

Service
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Service Manual



Contents	Page
1 Repair Scenario Matrix.....	1-1
2 Technical Specification and Connection Facilities	2-1 to 2-2
3 Laser Beam Safety Precautions.....	3-1
4 Important Safety Precautions	4-1 to 4-2
5 Safety Check After Servicing	5-1
6 Safety Information General Notes & Lead Free Requirements	6-1
7 Standard Notes For Servicing,Lead Free Requirements & Handling Flat Pack IC	7-1 to 7-4
8 Direction of Use	8-1 to 8-5
9 Cabinet Disassembly Instructions	9-1 to 9-3
10 Troubleshooting	10-1
11 Software Version Check &Upgrad.....	11-1 to 11-2
12 Repair Service Flow.....	12-1 to 12-5
13 Block Diagram	13-1
14 Wiring Diagram	14-1
15 Touch Key Board Circuit Diagram	15-1
Layout Diagram	15-1

Contents	Page
16 Output Board Circuit Diagram	15-2
Layout Diagram	15-3
17 Power Socket and LED Board Circuit Diagram	15-4
Layout Diagram	15-4
18 VFD Display Board Circuit Diagram	15-5
Layout Diagram	15-6
19 MCU Board Circuit Diagram	15-7
Layout Diagram	15-8
20 Decoder Board Block Diagram	15-9
Layout Diagram	15-10
21 Power Board Circuit Diagram	15-11
Layout Diagram	15-12
22 Exploded View.....	16-1 to 16-2
23 Revision List	17-1

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Feature Different	/12	/51	/93	/98
RDS	✓			
Voltage Selector				✓
ECO Standby	✓			
DTS	✓	✓	✓	✓



Rapir Scenario Matrix

Type Versions Boards in Used	BDP9600			
	/12	/51	/93	/98
Touch Key Board	C	C	C	C
Power Socket Board	C	C	C	C
VFD Display Board	C	C	C	C
MCU Board	C	C	C	C
LED Board	C	C	C	C
Power Board	BD	BD	BD	BD
Output Board	BD	BD	BD	BD
Decoder Board	BD	BD	BD	BD

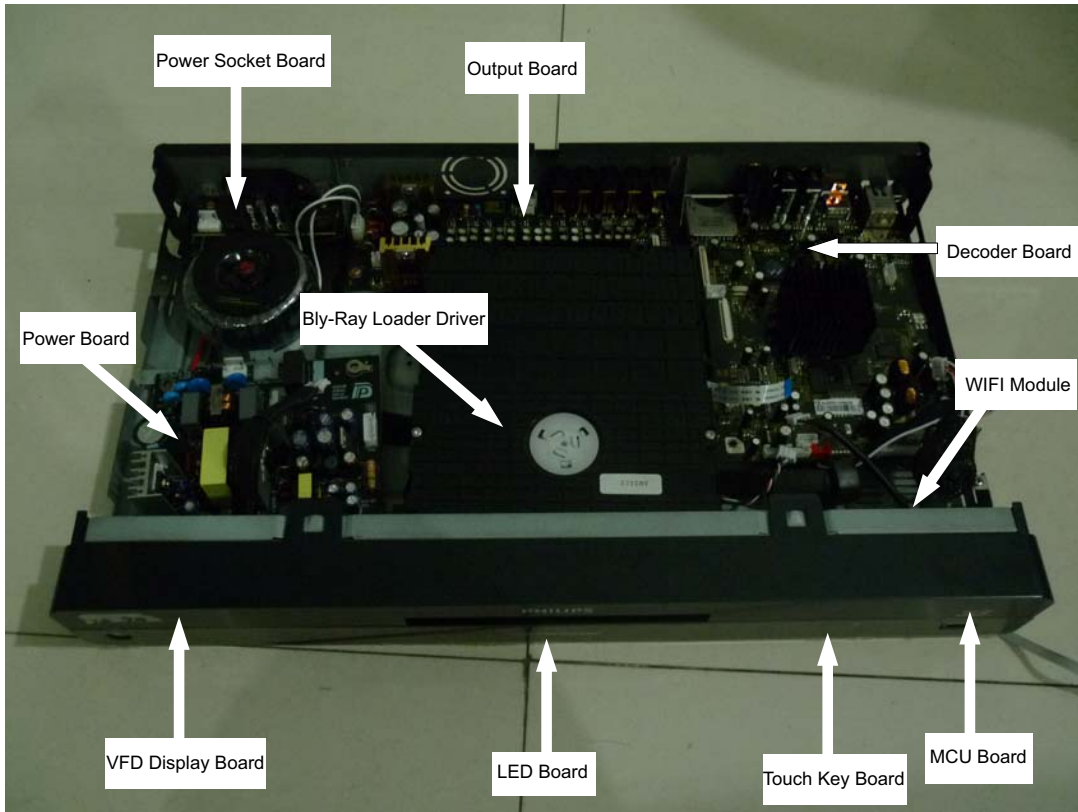
*C=Component Level Repair

*BD=Board Level Replacement

Technical Specification and Connection Facilities

1. Technical Specification and Connection Facilities

1.1 PCB Locations



Specifications differences				
Type/Versions	BDP9600			
	/12	/51	/93	/98
Specifications	/12	/51	/93	/98
Voltage	230V	230V	110V-240V	110V-240V
Frequency	50Hz	50Hz	50Hz-60Hz	50Hz-60Hz

Technical Specifications and Connection Facilities

1.2 General

Power supply	: 110-240V, 50Hz~60Hz
Power consumption	: 30W
Standby power consumption	: <0.2 W

1.3 Connectivity

CD-DA(PCM)/VideoCD(MPEG-1)

Output Voltage	: 2V ± 0.5dB
Signal to Noise Ratio	
Unweighted	: ≤-105dB
A-weighted	: ≤-120dB
With Automute	: ≤-120dB
Outband Attenuation(Above25kHz)	: ≤-50dB

DVD(LPCM / MPEG-2 /Dobly AC-3)

Output Voltage	: 2V ± 0.5dB
Signal to Noise Ratio	: ≥120dB
Outband Attenuation(Above25kHz)	: ≥-50dB

Digital Audio Outputs

LPCM	: according IEC 60958-3
MPEG 1, MPEG 2, AC3	: according IEC 61937
DTS	: according IEC 61937+ addendum

Coaxial & Optical output

Output signal Amplitude(75Ωterminater)	: 0.5Vpp ± 20%
Output impedance	: 75Ω ± 20%
DC Output voltage(75Ωterminater)	: 0.05V

Video Supporting Format

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

CVBS Output Component

Amplitude Output	: 1000mVpp ± 10%
White Bar	: 714mVpp ± 10%
Sync.Amplitude	: 286mVpp ± 10%
S/N Luminance	: ≥60dB
Chroma/Luminance Delay(2T pulse)	: ≤20nS
DC Level	: ≤1V

Video Output Component

Amplitude Output	: 1000mVpp ± 10%
White Bar	: 714mVpp ± 10%
Sync.Amplitude	: 286mVpp ± 10%
S/N Luminance	: ≥60dB
DC Level	: ≤1V

USB

Compatibility	: USB2.0
Type of connector	: Series A Connector
Class support	: UMS(USB Mass Storage Class)
File System	: FAT12,FAT16,FAT32

HDMI Output

Compatibility	: HDMI Version 1.4
Type of connector	: Type A Connector(19pins)

1.4 Dimension and Weight

Set Dimension WxHxD	: 435x70x260(mm)
Net Weight	: 5.0kg

1.5 Laser Output Power & Wavelength

DVD

Output power	: 6mW
Wavelength	: 655 +10nm/-10nm

CD

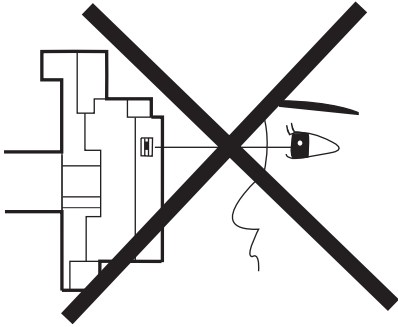
Output power	: 7mW
Wavelength	: 790 +10nm/-20nm

1.6 Playability

Video Playback		
1.	Playback Media: CD-R/CD-RW, DVD+R/+RW, DVD-R/-RW, DVD-Video, Video CD/SVCD, DVD+R DL, DVD-R DL,USB flash drive	x
2.	Compression Formats: MPEG2, MPEG1, DivX 3.11, DivX 4.x, DivX 5.x, DivX 6.0, MPEG4	x
Audio Playback		
1.	Playback Media: Audio CD, CD-R/RW, DVD+R DL, DVD+R/+RW, DVD-R/-RW, MP3- CD,MP3-DVD,USB flash drive, WMA-CD	x
2.	Compression Format: Dolby Digital, MP3, MPEG2 Multichannel, PCM, WMA	x
3.	MPEG1 bit rates: 64-384 kbps and VBR	x
Still Picture Playback		
1.	Playback Media: CD-R/RW, DVD+R DL, DVD+R/+RW, DVD- R/-RW, Picture CD, USB Digital Camera(PTP),USB flash drive	x
2.	Picture Compression Format: JPEG, JPEG digital camera photos	x
3.	Picture enhancement: Slideshow with MP3 playback, Create albums, Rotate, Slideshow with music playback, Zoom	x

Laser Beam Safety Precautions

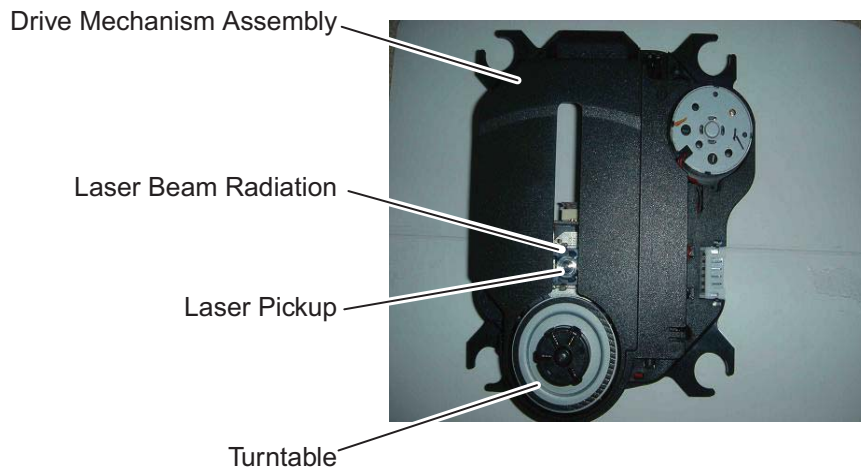
This Blu-Ray player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



CAUTION-CLASS 2M LASER
RADIATION WHEN OPEN
DO NOT STARE INTO THE BEAM
OR VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS



Location: Inside Top of Blu-Ray mechanism.

