



Service Manual

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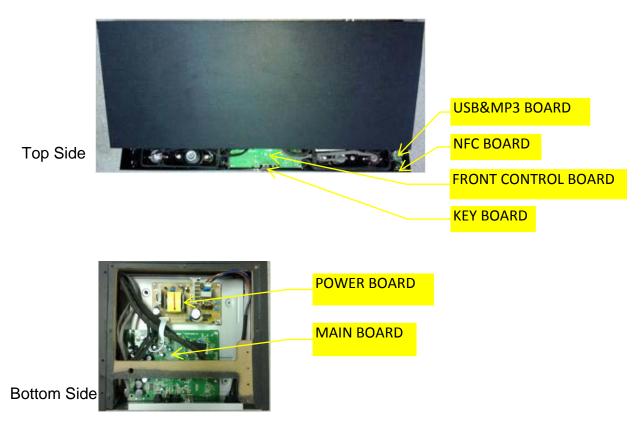
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GB 3142 038 61020



PCB Board Locations



Reminder: As BT and NFC need to be paired , and BT is on FE board , when one of BT , NFC or FE Board needs to be replaced , all of these three parts need to be replaced together.

VERSION VARIATIONS

VERSION VARIATIONS		
	Type / Versions	HTL4111B
Board in used Service Policy		/12
MAIN BOARD		M+C
POWER BOARD		M+C
FRONT CONTROL BOARD		M+C
USB&MP3 BOARD		М
NFC BOARD		М
KEY BOARD		M
*Tips:	C Component Level Repair M Module Level Repair X Used	

Product specifications



Note

Specifications and design are subject to change without notice.

Amplifier

- Total output power: 120W RMS (+/- 0.5 dB, 30% THD) / 96W RMS (+/- 0.5 dB, 10% THD)
- Frequency response: 20 Hz-20 kHz / +3 dB
- Signal-to-noise ratio: > 65 dB (CCIR) / (A-weighted)
- Input sensitivity:
 - AUX:1V
 - AUDIO IN: 1 V

Audio

- S/PDIF Digital audio input:
 - Coaxial: IEC 60958-3
 - Optical:TOSLINK

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class (MSC)
- File system: FAT16, FAT32, NTFS
- Maximum memory support: < 64 GB
- Supports MP3 and WMA file formats
- Sampling frequency:
 - MP3: 8 kHz, 11 kHz, 12 kHz, 16 kHz, 22 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 8 kbps-320 kbps
 - WMA: 32 kbps-192 kbps

- Version:
 - WMA:V7,V8,V9

Bluetooth

- Bluetooth profiles: A2DP
- Bluetooth version: 2.1 + EDR

Main unit

- Power supply: 110-240 V~, 50/60 Hz
- Power consumption: 80 W
- Standby power consumption: ≤ 0.5 W
- Speaker impedance: 4 ohm
- Speaker drivers: 2 x racetrack mid range (1.5" x 5") + 2 x 1" tweeter + 1 x 4" woofer
- Dimensions (WxHxD):701 x 68 x 325 mm
- Weight: 6.5 kg

Remote control batteries

• 1 x CR2025

Safety instruction, Warning & Notes

Safety instruction

1. General safety

Safety regulations require that during a repair:

- . Connect the unit to the mains via an isolation transformer.
- . Replace safety components indicated by the symbol A, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must return the unit in its original condition. Pay, in particular, attention to the following points:

- . Route the wires/cables correctly, and fix them with the mounted cable clamps.
- . Check the insulation of the mains lead for external damage.
- . Check the electrical DC resistance between the mains plug and the secondary side:
 - Unplug the mains cord, and connect a wire between the two pins of the mains plug.
 - Set the mains switch the "on" position (keep the mains cord unplug).
 - Measure the resistance value between the mains plug and the front panel, controls, and chassis bottom.
 - 4) Repair or correct unit when the resistance measurement is less than 1MC.
 - 5) Verify this, before you return the unit to the customer/user (ref. UL-standard no. 1492).
 - 6) Switch the unit "off", and remove the wire between the two pins of the mains plug.

2.Laser safety

This unit employs a laser. Only qualified service personnel may remove the cover, or attempt to service this device (due to possible eye injury).

Laser device unit

Type : Semiconductor laser GaAlAs

Wavelength: 650nm (DVD)

: 780nm (VCD/CD)

Output power : 7mW (DVD)

: 10mW (DVD /CD)

Beam divergence: 60 degree

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

Warning

1.General

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handing during repair can reduce life drastically. Make sure that, during repair, you are at the same potential as the mass of the set by a wristband with resistance. Keep components and tools at this same potential. Available ESD protection equipment:
 - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
 - 2) Wristband tester 4822 344 13999.
- Be careful during measurements in the live voltage section. The primary side of the power supply, including the heat sink, carries live mains voltage when you connect the player to the mains (even when the player is "off"!). It is possible to touch copper tracks and/or components in this unshielded primary area, when you service the player. Service personnel must take precautions to prevent touching this area or components in this area. A "lighting stroke" and a stripe-marked printing on the printed wiring board, indicate the primary side of the power supply.
- . Never replace modules, or components, while the unit is "on".

2. Laser

- . The use of optical instruments with this product, will increase eye hazard.
- Only qualified service personnel may remove the cover or attempt to service this device, due to possible eye injury.
- . Repair handing should take place as much as possible with a disc loaded inside the player.
- . Text below is placed inside the unit, on the laser cover shield:

CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM.

Notes: Manufactured under licence from Dolby Laboratories. The double-D symbol is trademarks of Dolby Laboratories, Inc. All rights reserved.

Service Hints

CAUTION

CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE DRIVE ELECTRONICS WHEN CONNECTING A NEW DRIVE.THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- SWITCH OFF POWER SUPPLY
- ESD PROTECTION

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the defective loader:

- 1. Dismantling of the loader to access the ESD protection point if necessary.
- 2. Solder the ESD protection point*.
- 3. Disconnect flexfoil cable from the defective loader.
- 4. Put a paper clip on the flexfoil to short-circuit the contacts (fig.1)
- 5. Replace the defective loader with a new loader.
- 6. Remove paperclip from the flexfoil and connect it to the new loader.
- 7. Remove solder joint on the ESD protection point.



ATTENTION: The laser diode of this loader is protected against ESD by a solder joint which shortcircuits the laserdiode to ground. For proper functionality of the loader this solder joint must be remove **after** connection loader to the set.



(ESD protection point is accessible from top of loader)

*Only applicable for defective loader needed to be sent back to supplier for failure analysis and to support backcharging evidence.

This is also applicable for all partnership workshops.

Notes

Lead-Free requirement for service

INDENTIFICATION:

Regardless of special logo (not always indicated)



One must treat all sets from 1.1.2005 onwards, according next rules.

Important note: In fact also products a little older can also be treated in this way as long as you avoid mixing solder-alloys (leaded/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - o To reach at least a solder-temperature of 400°C,
 - o To stabilize the adjusted temperature at the solder-tip
 - o To exchange solder-tips for different applications.
- · Adjust your solder tool so that a temperature around 360°C - 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free). If one cannot avoid, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).

Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.

Special information for BGA-ICs:

- always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use highest lead-free temperature profile, in case of doubt)
- lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. This will be communicated via AYS-website.

Do not re-use BGAs at all.

- For sets produced before 1.1.2005, containing leaded soldering-tin and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- On our website:

www.atyourservice.ce.Philips.com

You find more information to:

BGA-de-/soldering (+ baking instructions) Heating-profiles of BGAs and other ICs used in Philips-sets

You will find this and more technical information within the "magazine", chapter "workshop news". For additional questions please contact your local repair-helpdesk.

DFU Instructions:

1 Important

Read and understand all instructions before you use your product. If damage is caused by failure to follow instructions, the warranty does not apply.

Read and understand all instructions before you use your SoundStage. If damage is caused by failure to follow instructions, the warranty does not apply.

Safety

Risk of electric shock or fire!

- Never expose the product and accessories to rain or water. Never place liquid containers, such as vases, near the product. If liquids are spilt on or into the product, disconnect it from the power outlet immediately. Contact Philips Consumer Care to have the product checked before use.
- Never place the product and accessories near naked flames or other heat sources, including direct sunlight.
- Never insert objects into the ventilation slots or other openings on the product.
- Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
- Disconnect the product from the power outlet before lightning storms.
- When you disconnect the power cord, always pull the plug, never the cable.

Risk of short circuit or fire!

 Before you connect the product to the power outlet, ensure that the power voltage matches the value printed on the back or bottom of the product. Never connect the product to the power outlet if the voltage is different.

Risk of injury or damage to the SoundStage!

- For speakers with stands, use only the supplied stands. Secure the stands to the speakers tightly. Place the assembled stands on flat, level surfaces that can support the combined weight of the speaker and stand.
- Never place the product or any objects on power cords or on other electrical equipment.
- If the product is transported in temperatures below 5°C, unpack the product and wait until its temperature matches room temperature before connecting it to the power outlet.
- Visible and invisible laser radiation when open. Avoid exposure to beam.
- Do not touch the disc optical lens inside the disc compartment.
- Parts of this product can be made of glass. Handle with care to avoid injury and damage.

Risk of overheating!

 Never install this product in a confined space. Always leave a space of at least four inches around the product for ventilation.
Ensure curtains or other objects never cover the ventilation slots on the product.

Risk of contamination!

- Do not mix batteries (old and new or carbon and alkaine, etc.).
- Danger of explosion if batteries are incorrectly replaced. Replace only with the same or equivalent type.
- Remove batteries if they are exhausted or if the remote control is not to be used for a long time.
- Batteries contain chemical substances, they should be disposed of properly.

Risk of swallowing batteries!

 The product/remote control may contain a coin/button type battery, which can be swallowed. Keep the battery out of reach of children at all times! If swallowed, the battery can cause serious injury or death. Severe internal burns can occur within two hours of ingestion.

- If you suspect that a battery has been swallowed or placed inside any part of the body, seek immediate medical attention.
- When you change the batteries, always keep all new and used batteries out of reach of children. Ensure that the battery compartment is completely secure after you replace the battery.
- If the battery compartment cannot be completely secured, discontinue use of the product. Keep out of reach of children and contact the manufacturer.



This is CLASS II apparatus with double insulation, and no protective earth provided.

Mains fuse (UK only)

This information applies only to products with a UK mains plug.

This product is fitted with an approved molded plug. If you replace the fuse, use one with:

- the ratings shown on the plug,
- a BS 1362 approval, and
- the ASTA approval mark.

Contact your dealer if you are not sure about what type of fuse to use.

Caution: To conform with the EMC directive (2004/108/EC), do not detach the plug from the power cord.

Copyright in the UK

Recording and playback of material may require consent. See Copyright Act 1956 and The Performers Protection Acts 1958 to 1972.

Care for your product

Use only microfiber cloth to clean the product.

Care of the environment



Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.



When this crossed-out wheeled bin symbol is attached to a product it means that the product is covered by the European Directive 2002/96/ EC. Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste.

Correct disposal of your old product helps to prevent potential negative consequences for the environment and human health.



Your product contains batteries covered by the European Directive 2006/66/EC, which cannot be disposed with normal household waste. Please inform yourself about the local rules on separate collection of batteries because correct disposal helps to prevent negative consequences for the environmental and human health.

Help and support

Philips provides extensive online support. Visit our website at www.philips.com/support to:

- download the user manual and the quick start guide
- watch video tutorials (available only for selected models)
- find answers to frequently answered questions (FAQs)
- email us a question
- chat with our support representative.

Follow the instructions on the website to select your language, and then enter your product model number:

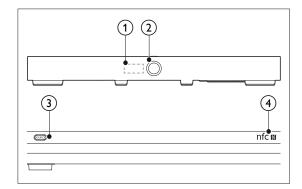
Alternatively, you can contact Philips Consumer Care in your country. Before you contact Philips, note down the model number and serial number of your product. You can find this information on the back or bottom of your product.

2 Your SoundStage

Congratulations on your purchase, and welcome to Philips! To fully benefit from the support that Philips offers(e.g. notification of product software upgrade), register your product at www.philips.com/welcome.

Main unit

This section includes an overview of the main unit.



1 LED display

- (2) ₍₂₎
 - Press to switch the SoundStage on or off.
 - Rotate to adjust the volume.

(3) SOURCE

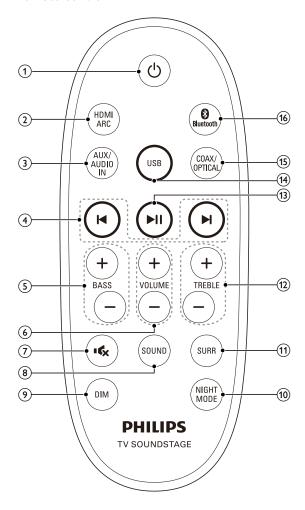
Select an input source or Bluetooth mode for the SoundStage.

(4) NFC tag

Tap the NFC-enabled device on the tag for Bluetooth connection.

