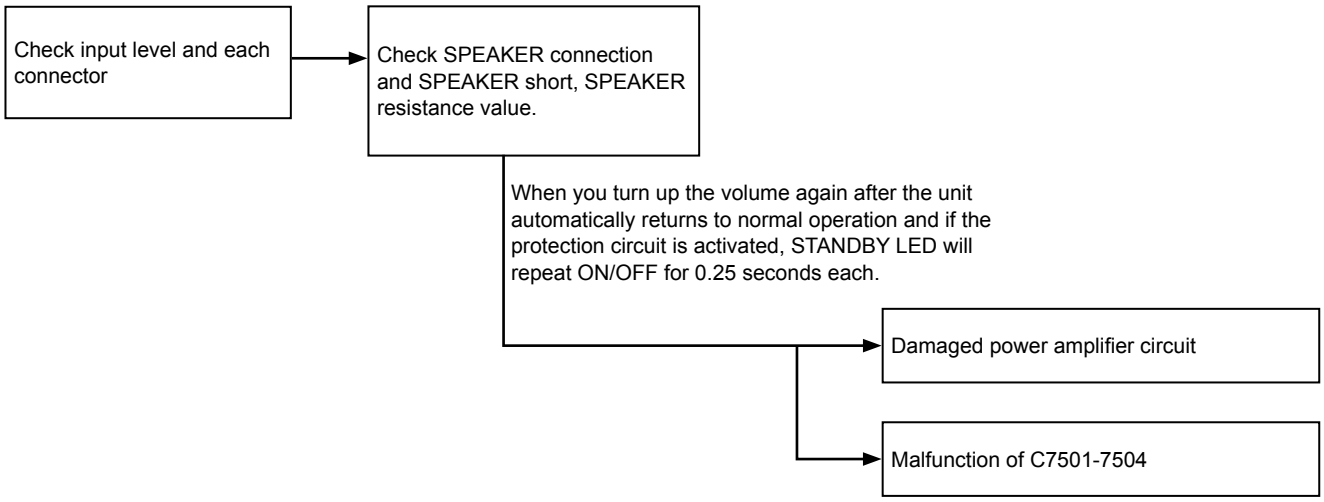
(Both channels)

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



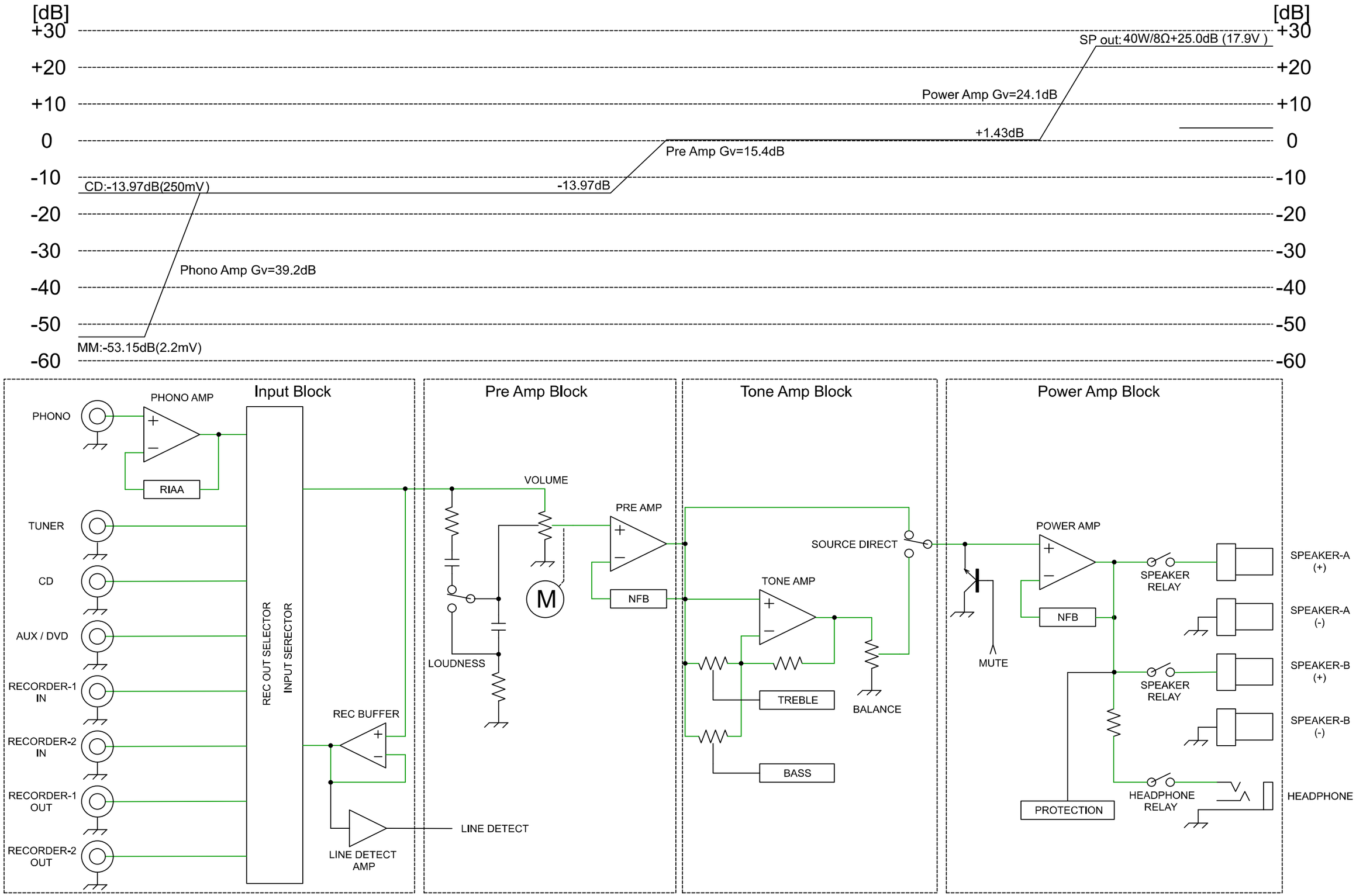
4.2 When the volume is turned up, Mute LED flashes. (protection mode is set)

POWER ON/OFF LED is flashing, and automatically returns to normal operation.

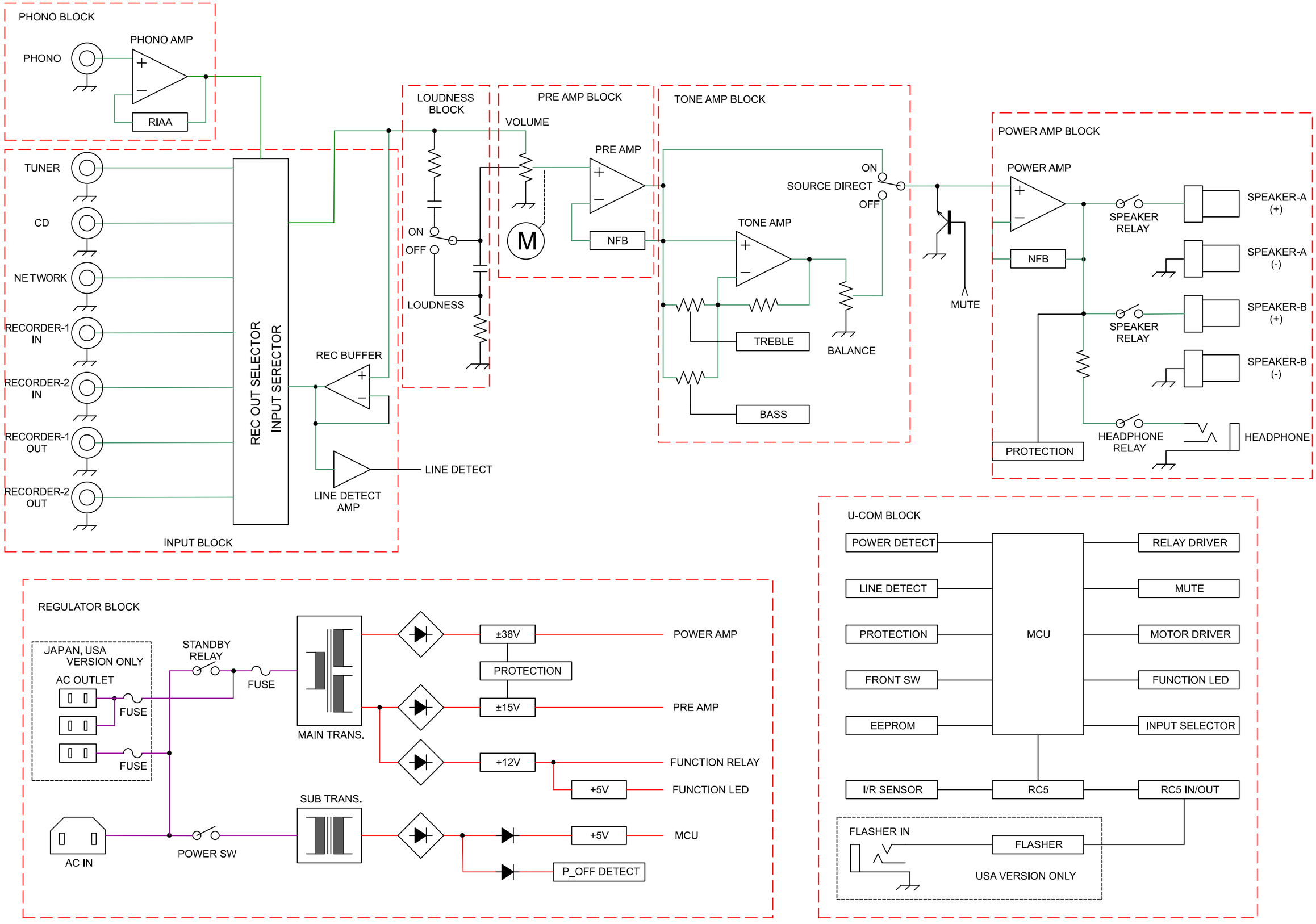


Personal notes:

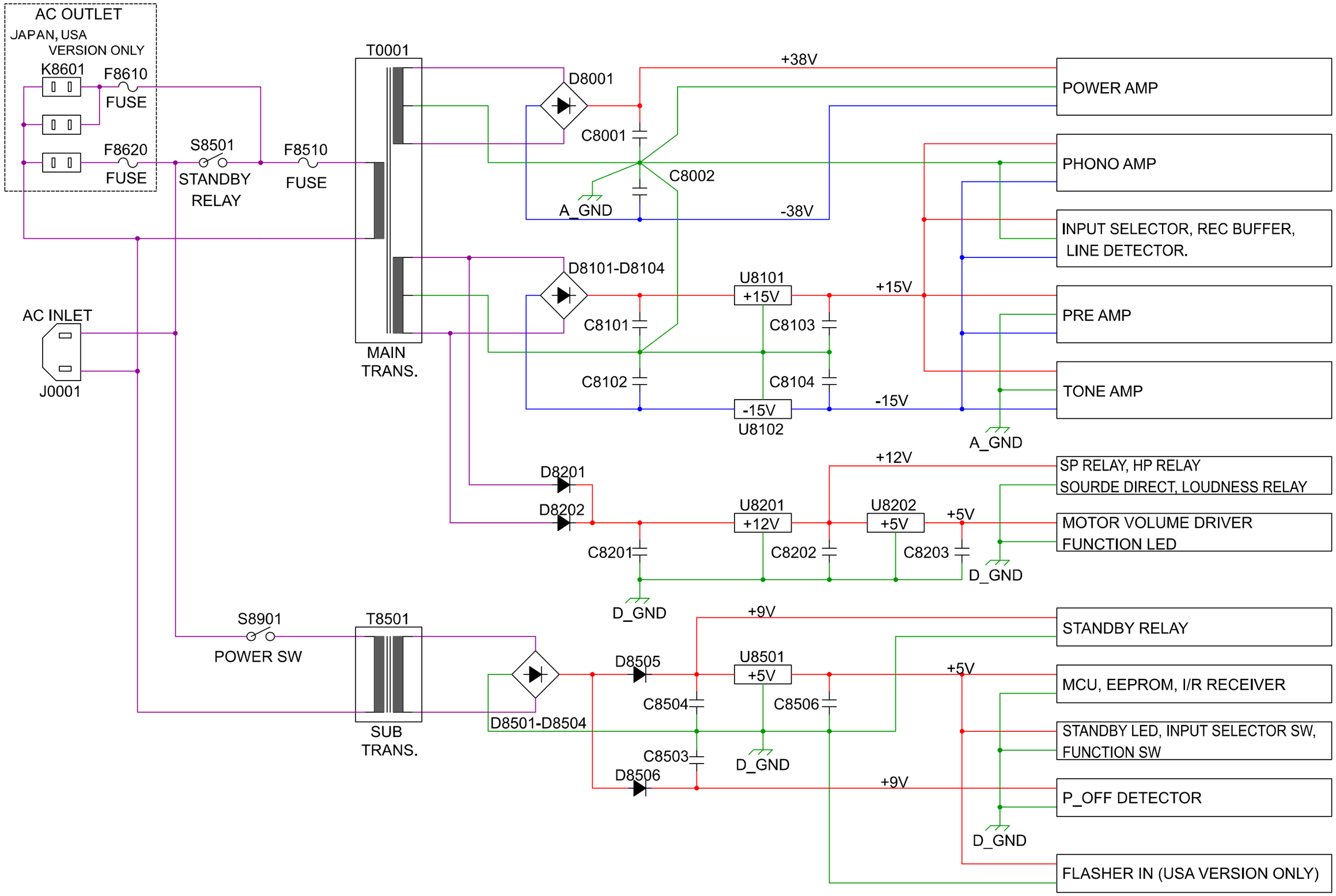
LEVEL DIAGRAM



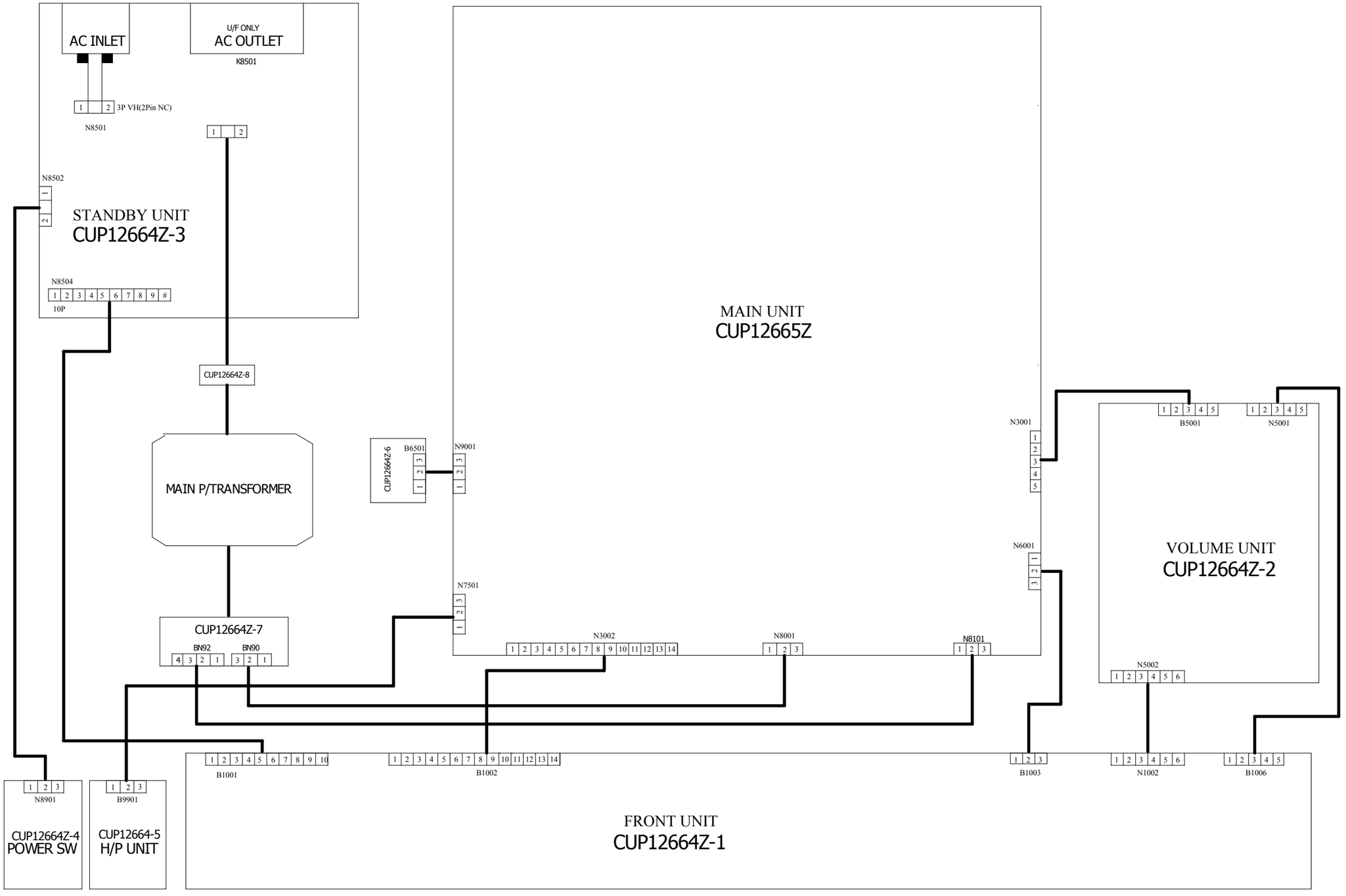
BLOCK DIAGRAM



POWER DIAGRAM



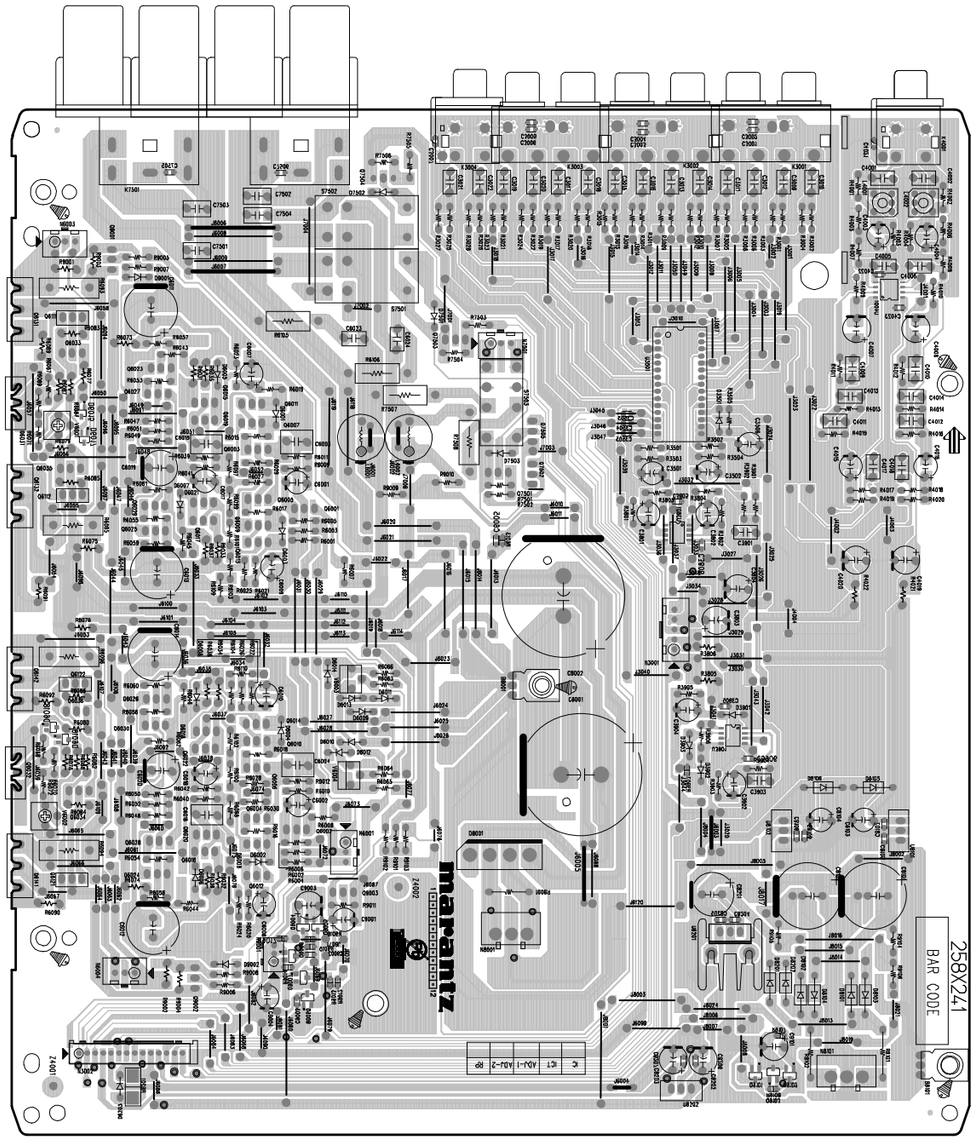
WIRING DIAGRAM



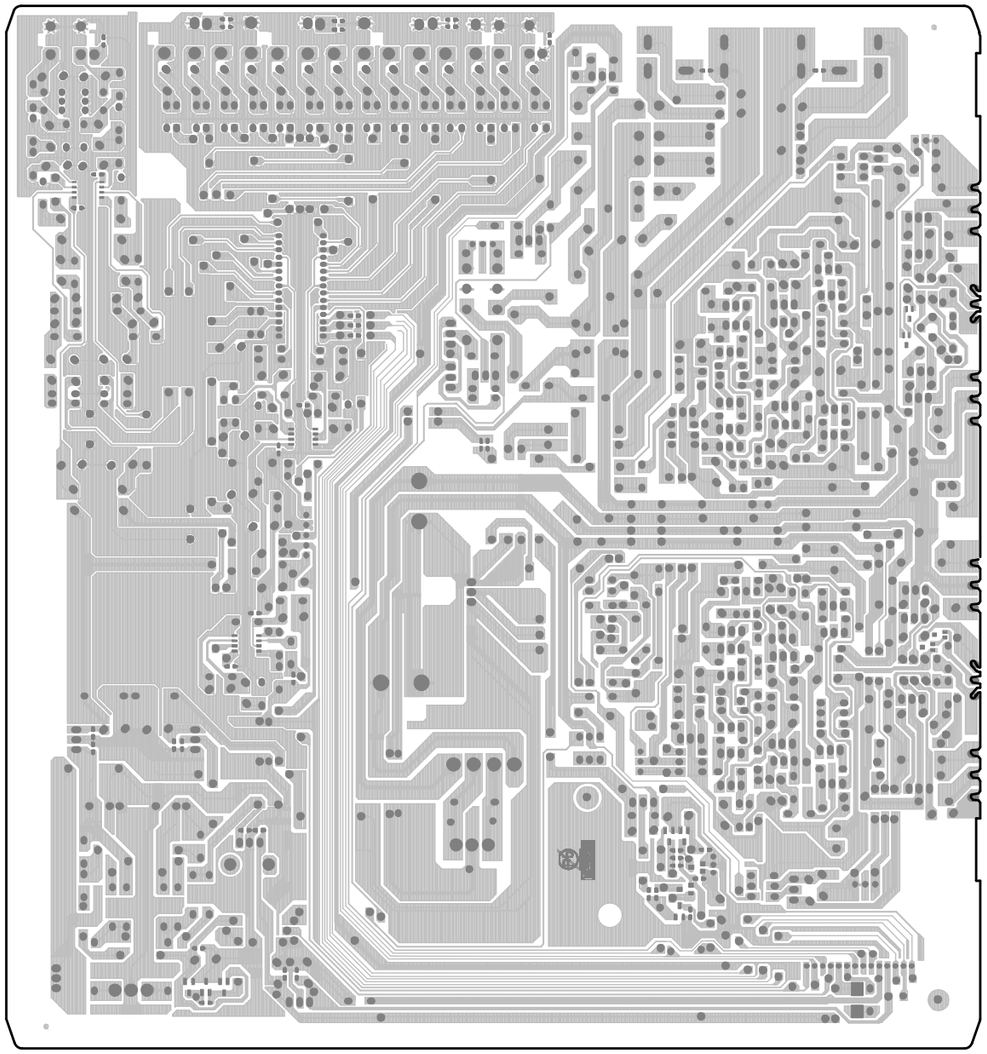
PRINTED CIRCUIT BOARDS

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

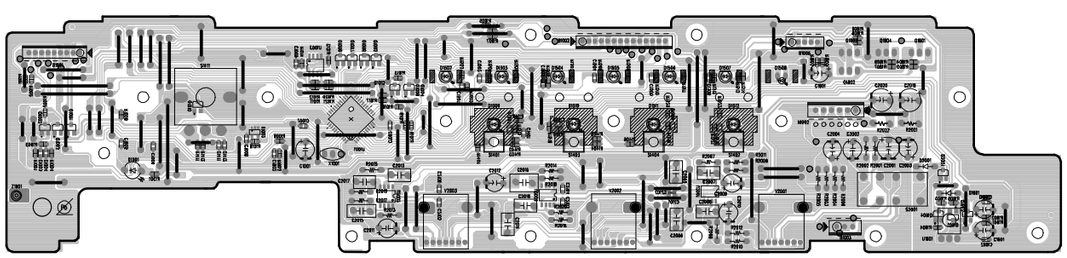
MAIN (A SIDE)