Important Safety Precautions

Important

Read and understand all instructions before you use your home theater. 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 spilled 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.
- 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 home theater!

- For wall-mountable products, use only the supplied wall mount bracket. Secure the wall mount to a wall that can support the combined weight of the product and the wall mount. Koninklijke Philips Electronics N.V. bears no responsibility for improper wall mounting that results in accident, injury or damage.

- 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.

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 alkaline, etc.).
- 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.

Product care

- Do not insert any objects other than discs into the disc compartment.
- Do not insert warped or cracked discs into the disc compartment.
- Remove discs from the disc compartment if you are not using the product for an extended period of time.
- Only use microfiber cloth to clean the product.

Important Safety Precautions

Disposal of your old product and batteries



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.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

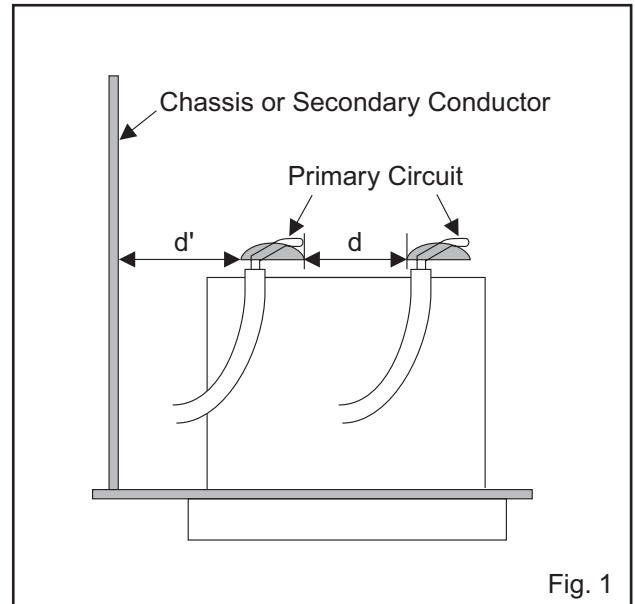
1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
110V~220V	≥ 3.2 mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.



2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON):

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

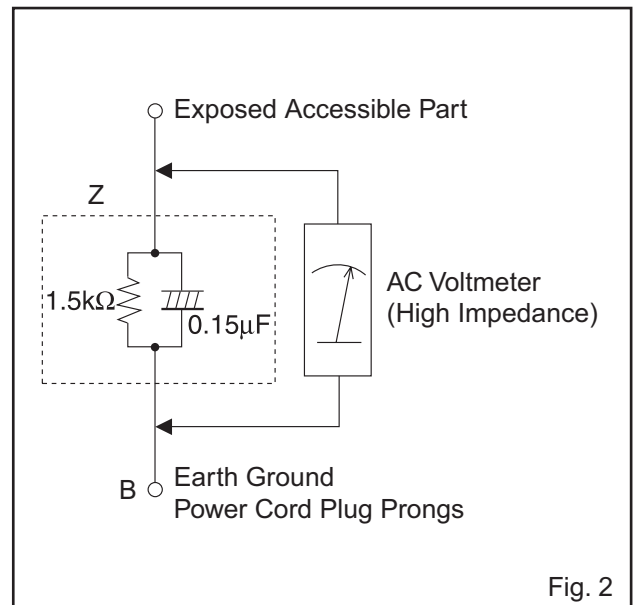


Table 2: Leakage current ratings for selected areas

AC Line Voltage	Load Z	Leakage Current (i)	Earth Ground (B) to:
110V~220V	0.15 μ F CAP. & 1.5 k Ω RES. Connected in parallel	$i \leq 0.5$ mA Peak	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

Safety Information, General Notes & Lead Free Requirements

1 Safety Instructions

1.1 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 to the 'on' position (keep the mains cord unplugged!).
 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 1 MΩ.
 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.

1.2 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	:AlGaInN(BD) :AlGaInP(DVD) :AlGaInP(CD)
Wavelength	: 650 nm (DVD) : 780 nm (VCD/CD) : 405nm(BD)
Output Power	: 20 mW (DVD+RW writing) : 0.8 mW (DVD reading) : 0.3 mW (VCD/CD reading)
Beam divergence	: 60 degree

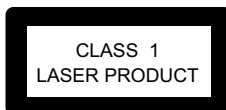


Figure 2-1

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.

2 Warnings

2.1 General

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD, ⚡). Careless handling 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.
 - Wristband tester 4822 344 13999.
- Be careful during measurements in the live voltage section. The primary side of the power supply, including the heatsink, 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 'lightning 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'.

2.2 Laser

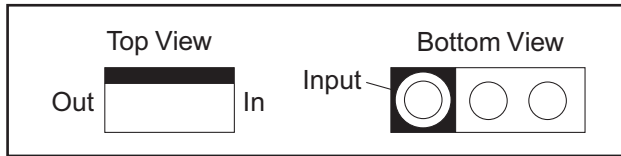
- The use of optical instruments with this product, will increase eye hazard.
- Only qualified service personnel may remove the cover or attempt to service this device, due to possible eye injury.
- Repair handling should take place as much as possible with a disc loaded inside the player.
- Text below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

CAUTION VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO BEAM
 ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING
 ADVARSEL SYNLIG OCH OSYNLIG LASERSTRÅLING NÄR DEKSEL ÅPENS UNNGÅ EKSPONERING FÖR STRÅLEN
 VARNING SYNLIG OCH OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD BETRÄKTA EJ STRÅLEN
 VARO! AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LASER SÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN
 VORSICHT SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN
 DANGER VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AVOID DIRECT EXPOSURE TO BEAM
 ATTENTION RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE EXPOSITION DANGEREUSE AU FAISCEAU

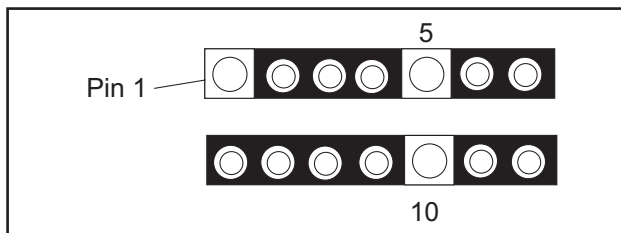
Figure 2-2

Circuit Board Indications

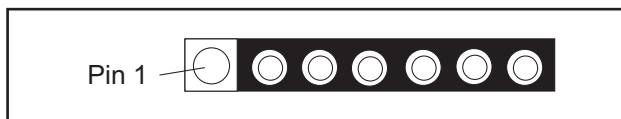
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

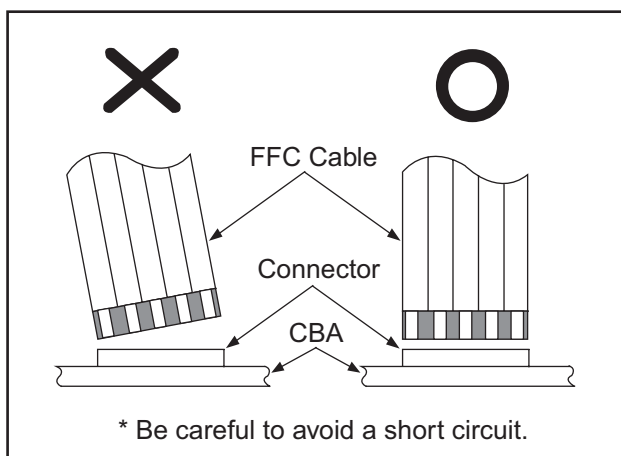


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

Information about lead-free soldering

Philips CE is producing lead-free sets from 1.1.2005 onwards.

IDENTIFICATION

Regardless of special logo (not always indicated)



One must treat all sets from **1 Jan 2005** onwards, according to the next rule:

Serial Number gives a 14-digit. Digit 5&6 shows the YEAR, and digit 7&8 shows the WEEK.

So from **0501** onwards=from 1 Jan 2005 onwards

Important note : In fact also products of year 2004 must 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 or does not know whether product is lead-free, 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.