Remote control

This section includes an overview of the remote control.



(1) ₍₀

- Switch the SoundStage on or off.
- When EasyLink is enabled, press and hold for at least three seconds to switch the connected HDMI devices to standby.

(2) HDMI ARC

Switch your source to HDMI ARC connection. HDMI ARC can only be selected if you connect your SoundStage to an HDMI ARC compliant TV through HDMI ARC.

(3) AUX/AUDIO IN

Press repeatedly to switch your audio source to the AUX connection or MP3 connection (3.5mm jack).

(4) **|4**/**▶**|

Skip to the previous or next track in USB mode and Bluetooth mode (only for AVRCP-supported Bluetooth devices).

(5) BASS +/-

Increase or decrease bass.

(6) VOLUME +/-

Increase or decrease the volume.

(7) K

Mute or restore the volume.

(8) SOUND

Select a sound mode.

(9) DIM

Set the brightness of SoundStage display panel.

(10) NIGHT MODE

Turn night mode on or off.

(11) SURR

Select stereo or virtual surround sound.

(12) TREBLE +/-

Increase or decrease treble.

(13) ▶Ⅱ

Start, pause or resume play in USB mode and Bluetooth mode (only for AVRCP-supported Bluetooth devices).

(14) USB

Switch to USB mode.

(15) COAX/OPTICAL

Press repeatedly to switch your audio source to the coaxial or optical connection.

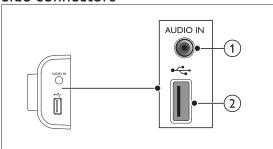
(16) 8 Bluetooth

Switch to Bluetooth mode.

Connectors

This section includes an overview of the connectors available on your SoundStage.

Side connectors



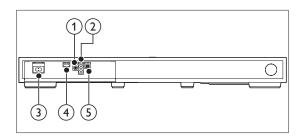
(1) AUDIO IN

Audio input from an MP3 player (3.5mm jack).

(2) **<**

Audio input from a USB storage device.

Rear connectors



(1) COAXIAL IN

Connect to a coaxial audio output on the TV or other devices.

2 AUX IN

Connect to an audio output on the TV or other devices.

(3) POWER CORD

Connect to the power supply.

(4) HDMI OUT

Connect to the HDMI input on the TV.

(5) OPTICAL IN

6 **EN**

Connect to an optical audio output on the TV or other devices.

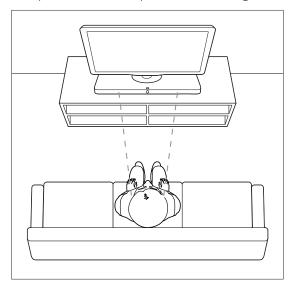
3 Place your SoundStage

This Philips SoundStage is designed to be placed under your TV.

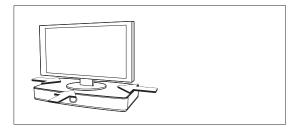


Caution

- The SoundStage is designed for TVs that weigh no more than 22 kg. Do not place a CRT type TV on the SoundStage.
- Do not place the SoundStage on an unstable cart, stand, bracket or table. Otherwise, the SoundStage may fall, causing serious injury to a child or adult and serious damage to the product.
- Make sure the ventilation openings on the rear panel are not blocked.
- Do not change the position of the SoundStage after placing yourTV on top of it.
- 1 Place the SoundStage on any flat and stable surface near yourTV. Then place yourTV on the top of the SoundStage.



2 Make sure the TV base is centered on it and not hanging over any of its edges.





- If the TV base is too large to put on top of the SoundStage, place the SoundStage in another location such as on an open shelf under the TV, but keep it close to yourTV so the audio cable will reach. You can also mount yourTV on the wall above the SoundStage.
- If your TV comes with an anti-tip device, install it according to the manufacturer's instructions and adjust the tether after placing the TV on top the SoundStage.
- If placing the SoundStage in a cabinet or on a shelf, for optimum audio performance, make sure the font of the SoundStage as close as possible to the front edge of the shelf
- If placing the SoundStage backed up to a wall, make sure there is at least a distance of 1 inch between the wall and the rear of the SoundStage.

4 Connect and set up

This section helps you connect your SoundStage to a TV and other devices, and then set it up.

For information about the basic connections of your SoundStage and accessories, see the Quick start guide.



- For identification and supply ratings, see the type plate at the back or bottom of the product.
- Before you make or change any connections, make sure that all devices are disconnected from the power outlet.

- 1 Using a High Speed HDMI cable, connect the HDMI OUT (ARC) connector on your SoundStage to the HDMI ARC connector on the TV.
 - The HDMI ARC connector on the TV might be labeled differently. For details, see the TV user manual.
- 2 On your TV, turn on HDMI-CEC operations. For details, see the TV user manual.



- If your TV is not HDMI ARC compliant, connect an audio cable to hear the TV audio through your SoundStage.
- If your TV has a DVI connector, you can use an HDMI/ DVI adapter to connect to TV. However, some of the features may not be available.

Connect to TV

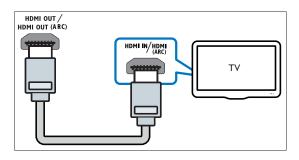
Connect your SoundStage to a TV to watch videos. You can listen to the TV audio through your SoundStage.

Use the best quality connection available on your SoundStage and TV.

Connect to TV through HDMI (ARC)

Best quality audio

Your SoundStage supports HDMI with Audio Return Channel (ARC). If your TV is HDMI ARC compliant, you can hear the TV audio through your SoundStage by using a single HDMI cable.



Connect audio from TV and other devices

Play audio from TV or other devices through your SoundStage speakers.

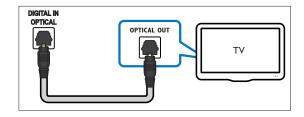
Use the best quality connection available on your TV, SoundStage, and other devices.



 When your SoundStage and TV are connected through HDMI ARC, an audio connection is not required.0

Option 1: Connect audio through a digital optical cable

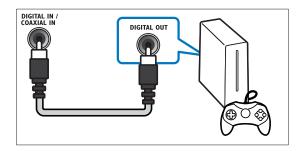
Best quality audio



- 1 Using an optical cable, connect the OPTICAL IN connector on your SoundStage to the OPTICAL OUT connector on the TV or other device.
 - The digital optical connector might be labeled **SPDIF** or **SPDIF OUT**.

Option 2: Connect audio through a digital coaxial cable

Good quality audio

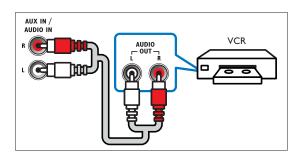


- Using a coaxial cable, connect the COAXIAL IN connector on your SoundStage to the COAXIAL/DIGITAL OUT connector on the TV or other device.
 - The digital coaxial connector might be labeled **DIGITAL AUDIO OUT**.

Option 3: Connect audio through analog audio cables

Basic quality audio

1 Using an analog cable, connect the AUX IN connector on your SoundStage to the AUDIO OUT connectors on the TV or other device.



Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

The following guidelines show how to dismantle the player.

- Step 1:Open the front cover. Open the cloth network directly, then remove 12 screws on the front panel, open the front panel carefully. (Figure 1)
- Step 2:Dismantle the Key Board.Remove 2 screws on the board.then pull out the board and dicconnect the connector XP1.(Figure 1)
- Step 3:Dismantle the Front Control Board.Remove 6 screws on the board.then pull out the board and disconnect the connectors(XP2,XP3,XP4)(Figure 1)



(Figure 1)

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

The following guidelines show how to dismantle the player.

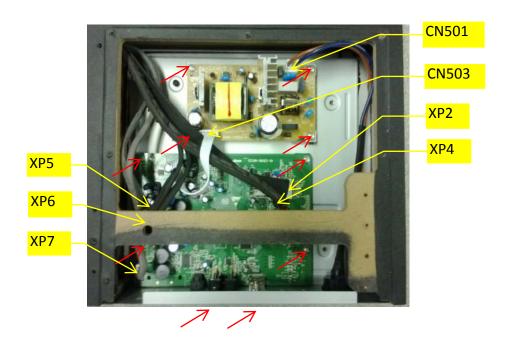
Step 5:Open the metal cover.Remove 11 screws on the bottom cover,then open the cover.(Figure 2)



(Figure 2)

Step 6:Dismantle the Power Board.Remove 4 screws on the board, then disconnect connectors(CN521, CN503)(Figure 3)

Step 7:Dismantle the Main Board.Remove 4 screws on the board and 2 screws on the back panel, then disconnect connectors(XP2,XP4,XP5,XP6,XP7)(Figure 3)



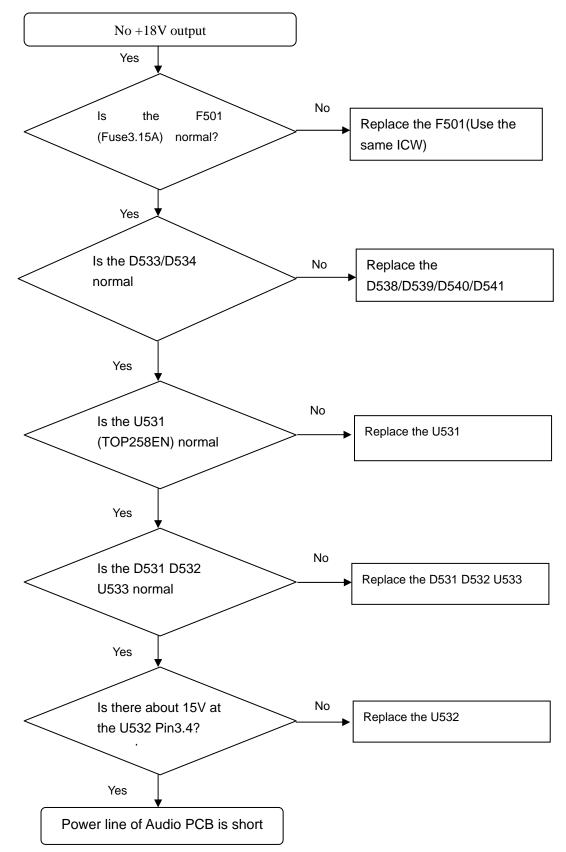
(Figure 3)

Software Update

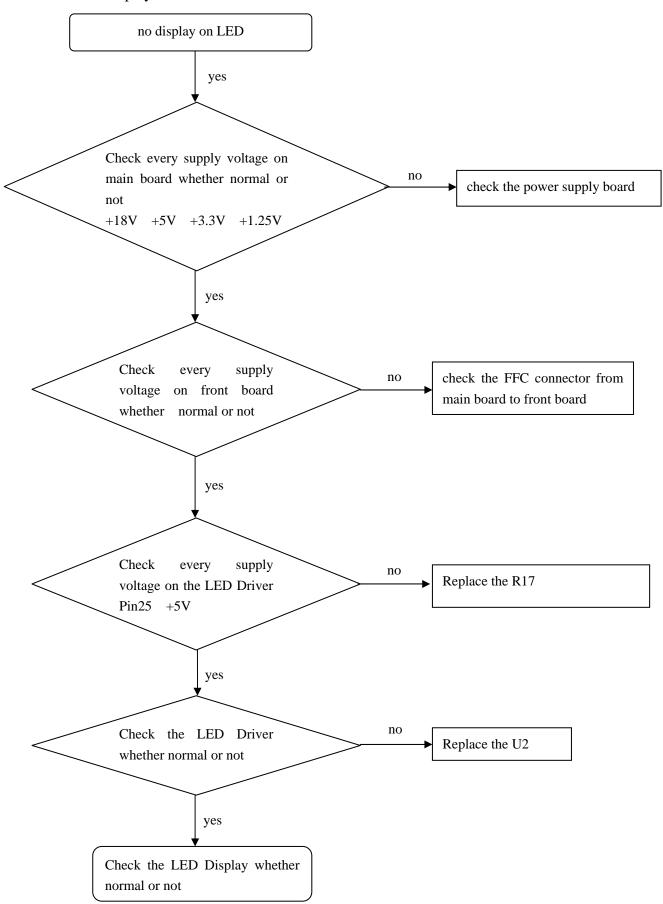
A .Mpeg software update:

- Ensure the update software name have changed into HTL4110B_xx.bin("xx" stand for area ,e.g.93,12...)
- 2. Put the update software document into USB. select USB source ,Wait for update .
- 3. The machine will restart after mpeg software update OK.

