Home Theater BD Player

HTB5540D/12/51/94/98/93

Service
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Service Manual

TABLE OF CONTENTS Page

CLASS 1
LASER PRODUCT

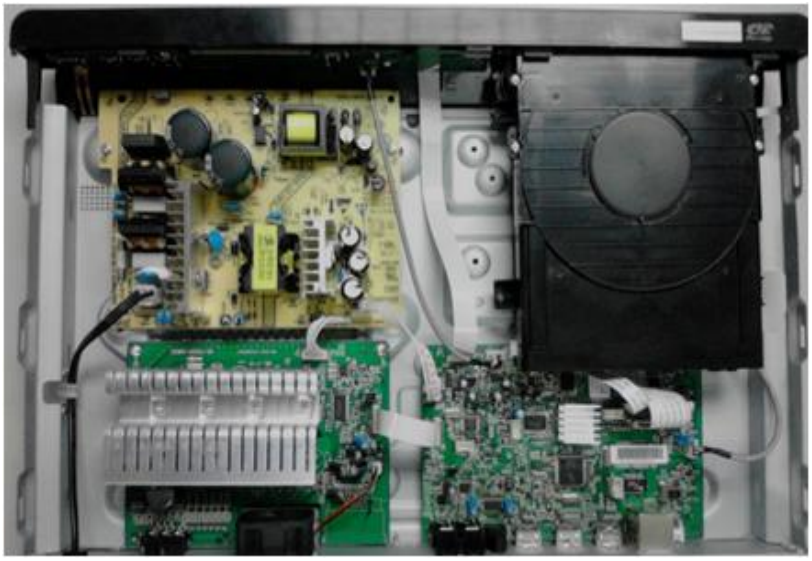
GB 3141 785 39822

Published by Arya & Stephen - 1317 Printed in The Netherlands Subject to modification

Version 1.2

PHILIPS

PCB Board Locations



VERSION VARIATIONS

Type / Versions / Board in used / Service Policy	HTB5540D				
	/12	/51	/94	/98	/93
MAIN BOARD	M	M	M	M	M
POWER BOARD	M+C	M+C	M+C	M+C	M+C
AMPLIFIER BOARD	M+C	M+C	M+C	M+C	M+C
FRONT CONTROL BOARD	M+C	M+C	M+C	M+C	M+C
TOUCH BOARD	M+C	M+C	M+C	M+C	M+C
LOADER	M	M	M	M	M

⁎Tips：	C -- Component Lever Repair M -- Module Lever Repair X -- Used

Product specifications

Note

- Specifications and design are subject to change without notice.

Region codes

The type plate on the back or bottom of the home theater shows which regions it supports.

Country	DVD	BD
Europe, United Kingdom	ALL 2	B
Asia Pacific, Taiwan, Korea	ALL 3	A
Latin America	ALL 4	A
Australia, New Zealand	ALL 4	B
Russia, India	ALL 5	C
China	ALL 6	C

Media formats

- AVCHD, BD, BD-R/ BD-RE, BD-Video, DVD-Video, DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL, CD-R/CD-RW, Audio CD, Video CD/SVCD, Picture files, MP3 media, WMA media, DivX Plus HD media, USB storage device

File formats

- Audio:
  - .aac, .mka, .mp3, .wma, .wav, .mp4, .m4a, .flac, .ogg
  - .ra (Available only in Asia Pacific and China)
- Video:
  - .avi, .divx, .mp4, .m4v, .mkv, .asf, .wmv, .m2ts, .mpg, .mpeg, .flv, .3gp
  - .rmvb, .rm, .rv (Available only in Asia Pacific and China)
- Picture: .jpg, .jpeg, .jpe, .gif, .png

Bluetooth

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

Audio formats

Your home theater supports the following audio files.

(. ra files are supported only in Asia Pacific and China)

Extension	Container	Audio codec	Bit rate
.mp3	MP3	MP3	Upto 320 kbps
.wma	ASF	WMA	Upto 192 kbps
.aac	AAC	AAC, HE-AAC	Upto 192 kbps
.wav	WAV	PCM	27.648 Mbps
.m4a	MKV	AAC	192 kbps
.mka	MKA	PCM	27.648 Mbps
		Dolby Digital	640 kbps
		DTS core	1.54 Mbps
		MPEG	912 kbps

		MP3	Upto 320 kbps
		WMA	Upto 192 kbps
		AAC, HE-AAC	Upto 192 kbps
.ra	RM	AAC, HE-AAC	Upto 192 kbps
		Cook	96469 bps
.flac	FLAC	FLAC	Upto 24 bps
.ogg	OGG	Vorbis	Variable bit rate, maximum block size 4096
		MP3	Upto 320 kbps

Video formats

If you have a high definition TV, your home theater allows you to play your video files with:

- Resolution: 1920 x 1080 pixels at
- Frame rate: 6 ~ 30 frames per second.

.avi files in AVI container

Audio codec	Video codec	Bit rate
PCM, Dolby Digital, DTS core, MP3, WMA	DivX 3.11, DivX 4.x, DivX 5.x, DivX 6.x	10 Mbps max
	MPEG 1, MPEG 2	40 Mbps
	MPEG 4 SP / ASP	38.4 Mbps
	H.264/AVC upto HiP@4.2	25 Mbps
	WMV9	45 Mbps

.divx files in AVI container

Audio codec	Video codec	Bit rate
PCM, Dolby Digital, MP3, WMA	DivX 3.11, DivX 4.x, DivX 5.x, DivX 6.x	10 Mbps max

.mp4 or .m4v files in MP4 container

Audio codec	Video codec	Bit rate
Dolby Digital, MPEG, MP3, AAC, HE-AAC, DD+	MPEG 1, MPEG 2	40 Mbps
	MPEG 4 ASP	38.4 Mbps
	H.264/AVC HiP@4.2	25 Mbps

.mkv files in MKV container

Audio codec	Video codec	Bit rate
PCM, Dolby Digital, DTS core, MPEG, MP3, WMA, AAC, HE-AAC, DD+	DivX Plus HD	30 Mbps
	MPEG 1, MPEG 2	40 Mbps
	MPEG 4 ASP	38.4 Mbps
	H.264/AVC HiP@4.2	25 Mbps
	WMV9	45 Mbps

.m2ts files in MKV container

Audio codec	Video codec	Bit rate
PCM, Dolby Digital, DTS core, MPEG, MP3, WMA, AAC, HE-AAC, DD+	MPEG 1, MPEG 2	40 Mbps
	MPEG 4 ASP	38.4 Mbps
	H.264/AVC HiP@4.2	25 Mbps
	WMV9	45 Mbps

.asf and .wmv files in ASF container

Audio codec	Video codec	Bit rate
Dolby Digital, MP3, WMA, DD+	MPEG 4 ASP	38.4 Mbps
	H.264/AVC HiP@4.2	25 Mbps
	WMV9	45 Mbps

.mpg and .mpeg files in PS container

Audio codec	Video codec	Bit rate
PCM, DTS core, MPEG, MP3	MPEG 1, MPEG 2	40 Mbps

.flv files in FLV container

Audio codec	Video codec	Bit rate
MP3, AAC	H.264/AVC upto HiP@4.2	25 Mbps
	H.263	38.4 Mbps

.3gp files in 3GP container

Audio codec	Video codec	Bit rate
AAC, HE-AAC	MPEG 4 ASP	38.4 Mbps
	H.264/AVC upto HiP@4.2	25 Mbps max

.rm, .rv, and .rmvb files in RM container (Available only in Asia Pacific and China)

Audio codec	Video codec	Bit rate
AAC, COOK	RV30, RV40	40 Mbps

Amplifier

- Total output power: 1000W RMS (30% THD)
- Frequency response: 20 Hz-20 kHz / ±3 dB
- Signal-to-noise ratio: > 65 dB (CCIR) / (A-weighted)
- Input sensitivity:
  - AUX: 2 V
  - AUDIO IN: 1 V

Video

- Signal system: PAL / NTSC
- HDMI output: 480i/576i, 480p/576p, 720p, 1080i, 1080p, 1080p24

Audio

- S/PDIF Digital audio input:
  - Coaxial: IEC 60958-3
  - Optical: TOSLINK
- Sampling frequency:
  - MP3: 32 kHz, 44.1 kHz, 48 kHz
  - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
  - MP3: 32 kbps - 320 kbps
  - WMA: 48 kbps - 192 kbps

Radio

- Tuning range:
  - Europe/Russia/China: FM 87.5-108 MHz (50 kHz)
  - Asia Pacific/Latin America: FM 87.5-108 MHz (50/100 kHz)
- Signal-to-noise ratio: FM 50 dB
- Frequency response: FM 180 Hz-12.5 kHz / ±3 dB

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class (MSC)
- File system: FAT16, FAT32, NTFS
- USB connector:
  - Front panel: 5V ⎓, 1A
  - Rear panel: 5V ⎓, 500mA

Main unit

- Power supply:
  - Europe/China: 220-240 V~, 50 Hz

  - Latin America/Asia Pacific: 110-127 V/220-240 V~, 50-60 Hz
  - Russia/India: 220-240 V~, 50 Hz
- Power consumption: 160 W
- Standby power consumption: ≤ 0.5 W
- Dimensions (WxHxD): 435 x 58 x 280 mm
- Weight: 2.66 kg

Subwoofer

- Output power: 166 W RMS (30% THD)
- Impedance: 4 ohm
- Speaker drivers: 165 mm (6.5") woofer
- Dimensions (WxHxD): 228.8 x 293 x 310 mm
- Weight: 4 kg
- Cable length: 3 m

Speakers

Center speaker:

- Output power: 166 W RMS (30% THD)
- Speaker impedance: 4 ohm
- Speaker drivers: 1 x 78 mm (3") full range
- Dimensions (WxHxD): 314.2 x 111.04 x 83 mm
- Weight: 1 kg
- Cable length: 2 m

Front/Rear speaker:

- Output power: 4 x 166 W RMS (30% THD)
- Speaker impedance: 4 ohm
- Speaker drivers: 1 x 78 mm (3") full range
- Dimensions (WxHxD):
  - **HTB5510**: 100.17 x 227.7 x 130.33 mm (front); 100.17 x 191.4 x 125.3 (rear)
  - **HTB5540**: 250 x 1179.1 x 250 mm (front); 100.17 x 191.4 x 125.3 mm (rear)
  - **HTB5570**: 250 x 1179.1 x 250 mm (front/rear)
- Weight:
  - **HTB5510**: 0.63 kg/each (front); 0.60 kg/each (rear)
  - **HTB5540**: 3.64 kg/each (front); 0.61 kg/each (rear)
  - **HTB5570**: 2.18 kg/each (front); 2.21 kg/each (rear)
- Cable length (front):
  - **HTB5510**: 3 m (front); 10 m (rear)
  - **HTB5540**: 4 m (front); 10 m (rear)
  - **HTB5570**: 4 m (front); 11 m (rear)

Remote control batteries

- 2 x AAA-R03-1.5 V

Laser

- Laser Type (Diode): InGaN/AlGaN (BD), AlGaInP (DVD/CD)
- Wave length: 405 +7 nm/-7 nm (BD), 655 +10 nm/-10 nm (DVD), 790 +10 nm/-20 nm (CD)
- Output power (Max. ratings): 20 mW (BD), 6 mW (DVD), 7 mW (CD)

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 ⚠, 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:

1) Unplug the mains cord, and connect a wire between the two pins of the mains plug.
2) Set the mains switch the "on" position (keep the mains cord unplug).
3) 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 1MΩ.
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:

1) 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.

Service Hints

CAUTION

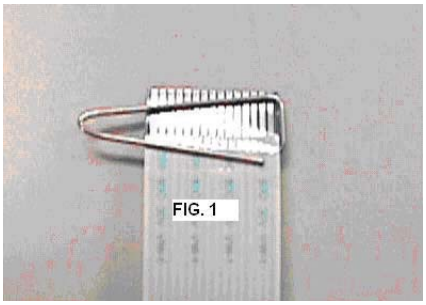
CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE DRIVE ELECTRONICS WHEN CONNECTING A NEW DRIVE.THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

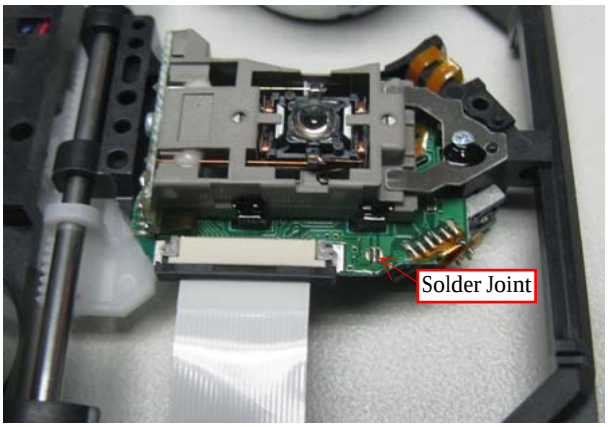
ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

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
  - To reach at least a solder-temperature of 400°C,
  - To stabilize the adjusted temperature at the solder-tip
  - 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.

EN Before using your product, read all accompanying safety information

CS Před použitím produktu si přečtěte doprovodné bezpečnostní informace

DA Læs alle medfølgende sikkerhedsoplysninger, inden du tager produktet i brug

DE Lesen Sie vor Verwendung dieses Produkts alle begleitenden Sicherheitsinformationen

EL Πριν χρησιμοποιήσετε το προϊόν, διαβάστε όλες τις παρεχόμενες πληροφορίες ασφάλειας

ES Antes de usar el producto, lea toda la información de seguridad adjunta

FI Lue kaikki turvallisuustiedot ennen tuotteen käyttöä

FR Avant d'utiliser votre produit, lisez l'intégralité des consignes de sécurité jointes

HU A termék használata előtt alaposan olvassa el a mellékelt biztonsági tudnivalókat

IT Prima di utilizzare il prodotto, leggere tutte le relative informazioni sulla sicurezza

NL Lees voordat u het product gaat gebruiken eerst alle bijbehorende veiligheidsinformatie

NO Lees voordat u het product gaat gebruiken eerst alle bijbehorende veiligheidsinformatie

PL Przed rozpoczęciem korzystania z produktu należy zapoznać się z informacjami dotyczącymi bezpieczeństwa

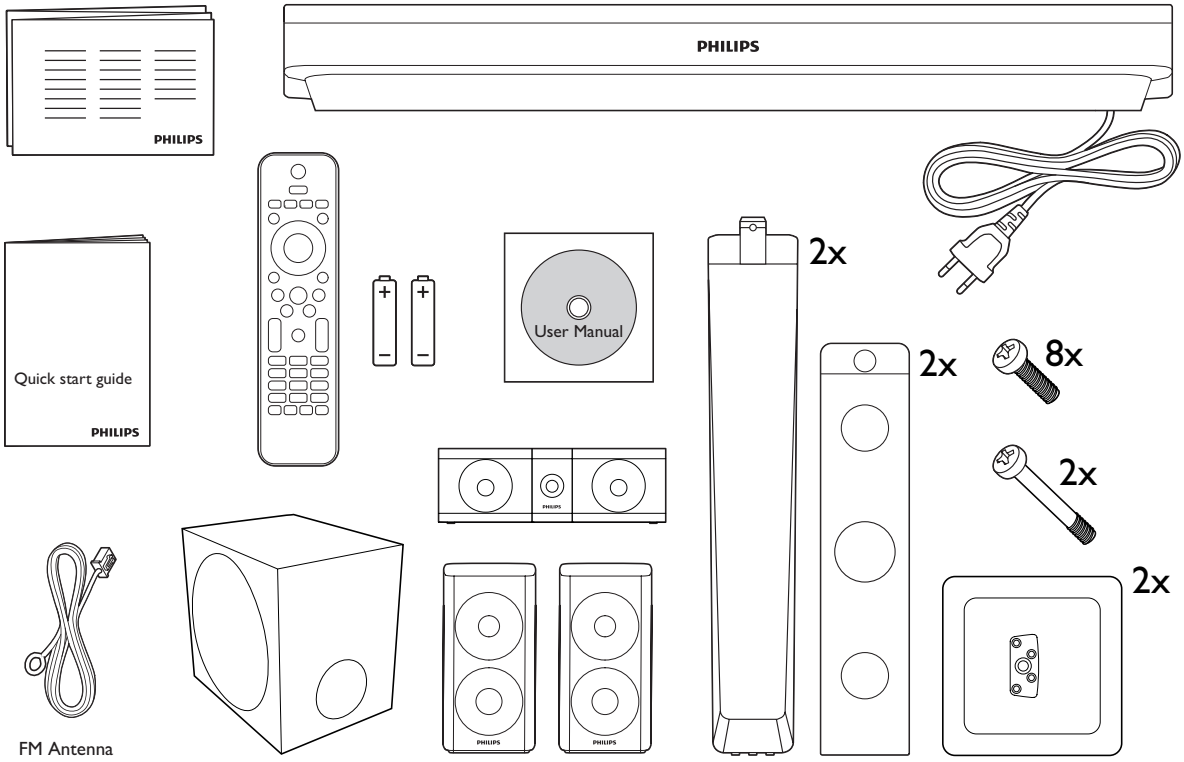
PT Antes de utilizar o produto, leia todas as informações de segurança que o acompanham

RO Înainte de a utiliza acest produs, citiţi toate informaţiile de siguranţă care îl însoţesc

SK Pred použitím produktu si prečítajte všetky sprievodné bezpečnostné informácie maklumat keselamatan yang disertakan

SV Innan du använder produkten ska du läsa all tillhörande säkerhetsinformation

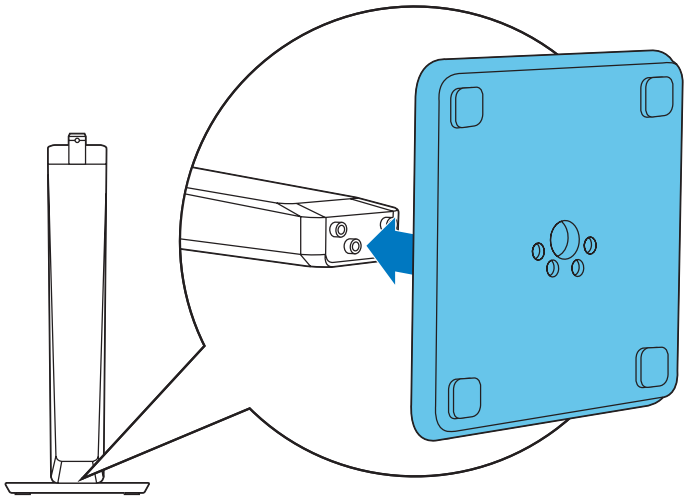
TR Ürününüzü kullanmadan önce ilgili tüm güvenlik bilgilerini okuyun



1

EN Stand mount the speakers
CS Nainstalujte reproduktory
DA Monter højttalerne på fod
DE Montage der Lautsprecher auf den Standfüßen
EL Στήστε τα ηχεία πάνω στις βάσεις
ES Monta los altavoces en la pared
FI Kaiuttimien kiinnitys jalustaan
FR Monter le pied des enceintes
HU A hangsugárzók állványra szerelése
IT Montaggio degli altoparlanti su supporto
NL Monteer de luidsprekers op de standaarden
NO Montere høyttalerne på stativ
PL Montaż głośników na podstawie
PT Colocar os altifalantes no suporte
RO Montaţi pe suport boxele
SK Montáž reproduktorov na stojan
SV Montera högtalarna på stativ
TR Hoparlörleri kaideye monte edin

1



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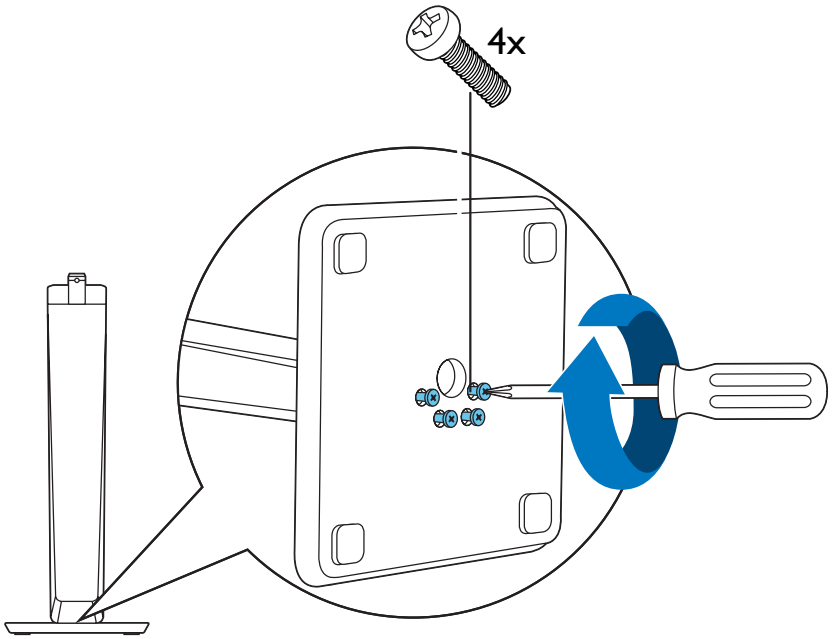

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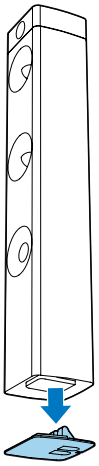