Standard Notes for Servicing, Lead Free Requirements & Handling Flat Pack IC

- Special information for BGA-ICs:
 - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use the 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. (MSL=Moisture Sensitivity Level). This will be communicated via AYS-website. Do not re-use BGAs at all.
- For sets produced before 1.1.2005 (except products of 2004), containing leaded solder-alloy 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.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

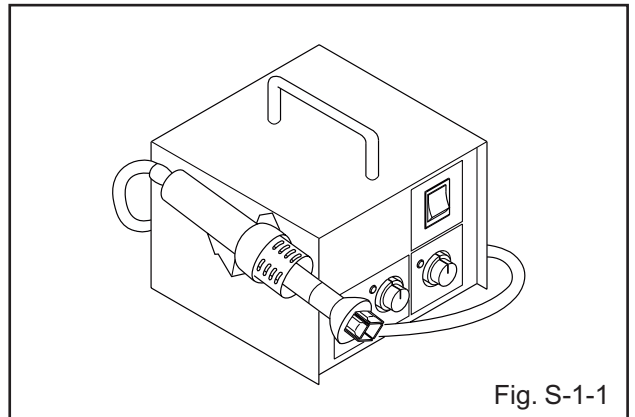


Fig. S-1-1

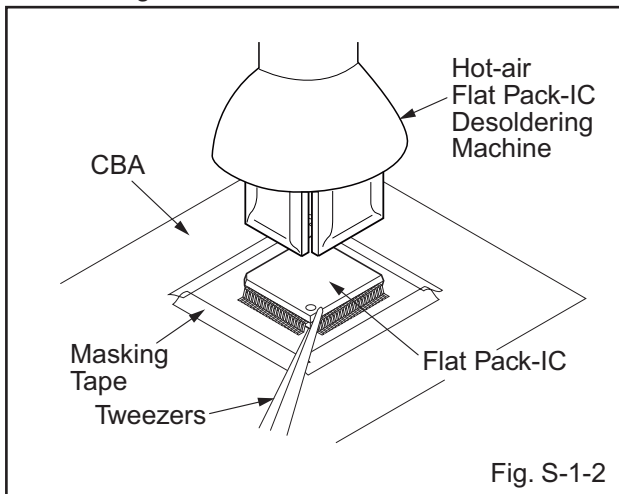
2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

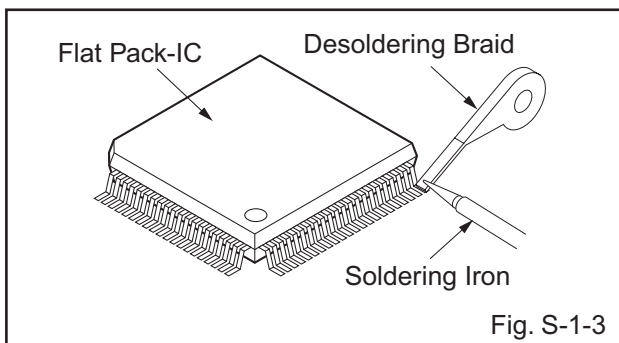
Standard Notes for Servicing, Lead Free Requirements & Handling Flat Pack IC

- The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

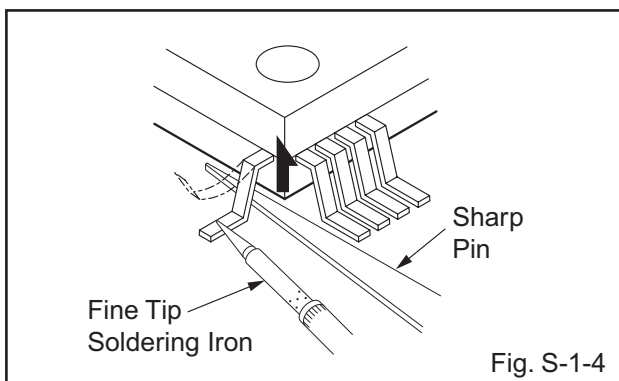


With Soldering Iron:

- Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



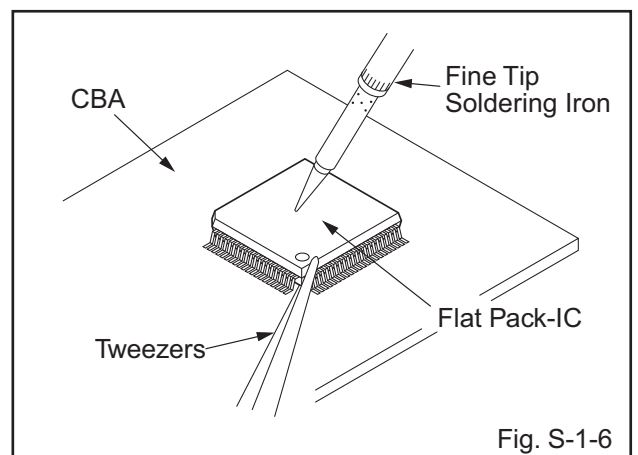
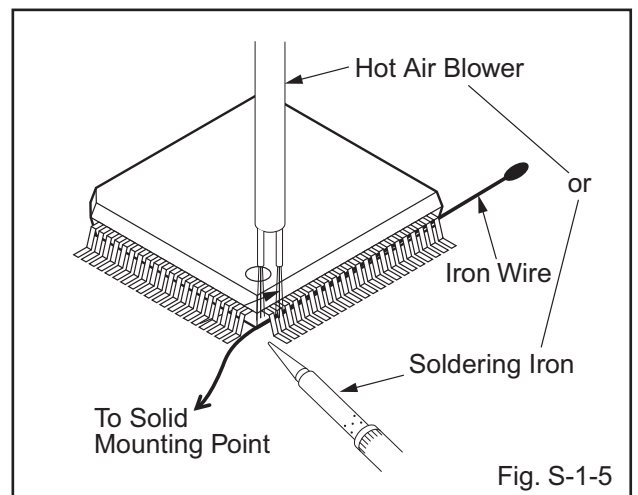
- Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

- Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

- Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
- Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
- Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

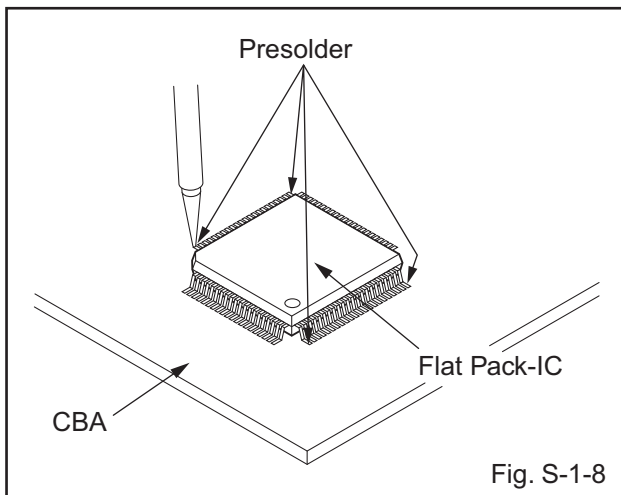
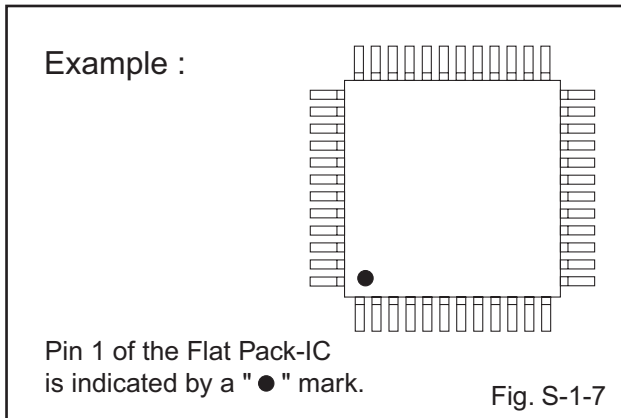
Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



Standard Notes for Servicing, Lead Free Requirements & Handling Flat Pack IC

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



Instructions for Handling Semi-conductors

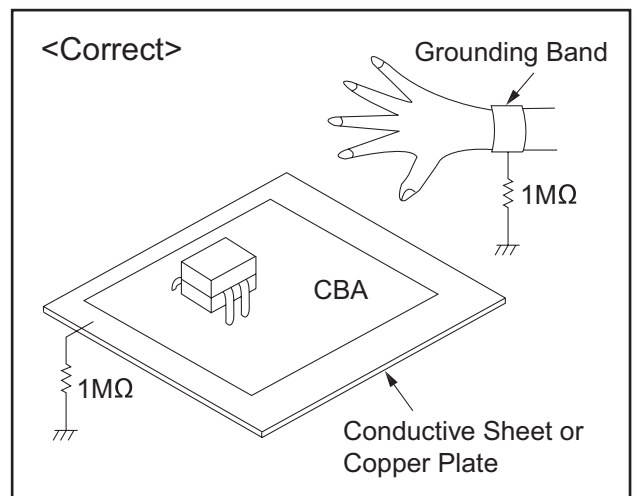
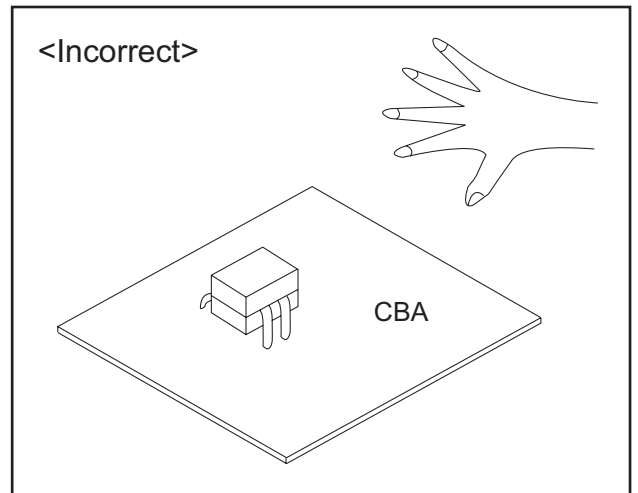
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band (1 M Ω) 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 M Ω) 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.