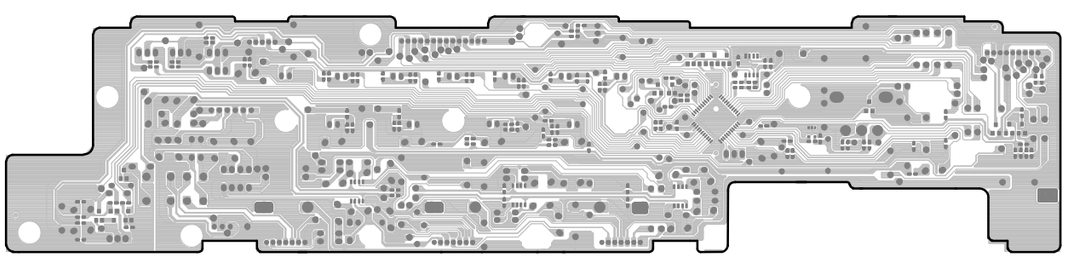
MAIN (B SIDE)



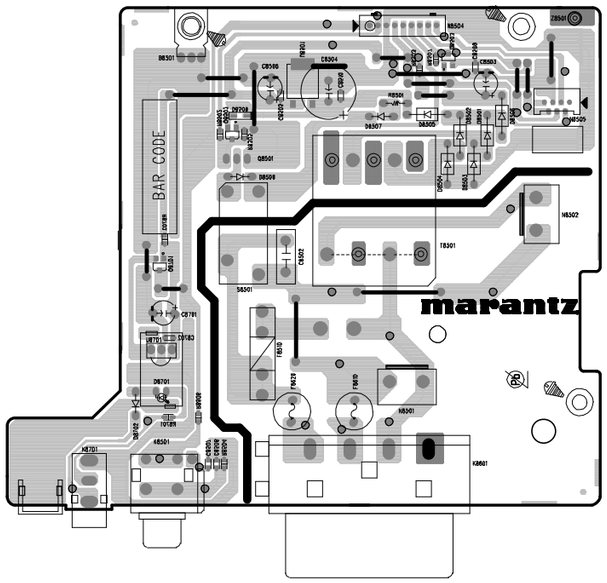
FRONT (A SIDE)



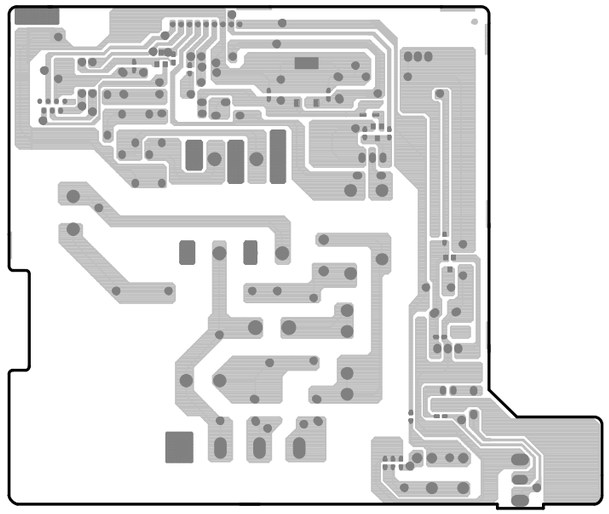
FRONT (B SIDE)



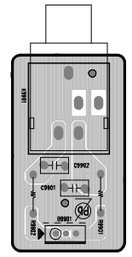
STANDBY (A SIDE)



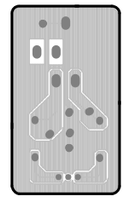
STANDBY (B SIDE)



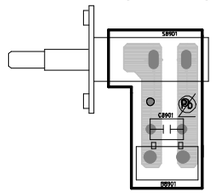
HEADPHONE (A SIDE)



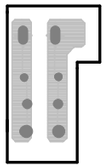
HEADPHONE (B SIDE)



POWER SW (A SIDE)



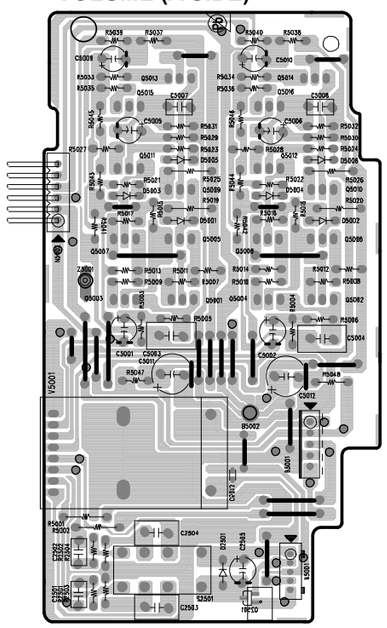
POWER SW (B SIDE)



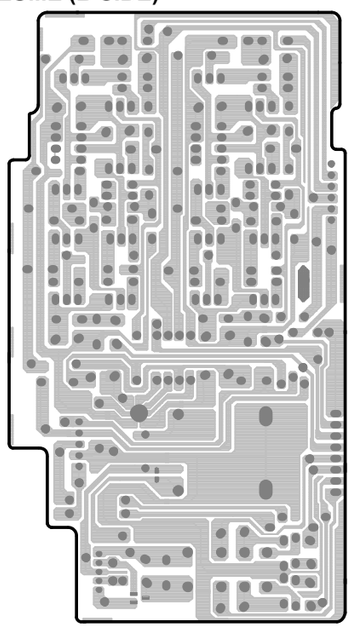
POSISTER (A SIDE)

POSISTER (B SIDE)

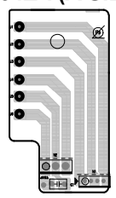
VOLUME (A SIDE)



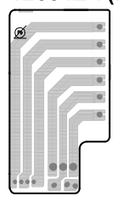
VOLUME (B SIDE)



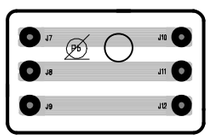
CUP12664Z-7(A SIDE)



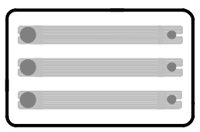
CUP12664Z-7(B SIDE)

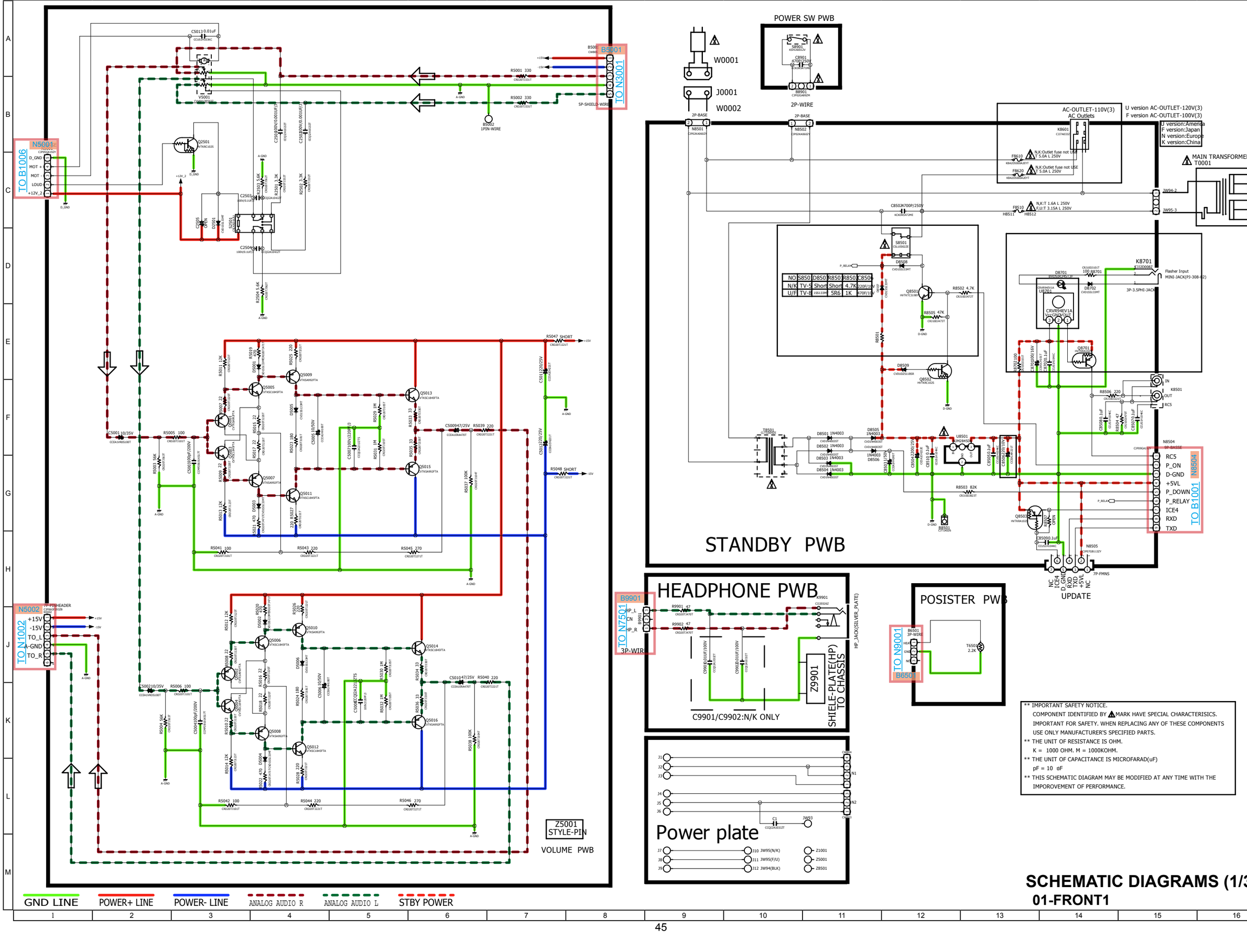


CUP12664Z-8(A SIDE)



CUP12664Z-8(B SIDE)