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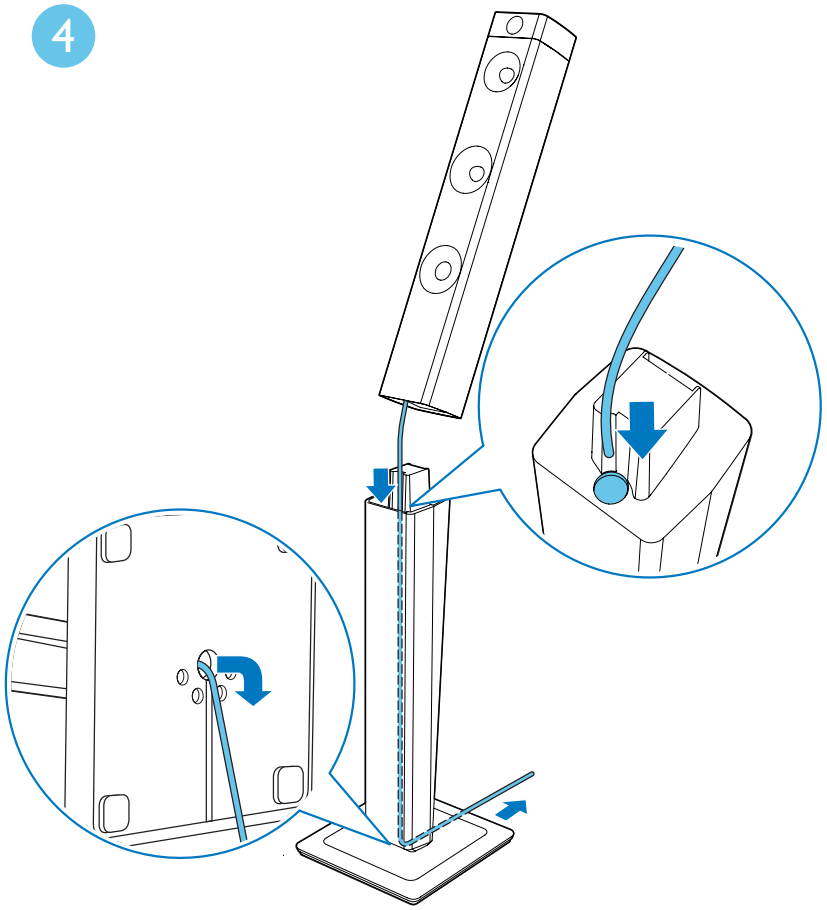

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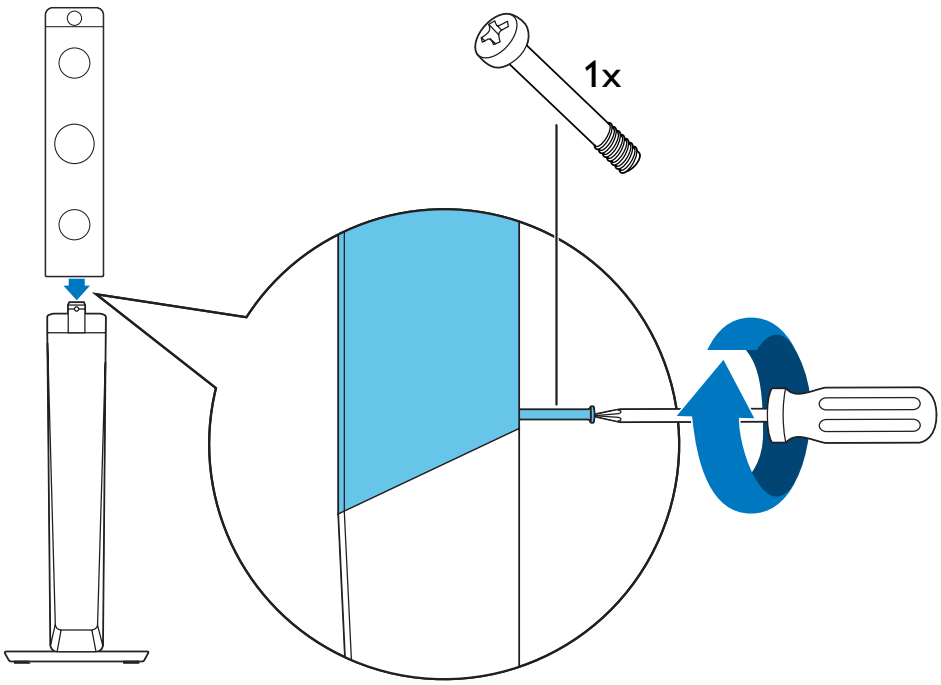
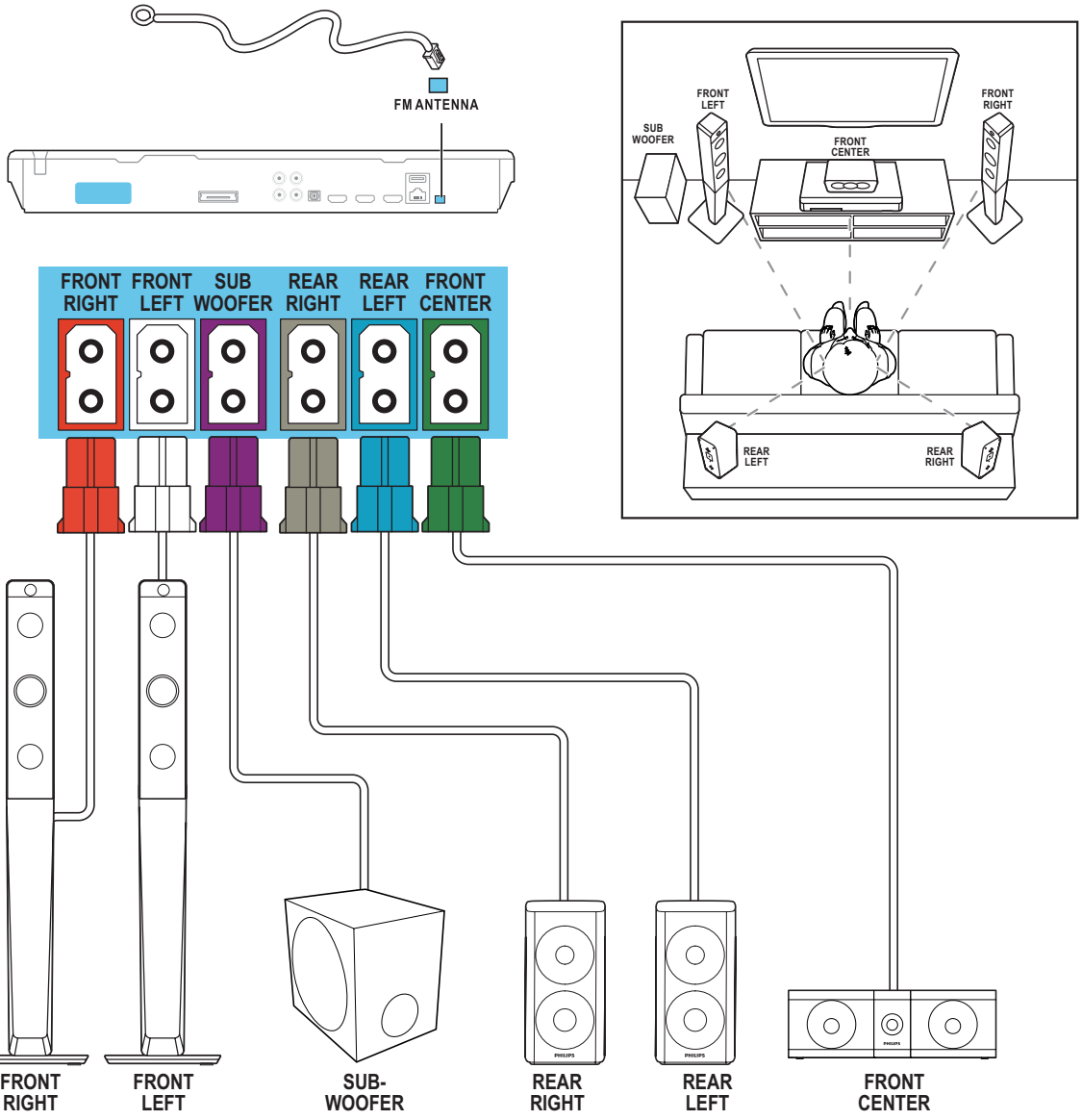


2

EN Connect the home theater
CS Připojte domácí kino
DA Tilslut hjemmebiografen
DE Anschließen des Home Entertainment-Systems
EL Συνδέστε το home cinema
ES Conecta el sistema de cine en casa
FI Kotiteatterin liitännät
FR Connecter les enceintes au Home Cinéma
HU A házimozi csatlakoztatása
IT Collegamento del sistema Home Theater
NL Sluit de home cinema aan
NO Koble til hjemmekinoanlegget
PL Podłączanie zestawu kina domowego
PT Efectuar as ligações ao sistema de cinema em casa
RO Conectaţi sistemul home theater
SK Pripojenie k domácemu kinu
SV Anslut hemmabiosystemet
TR Ev sinemasını bağlayın



3

EN Connect to TV in one of these ways

CS Připojení k televizoru proveďte jedním z následujících způsobů

DA Tilslut til TV på en af følgende måder

DE Herstellen einer Verbindung mit dem Fernseher über einer dieser Möglichkeiten

EL Συνδεθείτε στην τηλεόραση με έναν από τους παρακάτω τρόπους

ES Conexión al televisor de una de estas maneras

FI Liitä televisioon jommallakummalla tavalla

FR Connectez-vous au téléviseur via l'une de ces méthodes

HU Csatlakoztassa a tv-készülékhez az alábbi módok egyike szerint

IT Esegui il collegamento al TV in uno dei modi indicati di seguito

NL Maak op een van de volgende manieren verbinding met de TV

NO Koble til TVen på en av følgende måter

PL Podłącz do telewizora przy użyciu jednej z tych metod

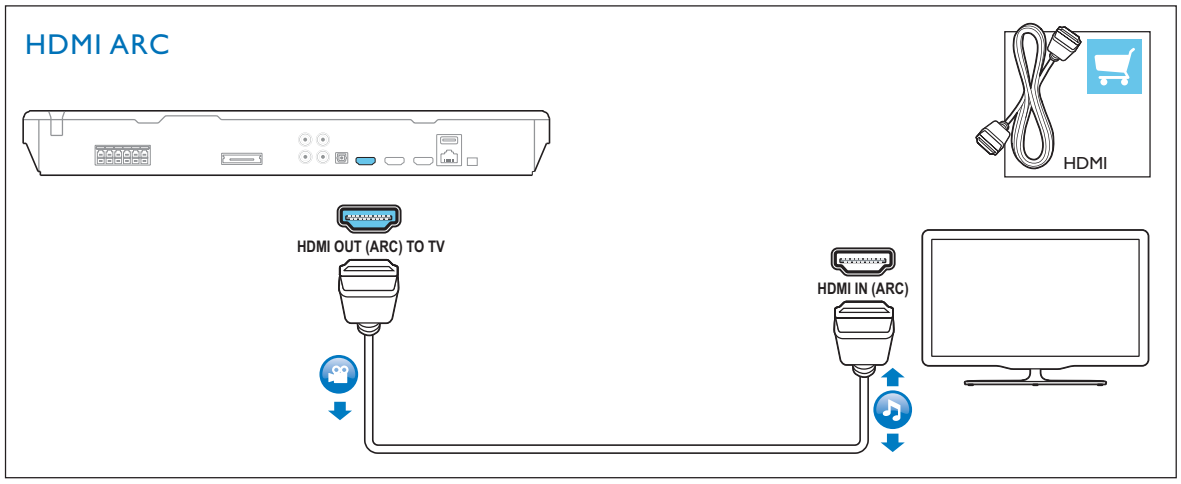
PT Ligar ao televisor de uma destas formas

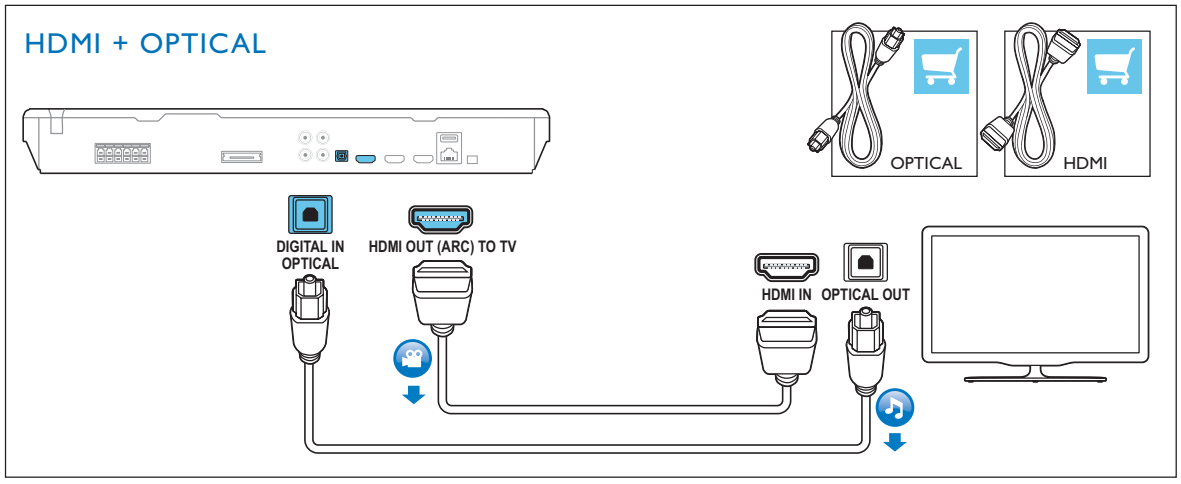
RO Conectaţi-vă la televizor într-unul din aceste moduri

SK Pripojte zariadenie k televízoru jedným z týchto spôsobov

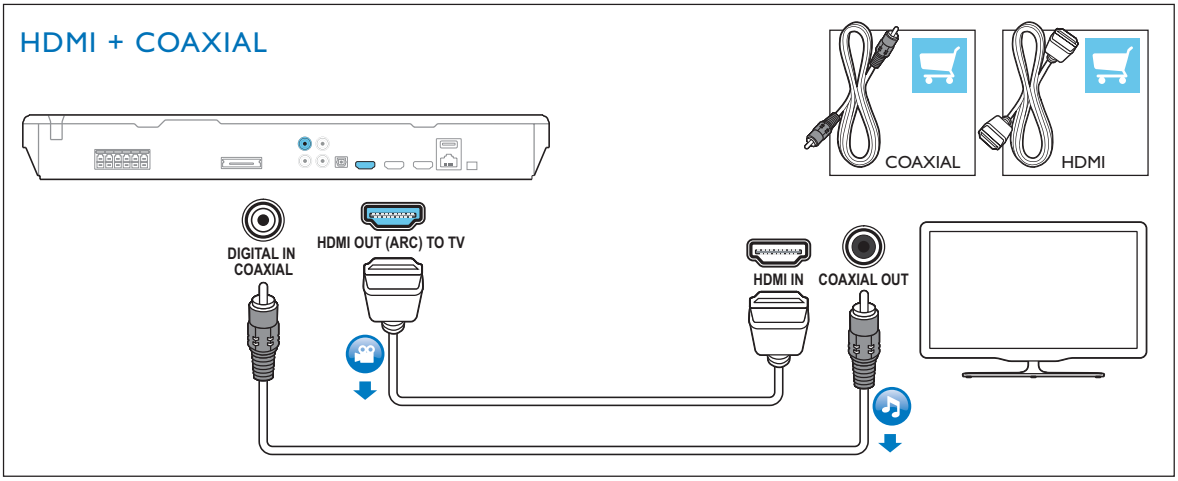
SV Anslut till TV:n på något av följande sätt

TR Aşağıdaki yöntemlerden biriyle TV'ye bağlanın

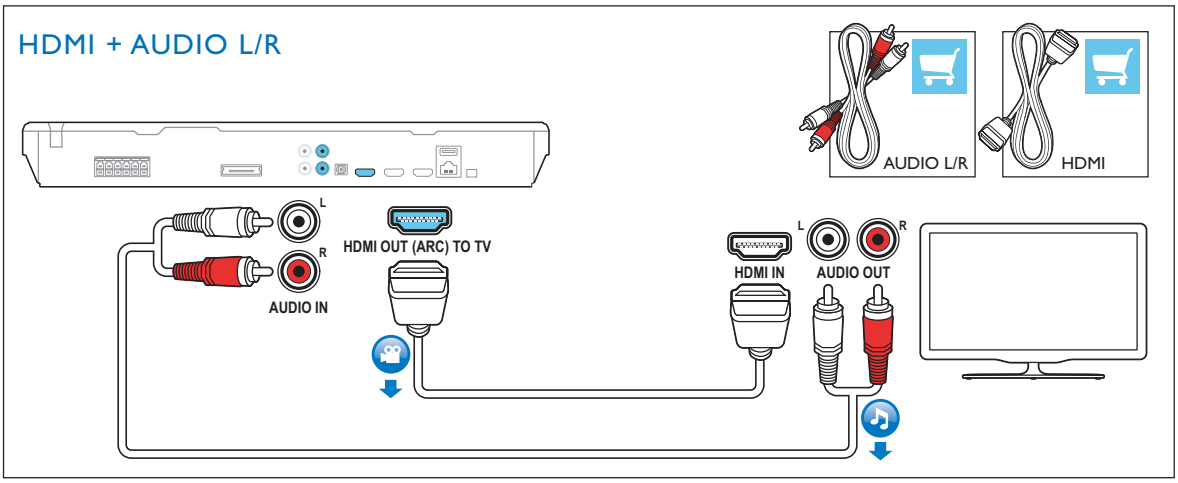




HDMI + COAXIAL

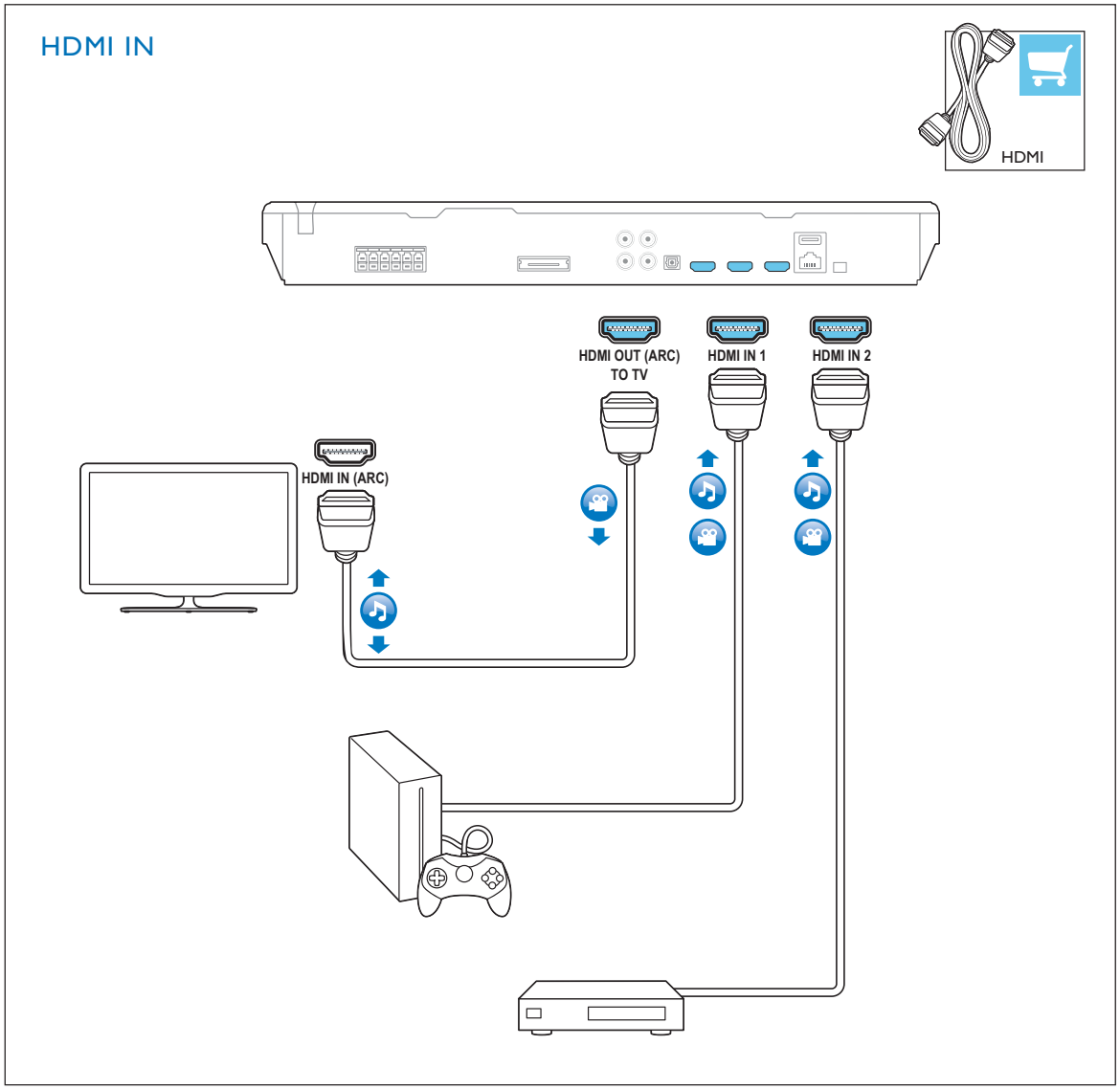


HDMI + AUDIO L/R



4

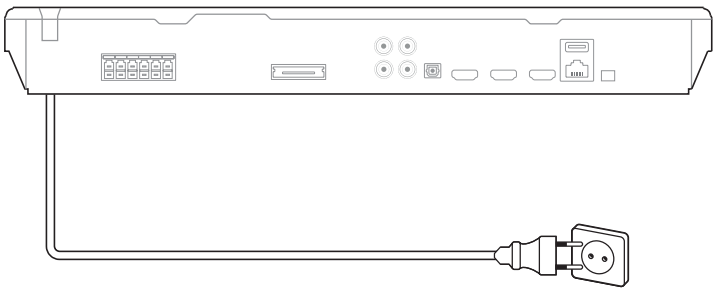
EN Connect with other HDMI devices
CS Připojení dalších zařízení HDMI
DA Opret forbindelse til andre HDMI-enheder
DE Anschluss an andere HDMI-Geräte
EL Σύνδεση με άλλες συσκευές HDMI
ES Conexión de otros dispositivos HMDI
FI Muihin HDMI-laitteisiin liittäminen
FR Connexion à d'autres périphériques HDMI
HU Csatlakoztassa más HDMI-eszközökhöz
IT Collegamento ad altri dispositivi HDMI
NL Aansluiten op andere HDMI-apparaten
NO Koble til andre HDMI-enheter
PL Podłączanie do innych urządzeń HDMI
PT Ligar a outros dispositivos HDMI
RO Conectaţi-vă cu celelalte dispozitive HDMI
SK Pripojenie k iným zariadeniam HDMI
SV Ansluta till andra HDMI-enheter
TR Diğer HDMI cihazlarına bağlama