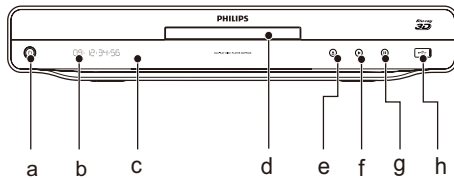


Direction of Use

*The following excerpt of the DFU/QSG serves as an introduction to the set. The Complete Direction for Use can be download in different languages from the internet site of Philips Customer care Center : www.support.philips.com

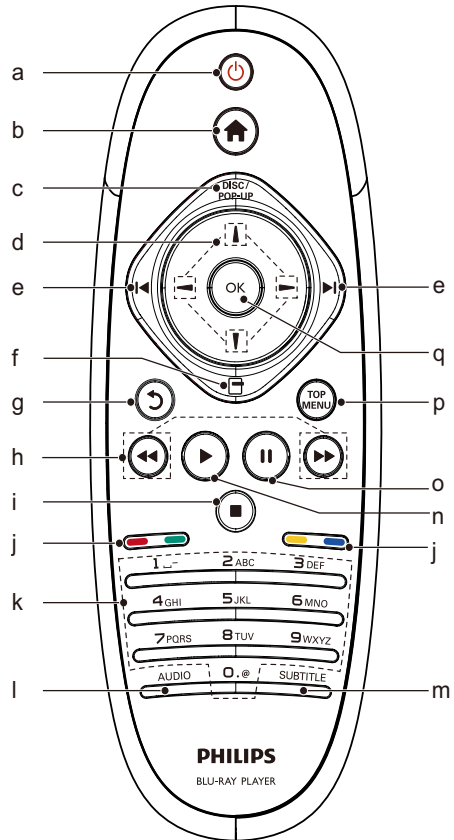
Product overview

Main unit









- a
 - Turn on this player or switch to standby mode.
- b Display panel
- c IR sensor
 - Detect signals from the remote control. Always point the remote control at the IR sensor.
- d Disc compartment
- e
 - Open or close the disc compartment .
- f
 - Start or resume play.
- g
 - Pause play.
- h jack
 - Connect a USB device.

Remote control



- a
 - Turn on this player or switch to standby mode.
 - When EasyLink is enabled, press and hold for at least three seconds to turn all connected HDMI CEC compliant devices to standby.
- b
 - Access the home menu of this player.
- c DISC/POP-UP
 - BD: Access or exit the pop-up menu.
 - DVD: Access or exit the disc menu.
- d
 - Navigate through the menus.
- e
 - Skip to the previous or next title, chapter, or track.

Remote Control

- f 
 - Access options for the current activity or selection.
- g 
 - Return to a previous display menu.
- h 
 - Search backward or forward.
- i 
 - Stop play.
 - Press and hold to open/close the disc compartment.
- j Color buttons
 - BD: Select tasks or options.
- k Alphanumeric buttons
 - Select an item to play.
 - Enter values.
 - Enter letters via SMS style entry.
- l AUDIO
 - Select an audio language or channel on a disc.
- m SUBTITLE
 - Select a subtitle language on a disc.
- n 
 - Start or resume play.
- o 
 - Pause play.
 - Move the paused picture forward frame by frame .
- p TOP MENU
 - BD: Display the top menu.
 - DVD: Display the title menu.
- q OK
 - Confirm an entry or selection.

3 Connect


Make the following connections to use this player.

Basic connections:

- Video
- Audio
- Power

Optional connections:

- Route audio to other devices
 - HDMI-compliant AV receiver/amplifier
 - Multi-channel AV amplifier/receiver
 - Digital AV amplifier/receiver
 - Analog stereo system
- USB device
- Wired/Wireless network

 **Note**

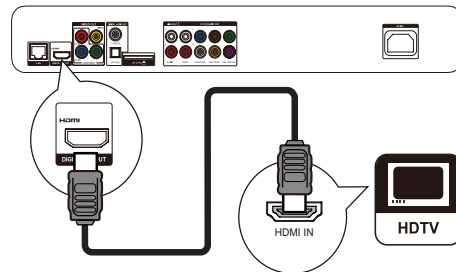
- Refer to the type plate at the back or bottom of the product for identification and supply ratings.
- Before you make or change any connections, ensure that all the devices are disconnected from the power outlet.

Connect video/audio cables

Select the best video connection that the TV can support.


- Option 1: Connect to the HDMI jack (for a HDMI, DVI or HDCP-compliant TV).
- Option 2: Connect to the component video jacks (for a standard TV or Progressive Scan TV).
- Option 3: Connect to the composite video jack (for a standard TV).

Option 1: Connect to the HDMI jack

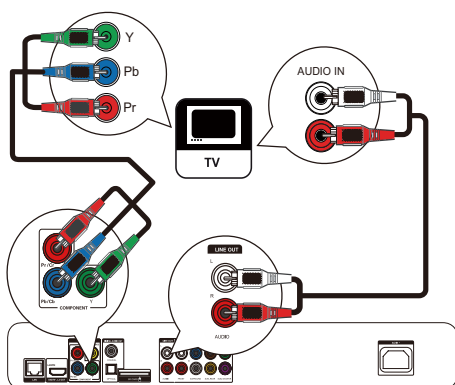


- 1 Connect an HDMI cable (not supplied) to:
 - the HDMI jack on this player.
 - the HDMI input jack on the TV.

Tip

- If the TV has a DVI connector only, connect via an HDMI/DVI adaptor. Connect an audio cable for sound output.
- If there is a blank TV screen under HDMI connection, on the remote control press  and then press "731" (numeric buttons) to recover picture display.
- If this player connects to a TV compatible with 1080p or 1080p/24Hz, Philips recommends HDMI category 2 cable, also known as High Speed HDMI cable, for optimal video and audio output.
- To play the digital video images of a BD-video or DVD-video via an HDMI connection, it is necessary that both this player and the display device (or an AV receiver/amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system).
- This connection provides the best picture quality.

Option 2: Connect to the component video jacks

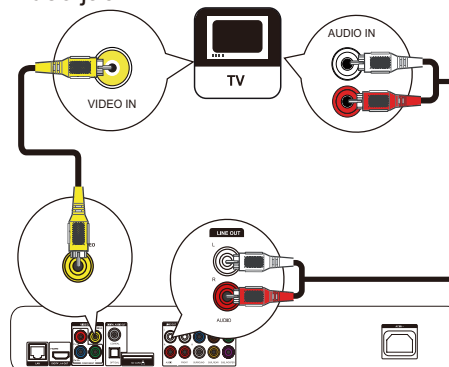


- 1 Connect the component video cables (not supplied) to:
 - the Y Pb/Cb Pr/Cr jacks on this player.
 - the COMPONENT VIDEO input jacks on the TV.
- 2 Connect the audio cables (not supplied) to:
 - the Audio LINE OUT-L/R jacks on this player.
 - the AUDIO input jacks on the TV.

Tip

- The component video input jack on the TV might be labeled as Y Pb Pr or YUV.

Option 3: Connect to the composite video jack



- 1 Connect a composite video cable (not supplied) to:
 - the VIDEO jack on this player.
 - the VIDEO input jack on the TV.
- 2 Connect the audio cables (not supplied) to:
 - the Audio LINE OUT L/R jacks on this player.
 - the AUDIO input jacks on the TV.

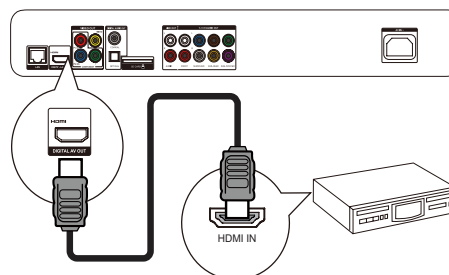
Tip

- The video input jack on the TV might be labeled as A/V IN, VIDEO IN, COMPOSITE or BASEBAND.

Route audio to other devices

You can route the audio from this player to other devices.

Connect to an HDMI-compliant AV receiver/amplifier



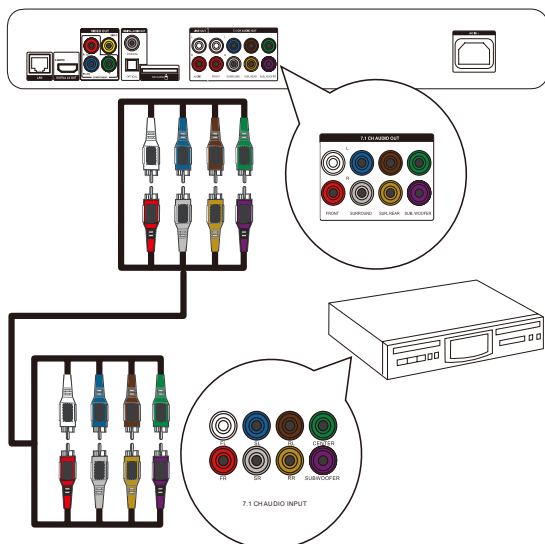
- 1 Connect an HDMI cable (not supplied) to:
 - the HDMI jack on this player.
 - the HDMI jack input jack on the device.



Tip

- The HDMI connection provides the best audio quality.

Connect to a multi-channel AV receiver/ amplifier



- 1 Connect the 7.1-channel audio cables (not supplied) to:
 - the 7.1 CH AUDIO OUTPUT jacks on this player.
 - the corresponding AUDIO input jacks on the device.

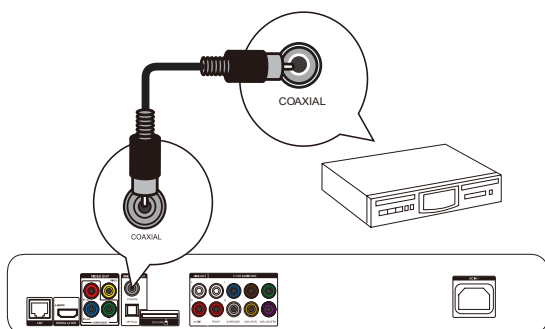


Tip

- To connect 5.1-channel AV receiver/amplifier, connect the 7.1-channel audio jacks except the SL/SR jacks.
- You can optimize the speaker output (see "Adjust settings" > [Audio] > [Speaker Setup]).