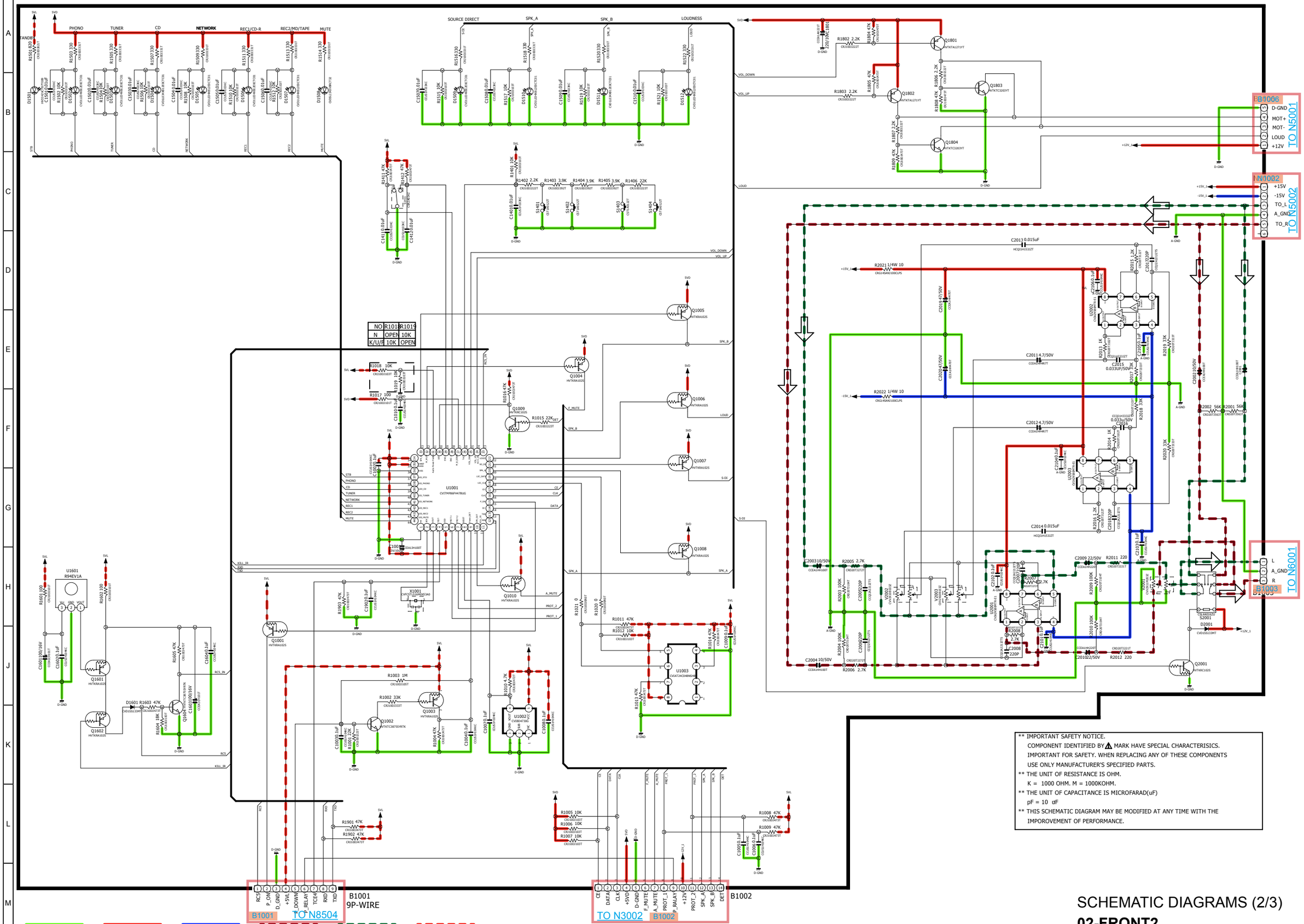




** IMPORTANT SAFETY NOTICE.
COMPONENT IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
** THE UNIT OF RESISTANCE IS OHM.
K = 1000 OHM. M = 1000KOHM.
** THE UNIT OF CAPACITANCE IS MICROFARAD(uF)
pF = 10 ㎌
** THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE
IMPOROVEMENT OF PERFORMANCE.

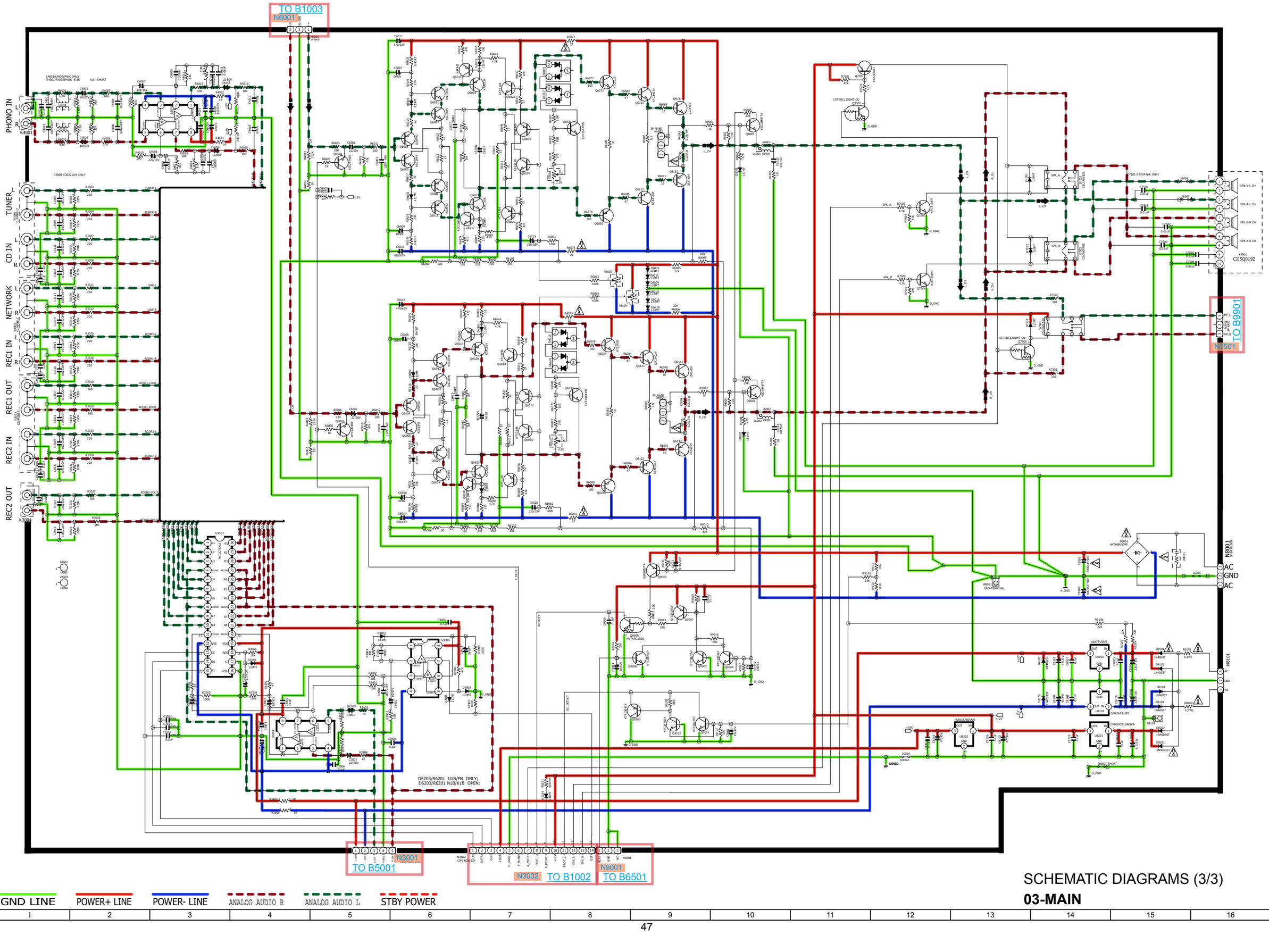
SCHEMATIC DIAGRAMS (1/3)

01-FRONT1



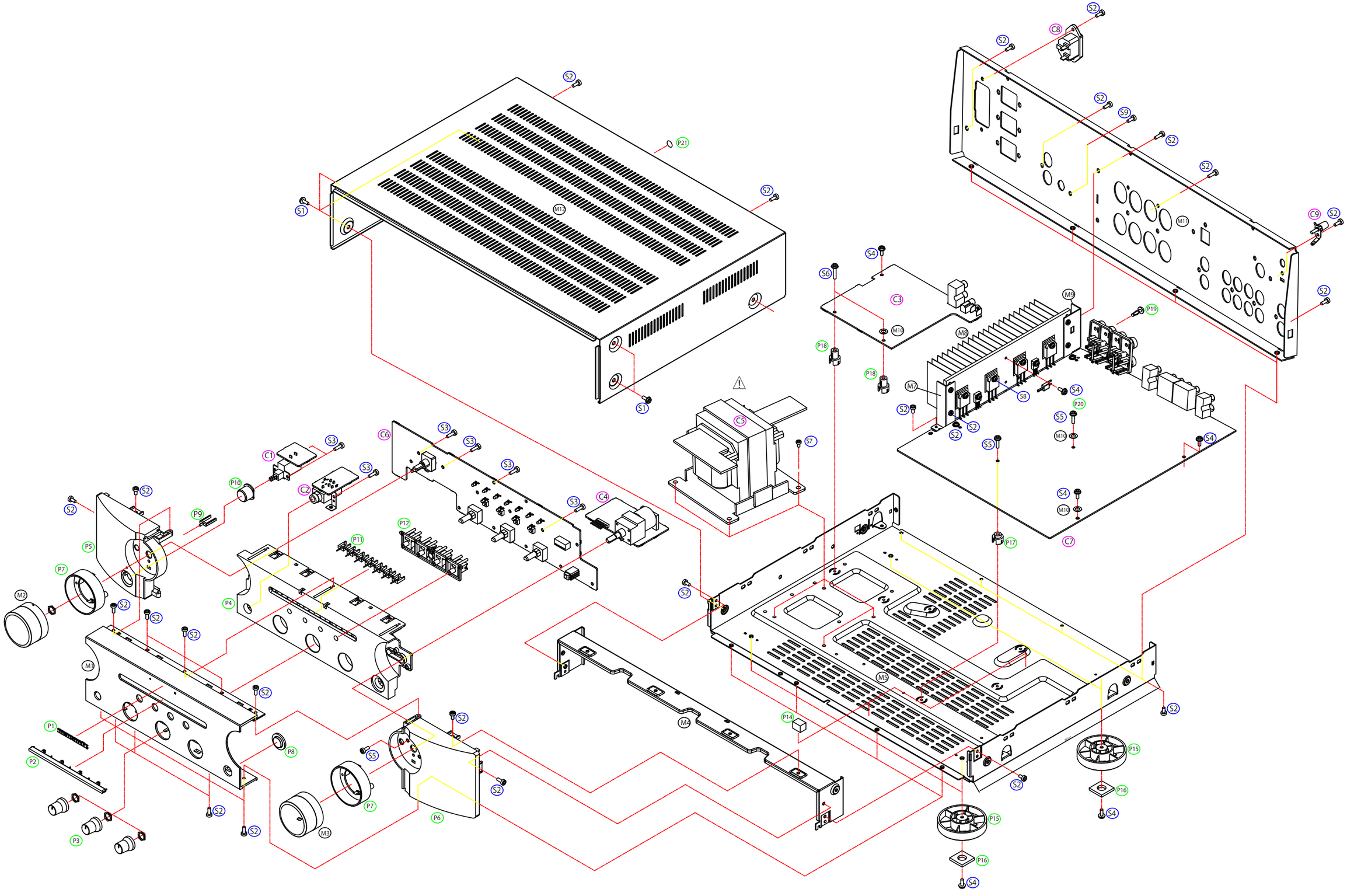
SCHEMATIC DIAGRAMS (2/3)

02-FRONT2


TO B1003
N6001
PHONO IN
K4001
TUNER
CD IN
NETWORK
REC1 IN
REC1 OUT
REC2 IN
REC2 OUT
K3004
TO B9901
K7501
CJJ5Q019Z
N8001
AC
GND
AC
N8101
N3001
TO B5001
N3002
TO B1002
N9001
TO B6501
D6203/R6201 U1B/FN ONLY;
D6203/R6201 N1B/K1B OPEN;
SCHEMATIC DIAGRAMS (3/3)
03-MAIN
GND LINE
POWER+ LINE
POWER- LINE
ANALOG AUDIO R
ANALOG AUDIO L
STBY POWER

EXPLODED VIEW

Please see the last chapter for the part list.