5

EN Switch on the home theater
CS Zapněte domácí kino
DA Tænd for hjemmebiografen
DE Einschalten des Home Entertainment-Systems
EL Ενεργοποιήστε το home cinema
ES Enciende el sistema de cine en casa
FI Virran kytkeminen kotiteatteriin
FR Mettre sous tension le Home Cinéma
HU A házimozi bekapcsolása
IT Accensione del sistema Home Theater
NL Schakel de home cinema in
NO Slå på hjemmekinoanlegget
PL Włączanie zestawu kina domowego
PT Ligar o sistema de cinema em casa
RO Porniţi sistemul home theater
SK Zapnutie domáceho kina
SV Sätt på hemmabiosystemet
TR Ev sinemasını açın

1



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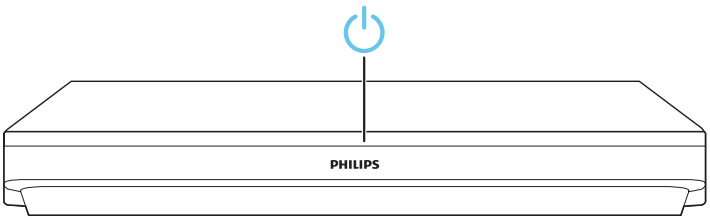
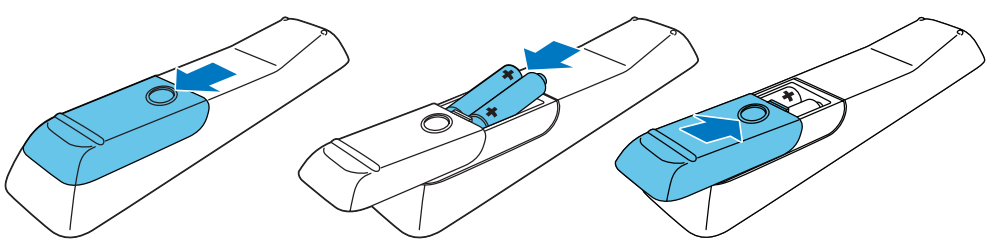
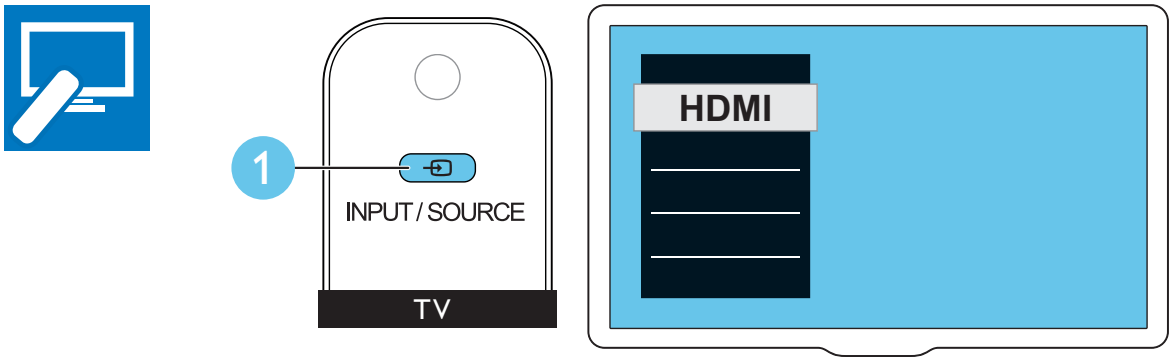


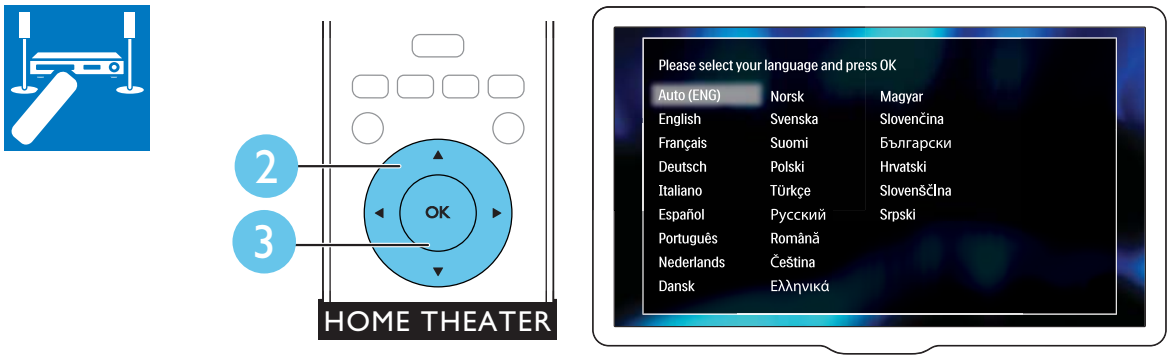
3



6

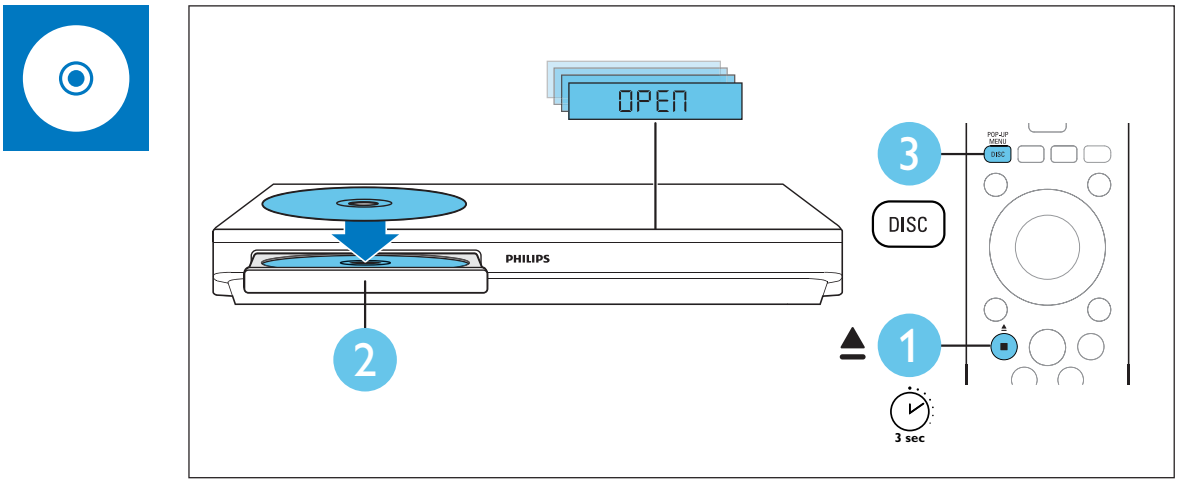
EN Complete the first time setup
CS Dokončili jste nastavení při prvním zapnutí
DA Fuldfør den indledende opsætning
DE Abschließen der Ersteinrichtung
EL Ολοκληρώστε τη ρύθμιση για πρώτη φορά
ES Finaliza la configuración inicial
FI Ensiasennuksen suorittaminen loppuun
FR Effectuer la configuration initiale
HU Az első üzembe helyezés
IT Completamento della configurazione iniziale
NL Voltooi de eerste installatie
NO Fullføre den første konfigureringen
PL Pierwsza konfiguracja
PT Executar a configuração inicial
RO Realizaţi prima configurare
SK Dokončenie prvého nastavenia
SV Slutför förstagångsinställningen
TR İlk kullanım öncesi kurulumunu tamamlayın

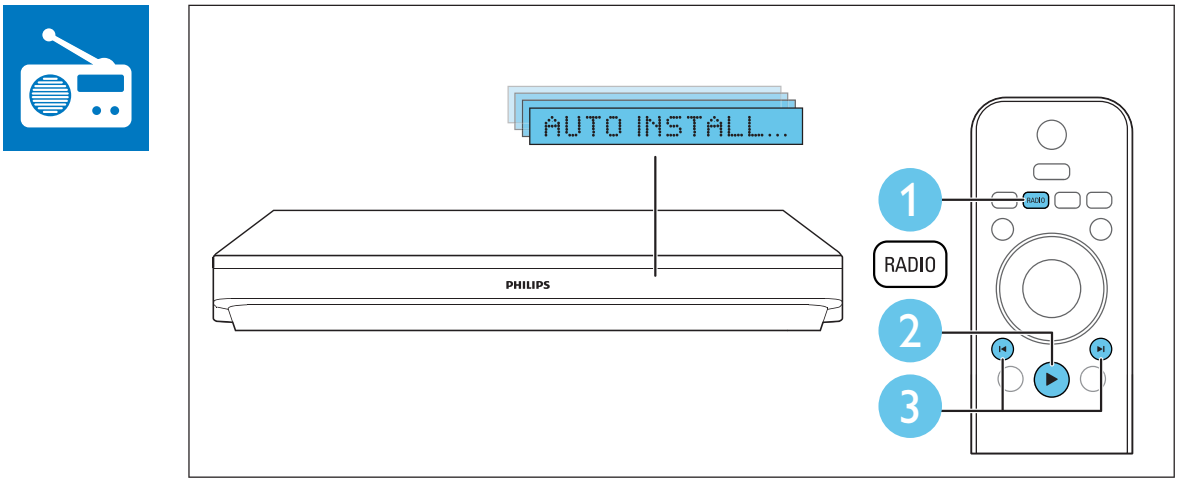




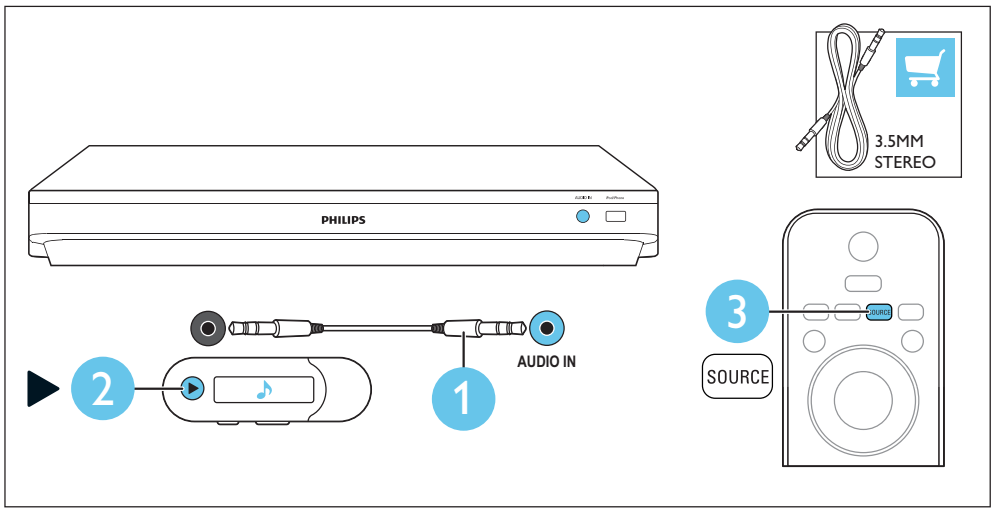
7

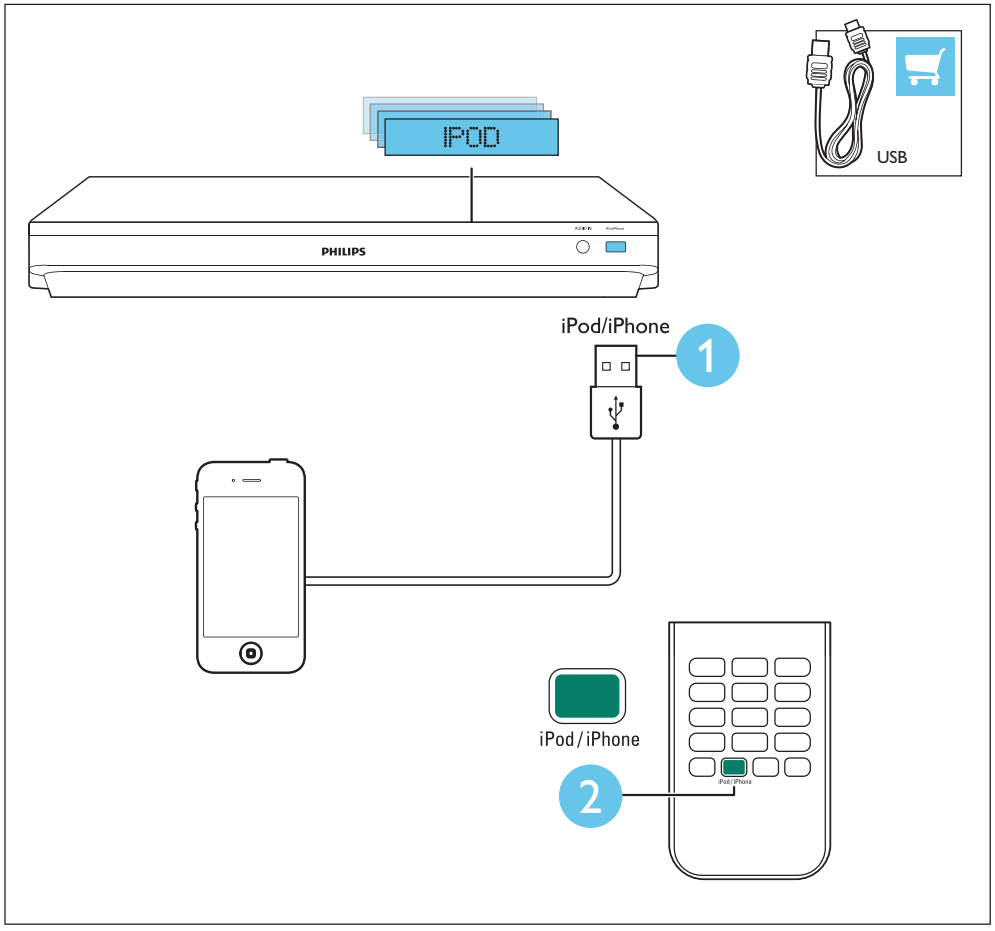
EN Use your home theater
CS Použití domácího kina
DA Brug af din hjemmebiograf
DE Verwenden des Home Entertainment-Systems
EL Χρησιμοποιήστε το home cinema
ES Uso del sistema de cine en casa
FI Kotiteatterin käyttäminen
FR Utiliser votre Home Cinéma
HU A házimozi használata
IT Utilizzo del sistema Home Theater
NL Uw home cinema bedienen
NO Bruke hjemmekinoanlegget
PL Korzystanie z zestawu kina domowego
PT Utilizar o sistema de cinema em casa
RO Utilizaţi sistemul home theater
SK Používanie domáceho kina
SV Använda hemmabiosystemet
TR Ev sinema sisteminin kullanılması

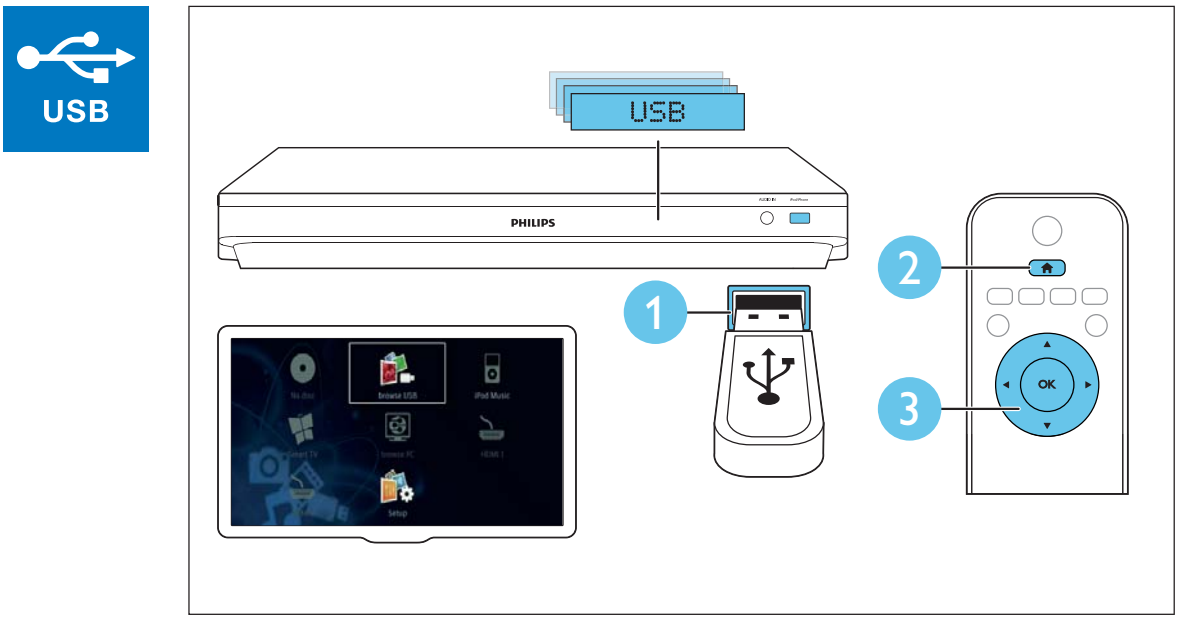


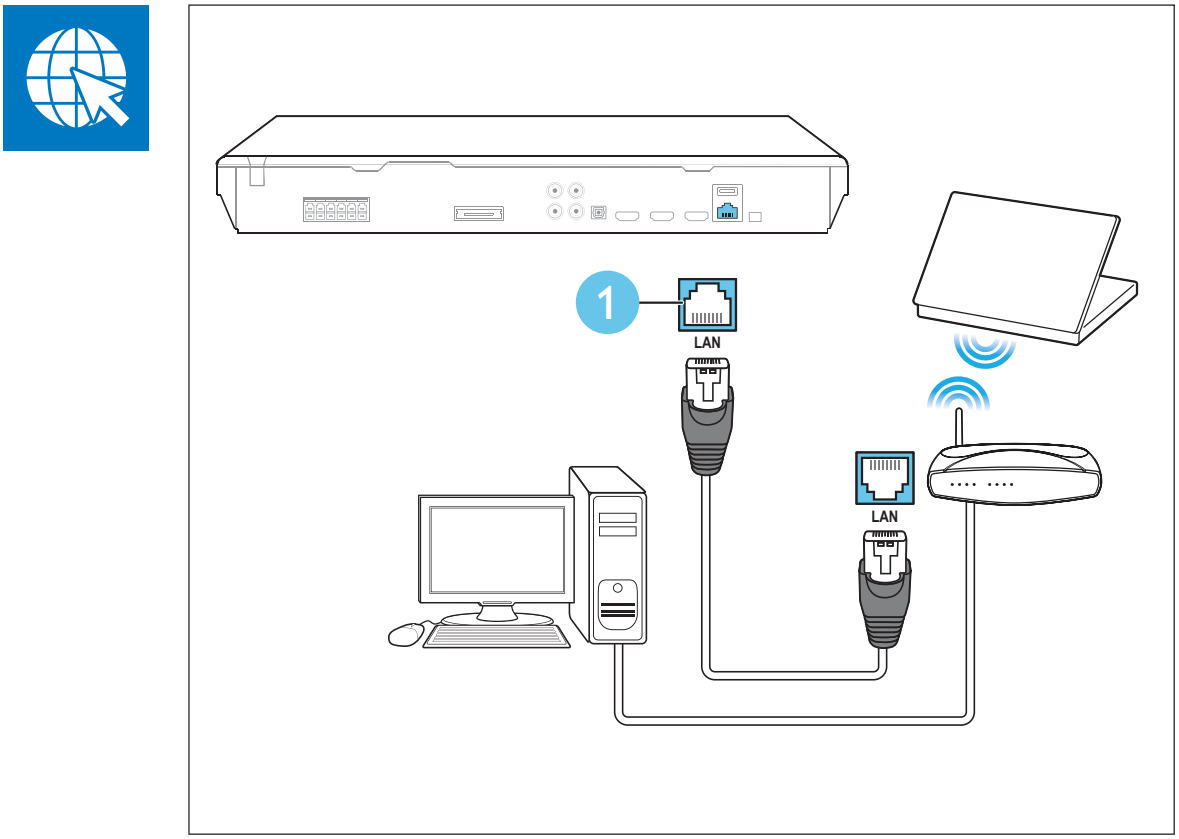



MP3


3.5MM
STEREO
PHILIPS
AUDIO IN
2
1
3
SOURCE


USB
iPOD
PHILIPS
iPod/iPhone
1
iPod / iPhone
2


USB
USB
PHILIPS
1
2
3
OK


1
LAN
LAN

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 top cover.Remove 4 screws on the back panel,dismantle the left and right baffles,then open the top cover.(Figur 1)

Figue 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 2:Dismantle the loader.Open the tray,diamantle the CD door,disconnect connectors(J11,J12,XP7,P2), remove 2 screws beside the loader,then pull up the loader.(Figure 2)

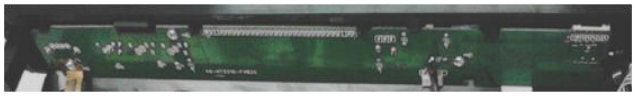
Step 3:Dismantle the main board.Disconnect connectors(XP6,XP9,XP4,XP13),remove 2 screws on the main board and 5 screws on the back panel.then pull up the main board.(Figure 2)

Step 4:Dismantle the amplifier board.Disconnect connectors(XP3,XP58),remove 2 screws on the amplifier board and 3 screws on the back panel.then pull up the amplifier board.(Figure 2)

Step 4:Dismantle the power board.Remove 4 screws on the power board, then pull up the board.(Figue 2)

Figue 2

Step 5:Dismantle the front control board.Remove 3 screws on the board, then pull up the board.(Figue 3)



Figue 3

Software upgrade

1.Build a folder name as UPG under root menu of USB device.