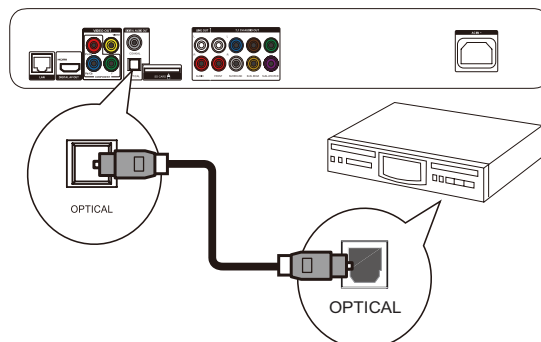
Connect to a digital AV amplifier/receiver

Connect to coaxial jack



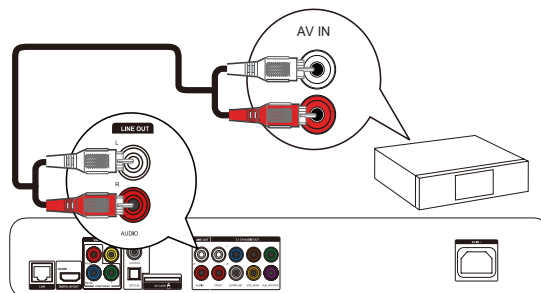
- 1 Connect a coaxial cable (not supplied) to:
 - the COAXIAL jack on this player.
 - the COAXIAL/DIGITAL input jack on the device.

Connect to optical jack



- 1 Connect an optical cable (not supplied) to:
 - the OPTICAL jack on this player.
 - the OPTICAL/DIGITAL input jack on the device.

Connect an analogue stereo system



- 1 Connect the audio cables (not supplied) to:
 - the Audio LINE OUT-L/R jacks on this player.
 - the AUDIO input jacks on the device.

Connect a USB device

- 1 Connect a USB device to the (USB) jack on the front panel of this player.

Note

- Press , and select [Browse USB] in the menu to access the content and play the files.
- Connect a USB device only to the jack on this player.
- Philips does not guarantee compatibility with all USB devices.

Connect a network

With a wired or wireless connection (see “Get started” > “Set up a network”), you can connect this player to:

- the Internet (for software update/BD Live/Net TV service).
- or a home network (to access media files from a DLNA media server, e.g. PC).



Note

- Internet access to Philips website for software update may not be allowed, depending on the router you use or the Internet Service Provider's policy. Contact your Internet Service Provider for more information.

Connect power



Caution

- Risk of player damage! Ensure that the power supply voltage corresponds to the voltage printed on the back of the unit.
- Before connecting the AC power cord, ensure you have completed all other connections.



Note

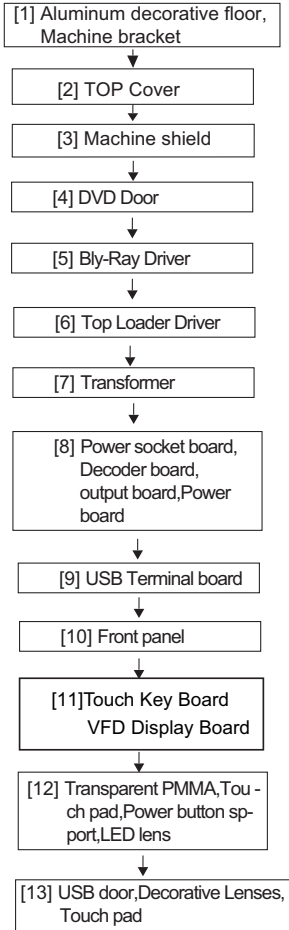
- The type plate is located on the back of the player.

- 1 Connect the AC power cable to:
 - this player.
 - the wall socket.
 - » This player is ready to be set up for use.

Cabinet Disassembly Instructions

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



Note:

- (1) Identification (location) No. of parts in the figures
- (2) Name of the part
- (3) Figure Number for reference
- (4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
0x = Screw, CNxx/Jxx/CONxx = Connector
D3.5X12BA is specification of screw.
* = Unhook, Unlock, Release, Unplug, or Desolder
e.g. 7(01) = seven Screws

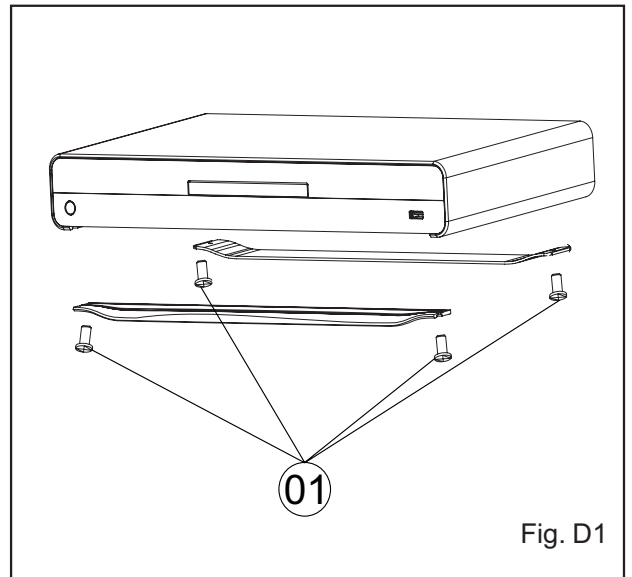


Fig. D1

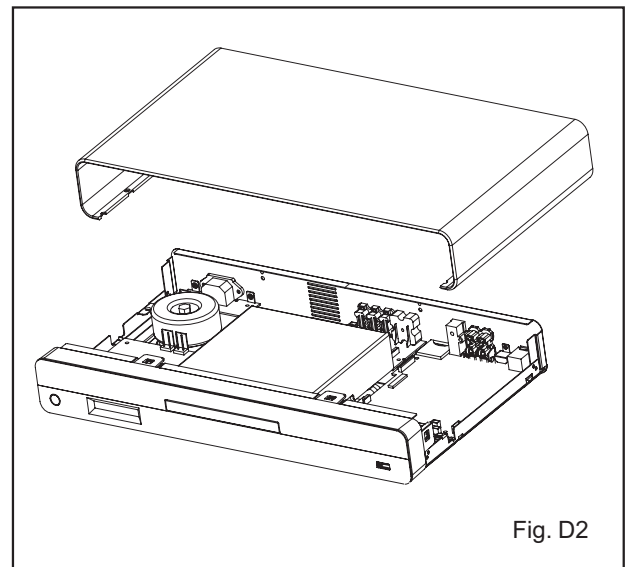
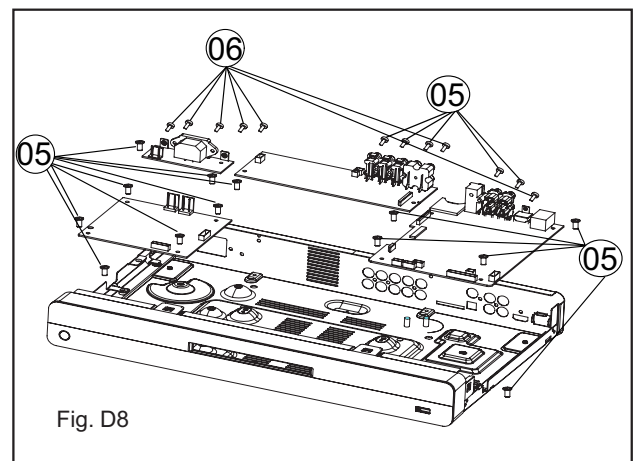
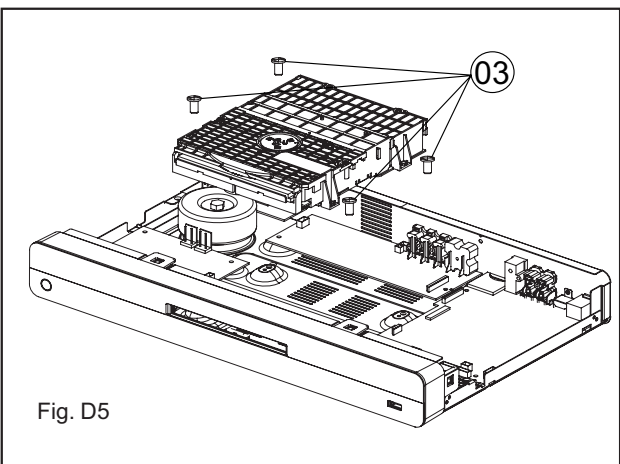
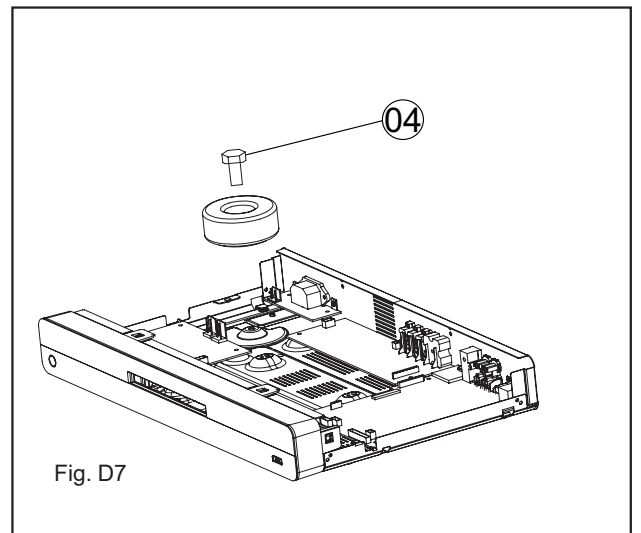
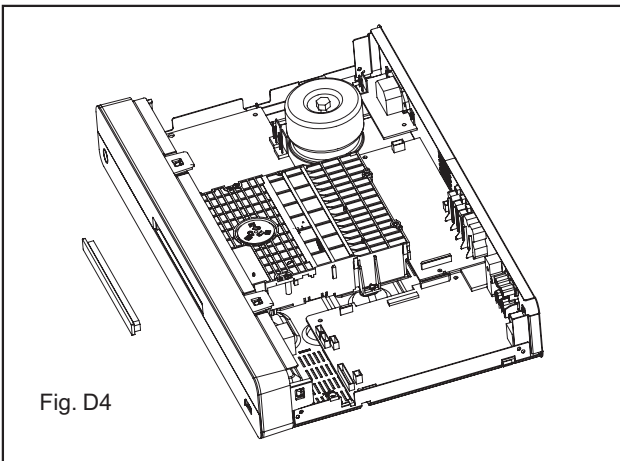
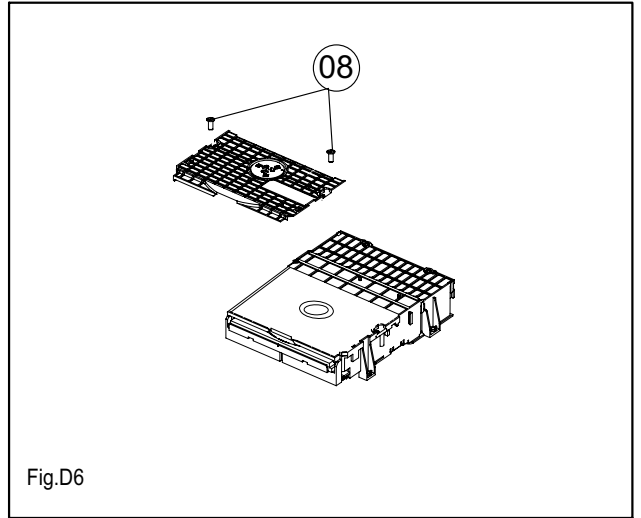
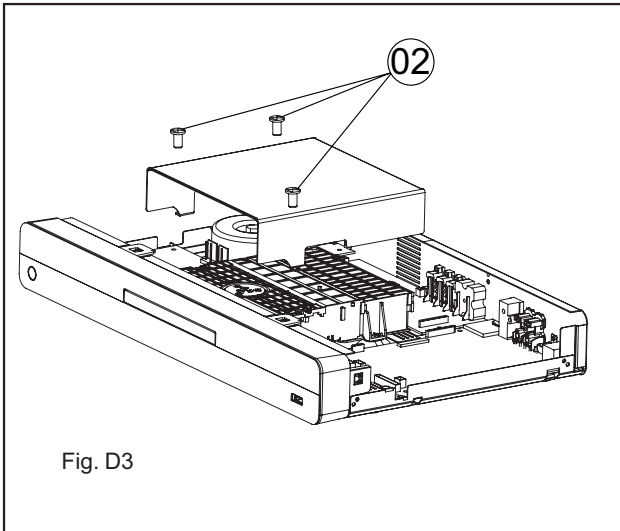