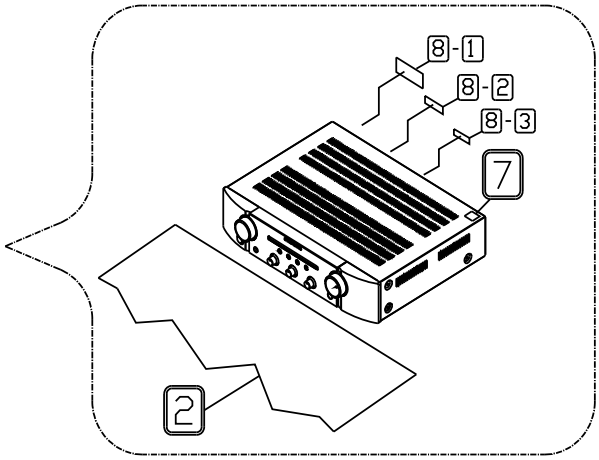
WARNING:
⚠ 印の部分は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

Personal notes:

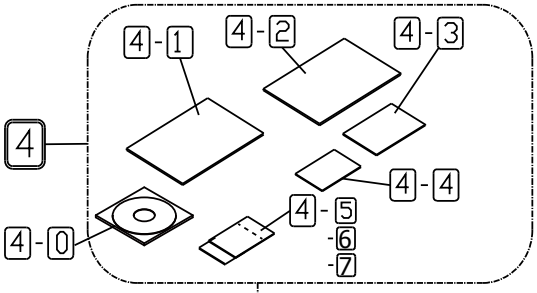
Personal notes:

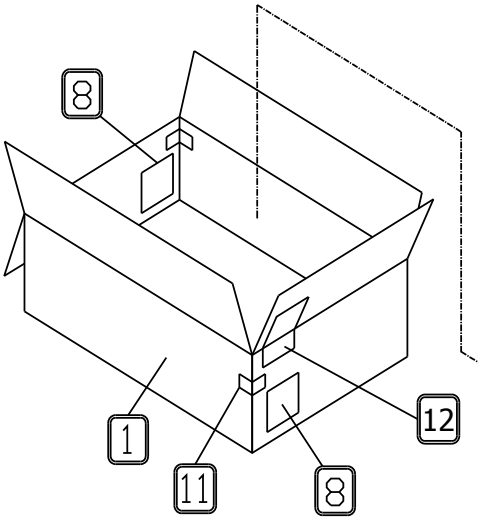
PACKING VIEW

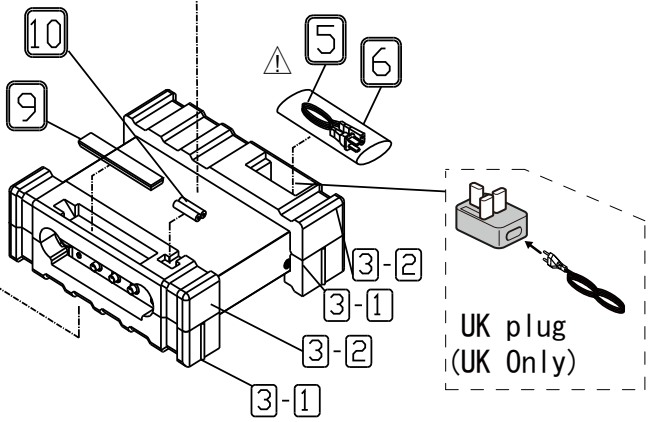
Please see the last chapter for the part list.



PP TAPE





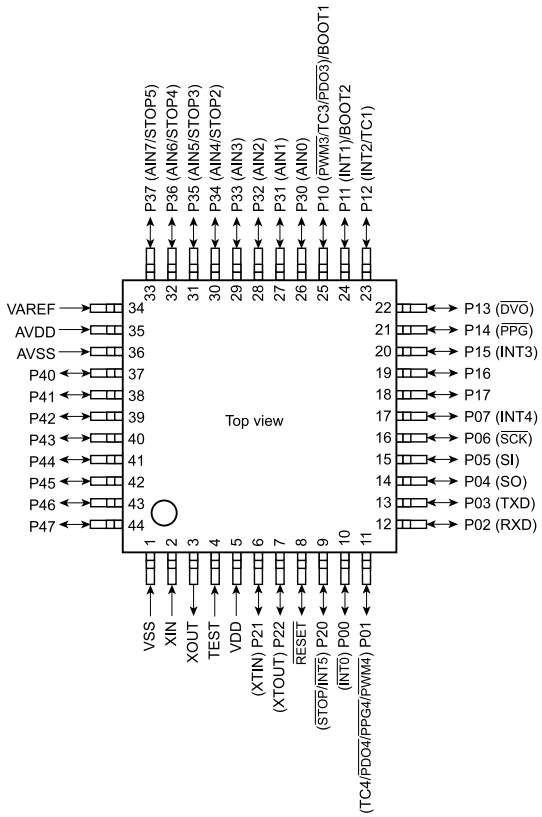


SEMICONDUCTORS

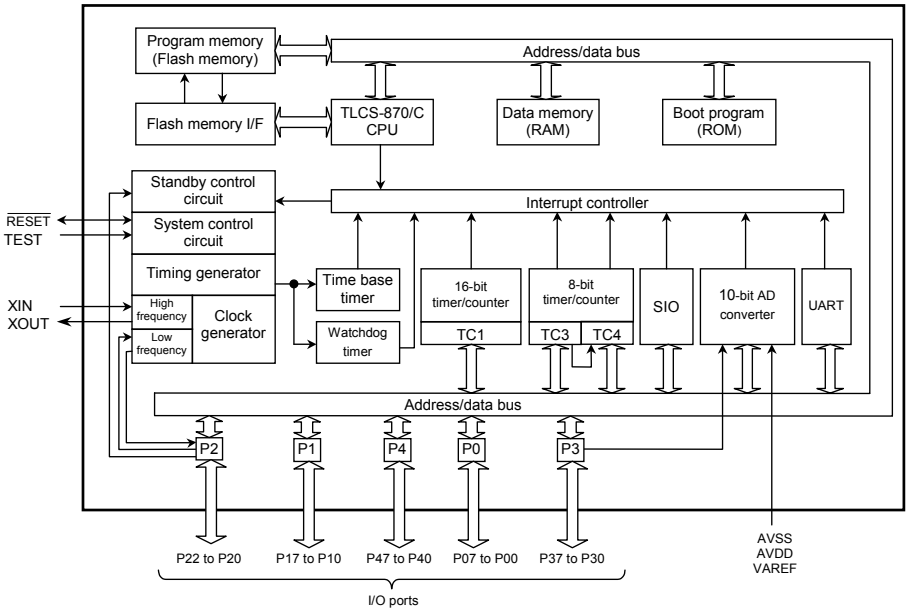
Only major semiconductors are shown, general semiconductors etc. are omitted to list.
The semiconductor which described a detailed drawing in a schematic diagram are omitted to list.

1. IC's

TMP86FH47BUG (U1001)



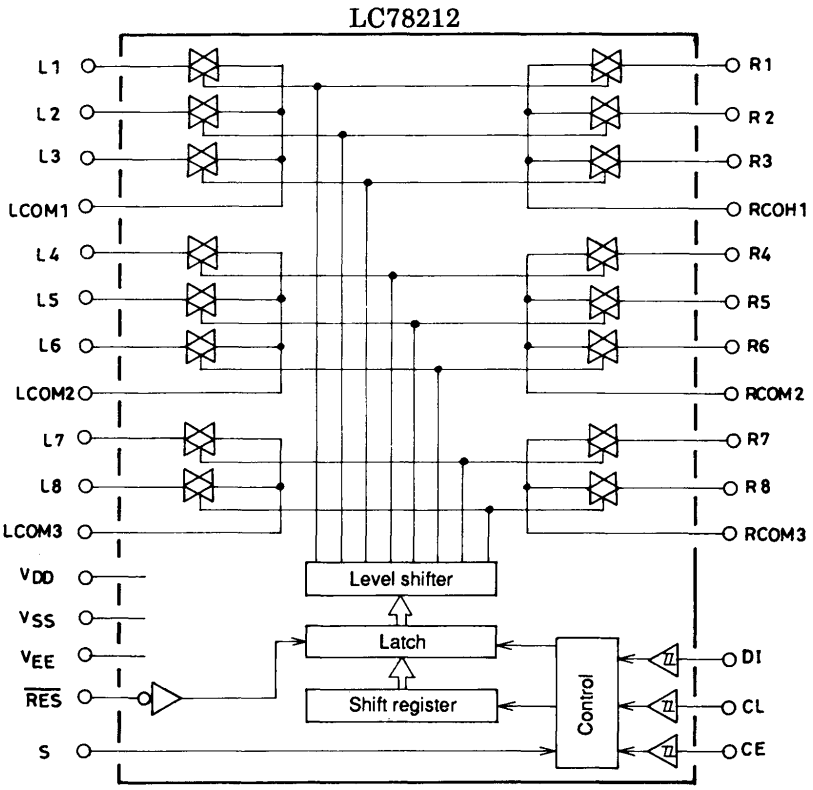
Block Diagram



Terminal Function

Pin	Port Name	I/O	Use	Name	Port Setting				Note
					ACT	INIT	STBY	EXT.R	
1	VSS	-	-		-	-	-	-	0 V
2	XIN	-	-		-	-	-	-	8M Clock in
3	XOUT	-	-		-	-	-	-	8M Clock out
4	TEST	I	I		H	-	L	47k	L->H : PROM Mode(Program rewriting)
5	VDD	-	-	VDD	-	-	-	-	u-com power supply 5V
6	P21 (XTIN)	I/O	I	PROT-1	L	-	H	47k	PROTECT_1: DC Offset / Over Current / Over Current
7	P22 (XTOUT)	I/O	I	PROT-2	L	-	H	47k	PROTECT_2:Vol.tage Abnormal Detect
8	RESET	I/O	I		L	-	H	4.7k	u-com Reset connector
9	P20 (STOP/INT5)	I/O	I	P_OFF	L	-	H	47K	Detect Power Down(primary power supply ON/ OFF detection). Oveserve at power supply cutting, Interrupt input
10	P00 (INT0)	I/O	O	SPK_OUT	L	H	H	-	Speaker Relay On (Audio Out)
11	P01 (TC4/PD04/PPG4/ PWM4)	I/O	O	RC-5_OUT	L	H	H	-	RC-5 Output
12	P02 (RXD)	I/O	O	VOL_UP	L	H	H	47K	Volume up
13	P03 (TXD)	I/O	O	VOL_DWN	L	H	H	47K	Volume down
14	P04 (SO)	I/O	O	DI	-	L	L	10K	Data (LC78212)
15	P05 (SI)	I/O	O	P_ON	L	H	H	-	Primary Relay ON
16	P06 (SCK)	I/O	O	CLK	-	-	L	10K	Clock (LC78212)
17	P07 (INT4)	I/O	O	CE	H	L	L	10K	CE (LC78212)
18	P17	I/O	O	I2C_CLK	-	H	H	47k	I2C (EEPROM) (Pull up)
19	P16	I/O	I/O	I2C_DATA	-	H	H	10K	I2C (EEPROM) (Pull up)
20	P15 (INT3)	I/O	O	SPK_A	H	L	L	-	Speaker A Relay On
21	P14 (PPG)	I/O	O	SD_DI	L	H	H	-	Relay operation port on power amp direct source direct mode
22	P13 (DVO)	I/O	O	PA_DI	L	H	H	-	Relay operation port on power amp direct
23	P12 (INT2/TC1)	I/O	I	RC-5_IN	L	-	H	47k	RC-5 Input
24	P11 (INT1)(BOOT2)	I/O	I	BOOT-2/ TXD	-	-	-	47k	Pull Up
25	P10(PWM3/TC3/ PD03)(BOOT1)	I/O	I	BOOT-1/ RXD	-	-	-	47k	Pull Up
26	P30 (AIN0)	I/O	I	TACT	-	-	-	10K	Source Direct / Power Amp Direct SW /SPK A / SPK B
27	P31 (AIN1)	I/O	I	M_B_ DOWN	L	-	H	47k	Checking port for amp power supply off confirm
28	P32 (AIN2)	I/O	I	ENC_1	L	-	H	47k	Input Sel. Rotary Enc.
29	P33 (AIN3)	I/O	I	ENC_2	L	-	H	47k	Input Sel. Rotary Enc.
30	P34 (AIN4/STOP2)	I/O	I	DET	L	-	L	47k	Power down : L (for Signal detection circuit)
31	P35 (AIN5/STOP3)	I/O	O	KILL IR	H	L	L	-	RC-5 Kill
32	P36 (AIN6/STOP4)	I/O	O	M_MUTE	L	H	L	-	Manual Mute (Mute on :L)
33	P37 (AIN7/STOP5)	I/O	O	SPK_B	H	L	L	-	Speaker B Relay On
34	VAREF	-	-	VAREF	-	-	-	-	A/D Reference
35	AVDD	-	-	AVDD	-	-	-	-	5 V
36	AVSS	-	-	AVSS	-	-	-	-	0 V
37	P40	I/O	O	LED_STD	L	H	L	-	STANDBY LED/Protecting warning flushes
38	P41	I/O	O	LED_ PHONO	L	H	H	-	PHONO LED
39	P42	I/O	O	LED_CD	L	H	H	-	CD LED
40	P43	I/O	O	LED_ TUNER	L	H	H	-	TUNER LED
41	P44	I/O	O	LED_AUX/ DVD	L	H	H	-	AUX/DVD LED
42	P45	I/O	O	LED_REC1	L	H	H	-	REC1 LED
43	P46	I/O	O	LED_REC2	L	H	H	-	REC2 LED
44	P47	I/O	O	LED_MUTE	L	H	H	-	MUTE LED/Protecting1 warning flushes