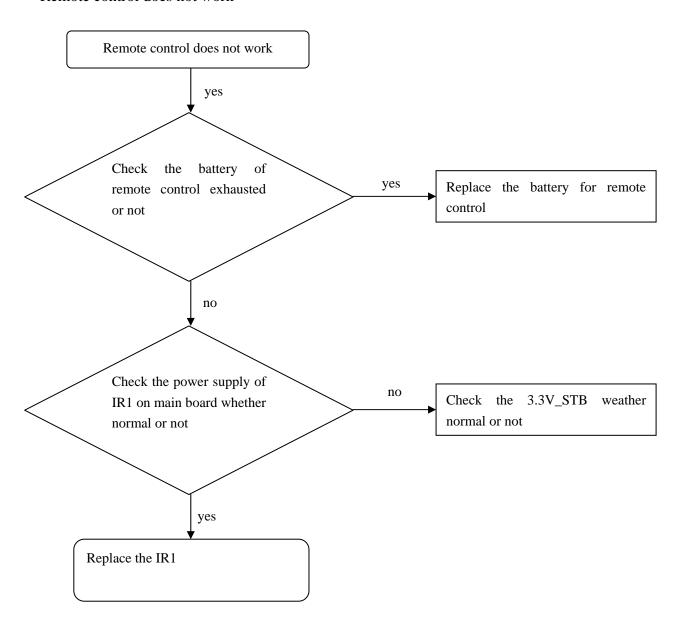
No + 18V output



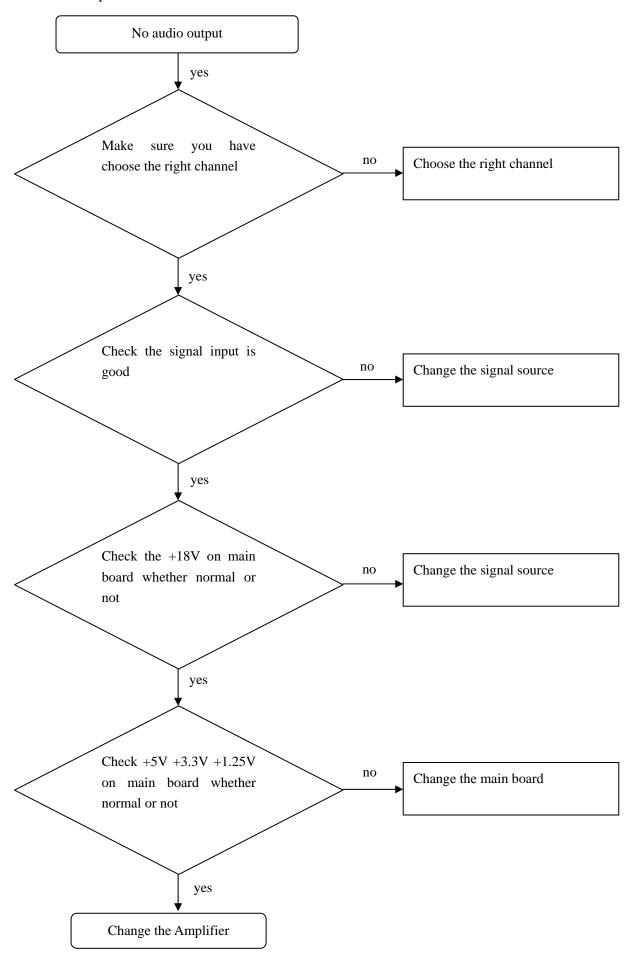
LED no display on LED



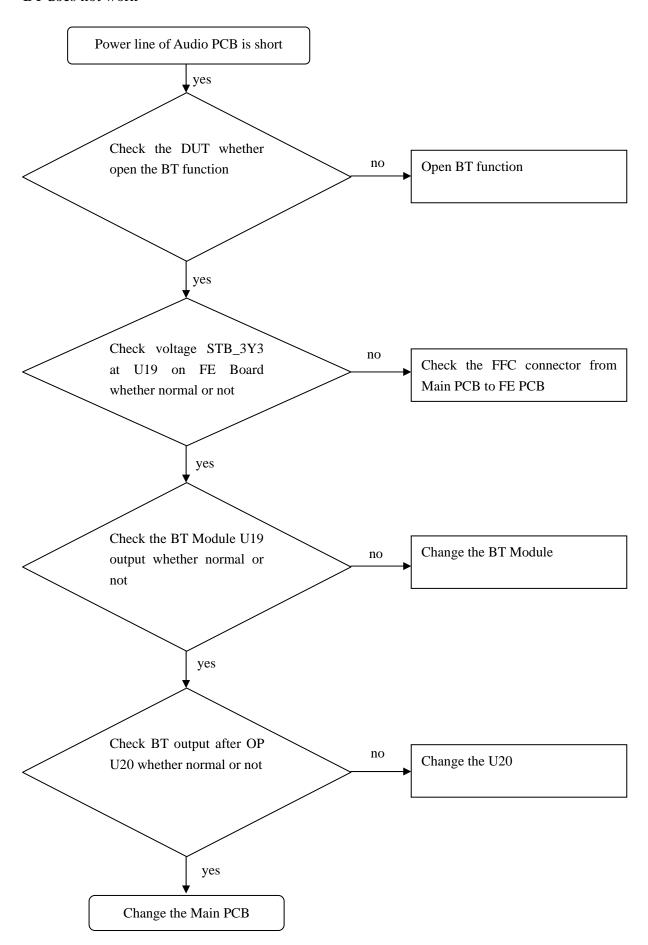
Remote control does not work



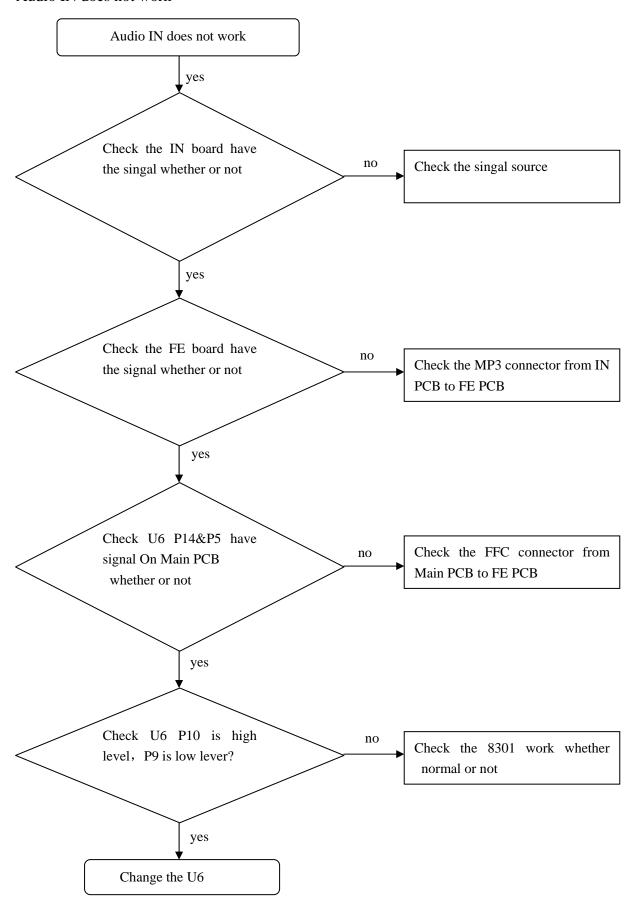
No audio output



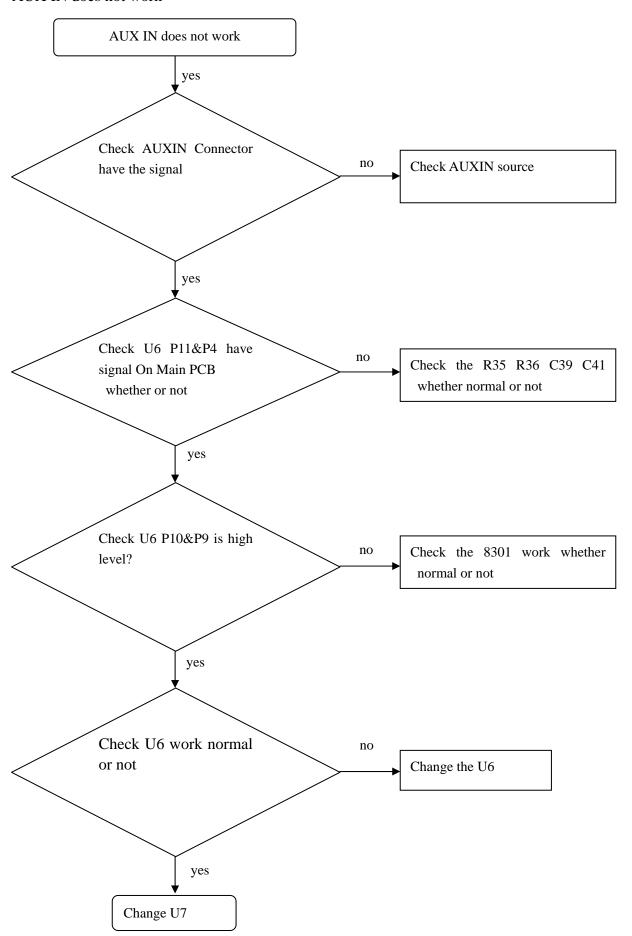
BT does not work