Fig. D2

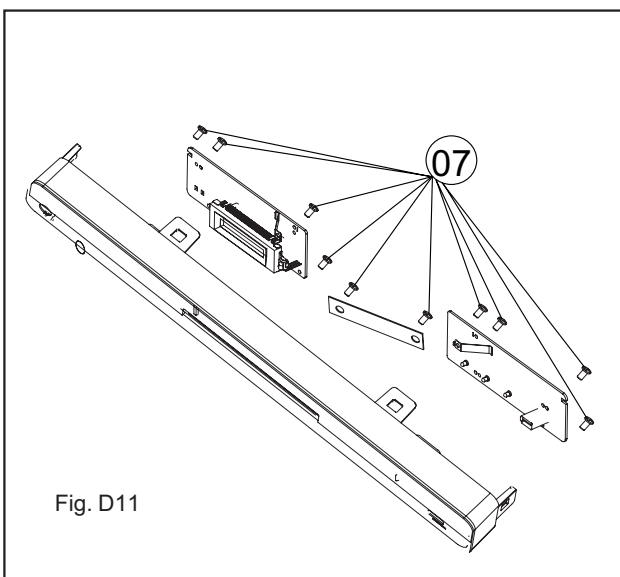
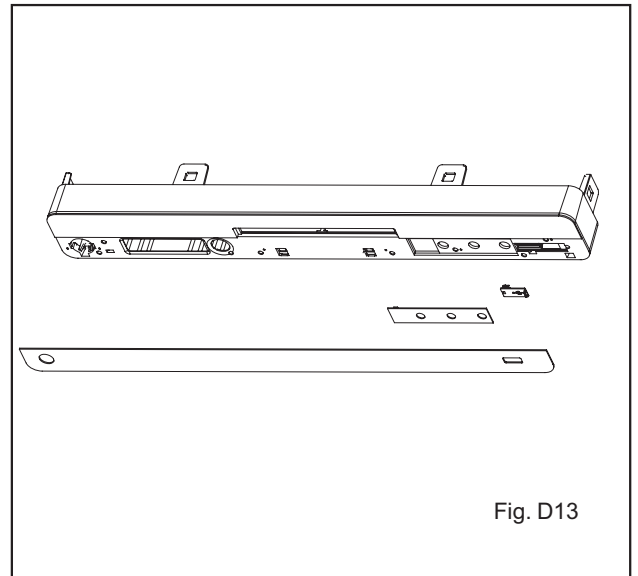
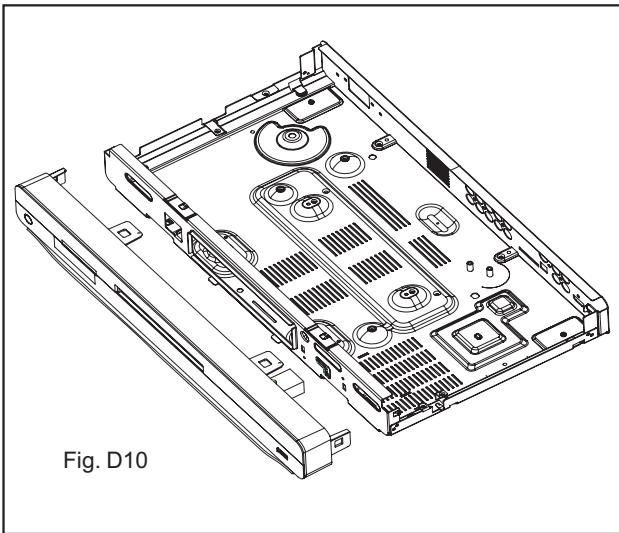
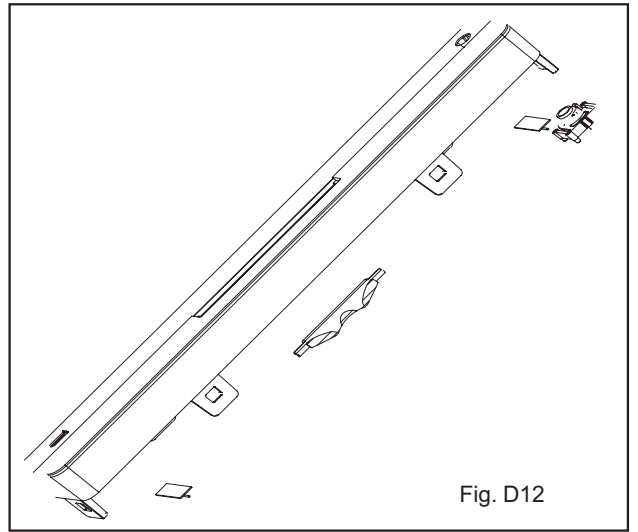
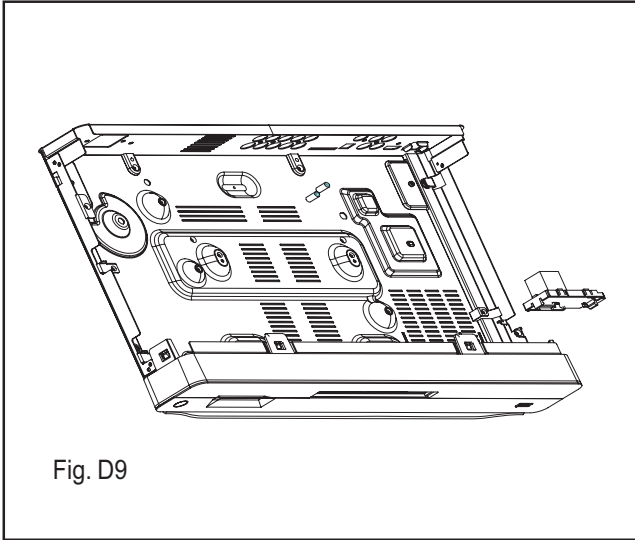
2. Disassembly Method

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[1]	Aluminum decorative floor, Machine bracket	D1	4(01) D3x6BMTT	
[2]	Machine shield	D3	3(02) D3x8BT	
[3]	Bly-Ray Loader Driver	D5	4(03) D3x8BT	
[4]	Top Loader Cover	D6	2(08) D3x5BMTT	
[4]	Transformer	D7	1(04) D4x6KMTT,4x6KT	
[5]	Power socket board, Decoder board, Output board, Power board	D8	7(06) D3x4BMTT 18(05) D3x8BT	
[6]	Touch Key board, VFD display board	D11	10(07) D2.6x8BT	