LC78212 (U3501)



FRONT PCB ASS'Y

※Parts indicated by "nsp"on this table cannot be supplied.

※The parts listed be 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		
	D1502-1507	943176100140M	LED,BLUE (2.54MM PITCH)		CVD1L034XB12E0CTT02	6		
	D1508	943176100150M	LED, RED(3.5PIE, 2.5MM PITCH, 330MCD)		CVDSLI343V8RCT32	1		
	D1509-1512	943176100140M	LED,BLUE (2.54MM PITCH)		CVD1L034XB12E0CTT02	4		
	D1601	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D2001	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D2501	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	1		
	D5001-5006	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	6		
	D8501-8506	00D9430182502	DIODE , RECT		CVD1N4003T	6		
	D8507	00D9430182609	WIRE, COPPER(D0.6)	U, F	CVD1SS133MT	0.02		
	D8507	nsp	WIRE, COPPER(D0.6)	N, K	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	U	BVDSIR34ST3F	1		
	D8702	00D9430182609	DIODE , SWITCHING	U	CVD1SS133MT	1		
	Q1001	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	1		
	Q1002	00D2730464901	T.R , CHIP , SOT-23		HVTKTC3875SYRTK	1		
	Q1003-1008	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	6		
	Q1009	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	1		
	Q1010	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	1		
	Q1601,1602	00D2690184907	T.R , CHIP , SOT-23		HVTKRA102S	2		
	Q1604	00D2730464901	T.R , CHIP , SOT-23		HVTKTC3875SYRTK	1		
	Q1801,1802	00MHT600141B1	T.R		HVTKTA1271YT	2		
	Q1803,1804	00MHT800951B1	T.R		HVTKTC3203YT	2		
	Q2001	00D2690192902	T.R , CHIP , SOT-23		HVTKRC102S	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		
	U1001	943243102480S	I.C , FLASH MICOM(LQFP-44)		CVIANAM2043A	1	*	
	U1002	00MHC10224210	I.C , RESET 4.2V(SSOP-5P)		CVIBD4742G	1		
	U1003	943236000650S	I.C , EEPROM(4K, JEDEC SOIC)		CVIAT24C04BNSHB	1		
	U1601	262010007707S	REMOTE SENSOR , R94EV1A		CRVR94EV1A	1		
	U2001-2003	00D2631289900	I.C , OPAMP(DUAL/LOW NOISE)_Copper		CVIAZ4580MTR-E1-CU	3		
	U8501	943219500140M	I.C, REGULATOR(5.0V/TO-252)		CVINJM2845DL1-05	1		
	U8701	262010007707S	REMOTE SENSOR , R94EV1A	U	CRVR94EV1A	1		
	RESISTOR GROUP							
	R1001	nsp	RES, CHIP(1608/5%/22Kohm)		CRJ10DJ223T	1		
	R1002	nsp	RES, CHIP(1608/5%/33Kohm)		CRJ10DJ333T	1		
	R1003	nsp	RES, CHIP(1608/5%/1Mohm)		CRJ10DJ105T	1		
	R1004	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R1005-1007	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	3		
	R1008,1009	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R1010	nsp	RES, CHIP(1608/5%/4.7Kohm)		CRJ10DJ472T	1		
	R1011	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R1012	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1013,1014	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R1015	nsp	RES, CHIP(1608/5%/22Kohm)		CRJ10DJ223T	1		
	R1016	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	1		
	R1017	nsp	RES, CHIP(1608/5%/100ohm)		CRJ10DJ101T	1		
	R1018	nsp	RES, CHIP(1608/5%/10Kohm)	U, K, F	CRJ10DJ103T	1		
	R1019	nsp	RES, CHIP(1608/5%/10Kohm)	N	CRJ10DJ103T	1		
	R1020,1021	nsp	RES, CHIP(1608/5%/0ohm)		CRJ10DJ0R0T	2		
	R1401	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1402	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	1		
	R1403-1405	nsp	RES, CHIP(1608/5%/3.9Kohm)		CRJ10DJ392T	3		
	R1406	nsp	RES, CHIP(1608/5%/22Kohm)		CRJ10DJ223T	1		
	R1411,1412	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R1501	nsp	RES, CHIP(1608/5%/470ohm)		CRJ10DJ471T	1		
	R1502	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1503	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1504	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1505	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1506	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1507	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1508	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1509	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1510	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1511	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1512	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1513,1514	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	2		
	R1515	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1516	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1517	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1518	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1519	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1520	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	R1521	nsp	RES, CHIP(1608/5%/10Kohm)		CRJ10DJ103T	1		
	R1522	nsp	RES, CHIP(1608/5%/330ohm)		CRJ10DJ331T	1		
	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%/47Kohm)		CRJ10DJ473T	1		
	R1802,1803	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	2		
	R1804,1805	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R1806,1807	nsp	RES, CHIP(1608/5%/2.2Kohm)		CRJ10DJ222T	2		
	R1808,1809	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	2		
	R1901-1903	nsp	RES, CHIP(1608/5%/47Kohm)		CRJ10DJ473T	3		
	R2001,2002	nsp	RES, CARBON(1/5W,56Kohm,J)		CRD20TJ563T	2		
	R2003,2004	nsp	RES, CARBON(1/5W,100Kohm,J)		CRD20TJ104T	2		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	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		
	R2013,2014	nsp	RES, CARBON(1/5W,1Kohm,J)		CRD20TJ102T	2		
	R2015,2016	nsp	RES, CARBON(1/5W,1.2Kohm,J)		CRD20TJ122T	2		
	R2017-2020	nsp	RES, CARBON(1/5W,33Kohm,J)		CRD20TJ333T	4		
	R2021,2022	00MGG0510016X	RES , CFPS1/4CMHTA100J		CRG14SANJ100CLPS	2		
	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	00MGD05220160	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	4		
	R5011-5014	nsp	RES, CARBON(1/5W,12Kohm,J)		CRD20TJ123T	4		
	R5015-5018	00MGD05220160	RES, CARBON(1/5W,22ohm,J)		CRD20TJ220T	4		
	R5019-5022	nsp	RES, CARBON(1/5W,470ohm,J)		CRD20TJ471T	4		
	R5023,5024	00MGD05181160	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	RES, CARBON(1/5W,5.6ohm,J)	U, F	CRD20TJ5R6T	1		
	R8501	nsp	WIRE, COPPER(D0.6)	N, K	C3A206	0.02		
	R8502	nsp	RES, CHIP(1608/5%/1Kohm)	U, F	CRJ10DJ102T	1		
	R8502	nsp	RES, CHIP(1608/5%/4.7Kohm)	N, K	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		
	R8506	nsp	RES, CHIP(1608/5%/220ohm)		CRJ10DJ221T	1		
	R8701	nsp	RES, CHIP(1608/5%/100ohm)	U	CRJ10DJ101T	1		
	R8702	nsp	RES, CHIP(1608/5%/100ohm)	U	CRJ10DJ101T	1		
	R9901,9902	nsp	RES, CARBON(1/5W,47ohm,J)		CRD20TJ470T	2		
	CAPACITORS GROUP							
	C1	nsp	CAP, MYLAR(50V/0.01uF/J)		HCQI1H103JZT	1		
	C1001	943134502680M	CAP , ELECT(10uF/63V)		CCEA1JH100T	1		
	C1002-1010	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	9		
	C1401	nsp	CAP, CHIP(1608, 50V/0.01uF, X7R)_SAMSUNG		CCUS1H103KCS	1		
	C1411,1412	nsp	CAP, CHIP(1608, 50V/0.01uF, X7R)_SAMSUNG		CCUS1H103KCS	2		
	C1501-1510	nsp	CAP, CHIP(1608, 50V/0.01uF, X7R)_SAMSUNG		CCUS1H103KCS	10		
	C1601	nsp	CAP, ELECT(16V/100uF)		CCEA1CH101T	1		
	C1602	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	1		
	C1603	nsp	CAP, ELECT(16V/100uF)		CCEA1CH101T	1		
	C1604	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	1		
	C1801	nsp	CAP, ELECT(10V/220uF)		CCEA1AH221T	1		
	C1902	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	1		
	C2001-2004	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	4		
	C2005-2008	943133501630M	CAP , MYLAR(100V/220PF/J)		CCQI2A221JZTS	4		
	C2009,2010	nsp	CAP, ELECT(50V/22uF)		CCEA1HH220T	2		
	C2011,2012	nsp	CAP, ELECT(50V/4.7uF)		CCEA1HH4R7T	2		
	C2013,2014	nsp	CAP , MYLAR(50V/0.015uF/J)		CCQI1H153JZT	2		
	C2015,2016	nsp	CAP , MYLAR(50V/0.033uF/J)		CCQI1H333JZT	2		
	C2017,2018	943133501630M	CAP , MYLAR(100V/220PF/J)		CCQI2A221JZTS	2		
	C2019,2020	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	2		
	C2101-2106	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	6		
	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	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	2		
	C5007,5008	nsp	CAP , POLYPROPYLENE(FAS(133)-200V-101K)		CCMP2B101KS17T	2		
	C5009,5010	00D9430175001	CAP, ELECT(25V/47uF)		CCEA1EH470T	2		
	C5011,5012	nsp	CAP, ELECT(25V/220uF)		CCEA1EH221T	2		
	C5013	nsp	CAP, CHIP(1608, 50V/0.01uF, X7R)_SAMSUNG		CCUS1H103KCS	1		
	C8502	00D9430024408	CAP , CERAMIC(X1/Y2/SC)		KCKDKS472ME	1		
	C8503	nsp	CAP, ELECT(50V/1uF)		CCEA1HH1R0T	1		
	C8504	13405013120AS	CAP, ELECT(25V/2200uF)		CCEA1EH222E	1		
	C8505	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	1		
	C8506	nsp	CAP, ELECT(10V/470uF)	U, F	CCEA1AH221T	1		
	C8506	nsp	CAP, ELECT(10V/220uF)	N, K	CCEA1AH221T	1		
	C8701	nsp	CAP, ELECT(16V/100uF)	U, N	CCEA1CH101T			
	C8507-8510	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG		CCUS1H104KCS	4		
	C8702	nsp	CAP, CHIP(1608, 50V/0.1uF, X7R)_SAMSUNG	U, F	CCUS1H104KCS	1		
	C8901	90M-DK100800R	CAP , CERAMIC(KH TYPE)		KCKDKS471ME	1		
	C9901,9902	943133501610M	CAP , MYLAR(100V/0.01uF/J)		CCQI2A103JZT	2		
	OTHER PARTS GROUP							
	B1001	nsp	WIRE ASS'Y (9PIN,280MM,61205001000AS)		CWZPM6004B1001	1		
	B1002	nsp	WIRE ASS'Y (14PIN,120MM,61205001100AS)		CWZPM6004B1002	1		
	B1003	nsp	WIRE ASS'Y (3PIN,160MM,61301000200AS)		CWZPM6004B1003	1		
	B1006	nsp	WIRE ASS'Y (5PIN,160MM,61205000900AS)		CWZPM6004B1006	1		
	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)	U, N, K	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		
!	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		KJCFC5S	2		
	J1000-1084	nsp	WIRE, COPPER(D0.6)		C3A206	85		
	J5001-5021	nsp	WIRE, COPPER(D0.6)		C3A206	21		
	J8501-8514	nsp	WIRE, COPPER(D0.6)		C3A206	14		
	JW93	nsp	WIRE ASS'Y		CWZAMC660JW52	1		
	JW94-2	nsp	1P WIRE ASS'Y(140MM,BLACK)		CWEE202140VV	1		
	JW95-3	nsp	1P WIRE ASS'Y(140MM, RED)		CWEE212140VV	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		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	N1	nsp	3P WIRE ASS'Y(320MM)		CWZPM5003BN92	1		
	N1002	nsp	LOCKING TYPE , STRAIGHT WAFER , 2.5MM 10PIN		CJP06HA292ZY	1		
	N2	nsp	SHIELD , WIRE ASS'Y(300mm,3P)		CWZPM5003BN90	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		
	N8504	nsp	WAFER, STRAIGHT, 9PIN		CJP09GA19ZY	1		
	N8505	nsp	WAFER, FFC(7P-1mm, ANGLE)		CJP07GB113ZY	1		
	S1401-1404	00D9430004402	SW , TACT		CST1A012ZT	4		
	S1411	90M-SR000290R	VR , ENCODER		CSR2A034Z	1		
	S2001	943682000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
	S2501	943682000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
	S8501	68201003400AS	RELAY,G5PA-1-M-E,DC5V,1C1P	U, F	CSL1C002ZE	1		
!	S8501	00D9430194900	RELAY,G5PA-1,DC6V,1C1P	N, K	CSL1E002ZE	1		
!	S8901	90M-SP001250R	SW , PUSH (MOMS) CN		KSH1A001ZV	1		
	T6501	943252100170M	POSISTOR , PTFM04BC222Q2N34B0		CRTPTH9M04BC222TS2F	1		
!	T8501	943101002880M	TRANS , SUB C515	U	CLT5I009ZU	1		
!	T8501	90M-TS003180R	TRANS , SUB CD6002/N	N, K	CLT5I009ZE	1		
!	T8501	90M-TS003170R	TRANS , SUB CD6002/F	F	CLT5I009ZJ	1		
	V2001	90M-RB000060R	RES , VARIABLE BALANCE		CVV2X11M203Z	1		
	V2002,2003	90M-RB000050R	RES , VARIABLE TONE		CVV2X10B103Z	2		
	V5001	00D9430197305	VOLUME , MOTOR		CVV9Y13B503Z	1		
	X1001	nsp	RESONATOR , CERAMIC (8Mhz,15pF)		CVFCSTLS8M00G53A0T	1		
	Z1001	nsp	WIRE ASS'Y(1P, 80MM,BLK,#22)		CWE5202080A	1		
	Z5001	nsp	WIRE ASS'Y(1P, 80MM,BLK,#22)		CWE5202080A	1		
	Z6501	nsp	TUBE , UL (0.8PIE , 3mm , BLACK)		C4B120R82	2		
	Z8501	nsp	WIRE ASS'Y(1P, 80MM,BLK,#22)		CWE5202080A	1		
	★	nsp	PLATE , SHIELD(HP)		CMC1A346-V1	1		