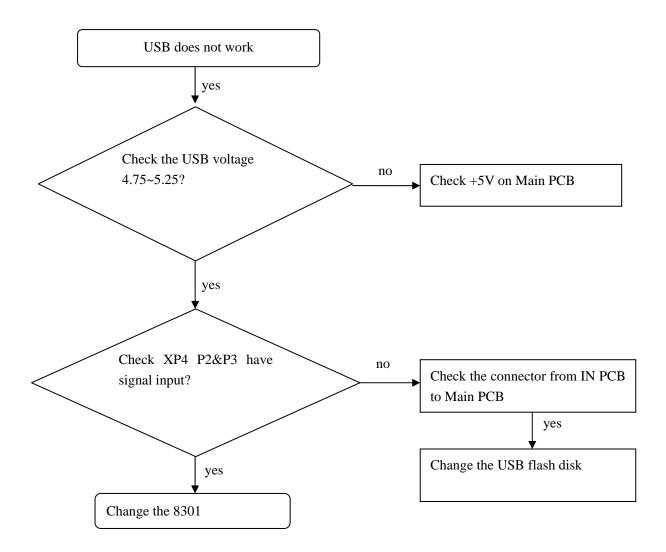
Audio IN does not work



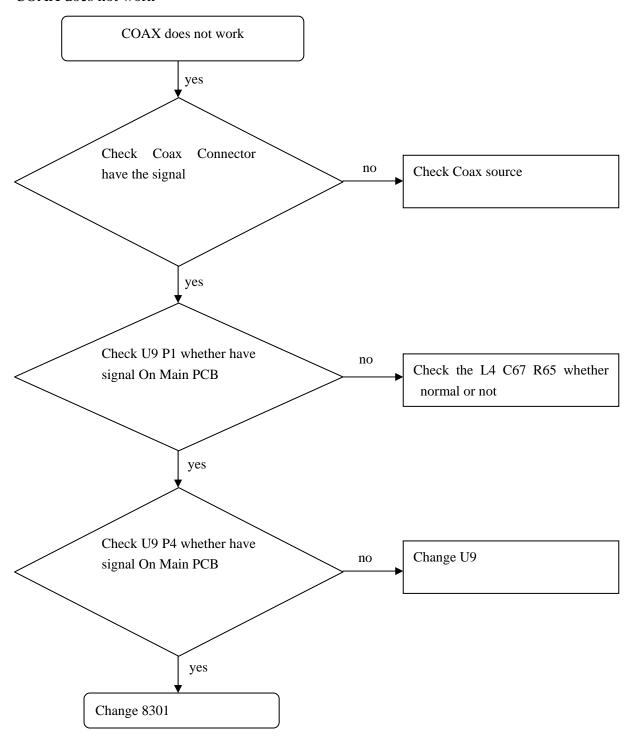
AUX IN does not work



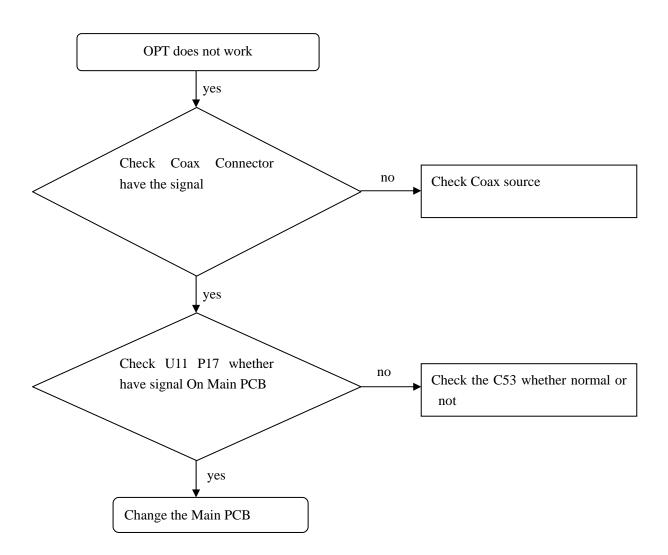
USB does not work



COAX does not work



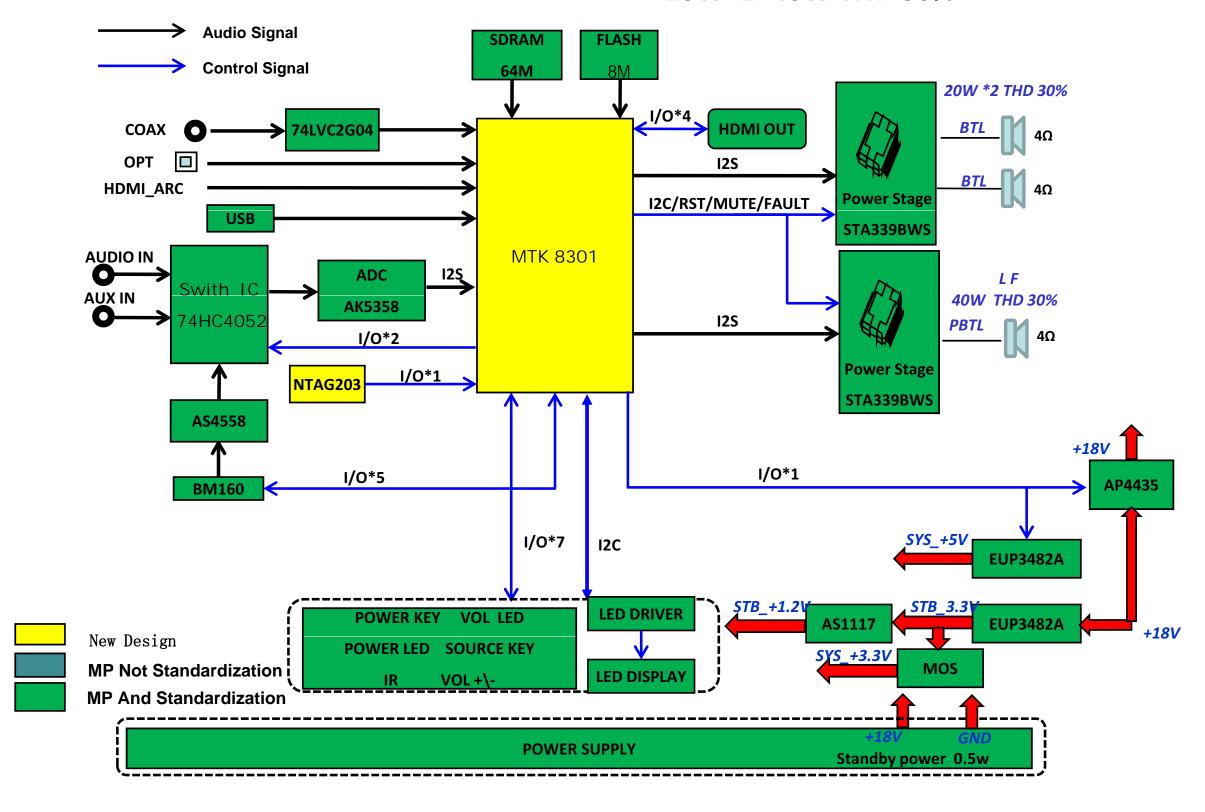
OPT does not work



6-1

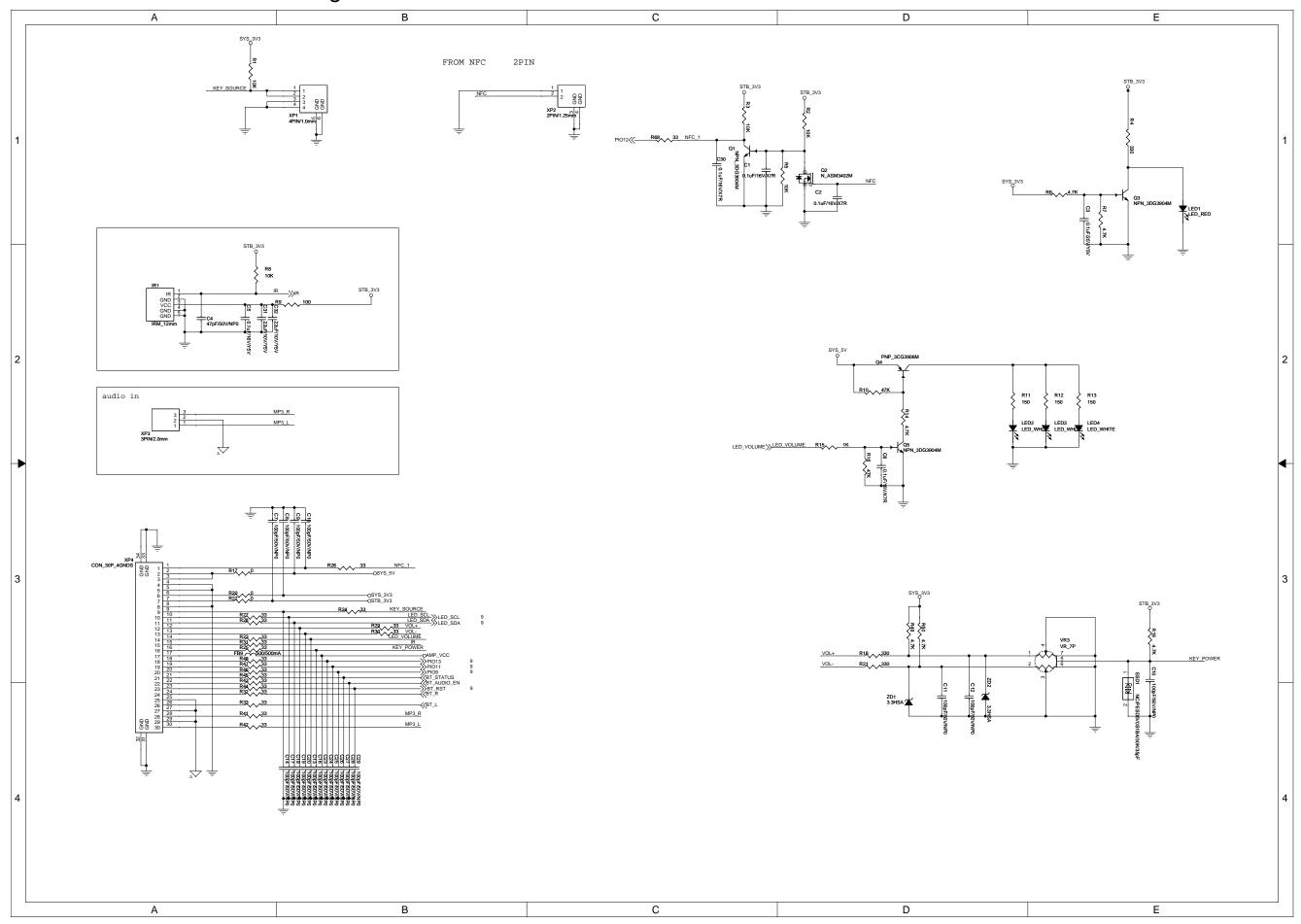
HTL4111 Block Diagram:

20W*2+40W THD 30%

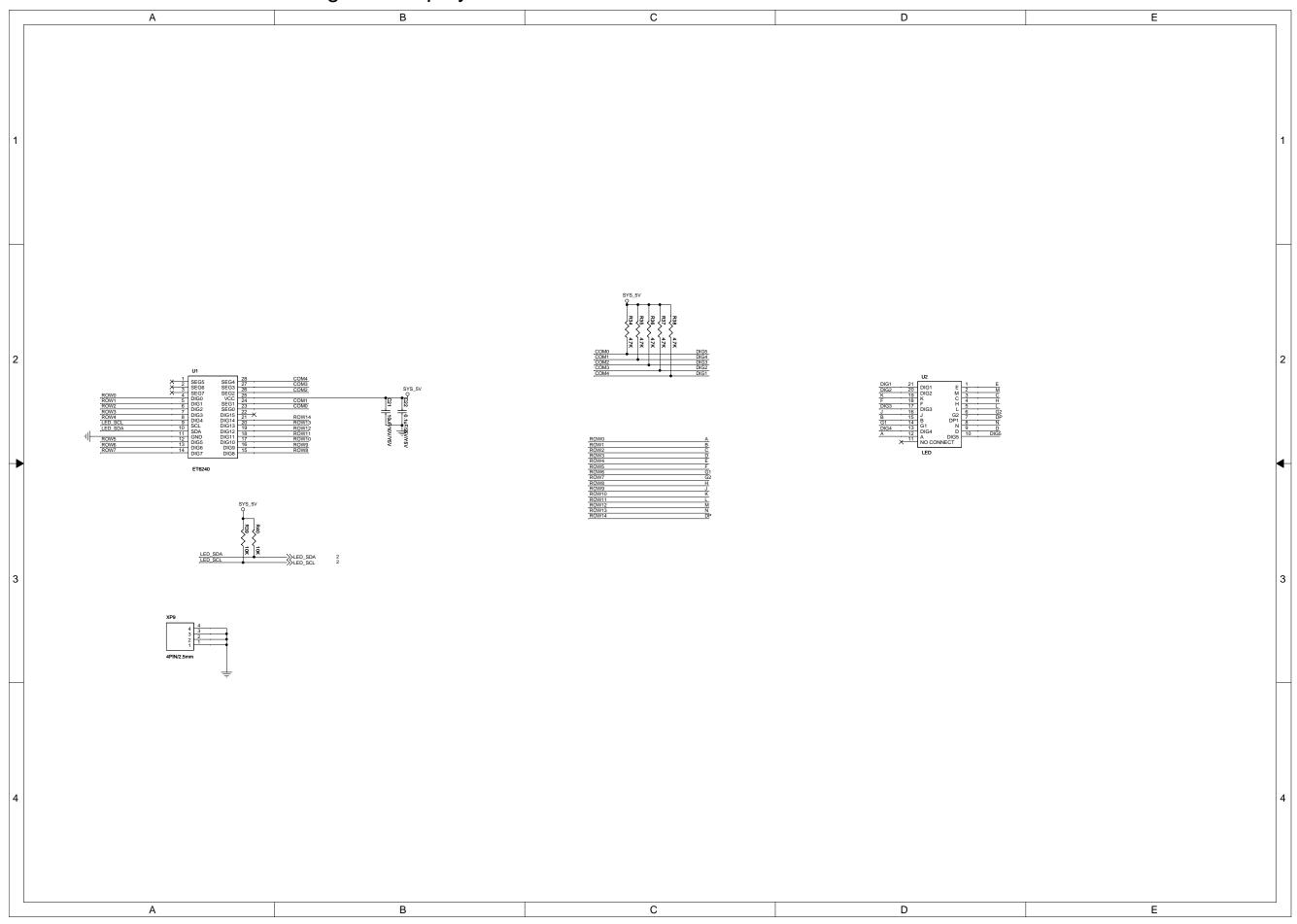


7-1

Front Control Board Circuit Diagram: IR

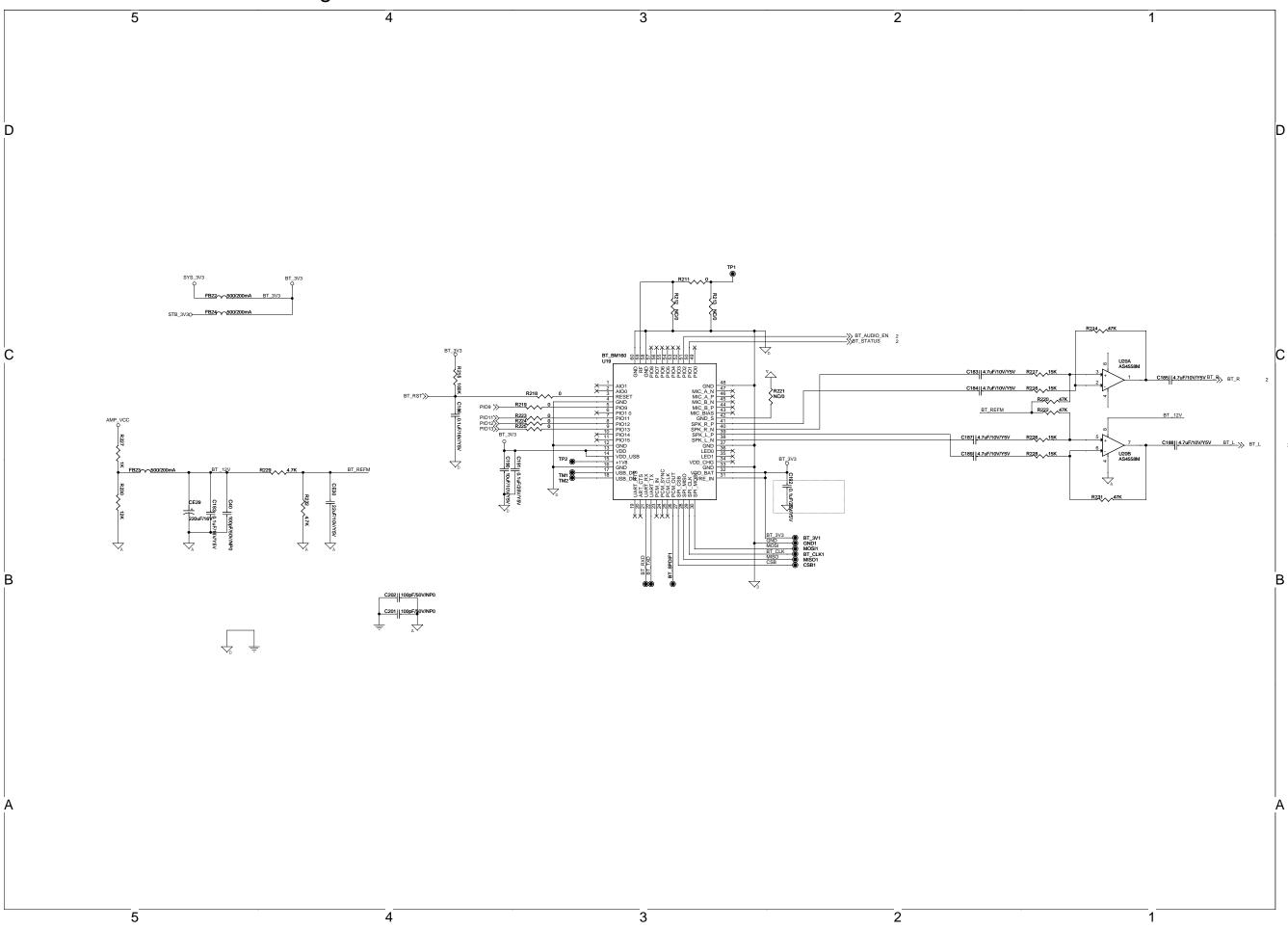


Front Control Board Circuit Diagram: Display



Front Control Board Circuit Diagram: Bluetooth

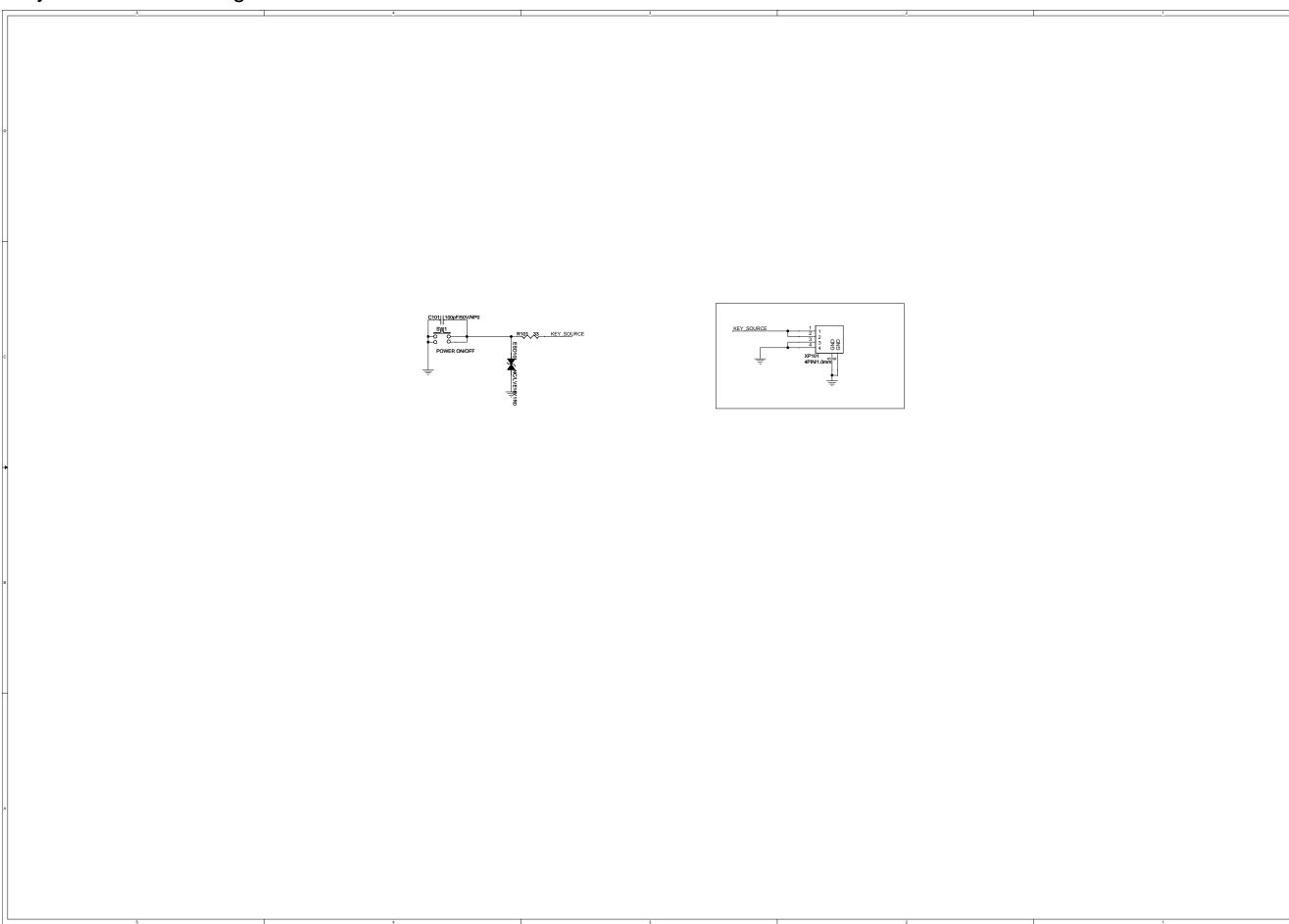
7-3



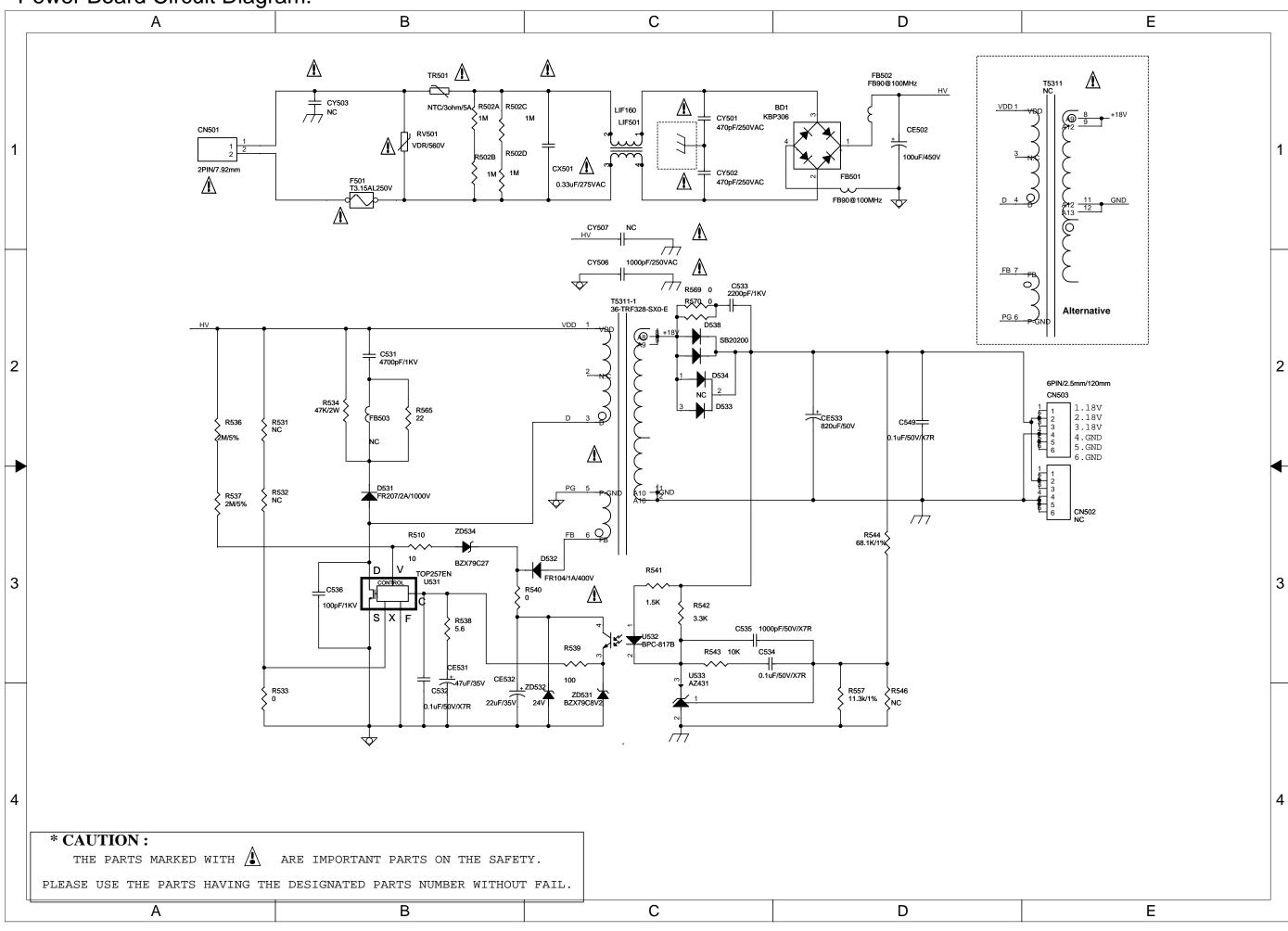
7-4

Key Board Circuit Diagram:

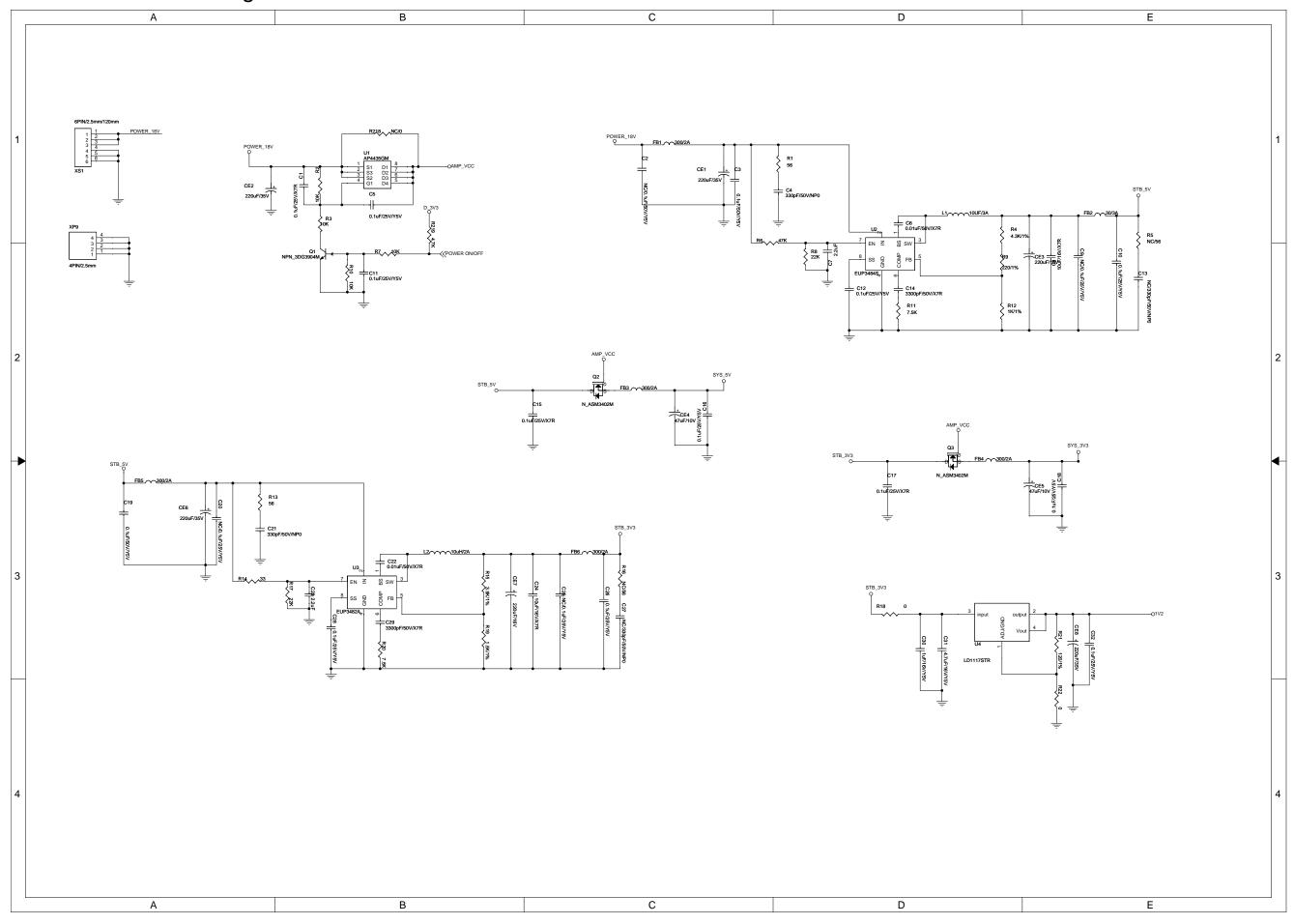
7-4



Power Board Circuit Diagram:

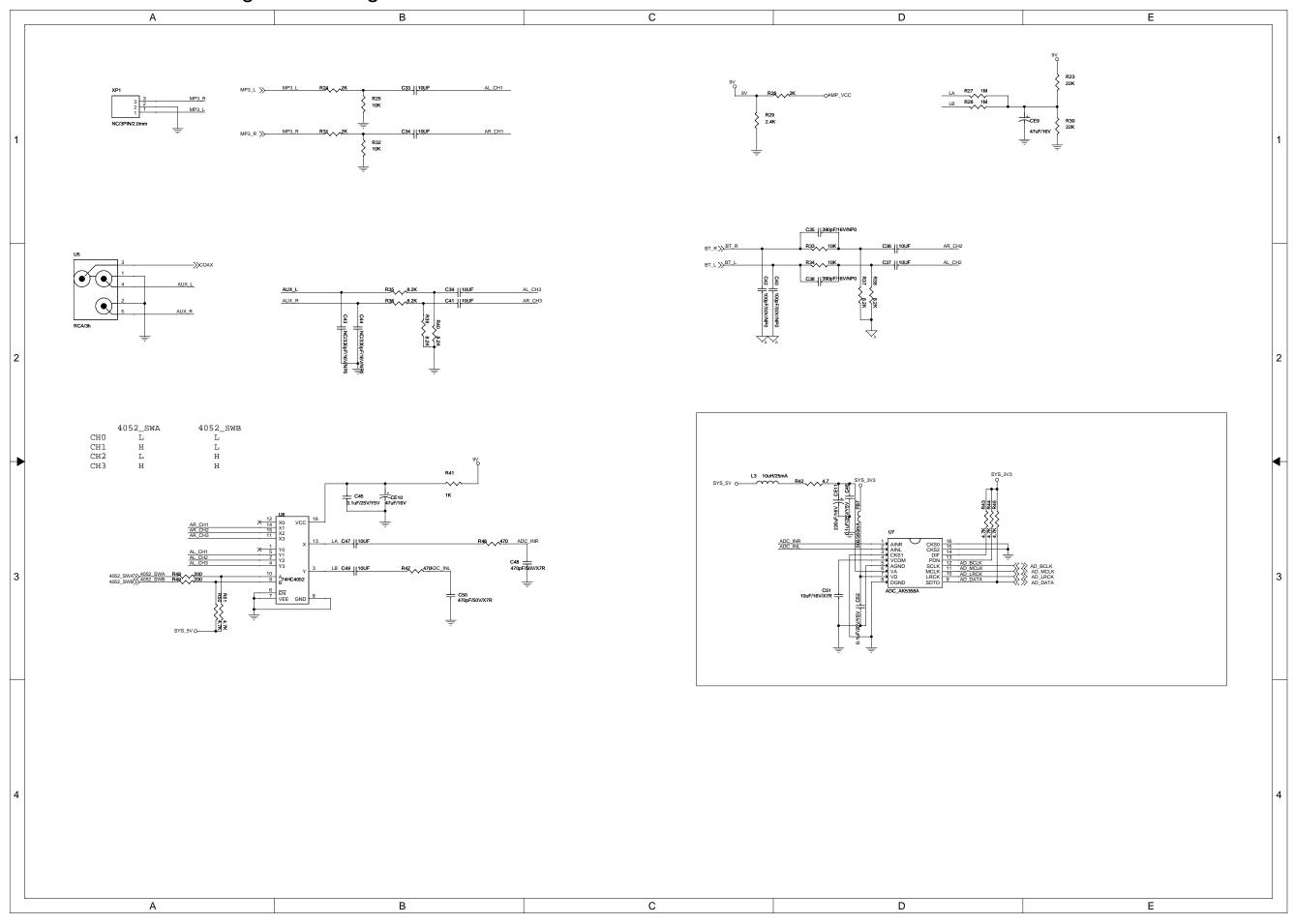


Main Board Circuit Diagram: Power

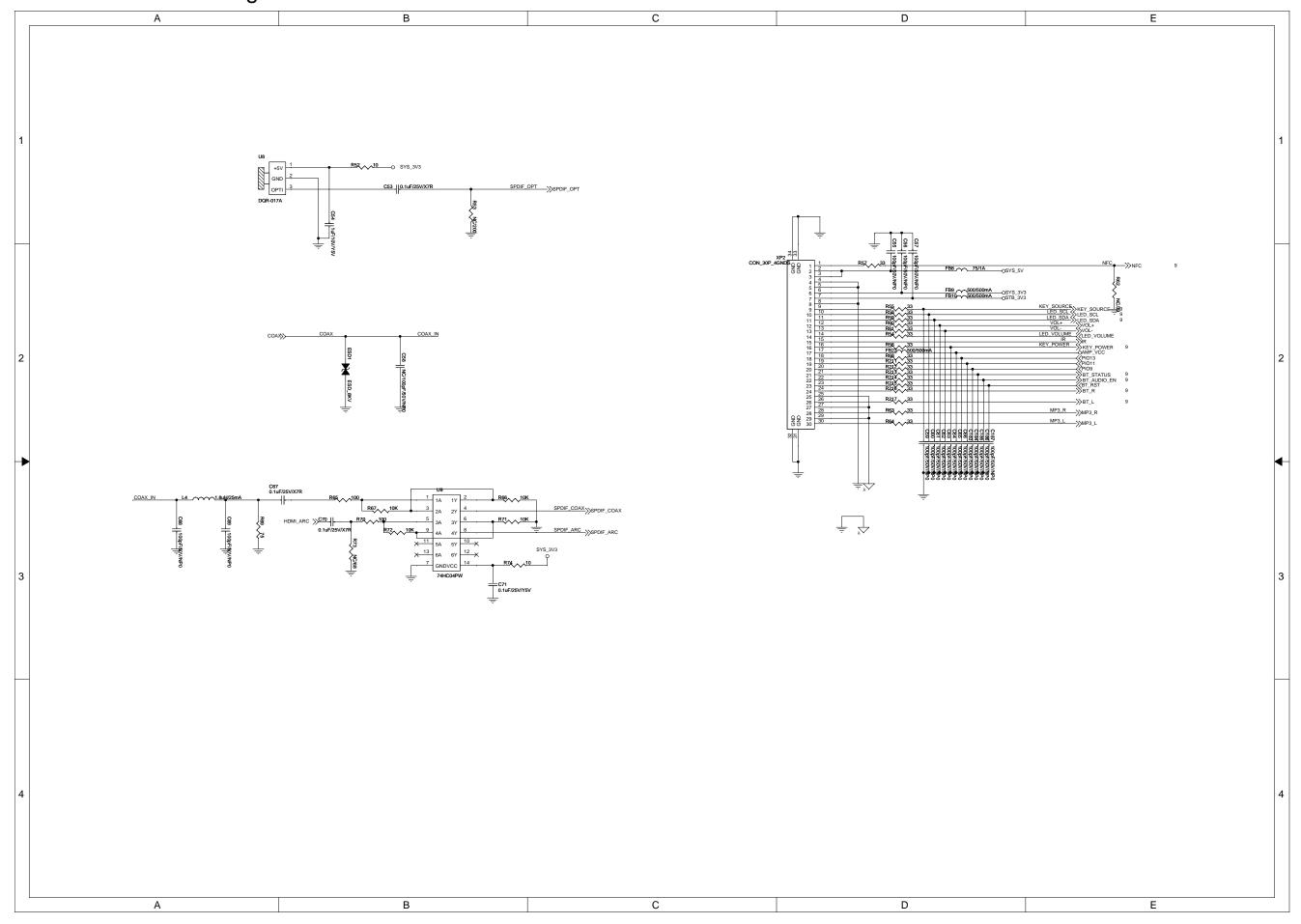


7-7

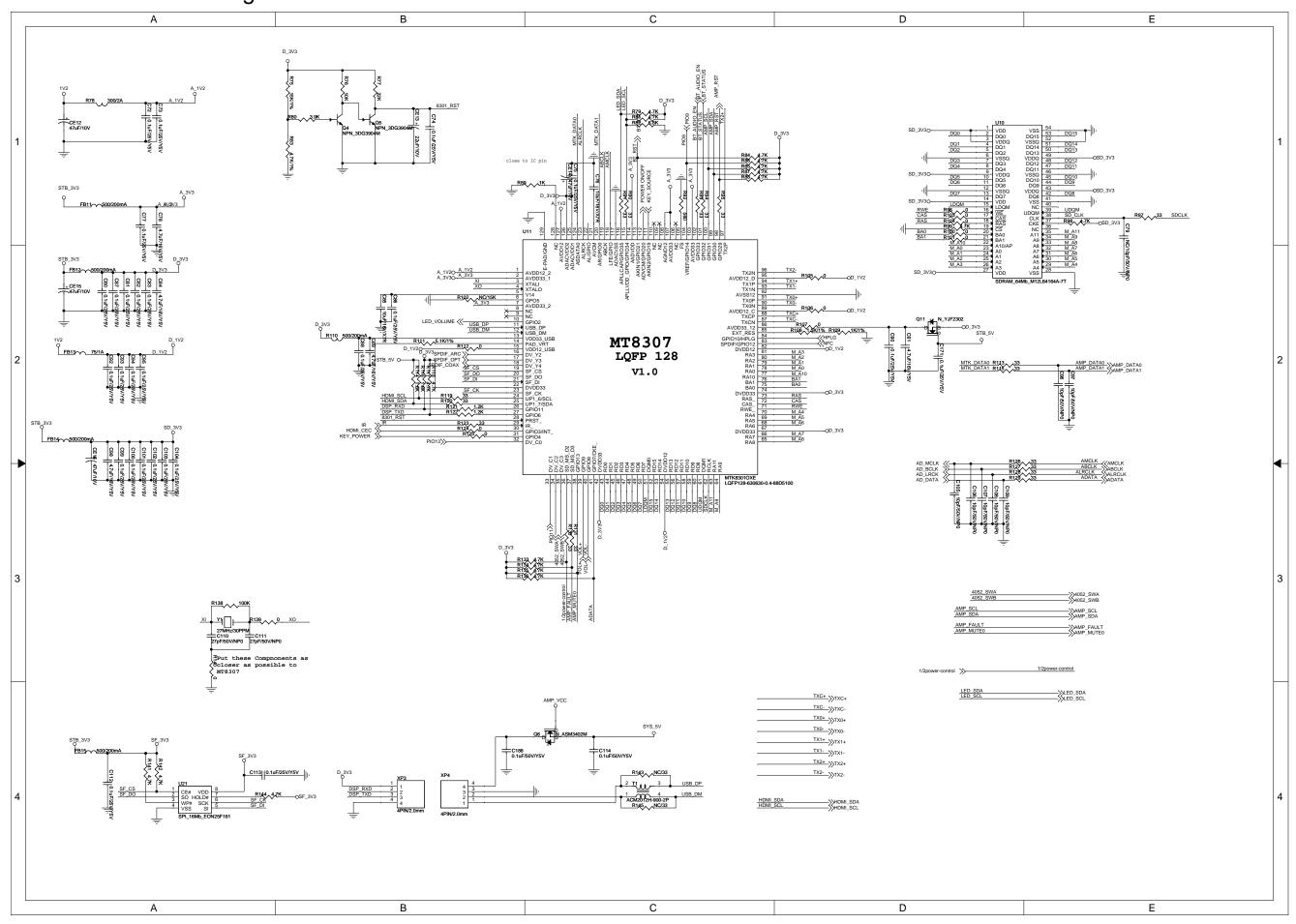
Main Board Circuit Diagram: Analog



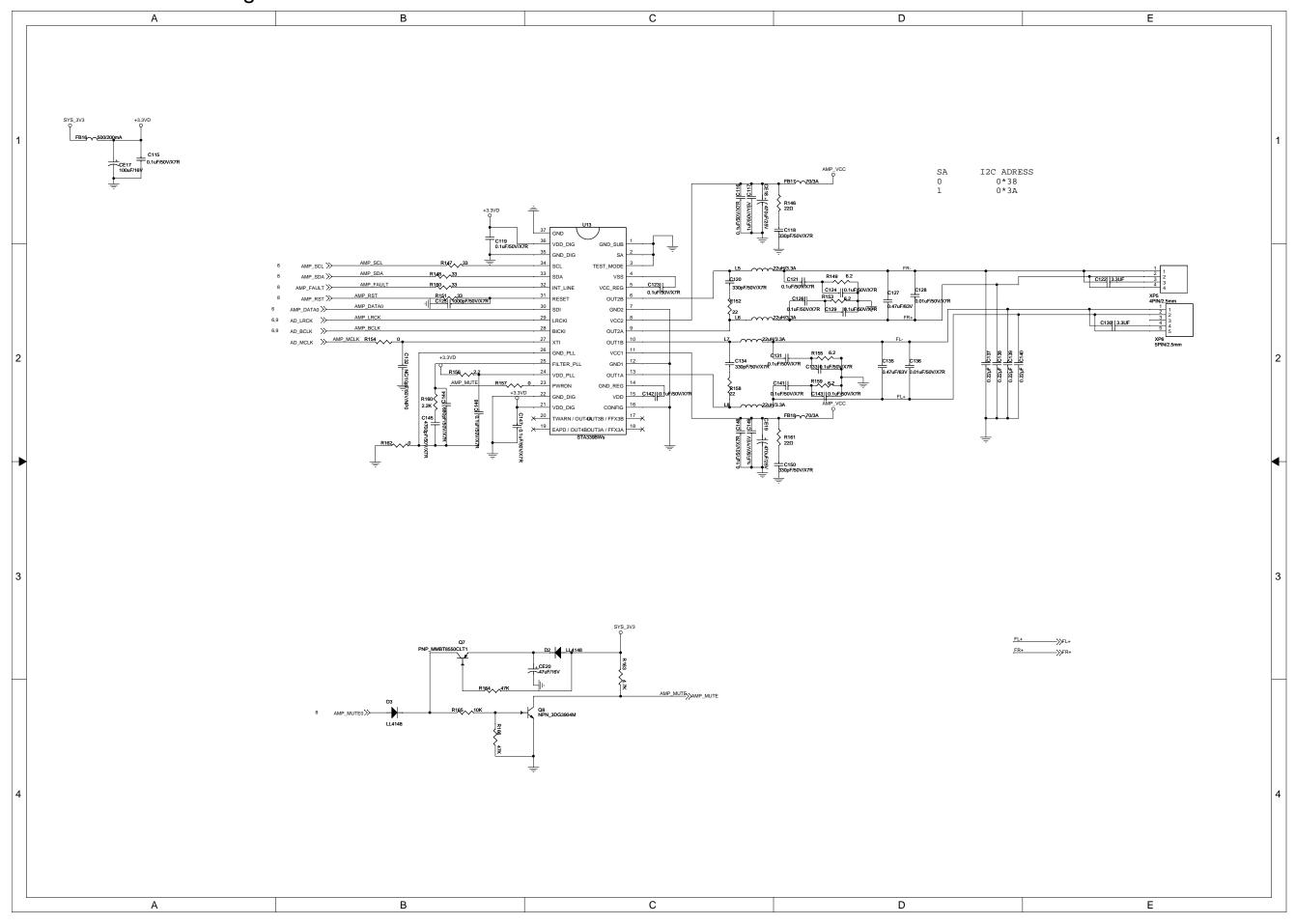
Main Board Circuit Diagram: CDAX&OPT