3.Copy the HTB5510.bin file(upgrade file) to the root menu of USB device.

4.Connect the USB device to HTS ,

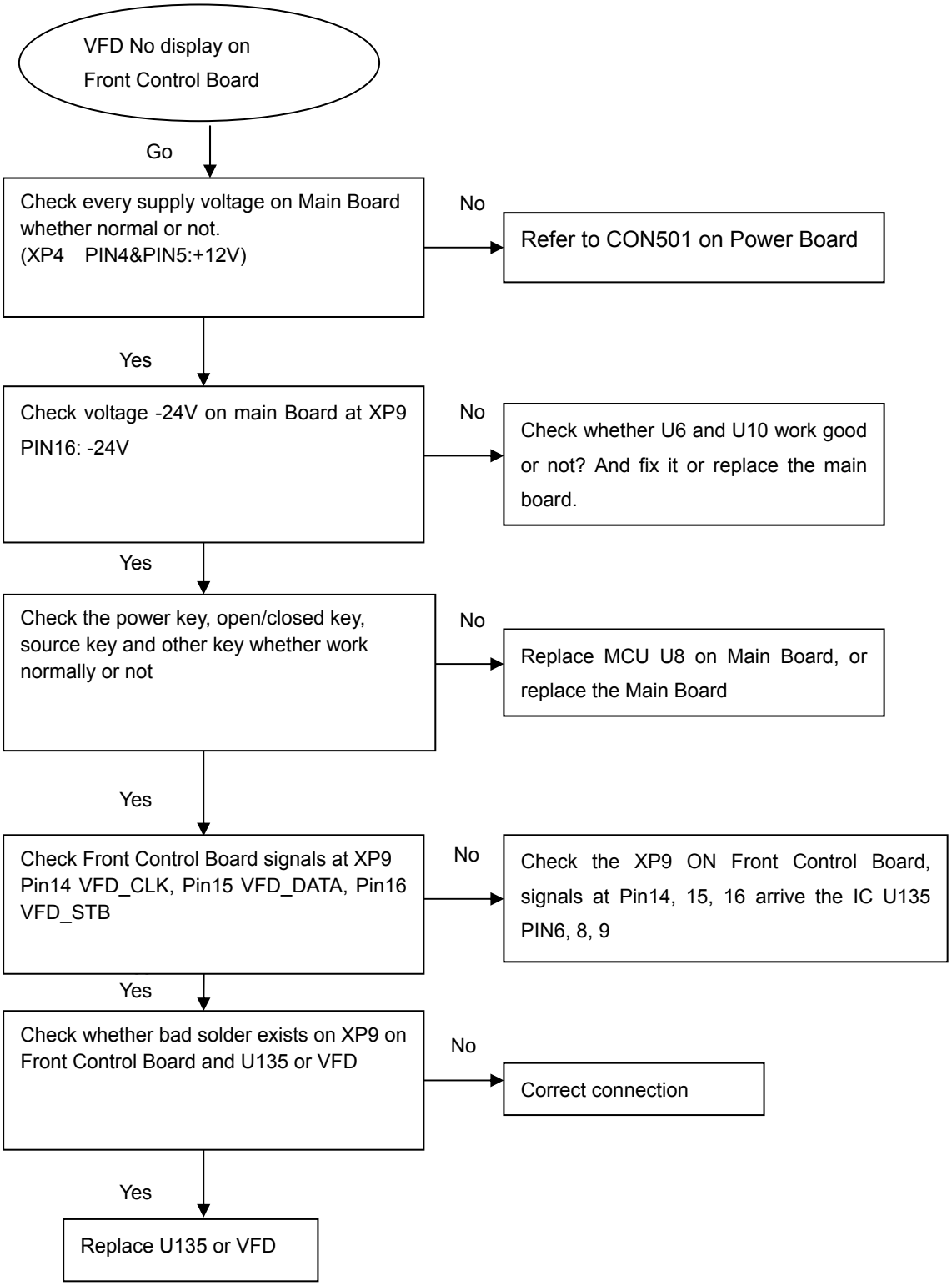
5.Power on DUT,enter into HOME UI.

6.Enter into Setup menu select Advance >>Software upgrade>>USB. If the upgrade SW was found ,it will prompt start upgrade SW,pls press ok select Start.

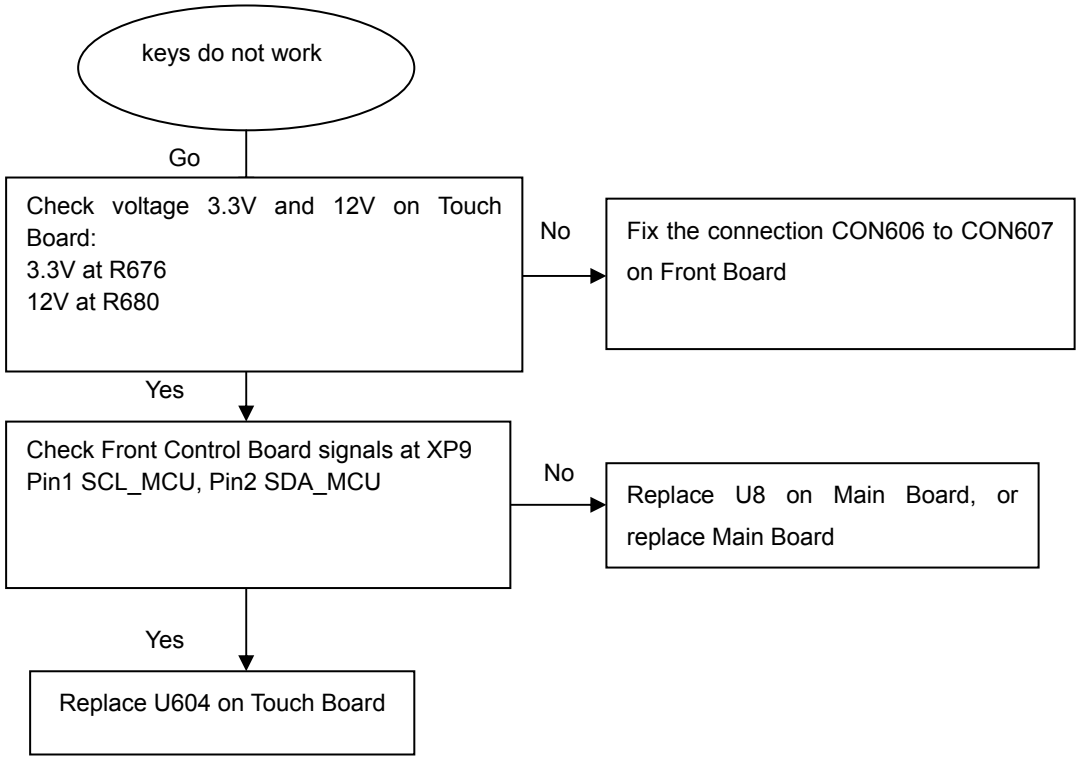
7.Don’t power off DUT .DUT will restart after SW upgrade completed.

Caution: The set must not be power off during upgrading, Otherwise the Main board will be damaged entirely.