MAIN PCB ASS'Y

※Parts indicated by "nsp"on this table cannot be supplied.

※The parts listed be 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		
	D6015-6018	943203500530S	DIODE,CHIP ULTRA-HIGH SPEED		CVDKDS122	4	*	
	D6023	00D9430182609	DIODE , SWITCHING	U	CVD1SS133MT	1		
	D6203	00D9430182609	DIODE , SWITCHING	F	CVD1SS133MT	1		
	D7501-7503	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	3		
!	D8001	90M-HE200330R	DIODE , BRIDGE		HVDKBU804F	1		
	D8101-8106	00D9430182502	DIODE , RECT		CVD1N4003ST	6		
	D8201,8202	00D9430182502	DIODE , RECT		CVD1N4003ST	2		
	D9001,9002	00D9430182609	DIODE , SWITCHING		CVD1SS133MT	2		
	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	90M-HX800010R	T.R , NPN Silicon Transistor(TO-92M)		CVTSRC1202MT-CU	1		
	Q7503,7504	00D9430154404	T.R		HVTKTC3198YT	2		
	Q7505	90M-HX800010R	T.R , NPN Silicon Transistor(TO-92M)		CVTSRC1202MT-CU	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	00D2631100021	I.C,REGULATOR(+12V,T0220IS)		HVIKIA7812API	1		
!	U8202	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		
	R3017,3018	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3019,3020	nsp	RES, CARBON(1/5W,560ohm,J)		CRD20TJ561T	2		
	R3021,3022	nsp	RES, CARBON(1/5W,220Kohm,J)		CRD20TJ224T	2		
	R3023,3024	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		
	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		
	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		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	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	00MGD05220160	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	00MGD05220160	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	00MGD05220160	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,1.8Kohm,J)		CRD20TJ182T	2		
	R6069,6070	nsp	RES, CARBON(1/5W,820ohm,J)		CRD20TJ821T	2		
	R6071,6072	nsp	RES, CARBON(1/5W,270ohm,J)		CRD20TJ271T	2		
	R6073-6076	00MGG0522016X	RES , CFPS1/4CMHTA220J		CRG14SANJ220CLPS	4		
	R6077-6080	943126500060M	RES, FLAME RETARDANT(1/4W 5% 100 OHM) CFPS1/4CMHTA		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) CFPS1/4CMHTA		CRG14SANJ221CLPS	2		
	R6089-6092	00MGG0510016X	RES , CFPS1/4CMHTA100J		CRG14SANJ100CLPS	4		
	R6093-6096	943129500920M	RES , CEMENT		CRF5EKR22	4		
	R6097,6098	nsp	RES, CARBON(1/5W,100ohm,J)		CRD20TJ101T	2		
	R6099-6102	nsp	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		
	R6109,6110	00D2412397969	RES, CARBON(1/5W,390ohm,J)		CRD20TJ391T	2		
	R6201	943129501020S	RES , CHIP , 100OHM 5% 1/2W Flame	U, F	CRJ12EJ101T	1	*	
	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		
	R9001,9002	00MGG0510216X	RES , CFPS1/4CMHTA102J		CRG14SANJ102CLPS	2		
	R9003,9004	00MGG0515216X	RES, FLAME RETARDANT(1/4W 5% 1.5KOHM) CFPS1/4CMHTA		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		
	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		
	RT01	00MYJ04002640	RECEPTACLE , AC(15A/250V,R-301,B21)		CJJ8A006ZW	1		
	CAPACITORS GROUP							
	C3001-3007	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	7		
	C3009-3022	943133501630M	CAP , MYLAR(100V/220PF/J)	N, K	CCQI2A221JZTS	14		
	C3501,3502	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	2		
	C3506	nsp	CAP, ELECT(50V/4.7uF)		CCEA1HH4R7T	1		
	C3801,3802	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	2		
	C3803,3804	nsp	CAP, ELECT(25V/100uF)		CCEA1EH101T	2		
	C3805,3806	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	2		
	C3901	943133501630M	CAP , MYLAR(100V/220PF/J)		CCQI2A221JZTS	1		
	C3902	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	1		
	C3904	943134502680M	CAP , ELECT(10uF/63V)		CCEA1JH100T	1		
	C3905,3906	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	2		
	C4001,4002	943133501630M	CAP , MYLAR(100V/220PF/J)		CCQI2A221JZTS	2		
	C4003,4004	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	2		
	C4005,4006	943133501630M	CAP , MYLAR(100V/220PF/J)		CCQI2A221JZTS	2		
	C4007,4008	nsp	CAP, ELECT(16V/220uF)		CCEA1CH221T	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	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	2		
	C4019,4020	nsp	CAP, ELECT(25V/100uF)		CCEA1EH101T	2		
	C4021	nsp	CAP, CHIP(1608, 25V/0.1uF, MURATA GRM18)		CCUMUS1E104ZF	1		
	C4022,4023	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	2		
	C6001,6002	nsp	CAP, ELECT(50V/22uF)		CCEA1HH220T	2		
	C6003,6004	nsp	CAP , POLYPROPYLENE(FAS(133)-200V-101K)		CCMP2B101KS17T	2		
	C6005	nsp	CAP, CHIP(1608, 50V/0.022uF)		CCUS1H223KC	1		
	C6011-6014	nsp	CAP , ELECT(63V/470uF)		CCEA1JH471E	4		
	C6015,6016	943133502030S	Polyester Film Capacitor HPE331J2AP050T		CCQI2A331JZT	2	*	
	C6017,6018	00D9430175001	CAP, ELECT(25V/47uF)		CCEA1EH470T	2		
	C6019,6020	943134010580S	CAP, ELECT(35V/220uF)		CCEA1VH221T	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)		CCUS1H103KC	2		
!	C8001,8002	90M-OA000450R	CAP , ELECT		CCET50VKL4682NK	2		
	C8101,8102	00MOA22803520	CAP, ELECT(35V/2200uF)		CCEA1VH222E	2		
	C8103,8104	00D9430175001	CAP, ELECT(25V/47uF)		CCEA1EH470T	2		
	C8105-8108	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	4		
	C8201	00MOA47703520	CAP, ELECT(35V/470uF)		CCEA1VH471E	1		
	C8202,8203	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	2		
	C8204-8207	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	4		
	C9001	nsp	CAP, ELECT(50V/0.47uF)		CCEA1HHR47T	1		
	C9002	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C9003	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	1		
	C9004	nsp	CAP, ELECT(50V/10uF)		CCEA1HH100T	1		
	C9005	nsp	CAP, CHIP(1608, 50V/0.1uF)		CCUS1H104KC	1		
	C9101	00D9430148708	CAP, ELECT(50V/47uF)		CCEA1HH470T	1		
	OTHER PARTS GROUP							
	B8001	nsp	PLATE , EARTH(TRONIC ELECTRONICS)		CJT1A026	1		