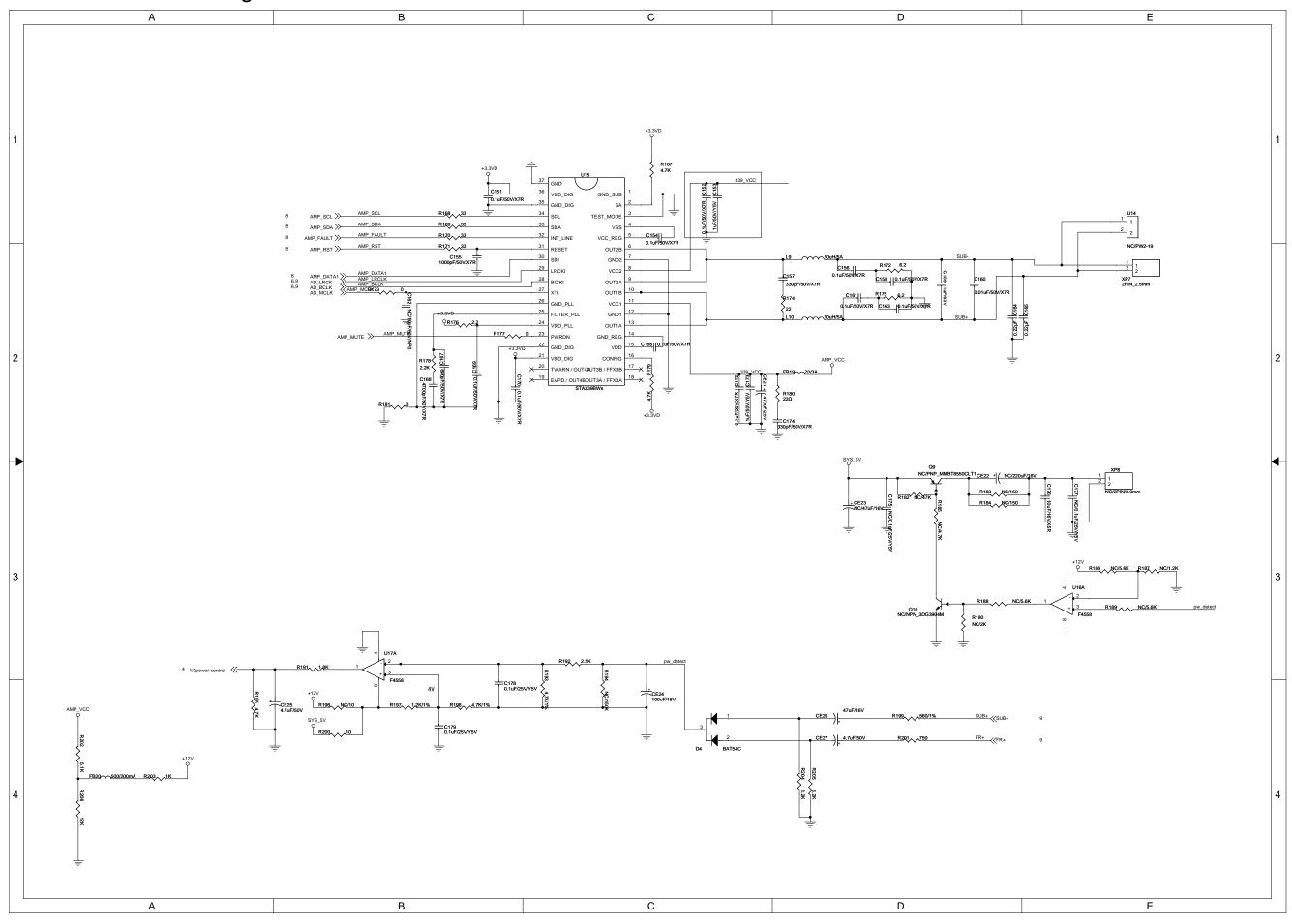
Main Board Circuit Diagram: MTK8301



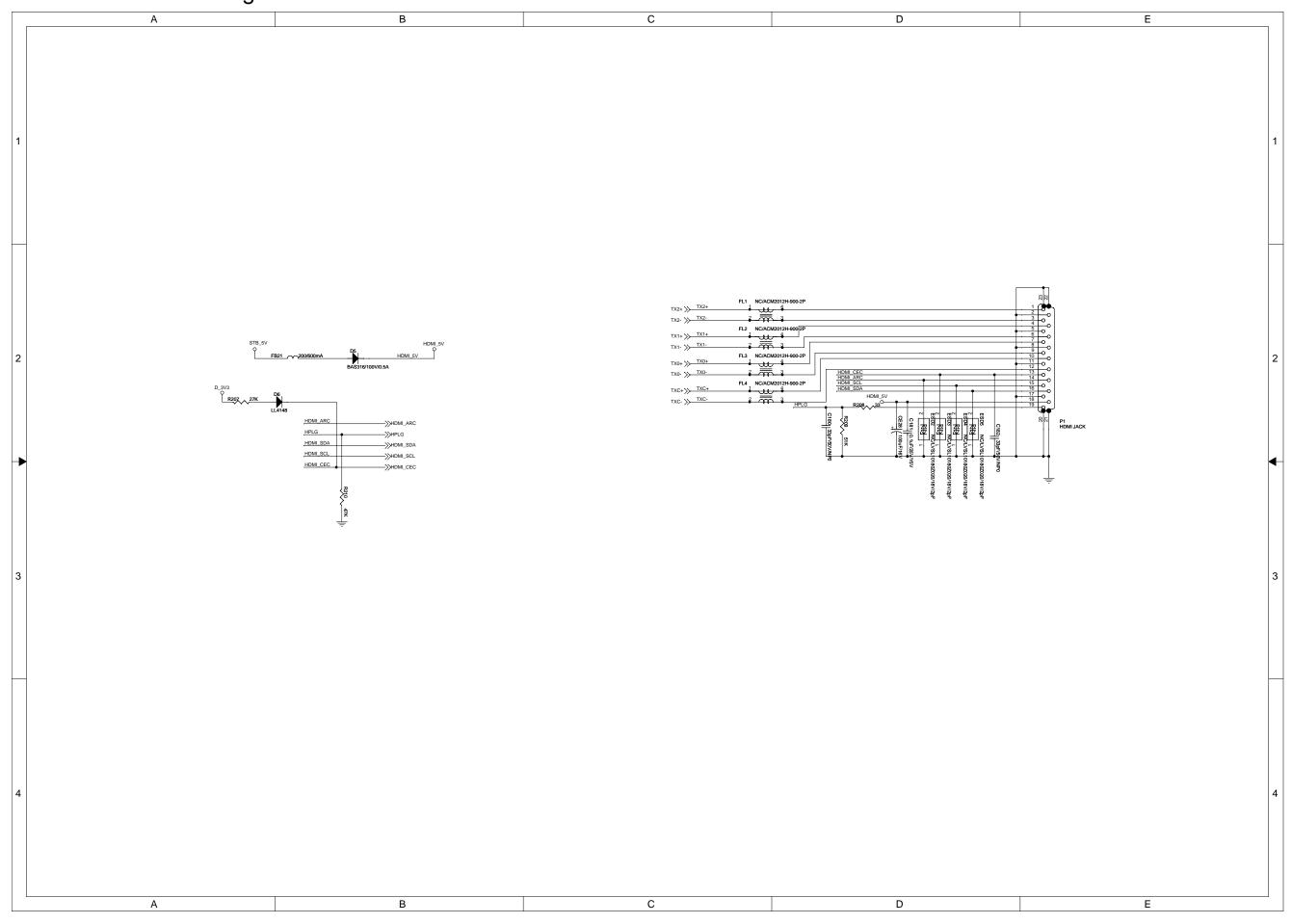
Main Board Circuit Diagram: STA339BWS



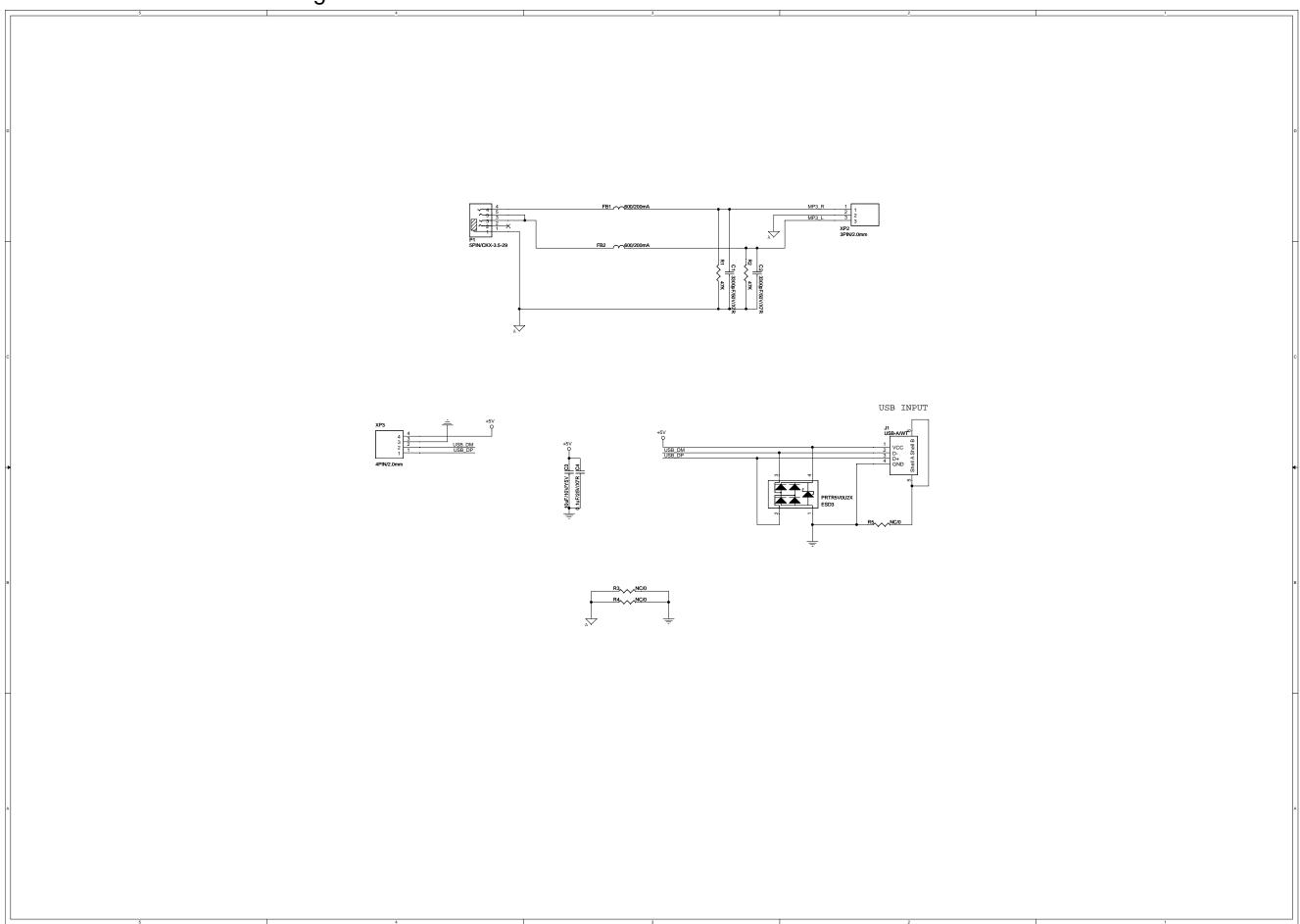
Main Board Circuit Diagram: Subwoofer AMP