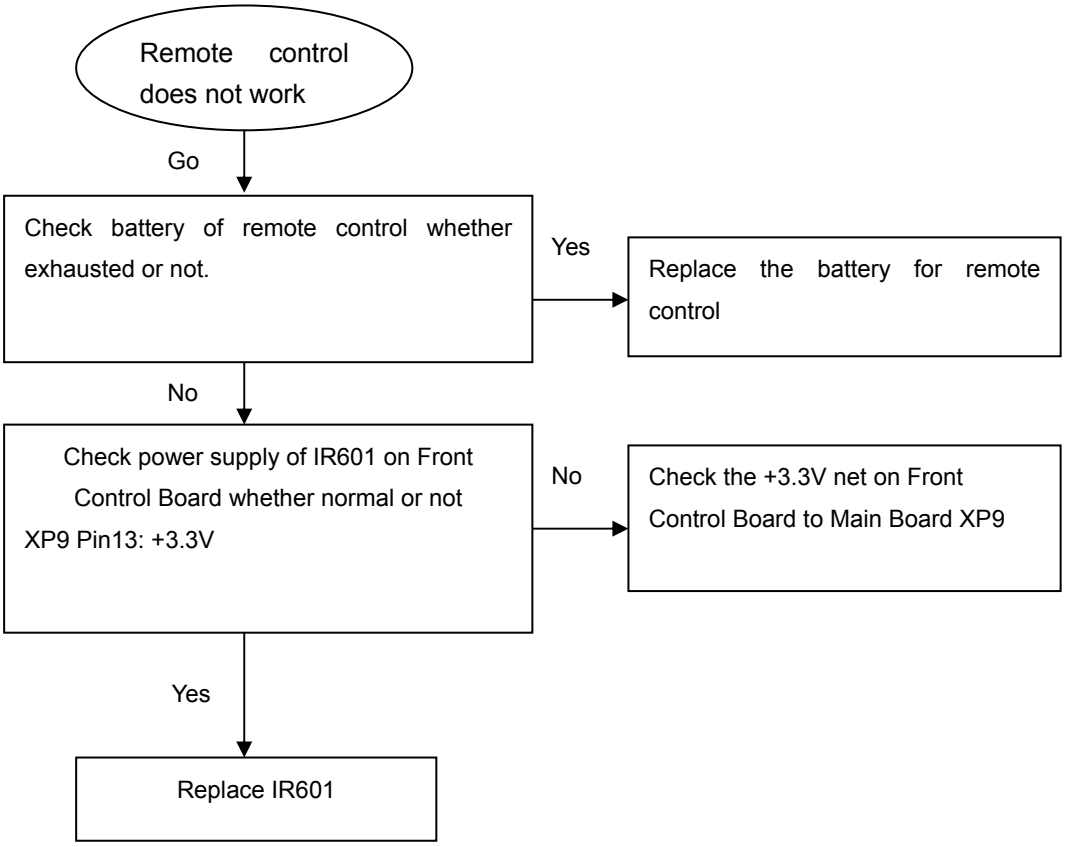
VFD No display on Front Control Board



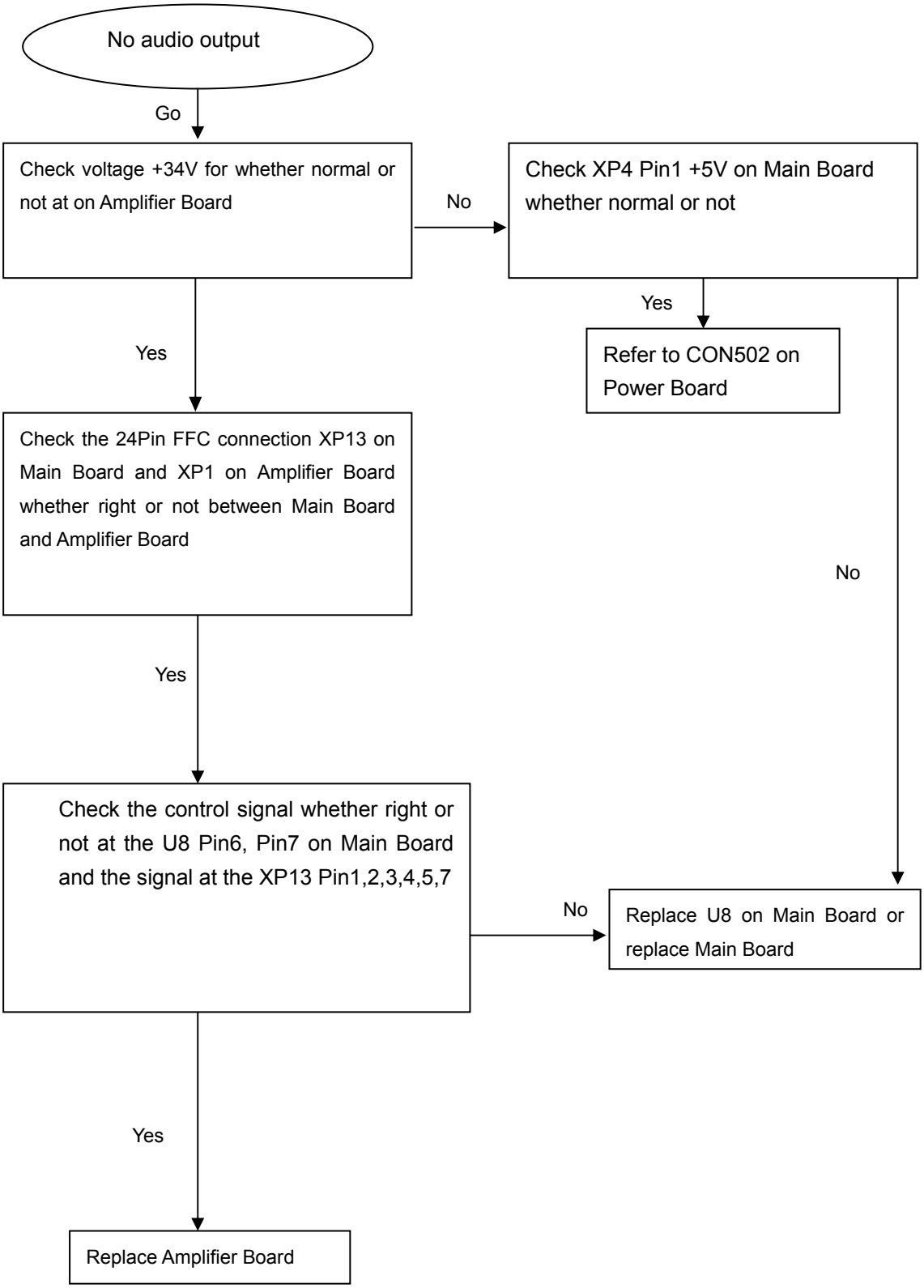
Touch keys do not work



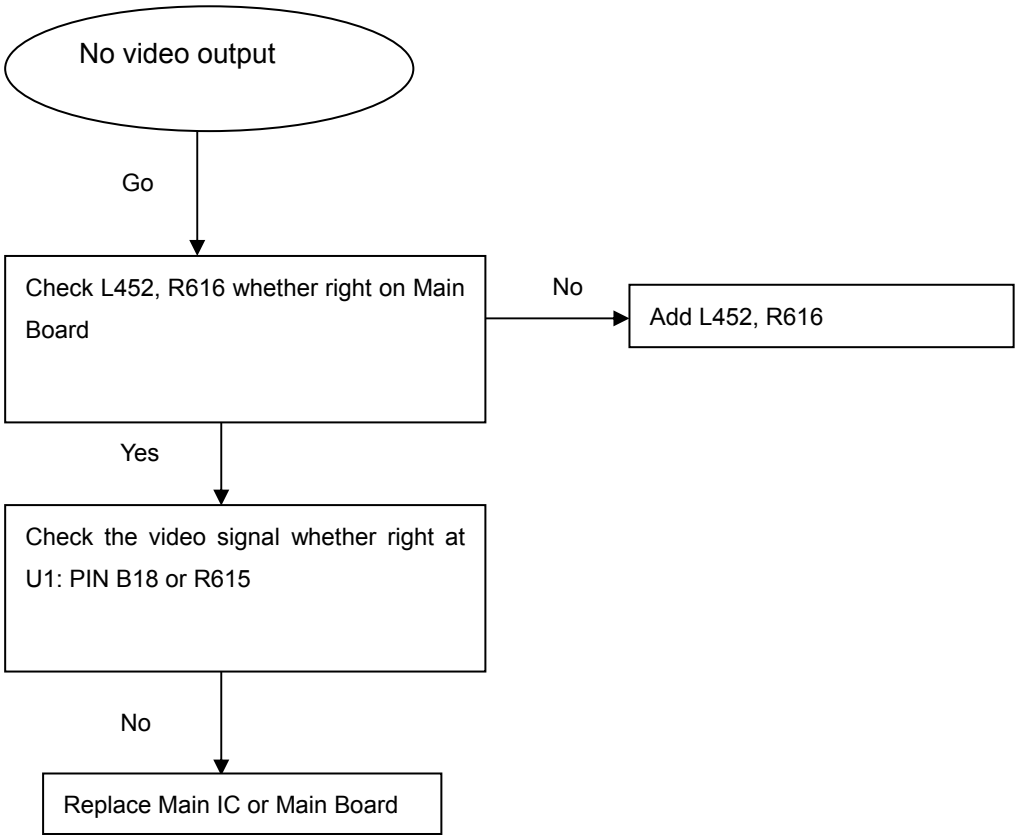
Remote control does not work



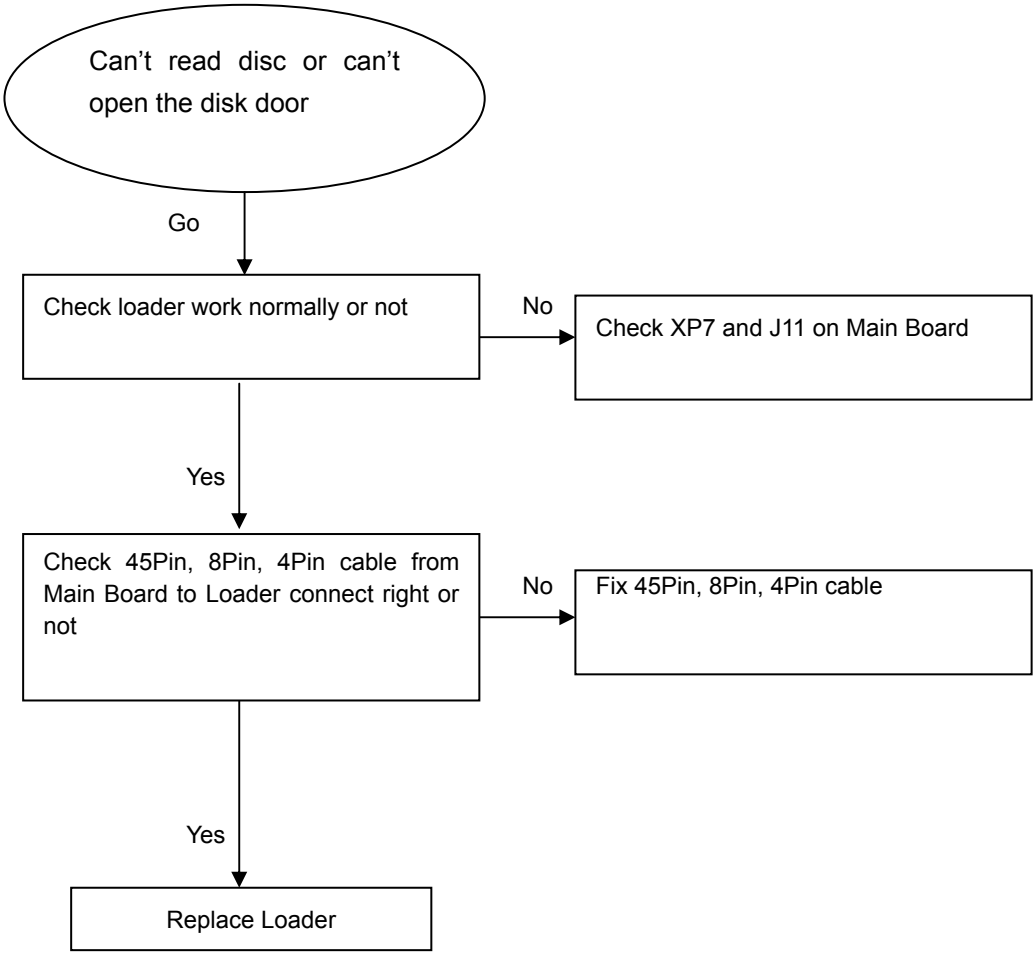
No audio output



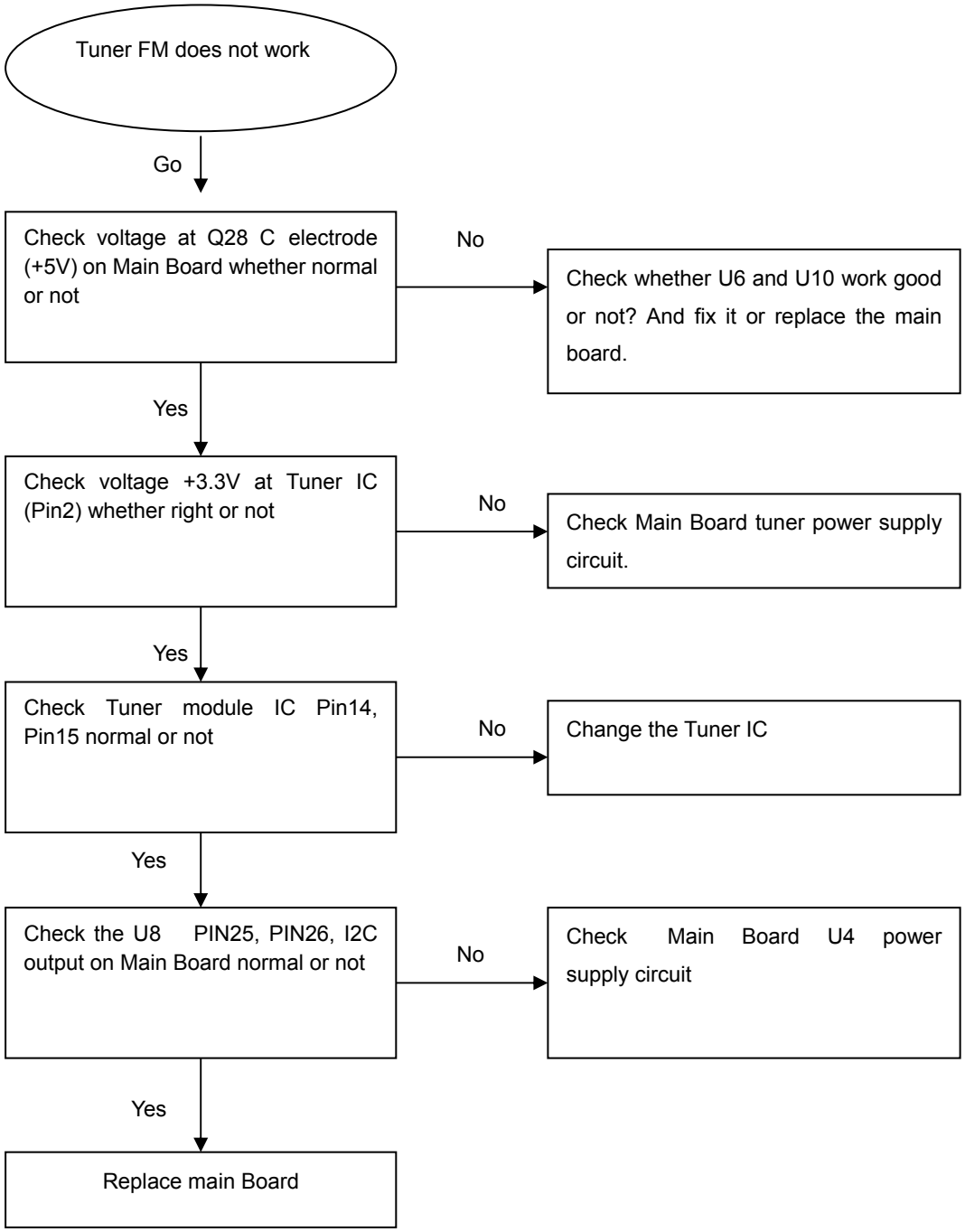
No video output



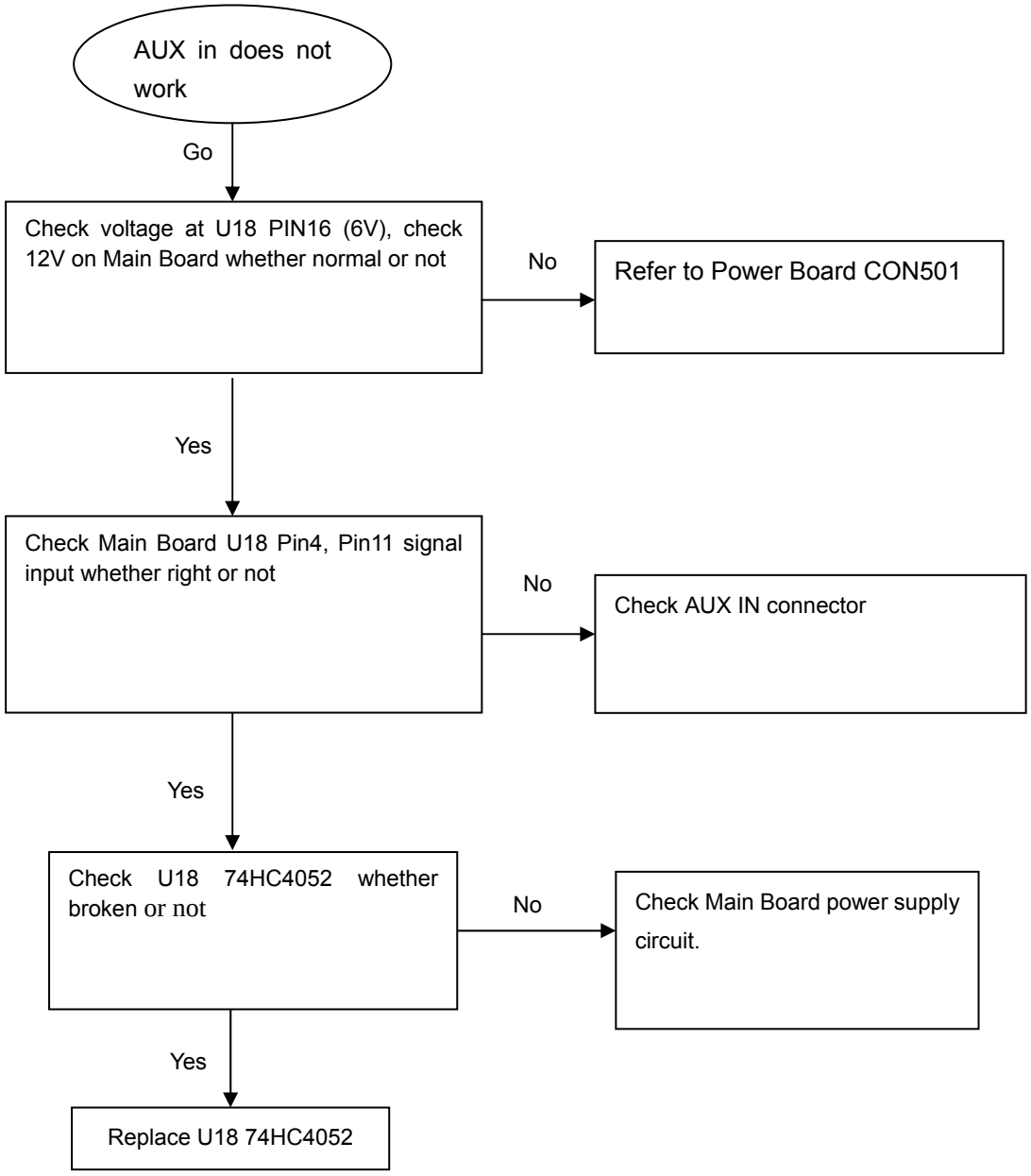
Can’t read disc or can’t open the disk door