	REF No.	Part No.	Part Name	Remarks		Q'ty	New	Ver
	B8101	nsp	PLATE , EARTH(TRONIC ELECTRONICS)		CJT1A026	1		
!	F8510	90M-FS001420R	FUSE(218Series, 250V/3.15A)	U, F	KBA2C3150TLEY	1		
!	F8510	943652500320M	FUSE(218Series, 250V/1.6A)	N, K	KBA2C1600TLEY	1		
	K3001-3003	943643102620M	JACK RCA, 4P(W/R*2), VERTICAL,GOLD		CJJ4P081Z	3		
	K3004	943643102600M	JACK RCA, 2P(W/R), VERTICAL, GOLD		CJJ4N101Z	1		
	K4001	943643102600M	JACK RCA, 2P(W/R), VERTICAL, GOLD		CJJ4N101Z	1		
	K7501	943643004090S	TERMINAL , SPEAKER		CJJ5Q019Z	1		
	L4001,4002	00D9430193601	COIL, TOROIDAL	N, K	CLU9S004Z	2		
	N3001	nsp	LOCKING TYPE , STRAIGHT WAFER , 2.5MM		CJP05GI237ZW	1		
	N3002	nsp	CARD CABLE WAFER		CJP14GA19ZY	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	WAFER,YW396-03B(3.96mm)		CJP03GA90ZY	1		
	N9001	nsp	WAFER , STRAIGHT(3PIN)		CJP03GA19ZY	1		
	S7501,7502	943682010300S	RELAY,G5PA-28-MC,DC12V,2C1P		CSL3A018ZE	2		
	S7503	943682000810S	RELAY,BC3-12H,DC12V,2C2P		CSL4A016ZU	1		
	TW91	Delete	2P WIRE ASS'Y(100MM)		CWZPM5003TW91	1		
	V6001,6002	943161102000D	RES , SEMI FIXED (2200 OHM)		CVN12A222B03T	2	*	
	V6003,6004	943161100150D	RES , SEMI FIXED (4.7K , B CURVE)		CVN12A472B03T	2		
	Z4001,4002	nsp	WIRE ASS'Y(1P, 80MM,BLK,#22)		CWE5202080A	2		
	★	nsp	HEAT SINK ASS'Y		CMYPM5005	1		
	★	nsp	SCREW , SPECIAL		CHD1A012ZR	6		
	★	nsp	BRACKET(F) , HEAT SINK		CMD1A366-V1	1		
	★	nsp	BRACKET(F) , HEAT SINK		CMD1A367-V1	1		
	★	nsp	HEAT SINK		CMY2A150-V1	1		
	★	nsp	SCREW		CTB3+8JR	4		
	★	nsp	SCREW		CTW3+8JR	2		
	★	nsp	I.C HEATSINK ASS'Y(CMY1A338)		CVIKIA7812APIBSA	1		
	★	nsp	HEAT SINK 25MM		CMY1A338	1		
	★	00D2631100021	I.C,REGULATOR(+12V,T0220IS)		HVIKIA7812API	1		
	★	nsp	LOCKER		CRE1A037	8		
	★	nsp	SCREW		CTB3+6JR	8		
	★	nsp	SCREW		CTB3+8JFB	19		
	★	nsp	SCREW		CTB4+6FR	4		
	★	nsp	SCREW		CTW3+12JR	2		
	★	nsp	SCREW		CTW3+18JR	2		
	★	nsp	SCREW		CTW3+8JR	9		
	★	nsp	CHASSIS , BOTTOM		CUA1A288	1		
!	★	943652500320M	FUSE(218Series, 250V/1.6A)		KBA2C1600TLEY	1		
	★	nsp	SCREW		CTB3+8FFB	1		

EXPLODED

※Parts indicated by "nsp"on this table cannot be supplied.

※The parts listed be 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
	★	nsp	FRONT PCB ASS'Y					
	C1	nsp	POWER S/W PCB		CUP12664Z	1		
	C2	nsp	PHONE JACK PCB		CUP12664Z	1		
	C3	nsp	POWER PCB		CUP12664Z	1		
	C4	nsp	VOLUME PCB		CUP12664Z	1		
	C6	nsp	FRONT PCB		COP12664B	1		
	C7	nsp	MAIN PCB ASS'Y (N)		COP12665B	1		
	C7	nsp	MAIN PCB ASS'Y (K)		COP12665E	1		
	C7	nsp	MAIN PCB ASS'Y (U)		COP12665C	1		
	C7	nsp	MAIN PCB ASS'Y (F)		COP12665D	1		
	P1	421410006004M	BADGE , MARANTZ		CGB1A206	1		
	P2	943416003900M	WINDOW , FUNCTION		CGU1A425A12	1		
	P3	943412101130M	KNOB , ROTARY (B)	B	CBN1A278	3		
	P3	943412101140M	KNOB , ROTARY (SG)	SG	CBN1A278RMD10	3		
	P4	nsp	PANEL , SUB (B,)	B	CGW1A465	1		
	P4	nsp	PANEL , SUB (SG)	SG	CGW1A465RMD10	1		
	P5	943404100570M	PANEL , SIDE L (B) N,,U VER.	N1B, U1B	CGW3A467RNWB37	1		
	P5	943404100580M	PANEL , SIDE L (SG) N,,U VER.	N1SG, FN	CGW3A467ROVD10	1		
	P5	943402104940M	PANEL , SIDE L (B) K VER.	K1B	CGW3A467RNUB37	1		
	P5	943402104950M	PANEL , SIDE L (SG) K VER.	K1SG	CGW3A467ROSD10	1		
	P6	943422003990M	PANEL , SIDE R (B)	B	CGW1A466RNZB37	1		
	P6	943422004000M	PANEL , SIDE R (SG)	SG	CGW1A466ROYD10	1		
	P7	943412002830M	ORNAMENT , RING (B)	B	CGR1A456B37	2		
	P7	943412002840M	ORNAMENT , RING (SG)	SG	CGR1A456RMD10	2		
	P8	481510004009M	WINDOW , IR (B)	B	CGU1A424A12	1		
	P8	481510004047M	WINDOW , IR (SG)	SG	CGU1A424	1		
	P9	481510003006M	INDICATOR , POWER		CGL1A274	1		
	P10	411510016027M	KNOB , PUSH POWER (B)	B	CBC1A166	1		
	P10	943411001970M	KNOB , PUSH POWER (SG)	SG	CBC1A166RMD10	1		
	P11	nsp	INDICATOR , FUNCTION		CGL1A276	1		
	P12	943411102820M	TACT KNOB ASS'Y (B)	B	CBT1A1085XA	1		
	P12	943411102810M	TACT KNOB ASS'Y (SG)	SG	CBT1A1085WA	1		
	P14	nsp	CUSHION		CHG1A104	2		
	P15	nsp	FOOT , FRONT		CKL2A042H46	4		
	P16	nsp	CUSHION , FOOT		CHG1A360	4		
	P17	nsp	HOLDER , PCB		CHE170	2		
	P18	nsp	HOLDER , PCB		CHE2A030	2		
	P19	nsp	LOCKER		CRE1A037	8		
	P21	nsp	SHEET, SCREW		CGX1A439	1		
	M1	943402104680M	PANEL , AL FRONT (B)	U1B, N1B, K1B	CKM1A204UC23	1		2
	M1	943402104670M	PANEL , AL FRONT (SG)	N1SG, K1SG, FN	CKM1A204TC62	1		2
	M2	943412002810M	INPUT KNOB ASS'Y (B)	B	CGK1A138ZA	1		
	M2	943412002820M	INPUT KNOB ASS'Y (SG)	SG	CGK1A138YA			
	M3	943412004010M	VOLUME KNOB ASS'Y (B)	B	CGK1A137ZA	1		
	M3	943412004020M	VOLUME KNOB ASS'Y (SG)	SG	CGK1A137YA			
	M4	nsp	FRAME , FRONT		CUF2A004	1		
	M5	nsp	CHASSIS , BOTTOM		CUA1A288	1		
	M7	nsp	BRACKET, HEATSINK		CMD1A366-V1	1		
	M8	nsp	HEATSINK		CMY2A150-V1	1		
	M9	nsp	BRACKET, HEATSINK		CMD1A367-V1	1		
	M10	nsp	WASHER , GROUND		CNW1A035	4		
	M11	nsp	PANEL , REAR (N Ver.)	N	CKF2A391O	1		
	M11	nsp	PANEL , REAR (K Ver.)	K	CKF2A391N	1		
	M11	nsp	PANEL , REAR (U Ver.)	U	CKF1A391T	1		
	M11	nsp	PANEL , REAR (F Ver.)	F	CKF6A391U	1		
	M12	943401002850M	CABINET , TOP (B)	B	CKC1A187K117	1		
	M12	943401002860M	CABINET , TOP (SG)	SG	CKC1A187D11	1		
	C5	943101102490M	POWER TRANS (N)		CLT5R046ZW	1	*	
	C5	943101102500M	POWER TRANS (U)		CLT5R046ZU	1	*	
	C5	943101102510M	POWER TRANS (F)		CLT5R046ZJ	1	*	
	C8	943641500290M	AC INNET ASS'Y		CJJ7A033Z	1		
	C9	nsp	TERMINAL , GROUND		CMA1A006	1		
	S1	nsp	SCREW (B)	B	CTW3+8JFZR	6		
	S1	nsp	SCREW (SG)	SG	CTW3+8JFZR	6		
	S2	nsp	SCREW		CTB3+8JR	23		
	S3	nsp	SCREW		CTB3+10JR	17		
	S4	nsp	SCREW		CTW3+8JR	7		
	S5	nsp	SCREW		CTW3+12JR	4		
	S6	nsp	SCREW		CTW3+18JR	2		
	S7	nsp	SCREW		CTB4+6FR	4		
	S8	nsp	SCREW, SPECIAL		CHD1A012ZR	6		
	S9	nsp	SCREW		CTB3+6JR	5		

PACKING

※Parts indicated by "nsp"on this table cannot be supplied.

※The parts listed be 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
	1	943531104400M	BOX,OUTCARTON		CPG1A994V	1	*	
	2	nsp	BAG,POLY		CPB1A008Z	1		
	3-1	943533101991M	PAD,SNOWBOTTOM(F/R)		CPS2A964	1		2
	3-2	943533101981M	PAD,SNOWTOP(F/R)		CPS2A962	1		2
	4	nsp	INSTRUCTIONMANUALASS'Y		---	1		
	4-0	35201033300AM	CD MANUALASS'Y U	U	CFT1A152ZA	1	*	2
	4-0	35201033200AM	CD MANUALASS'Y N	N	CFT1A150ZA	1	*	2
	4-0	35201033400AM	CD MANUALASS'Y K	K	CFT1A151ZA	1	*	2
	4-1	54111118000AM	MANUAL,INSTRUCTION	F	CQX1A1865Z	1	*	
	4-2	nsp	SAFETYINSTRUCTION U	U	CQX1A1814Z	1	*	
	4-2	nsp	SAFETYINSTRUCTION N	N	CQX1A1812Z	1	*	
	4-2	nsp	SAFETYINSTRUCTION K	K	CQE1A691Z	1	*	
	4-2	nsp	SAFETYINSTRUCTION F	F	CQE1A704Z	1	*	
	4-3	54111117700AM	MANUAL,GETTINGSTART U	U	CQX1A1814Z	1	*	
	4-3	54111117600AM	MANUAL,GETTINGSTART N	N	CQX1A1812Z	1	*	
	4-3	54111117800AM	MANUAL,GETTINGSTART K	K	CQX1A1813Z	1	*	
	4-3	54111117900AM	MANUAL,GETTINGSTART F	F	CQX1A1815Z	1	*	
	4-4	nsp	CARD,USER(JAPAN)	F	CQE1A139S	1		
	4-6	nsp	CARD,WARRANTY	U	CQE1A131V	1		
	4-6	nsp	WARRANTYCANADA	U	CQE1A132V	1		
	4-7	nsp	CARDFORCHINAINDENTIFICATION	K	CQE1A450Z	1		
	5	90M-ZC000310R	CORD,POWER U	U	CJA2A070Z	1		
	5	90M-ZC000320R	CORD,POWER N	N	CJA2B054Z	1		
	5	90M-ZC000650R	CORD,POWER K	K	CJA2N075Z	1		
	5	611050028007S	CORD,POWER F	F	CJA2J115ZV	1		
	6	nsp	BAG,POLY		CPB1A008Z	1		
	7	nsp	LABEL,HOTSURFACE		CQB1A906Z	1		
	8	nsp	LABEL,CONTROL		CQB2A993Z	1		
	8-1	nsp	LABEL,SERIAL		CQB2A993Z	1		
	8-2	nsp	LABEL,SERIAL		CQB2A993Z	1		
	8-3	nsp	LABEL,PRODUCTION YEAR		CQB2A993Z	1		
	9	30701016500AM	REMOCON (RC002PMCD)		CARTCD5005	1		
	10	nsp	BATTERY(SIZE'AAA')		CABR03PPB	1		
	11	nsp	LABEL,WHITEM1SG	SG	CQB1A908Z	1		
	12	nsp	CARD,WARRANTYCHINA	K	CQE1A449X	1		
	12	nsp	CARD,WARRANTY(JAPAN)	F	CQE1A123W	1		