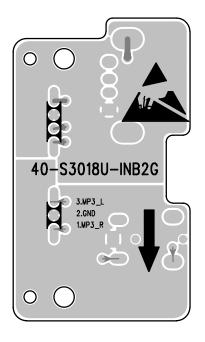
Main Board Circuit Diagram: HDMI

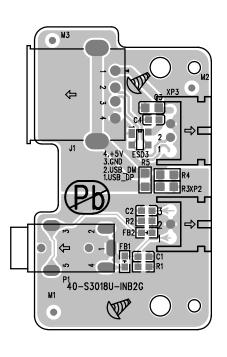


USB & MP3 board Circuit Diagram:

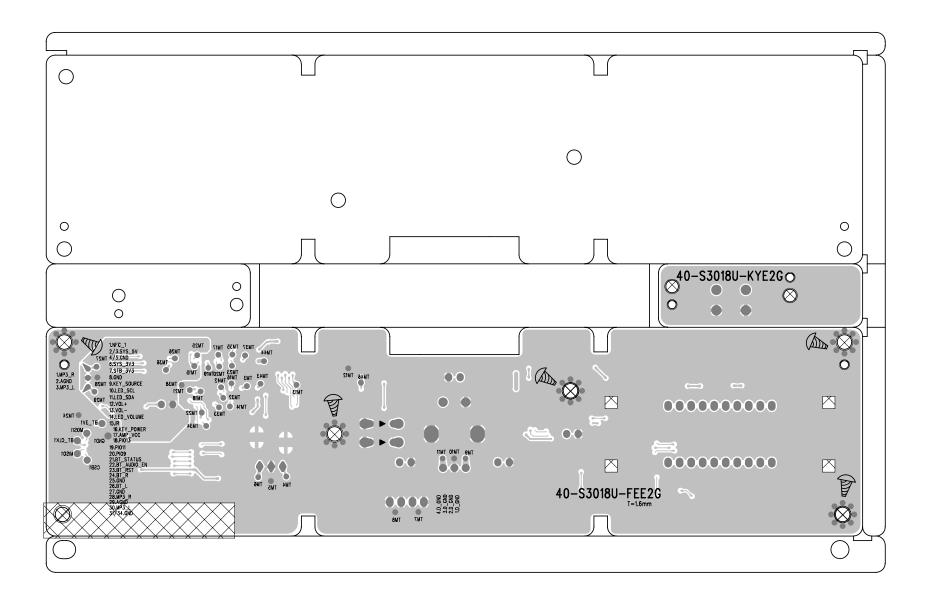


USB & MP3 board Print-Layout(bottom and top side):

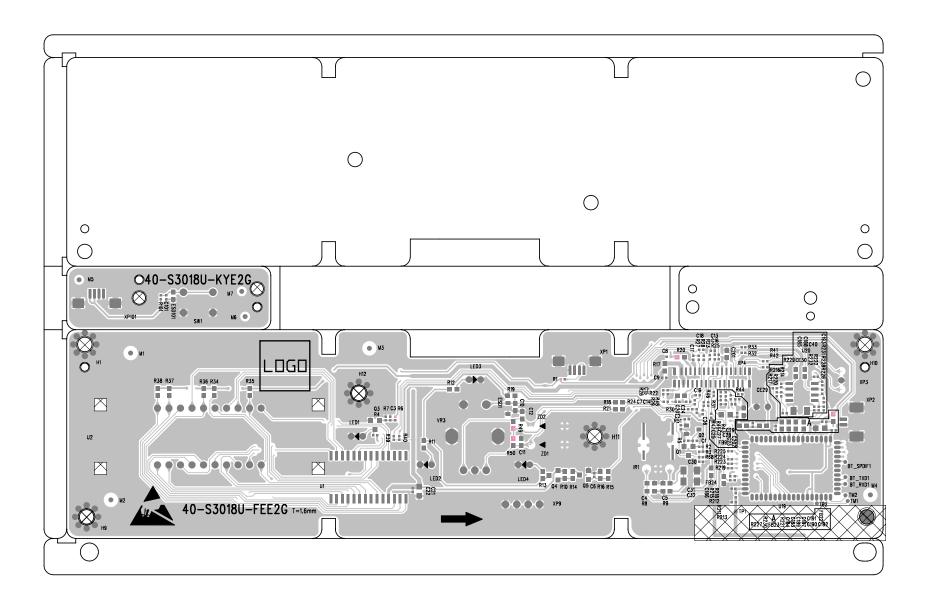




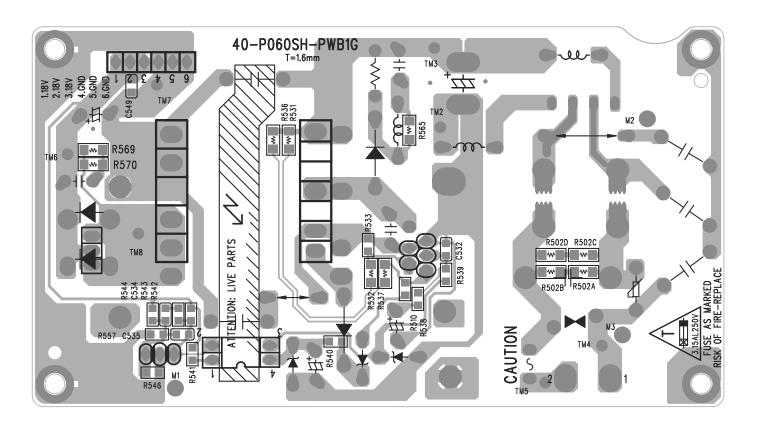
Front Control and Key board Print-Layout(bottom side):



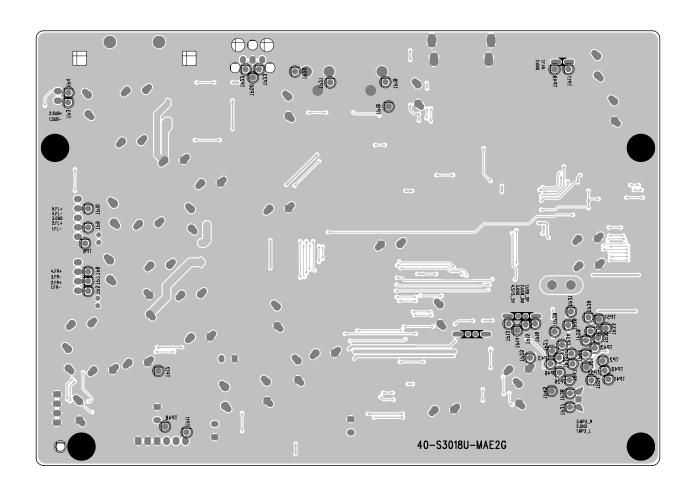
Front Control and Key board Print-Layout(Top side):



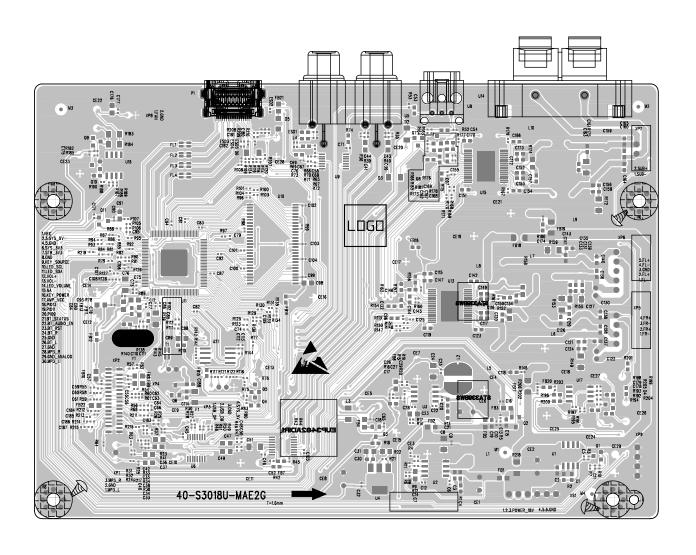
Power board Print-Layout(Bottom side):



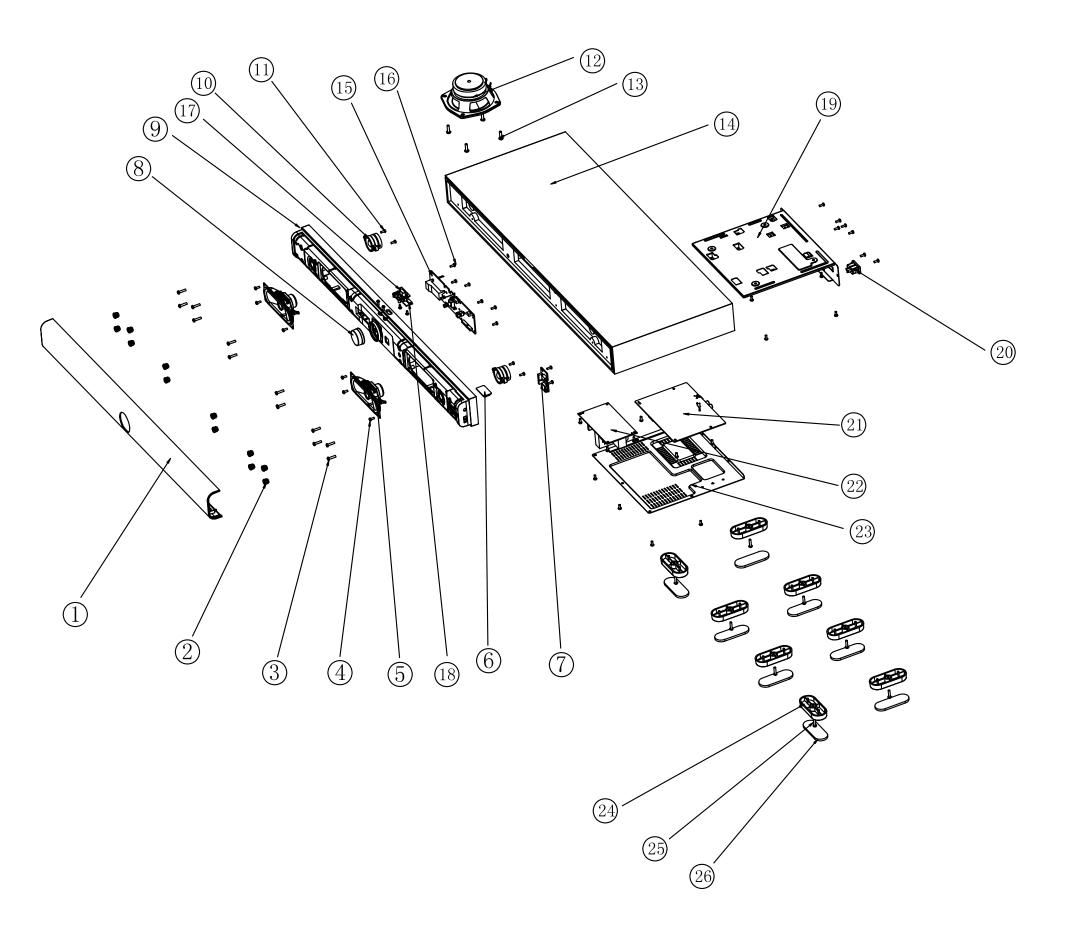
Main board Print-Layout(Bottom side):



Main board Print-Layout(Top side):



Exploded View for HTL4111:



Revision List Version 1.0 Initial Release for HTL4111B/12 by WK1338.

version 2.0 2015-12-07 Add reminder for BT & NFC pair.