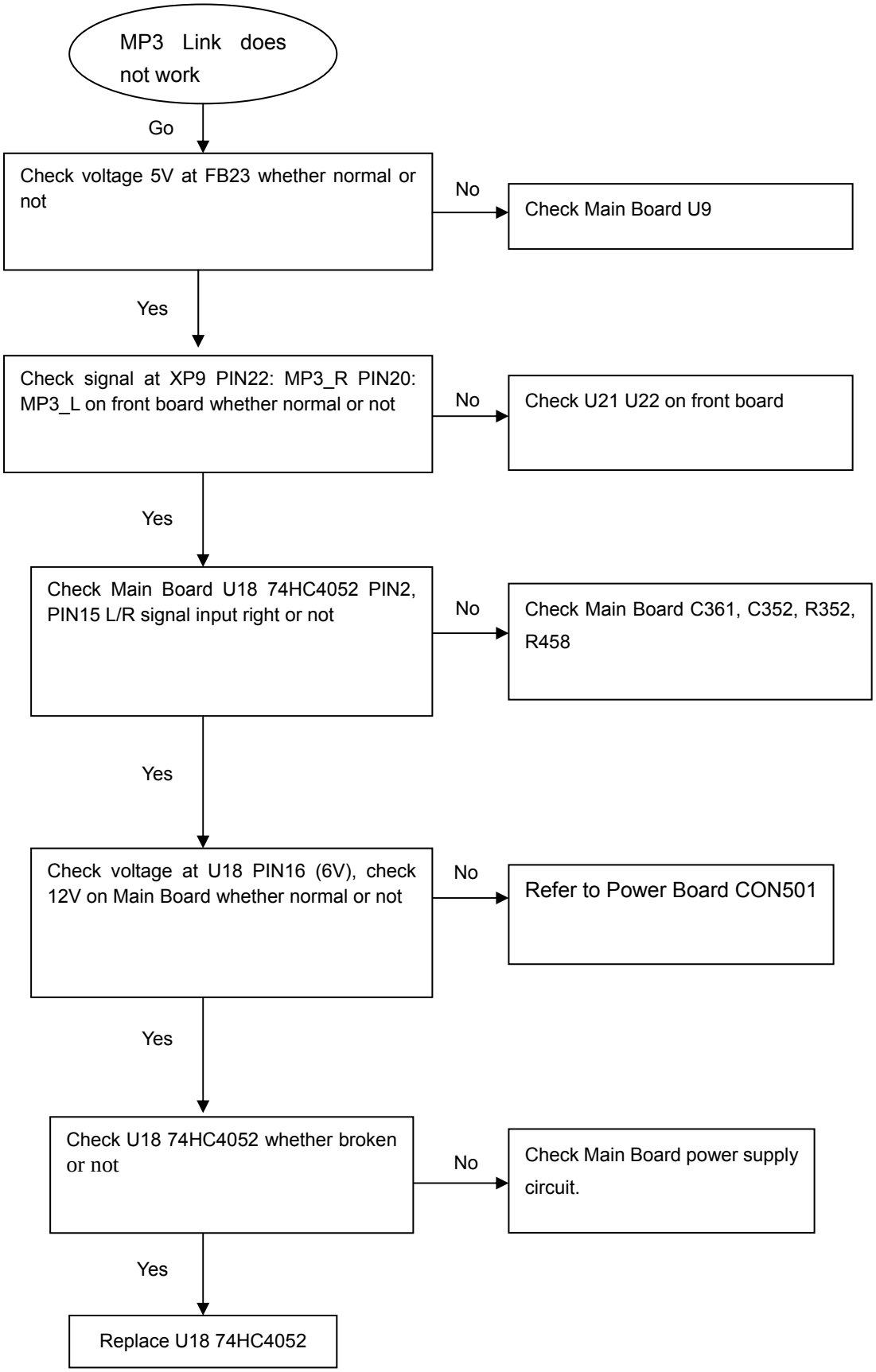
Tuner FM does not work



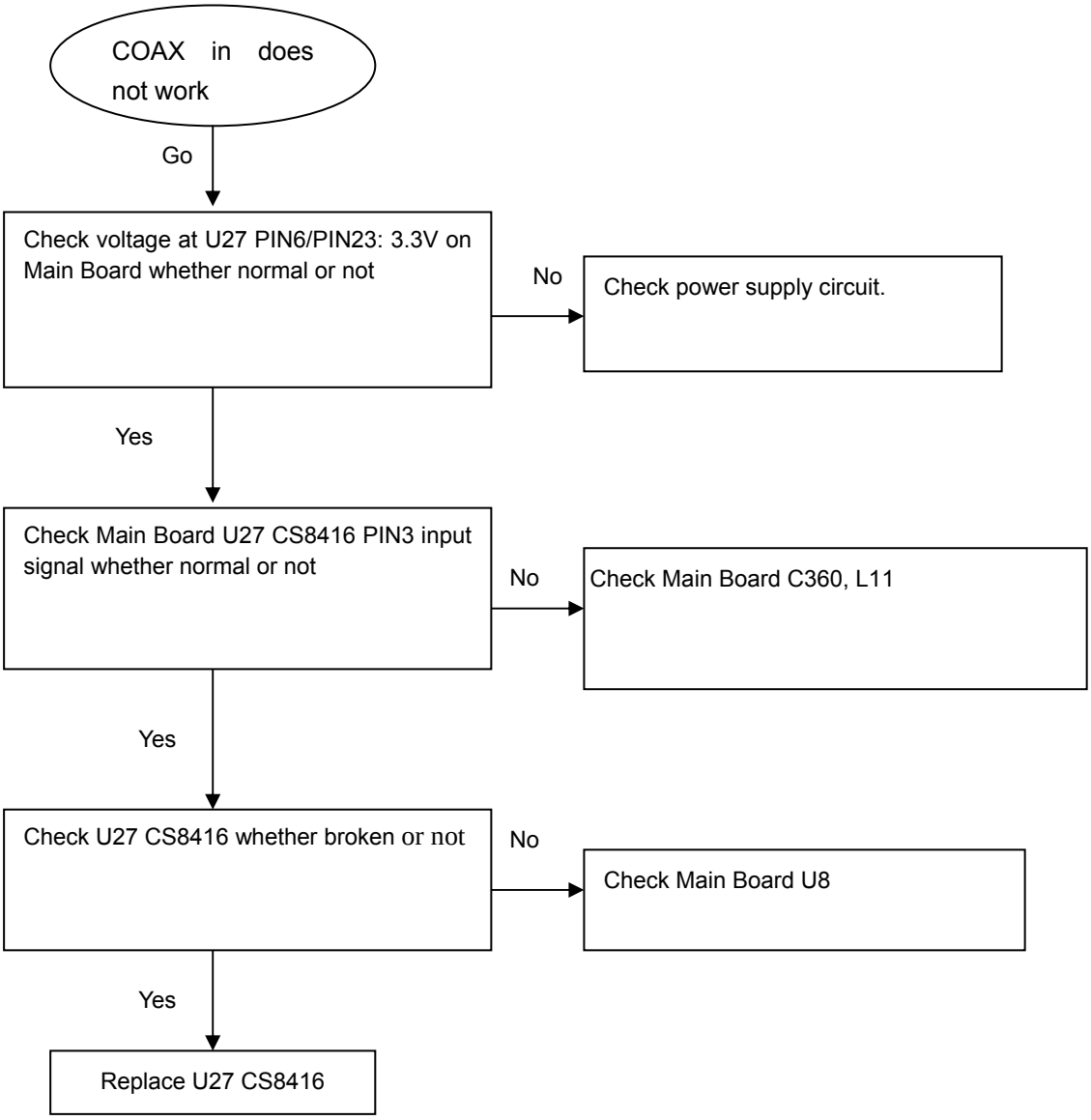
AUX in does not work



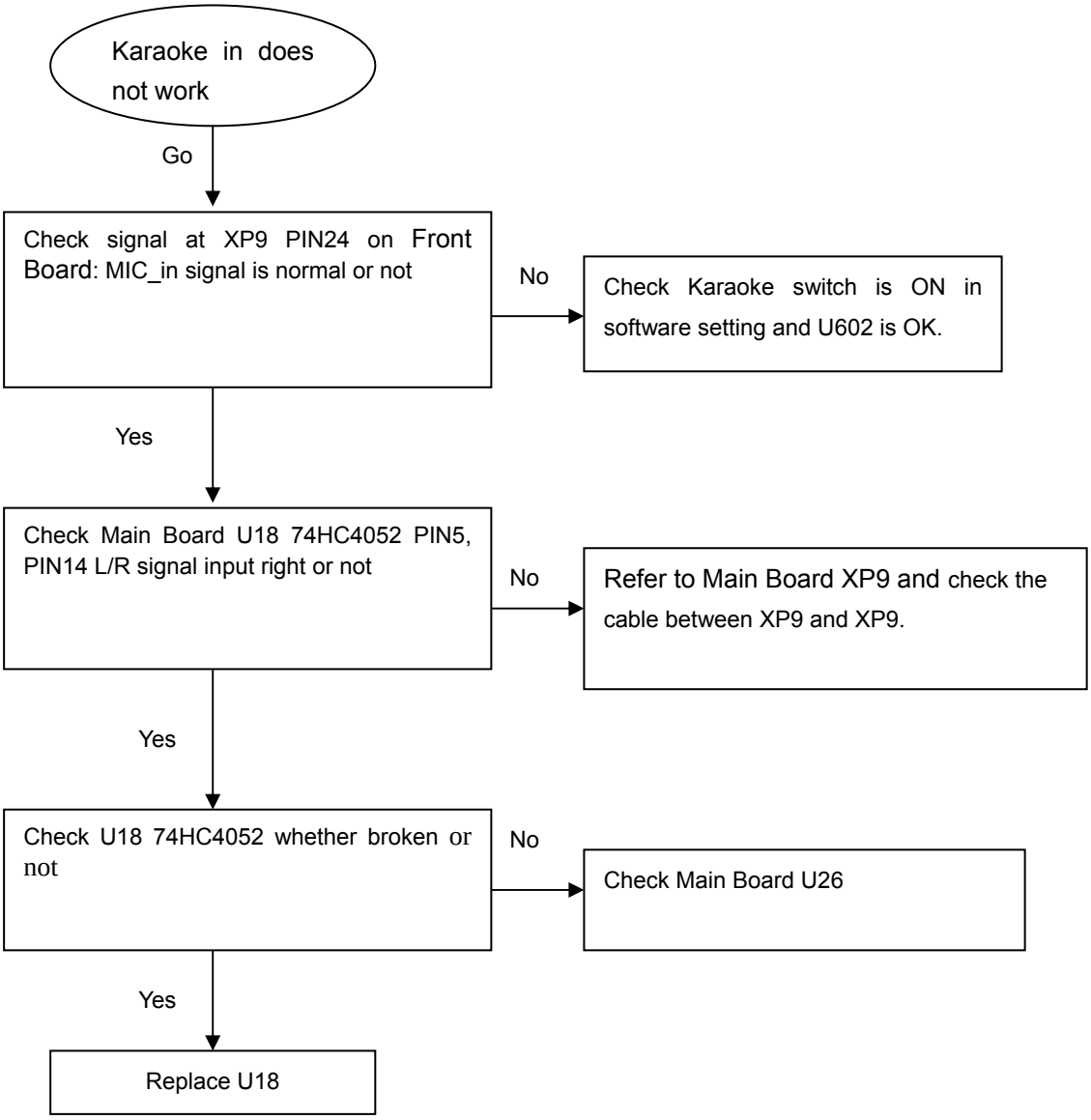
MP3 Link does not work



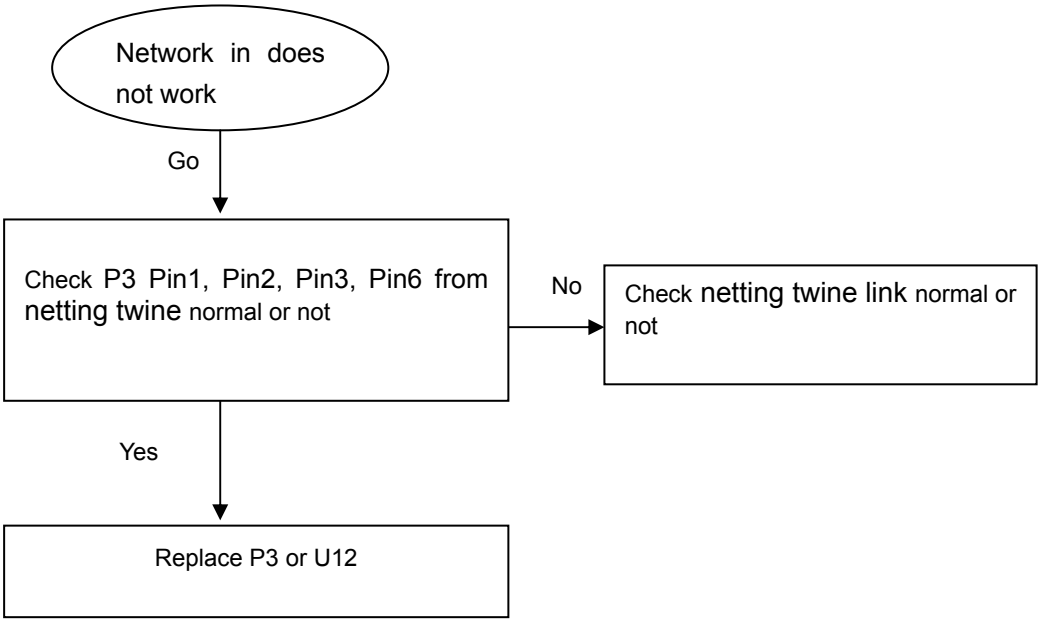
COAX in does not work



Karaoke in does not work

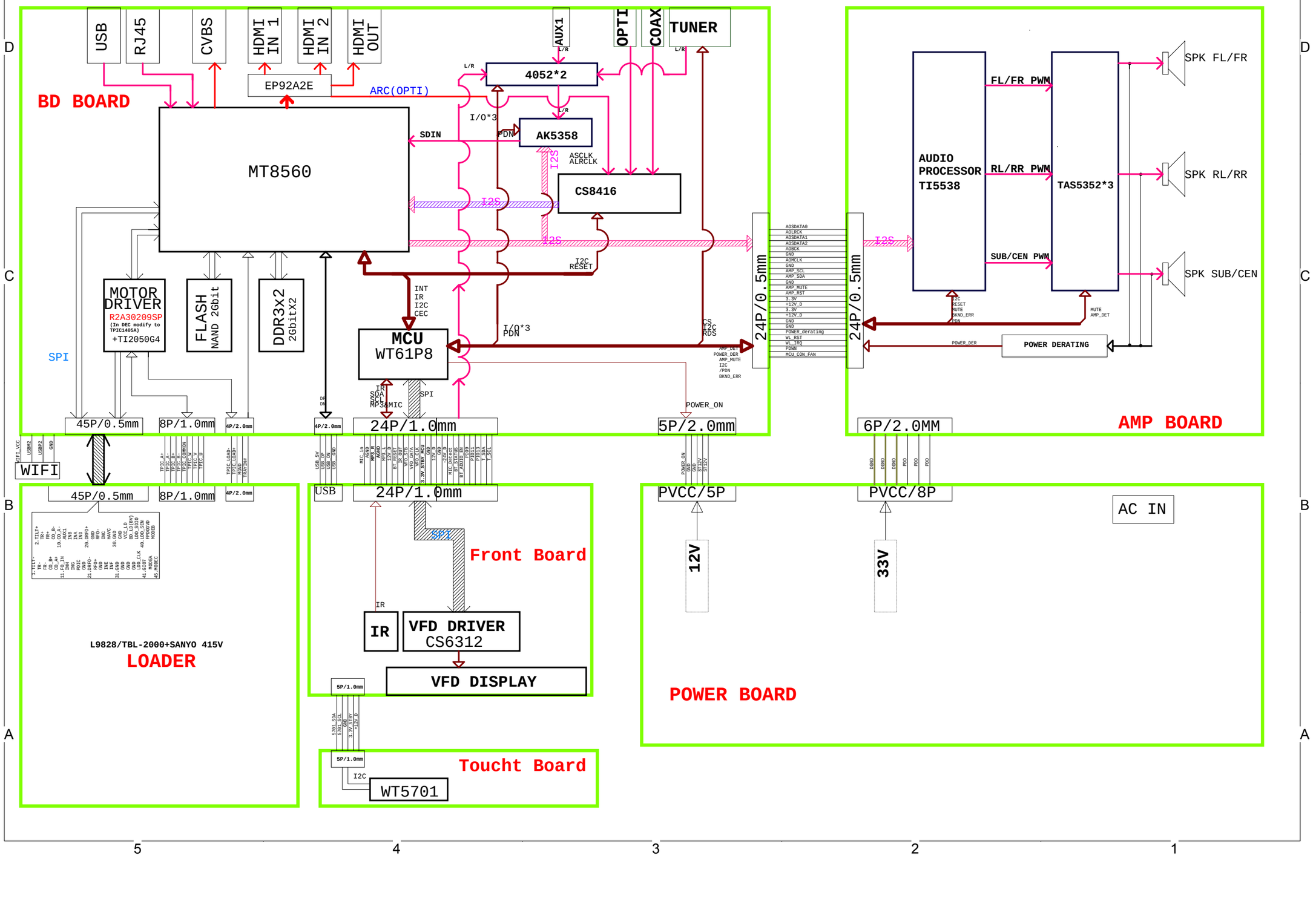


Network in does not work



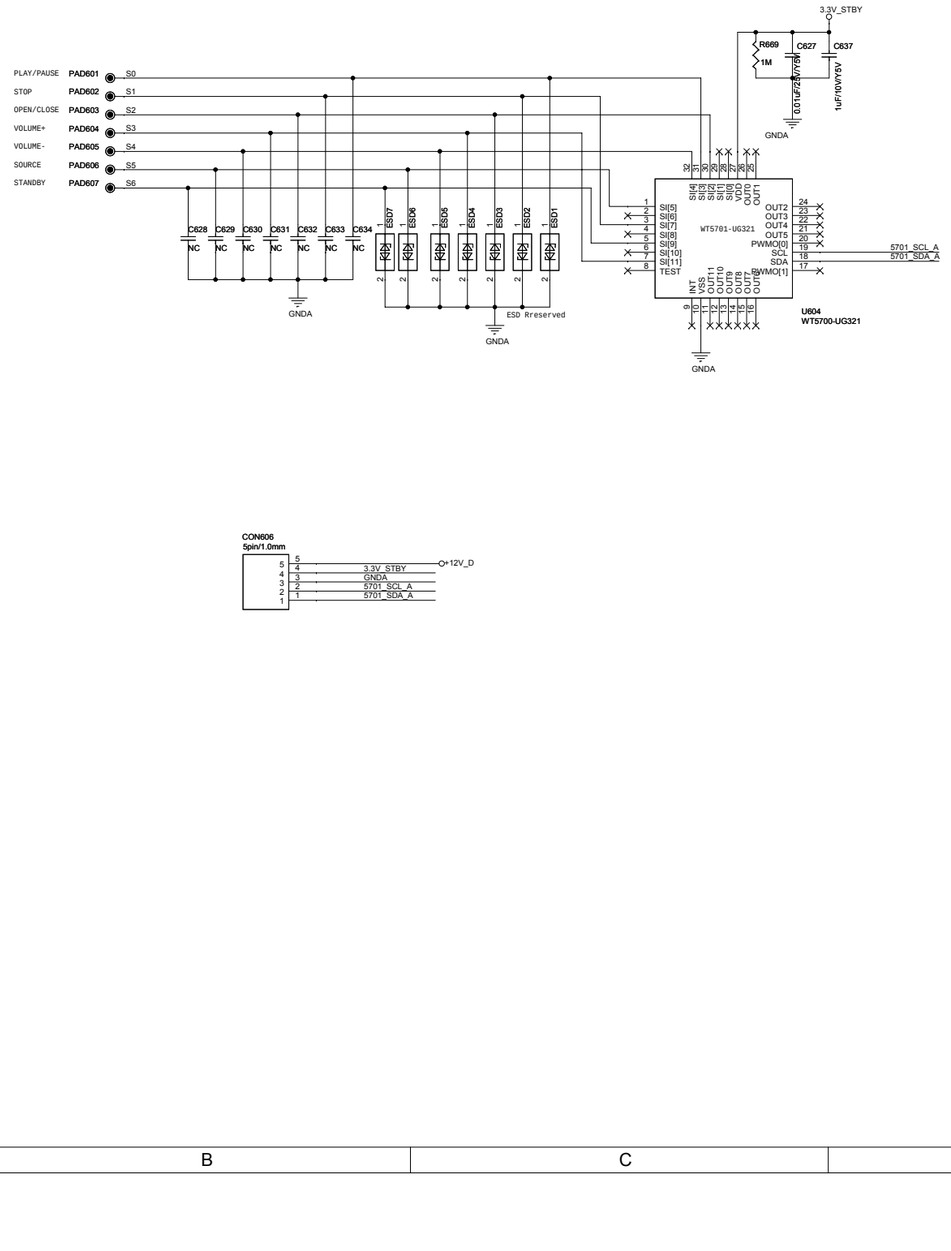
6-1

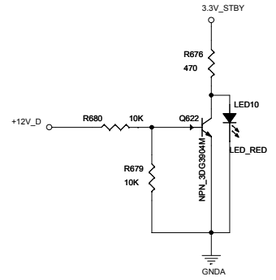
Block Diagram for HTB5540D:



7-1

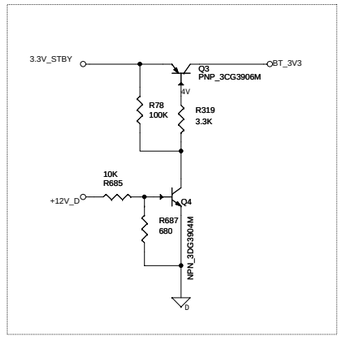
Touch Board Circuit Diagram:

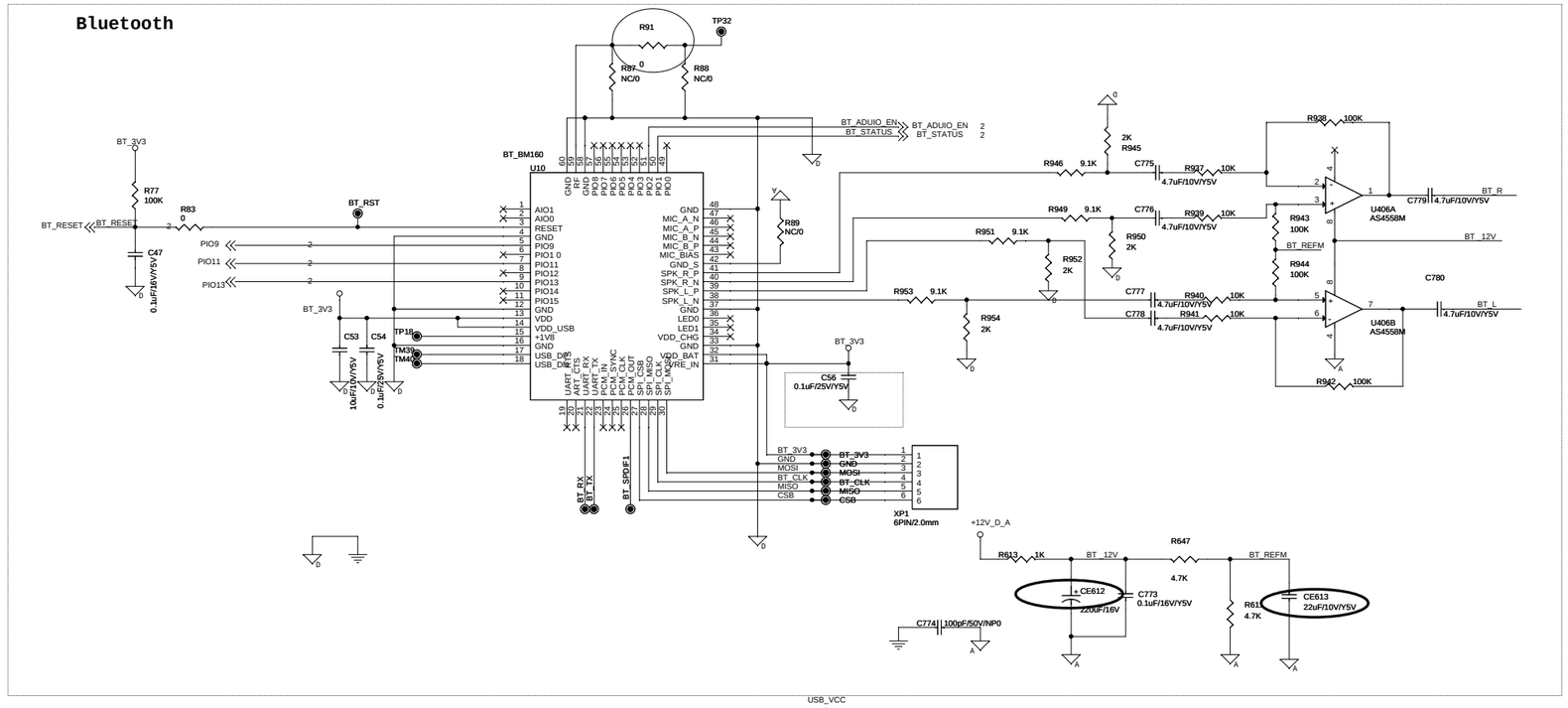




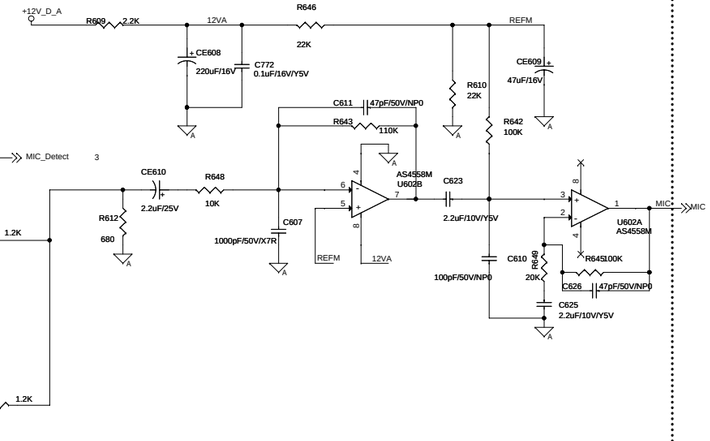
7-2

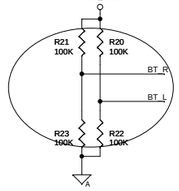
Front Control Board Circuit Diagram:VFD

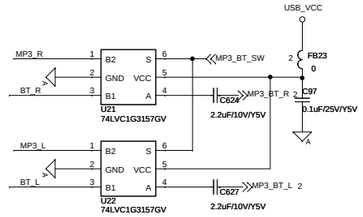


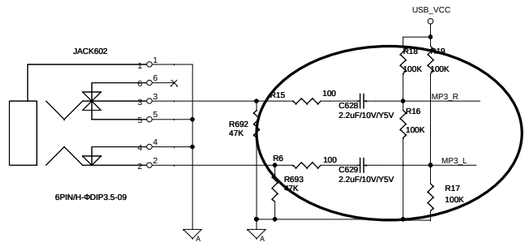


Unit Name		
Unit Number	E25	01UKOKAMP-102
Reference		
Description		
Date	20120924	VER:02





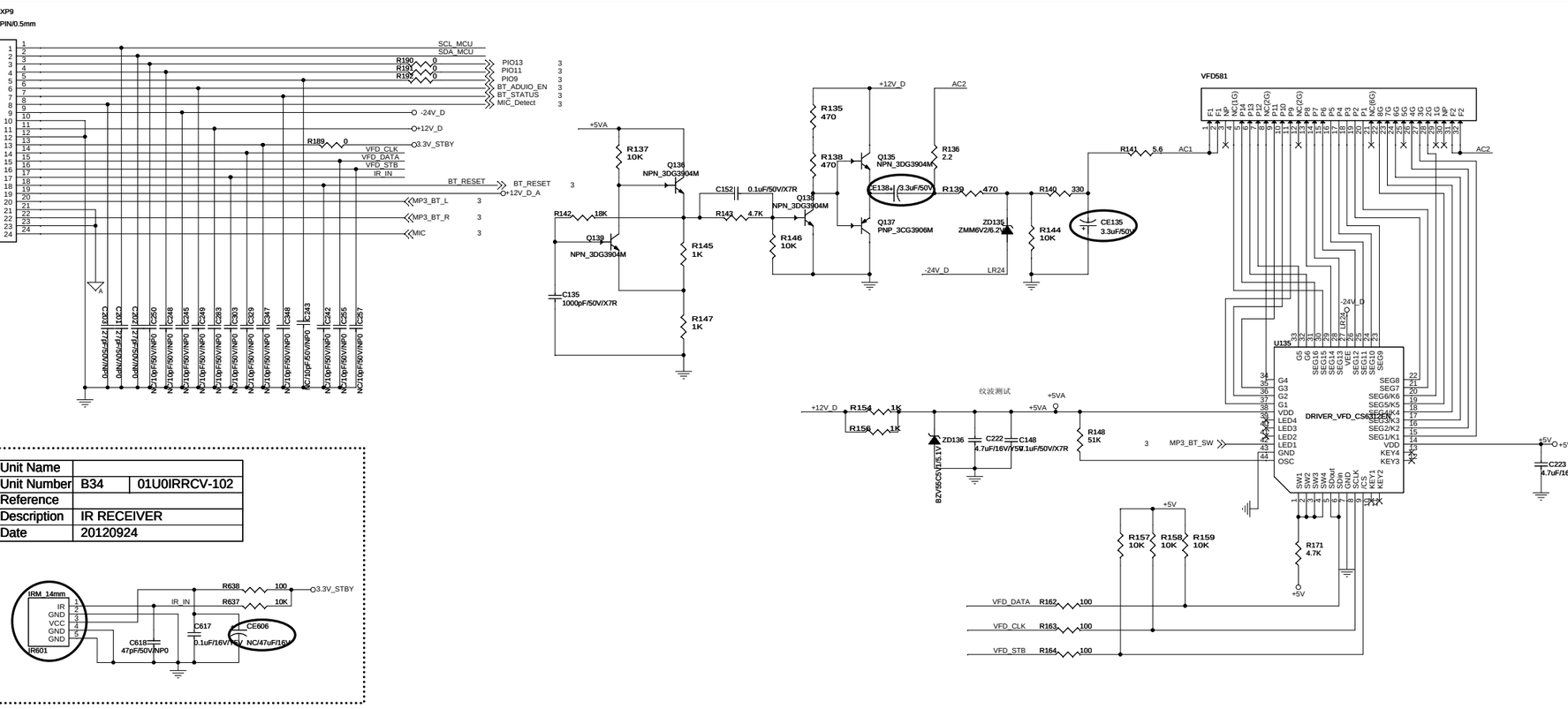


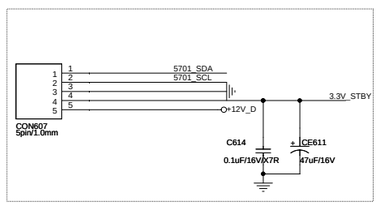


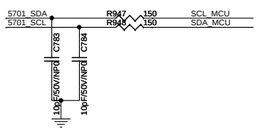
7-3

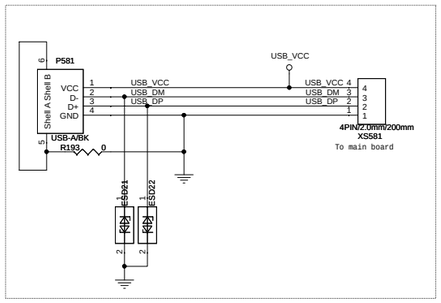
Front Control Board Circuit Diagram:Bluetooth

Unit Name		
Unit Number	B34	01U0IRRCV-102
Reference		
Description	IR RECEIVER	
Date	20120924	



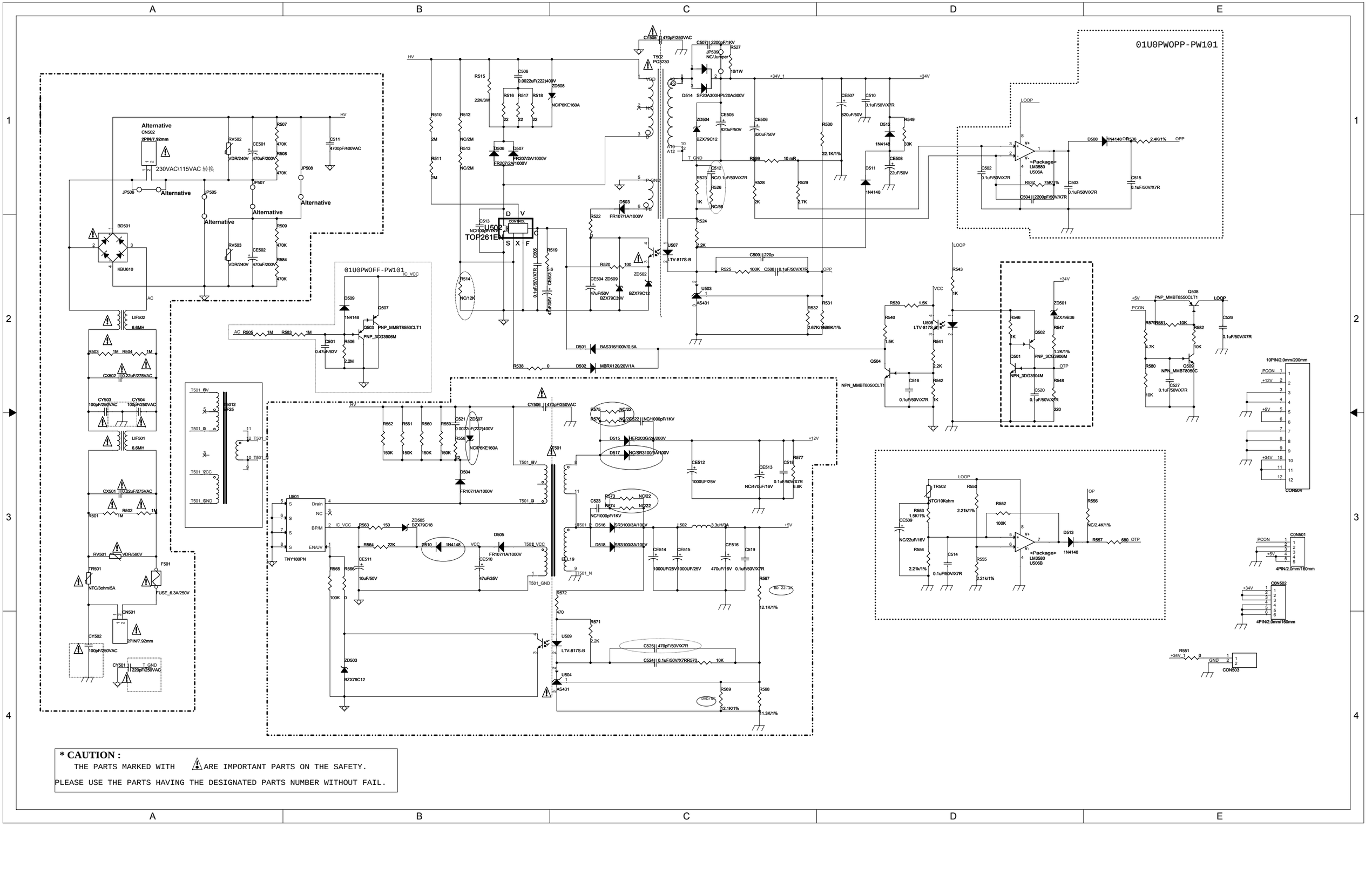






7-4

Power Board Circuit Diagram:



*** CAUTION :**

THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY.

PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.

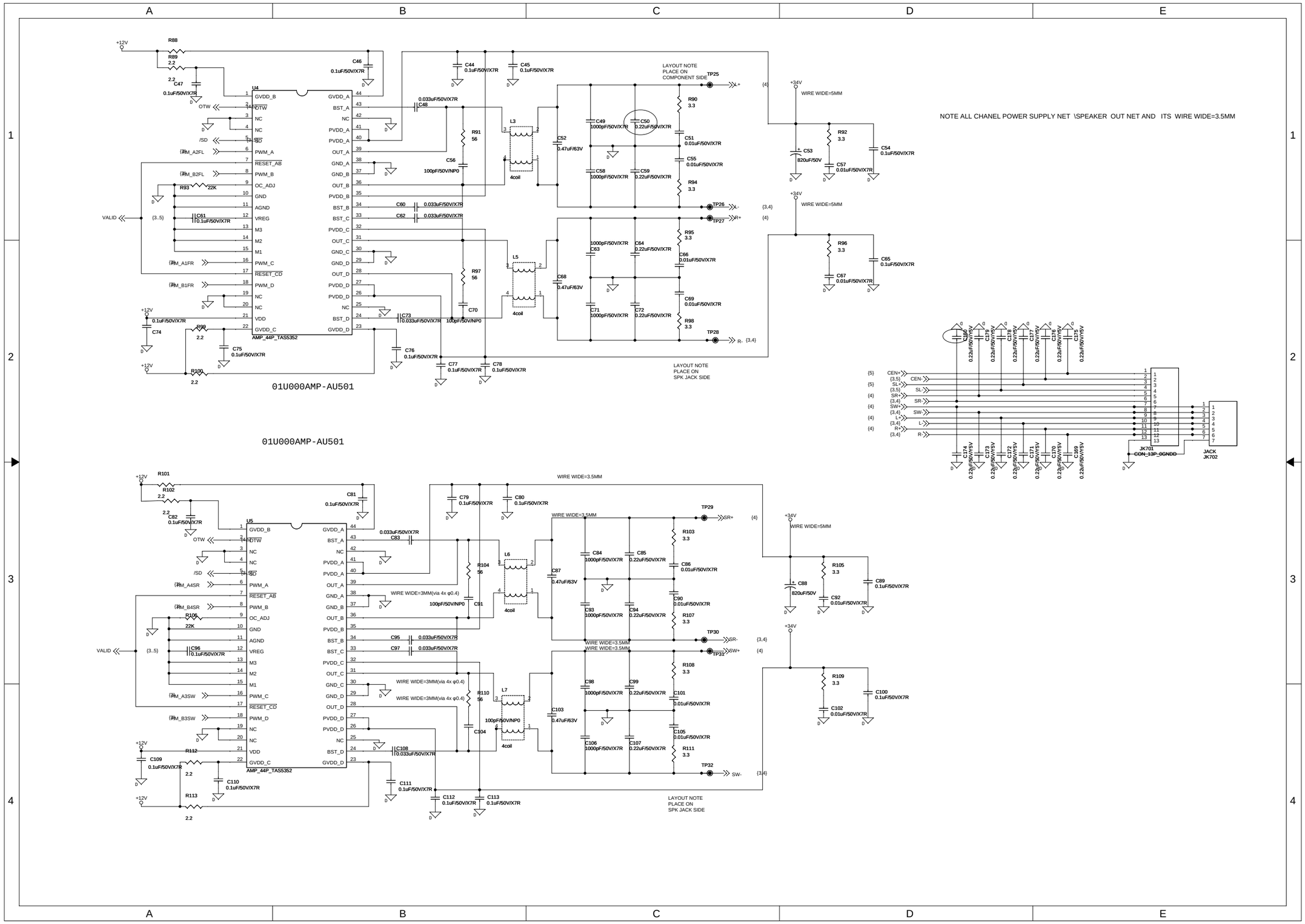
7-5

Amplifier Board Circuit Diagram:SL+SW

01U000AMP-AU501

7-6

Amplifier Board Circuit Diagram:SL+SW



7-7

Amplifier Board Circuit Diagram:DSP

ADD FB8 AND +12V-FAN
NET FOR FAN

Power ON / OFF Mute

add R718 R717

Power detect&DC FAN Control Circuit

CHANGE FROM
1% TO 5%

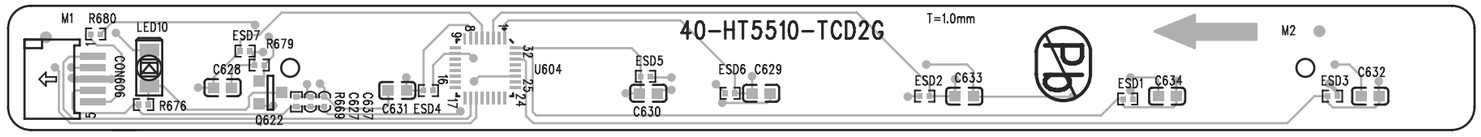
LAYOUT NOTE:
EMI SNUBBER
PLACE TO THE
RIGHT OF U100

LAYOUT NOTE:
EMI SNUBBER
PLACE TO THE
LEFT OF U100

LAYOUT NOTE:
EMI SNUBBER
PLACE NEAR
J901 PIN 1

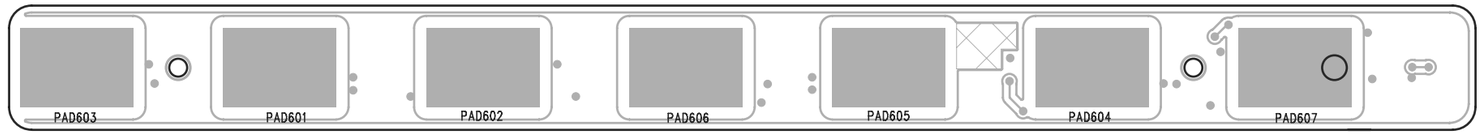
7-8

Touch Board Print layout (bottom side):



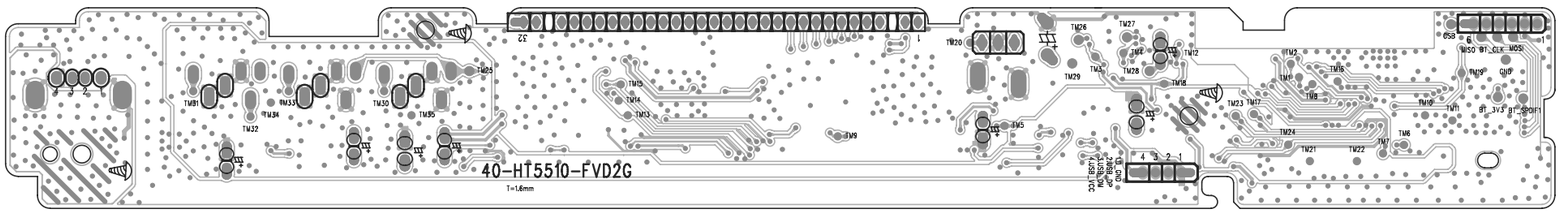
7-9

Touch Board Print layout (top side):



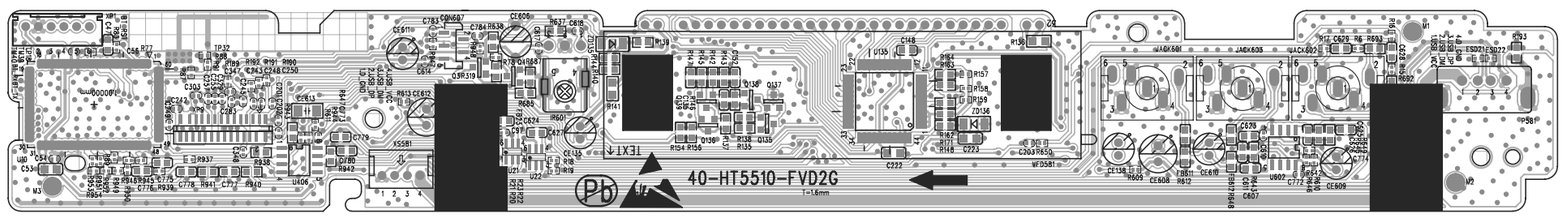
7-10

Front Control Board Print layout (bottom side):



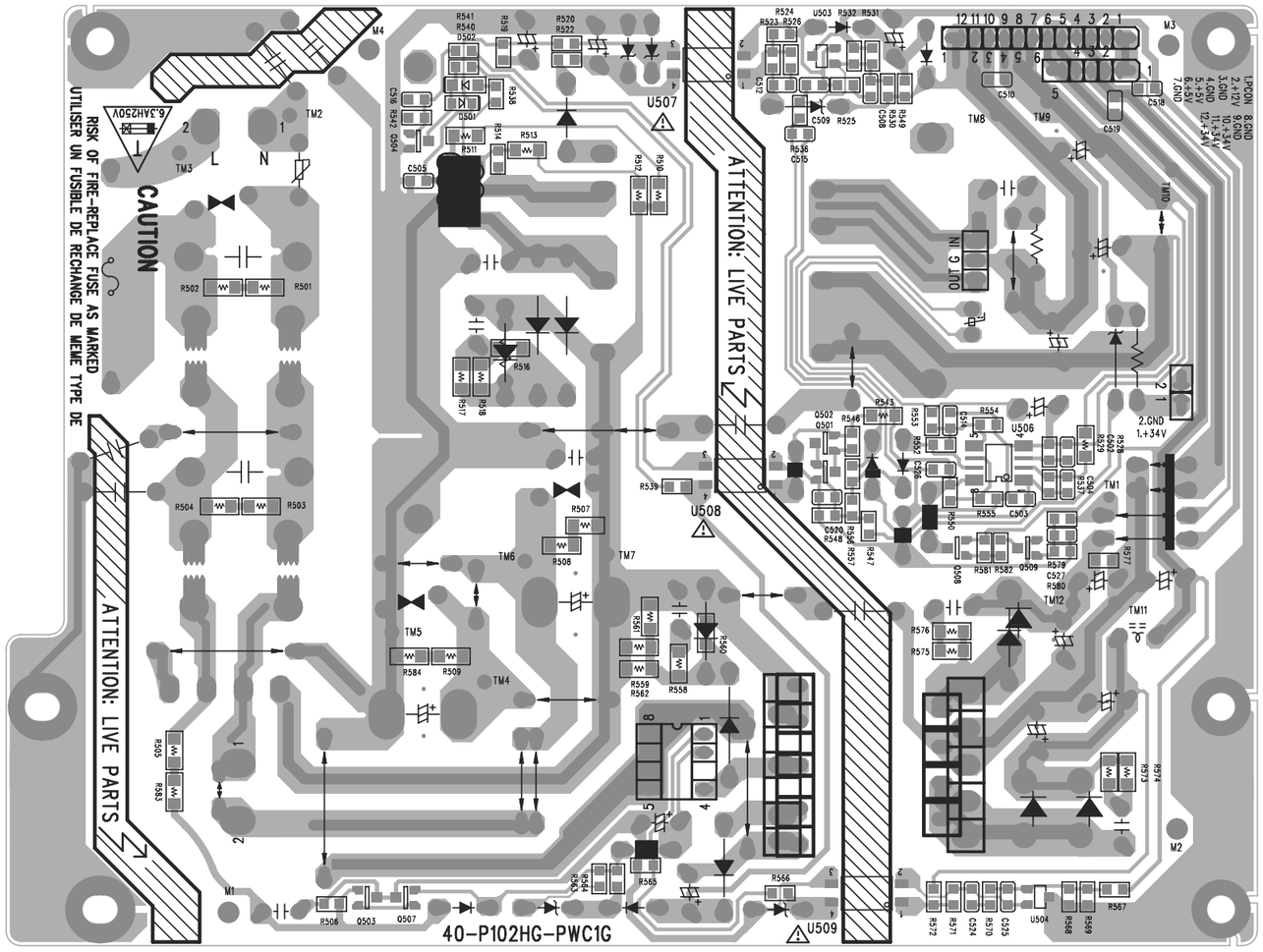
7-11

Front Control Board Print layout (top side):



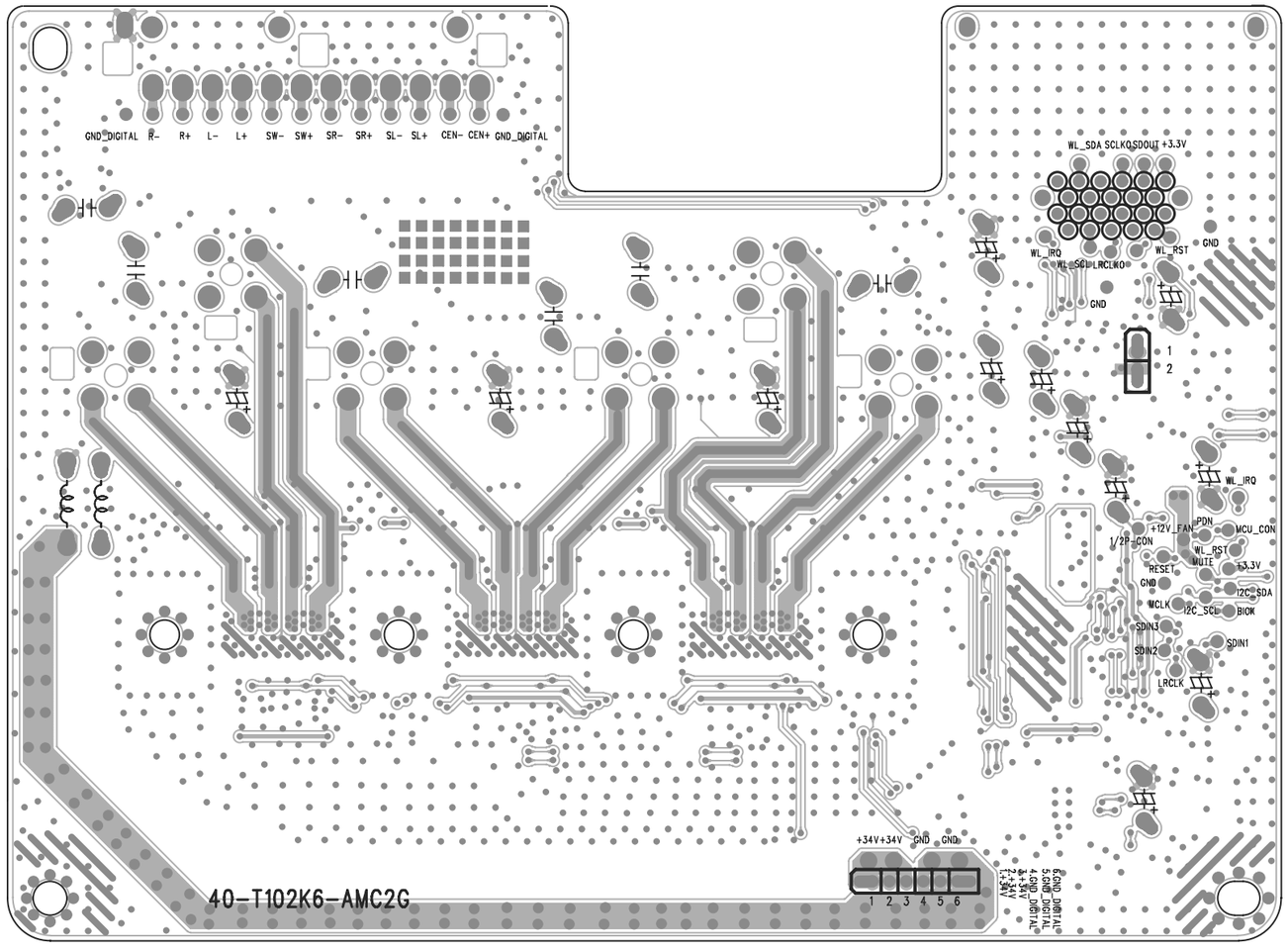
7-12

Power Board Print layout:



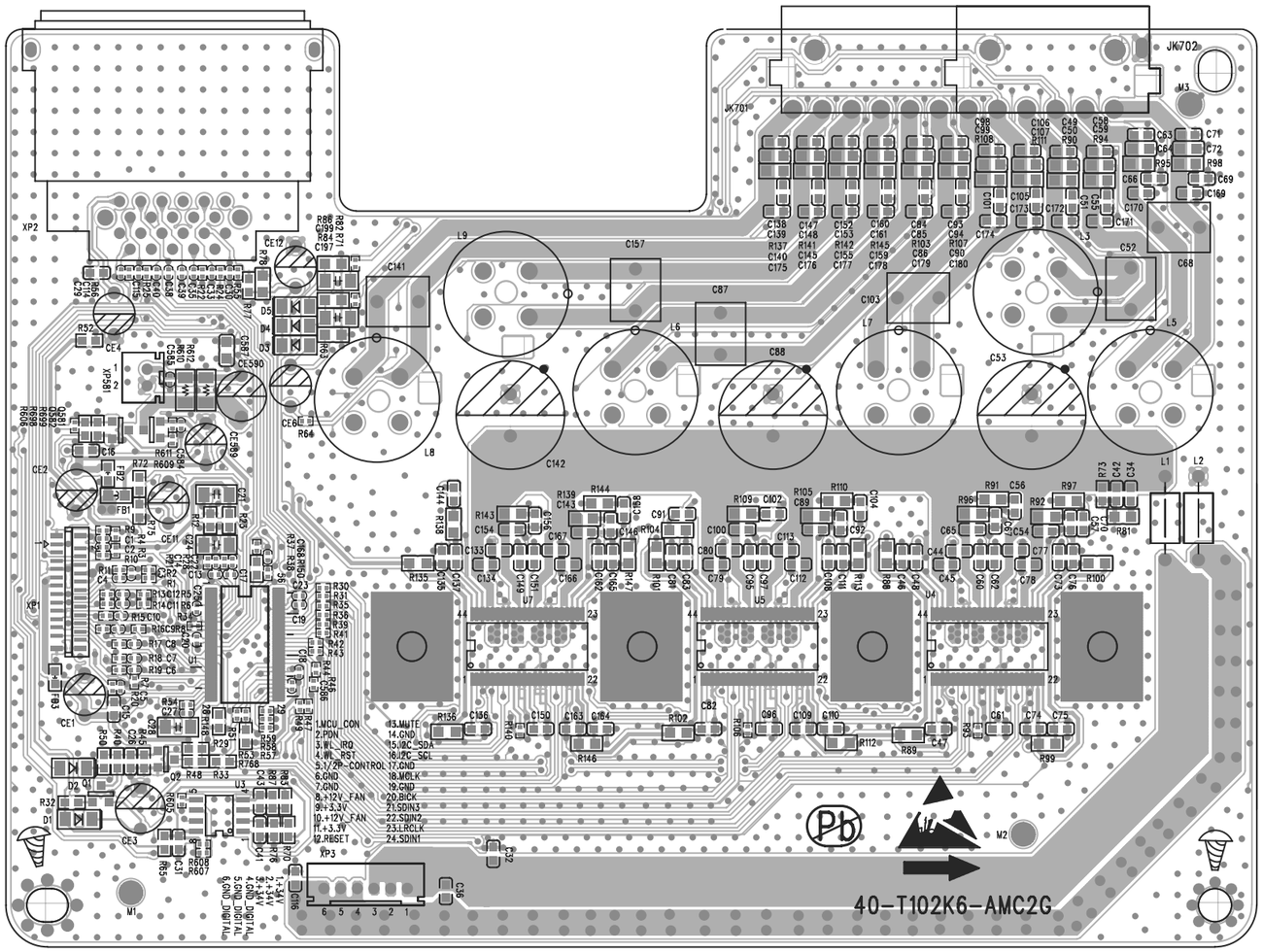
7-13

Amplifier Board Print layout (bottom side):



7-14

Amplifier Board Print layout (top side):



Voltage for Connection

XP4--From Main Board Connect to Power Board		
Pin No	**Pin Assin**	**Remarks**
1	VCC_D	4.75-5.25V
2	GND	
3	GND	
4	+12V	11.4-12.6V
5	+12V	11.4-12.6V

XP9--From Main Board Connect to Front Board		
Pin No	**Pin Assin**	**Remarks**
1	MIC_in	
2	AGND	
3	MP3_R	
4	AGND	
5	MP3_L	
6	+12V_D	11.4-12.6V
7	BT_RESET	
8	IR_OUT	
9	VFD_STB	SPI
10	VFD_DATA	
11	VFD_CLK	
12	3.3V_STBY_MCU	3.2-3.4V
13	GND	
14	+12V_D	11.4-12.6V
15	GND	
16	-24V_D	-19.0--24.0V
17	MIC_Detect	
18	BT_STATUS	
19	BT_ADUIO_EN	
20	PIO9	
21	PIO11	
22	PIO13	
23	T_SDA	
24	T_SCL	

XP13--From Main Board Connect to Amp Board		
Pin No	**Pin Assin**	**Remarks**
1	AOSDATA0	I2S
2	AOLRCK	
3	AOSDATA1	
4	AOSDATA2	
5	AOBCK	
6	GND	
7	AOMCLK	I2S
8	GND	
9	AMP_SCL	IIC
10	AMP_SDA	
11	GND	
12	AMP_MUTE	
13	AMP_RST	
14	3.3V	3.2-3.4V
15	+12V_D	11.4-12.6V
16	3.3V	3.2-3.4V
17	+12V_D	11.4-12.6V
18	GND	
19	GND	
20	POWER_derating	
21	WL_RST	
22	WL_IRQ	
23	PDWN	
24	MCU_CON_FAN	

XP6--From Main Board Connect to Front USB		
Pin No	**Pin Assin**	**Remarks**
1	USB_VCCF	4.75-5.25V
2	USBP1	High spped difference
3	USBM1	
4	GND	

Waveforms for measure point

图1.XP13.1 DATA0

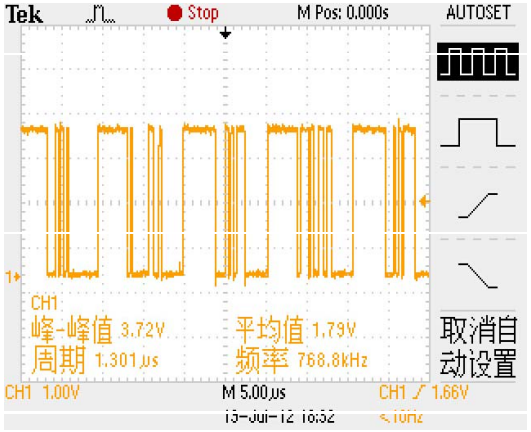


图2.XP13.2 LRCKL

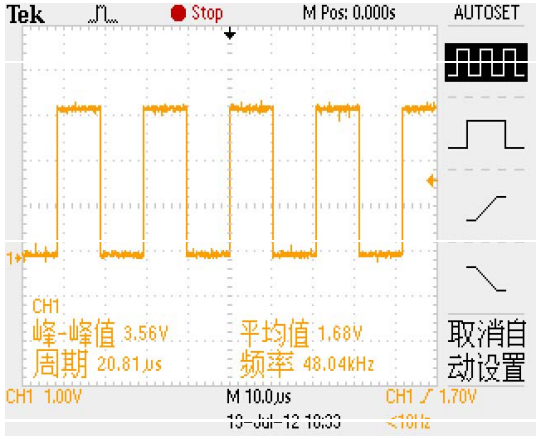


图3.XP13.3 DATA1

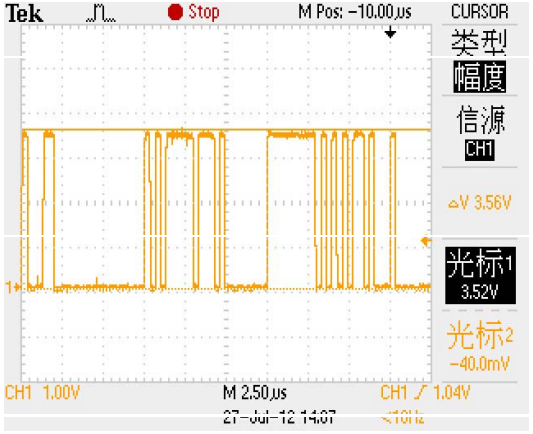


图4.XP13.4 DATA2

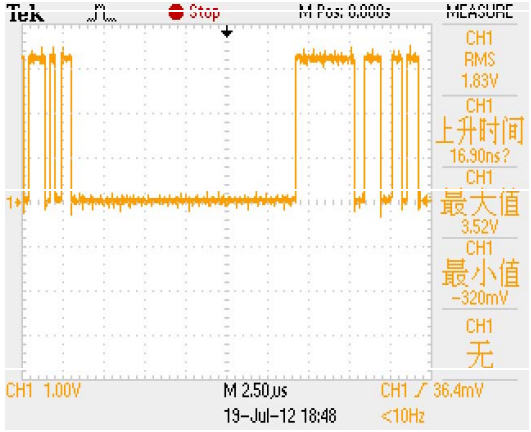


图5.XP13.5 BCLK

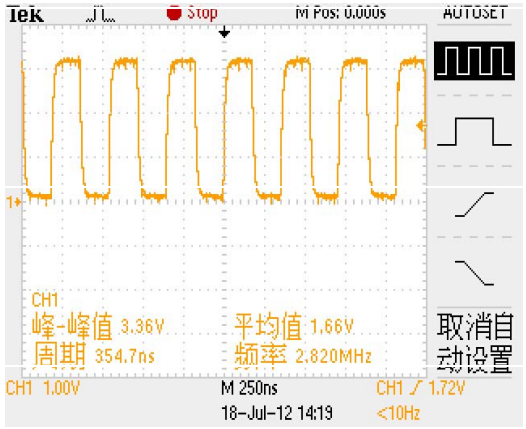
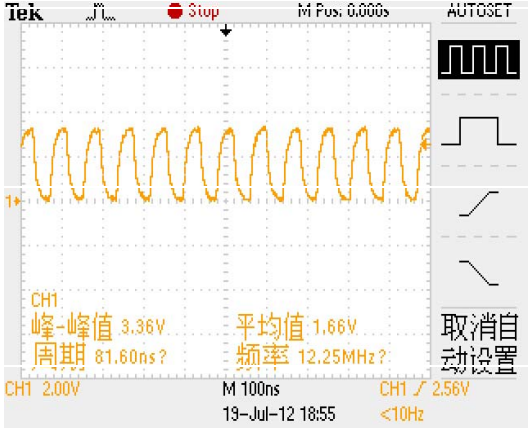


图6.XP13.7 MCLK



Waveforms for measure point

图7.XP13.9 AMP_SCL

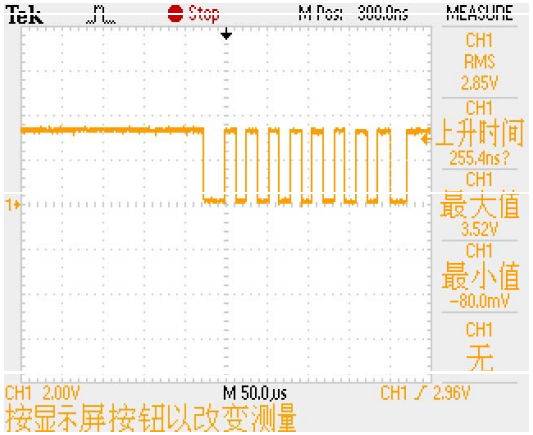


图8.XP13.10 AMP_SDA

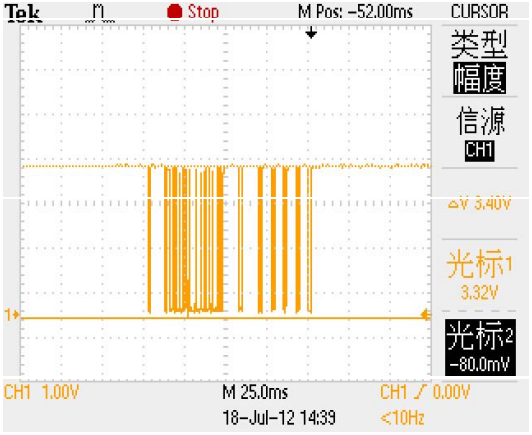


图9.XP13.12 AMP_MUTE

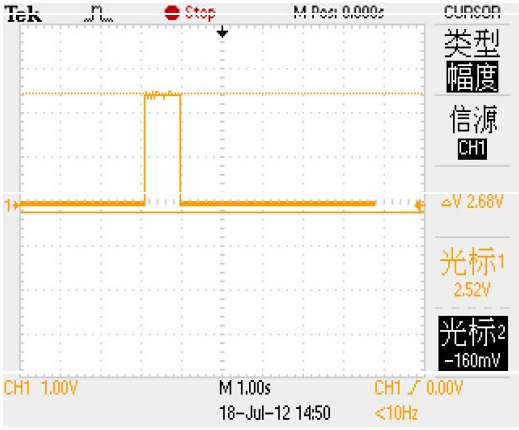


图10.XP13.13 AMP_RST

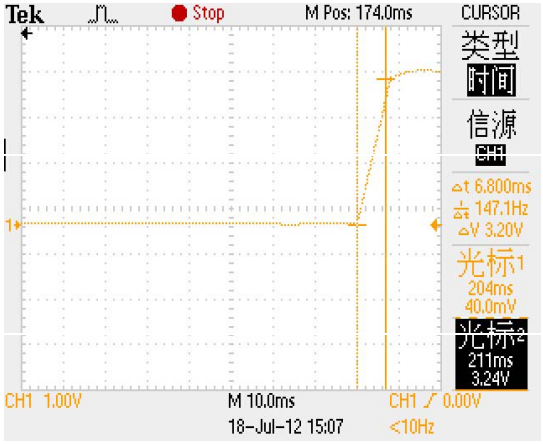


图11.XP13.20 POWER_derating

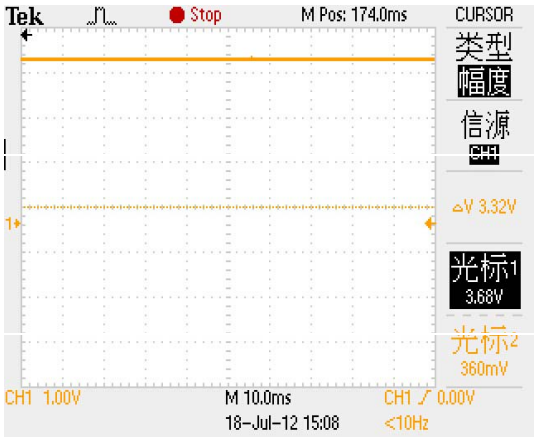
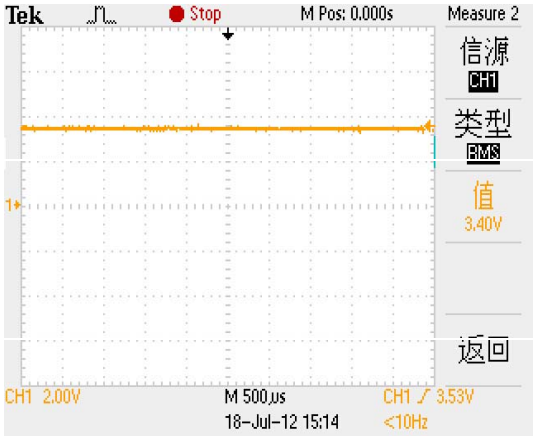
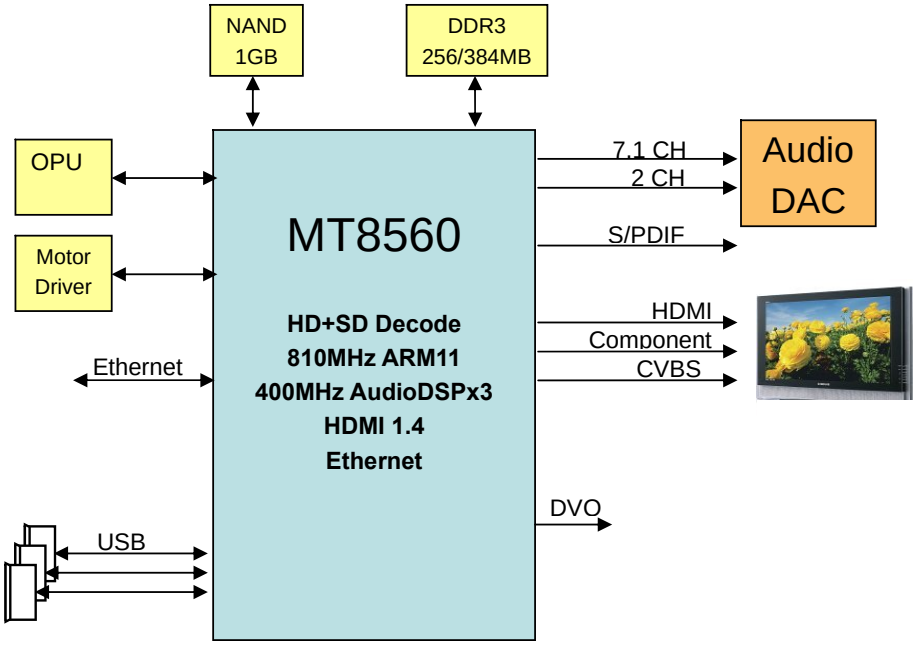


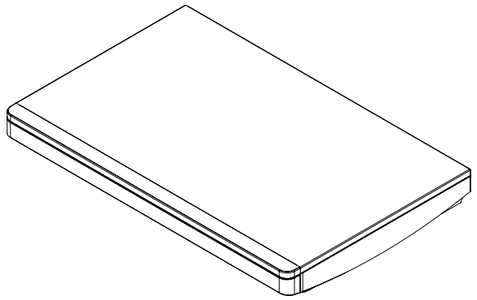
图12.XP13.23 PDWN



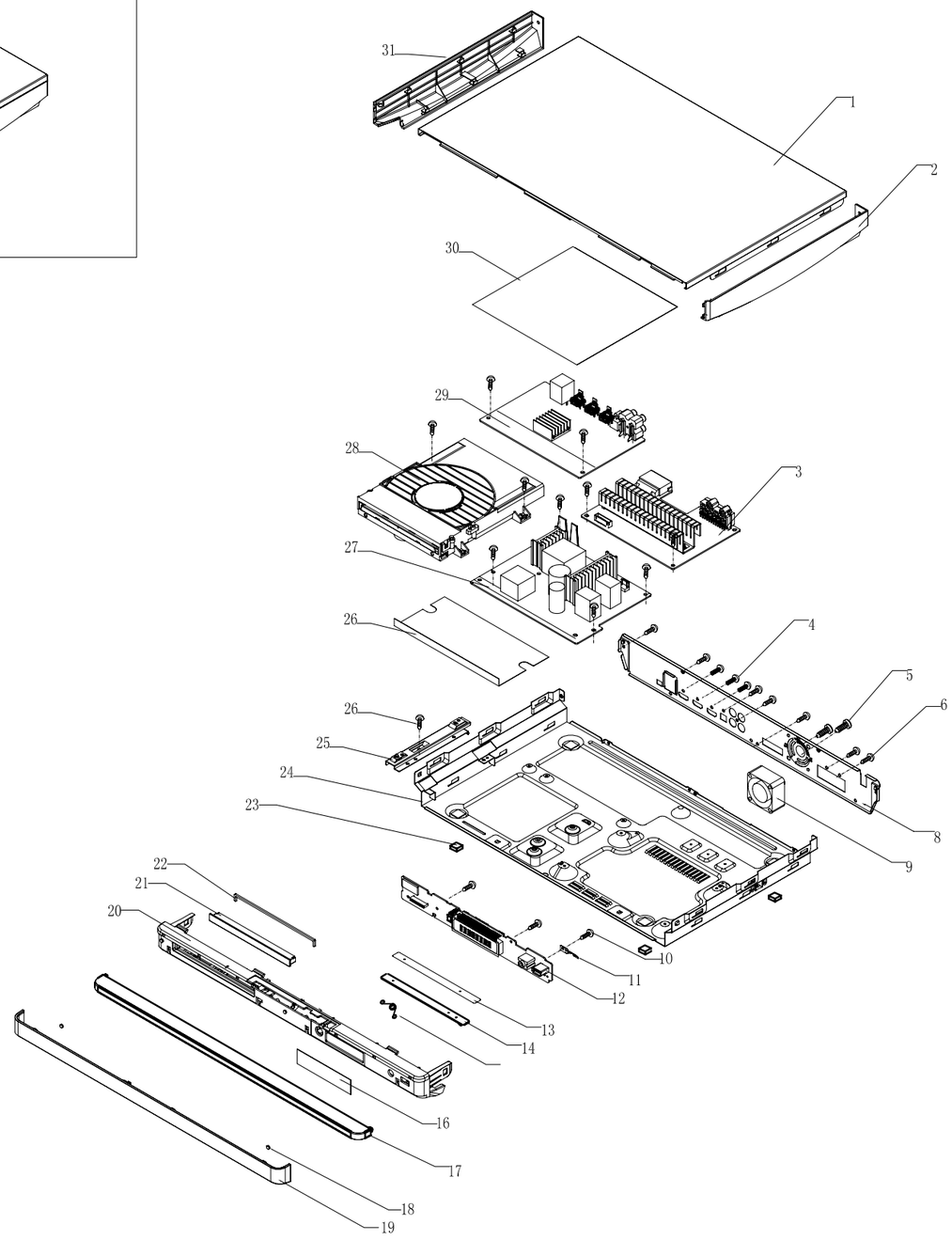
FUNCTIONAL BLOCK DIAGRAM FOR MAIN IC MT8560



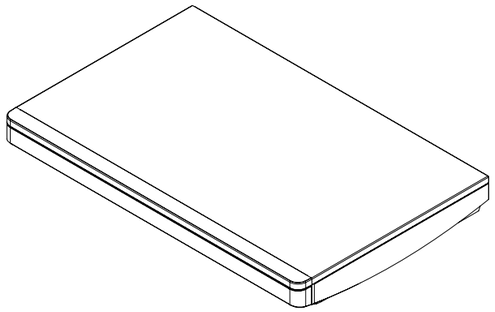
10-1



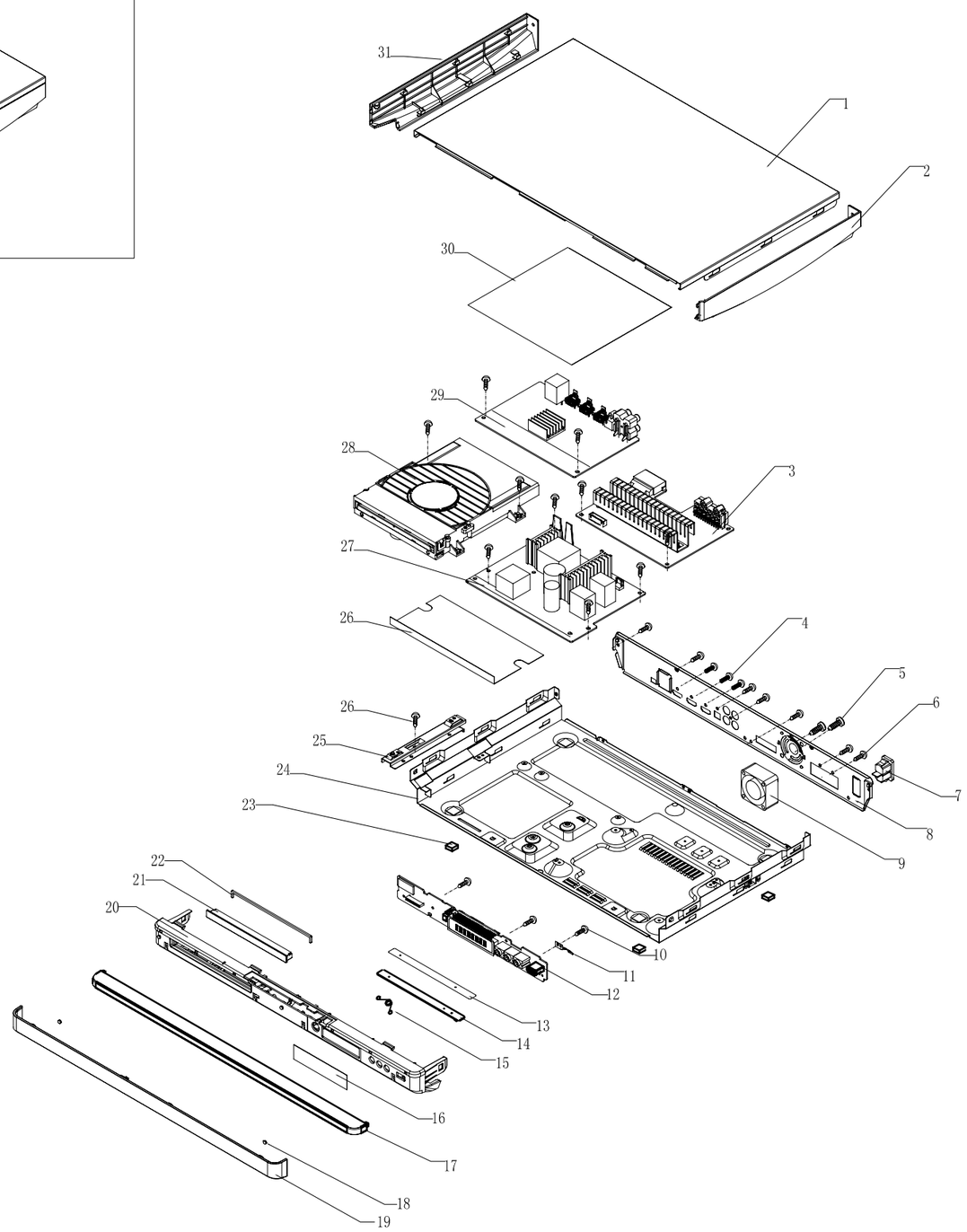
Exploded View for
HTB5540D/12/94/93



10-2



Exploded View for
HTB5540D/51/98



Revision List

Version 1.0

* Initial Release for HTB5540D/12:

Version 1.1

* Initial Release for HTB5540D/51/94/98/93 and correct the method of software upgrade by WK1312.

Version 1.2

* Correct the photo on cover,Specifications,DFU by WK1317.