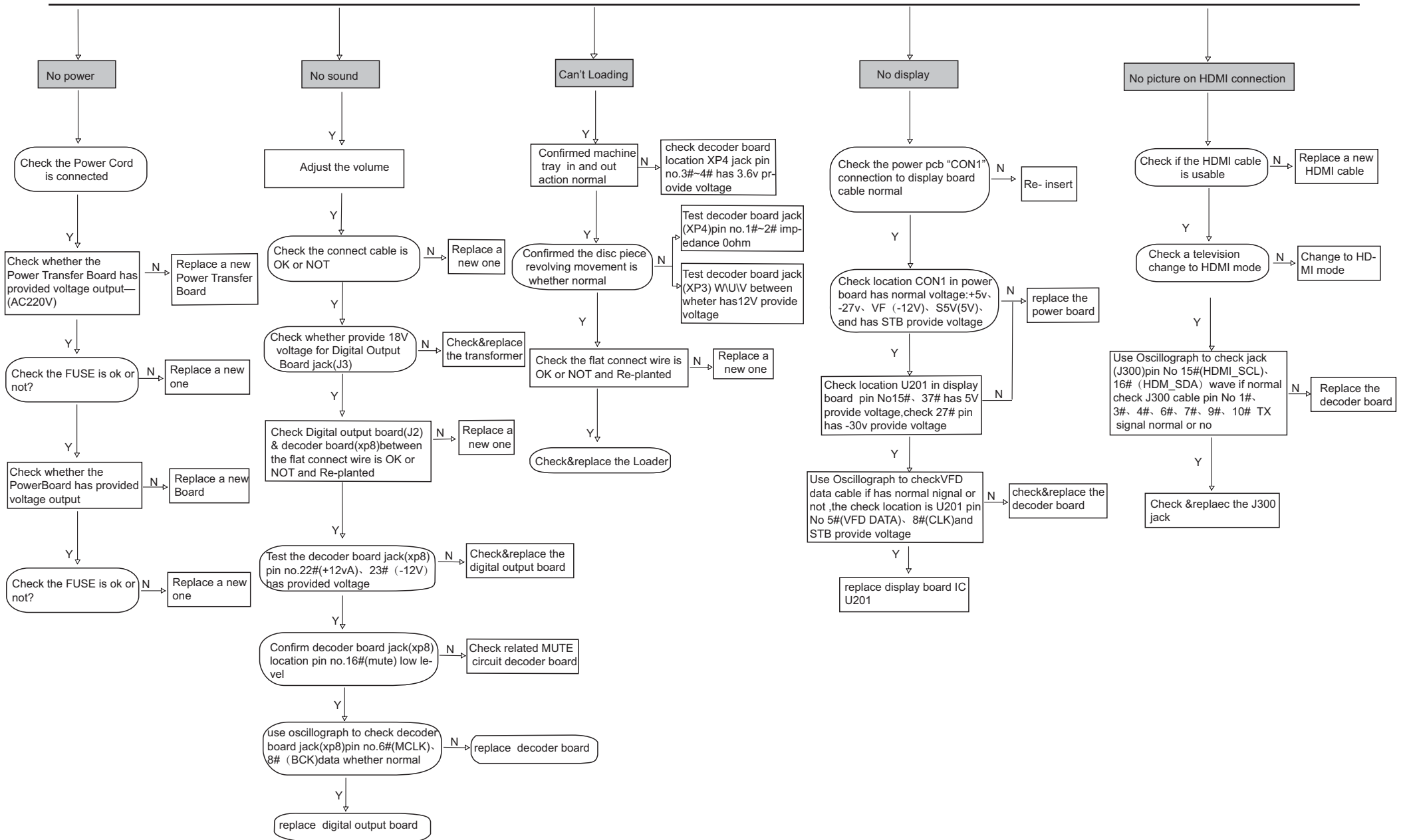
Cabinet Disassembly Instructions



Cabinet Disassembly Instructions



Troubleshooting



Software Upgrading Procedure

1. Download the Software from Philips support Website:

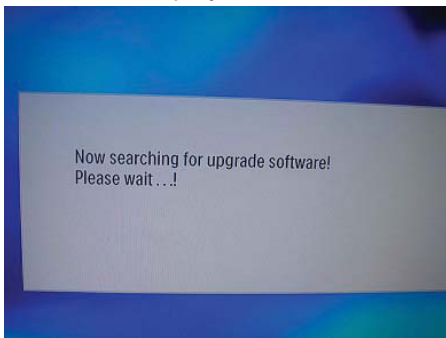
<http://www.philips.com/support>

2. Copy the Software upgrade file into USB device.

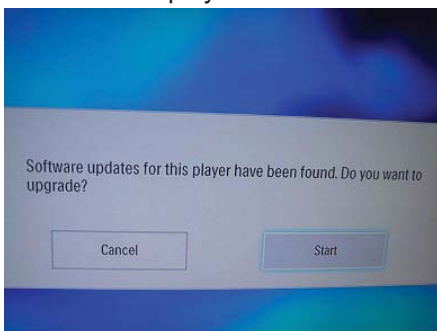
- A. Connect to TV and Turn on Main Unit,
Select Upgrad from USB,TV Screen Display:



- Press OK on Remote Control,
TV Screen Display:



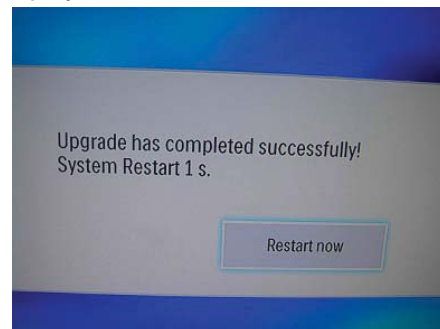
- B. Press OK on Remote Control,
TV Screen Display:



- C. Software Upgrading



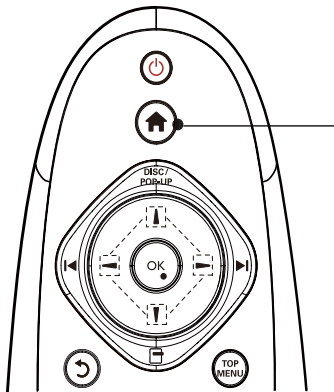
- D. When Software Upgrading finish,TV screen display



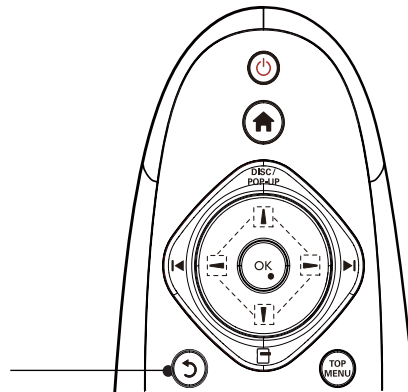
Software Upgrade finish.

Software Version Check

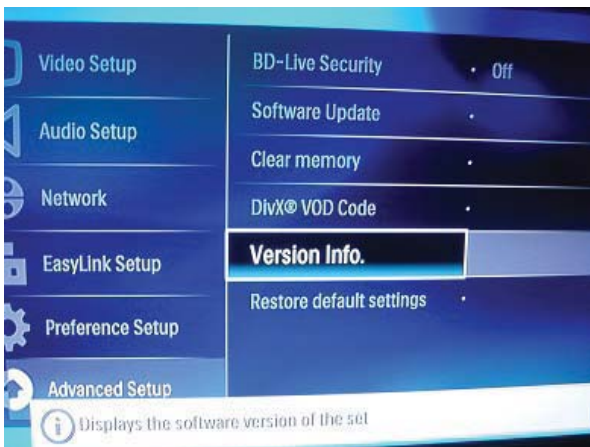
1. Select the “”, like below show:



4. Press “” on Remote Control:



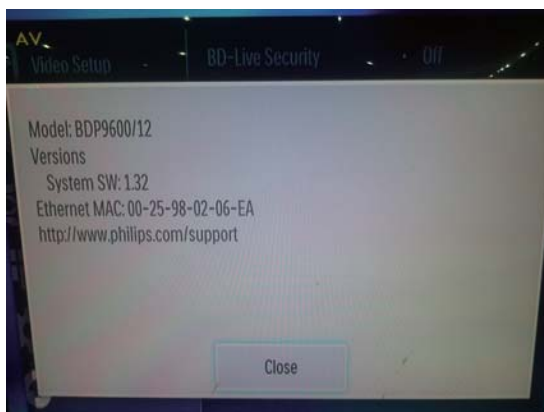
2. TV Screen Display,select Version Info.



VFD display:



3. Select OK to get the Version information :



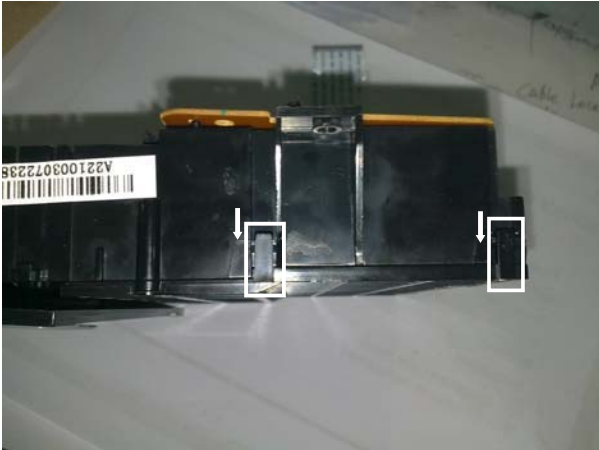
5. Press 8-5-2-0 on Remote Control,can find Software Version:



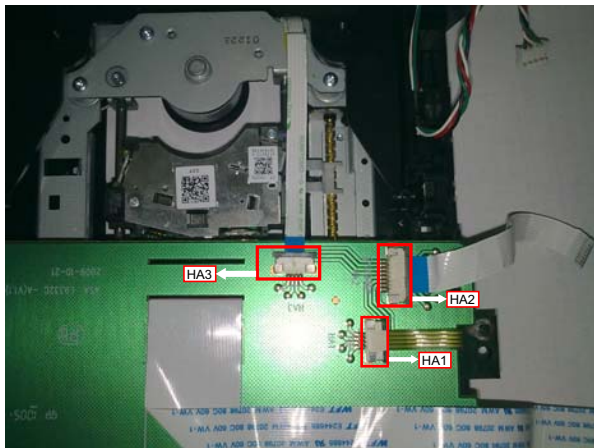
Repair Service Flow

How to replace the defective Blu-ray Loader

- 1.Remove the defective Blu-ray Loader.
- 2.Remove the shield cover at the top of Blu-ray Loader as shown below:



- 3.Assembly Blu-ray Loader to "HA1,HA2,HA3" on the top of BD Board as shown below:



4. Remove soldered joint on the ESD protection points.



Top Side




Bottom Side

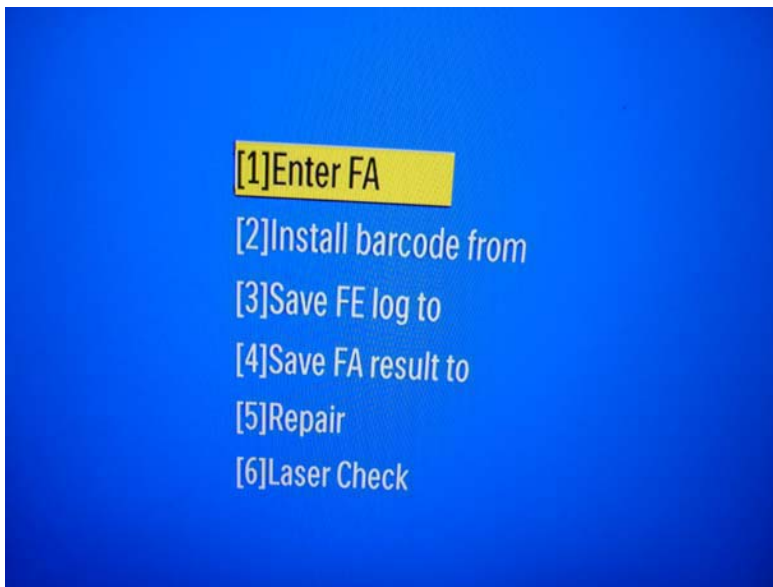
- Note:The ESD protection points on any one side must be soldered if
- a.The Blu-ray Loader needs to be disconnected from connector HA1,HA2 and HA3 of the BD Board.
 - b.The defective Blu-ray Loader is needed to be send back to supplier for failure analysis and to support backcharging evidence.

Repair Service Flow

BD board and Blu-ray Loader OPU matching procedure

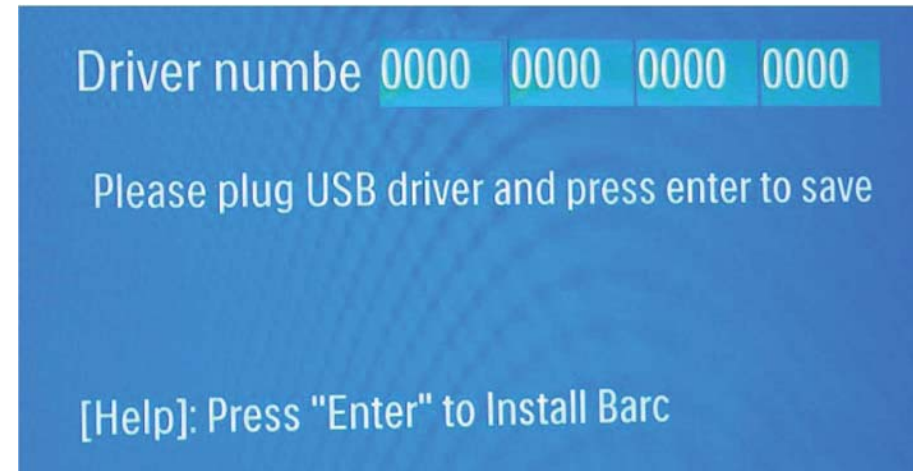
Step1

- 1.Assemble loader to 8530 PCB
- 2.Remove laser protection point
- 3.Power on,Press “”<Home> button and input 85177 on R/C
- 4.Select item[5],then press<OK>,as shown below:



Step2

Insert USB device of MSC type and press<OK>button on R/C as shown below:



Repair Service Flow

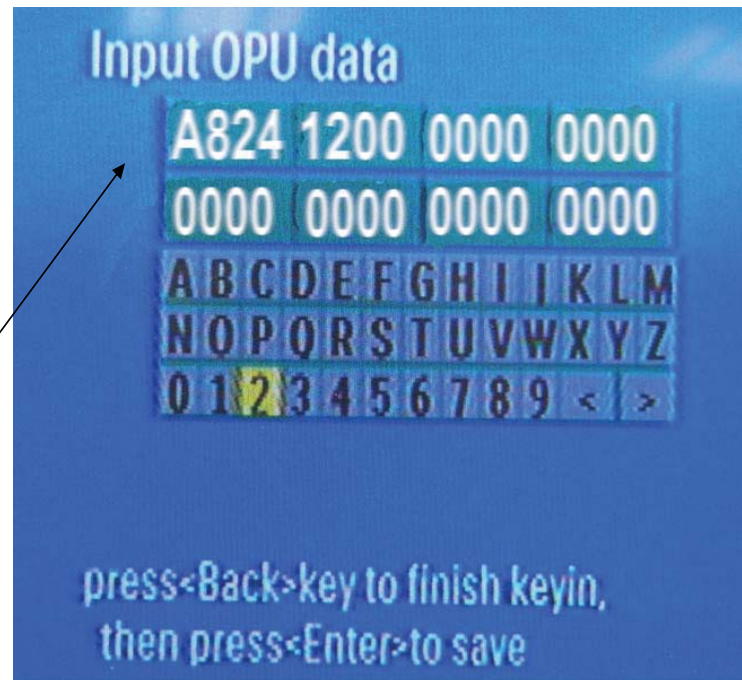
Step3

Using Navigate buttons on R/C input the 6 digit @ Sanyo OPU

Input 1D info from left to right

Press<OK> button to save

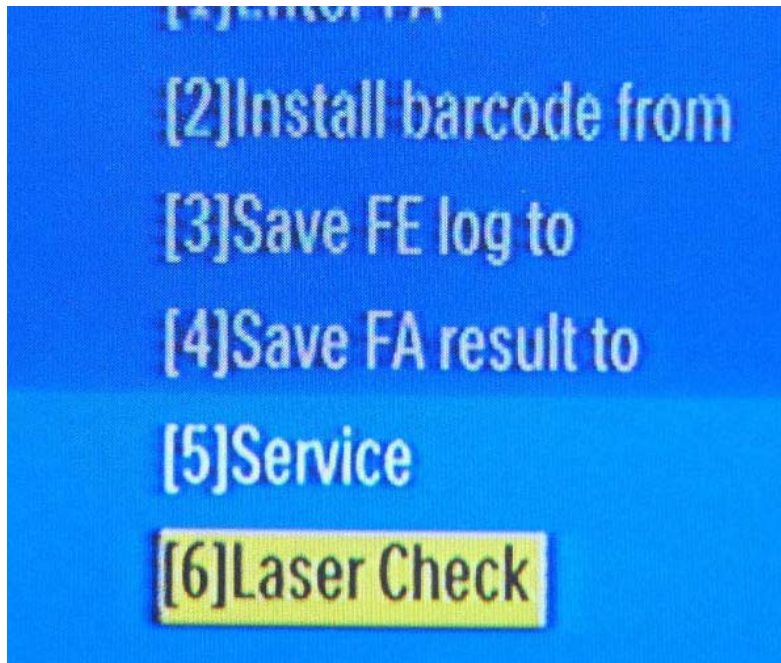
Sanyo



Repair Service Flow

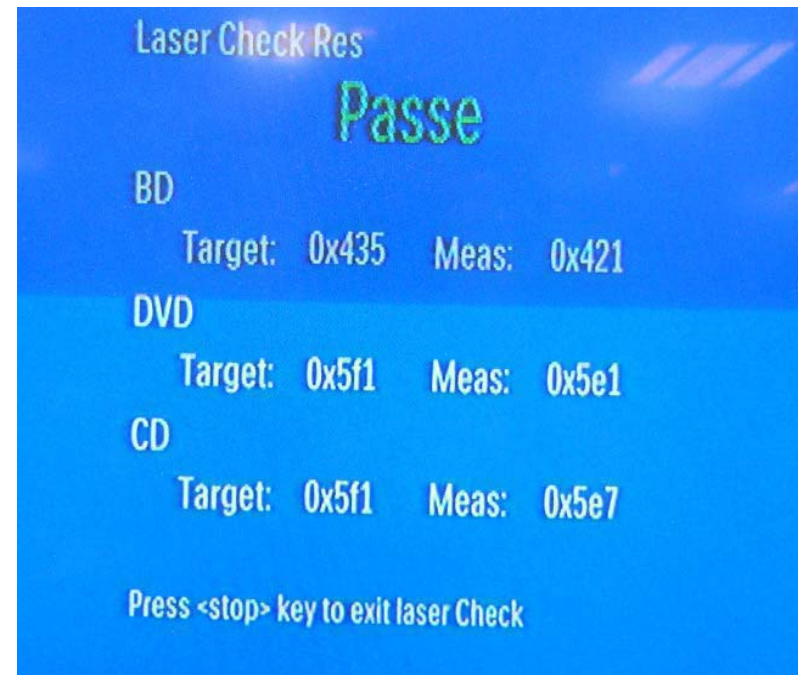
Step4

Goto to Top manual and select item[6]laser check press <OK>,as shown below:

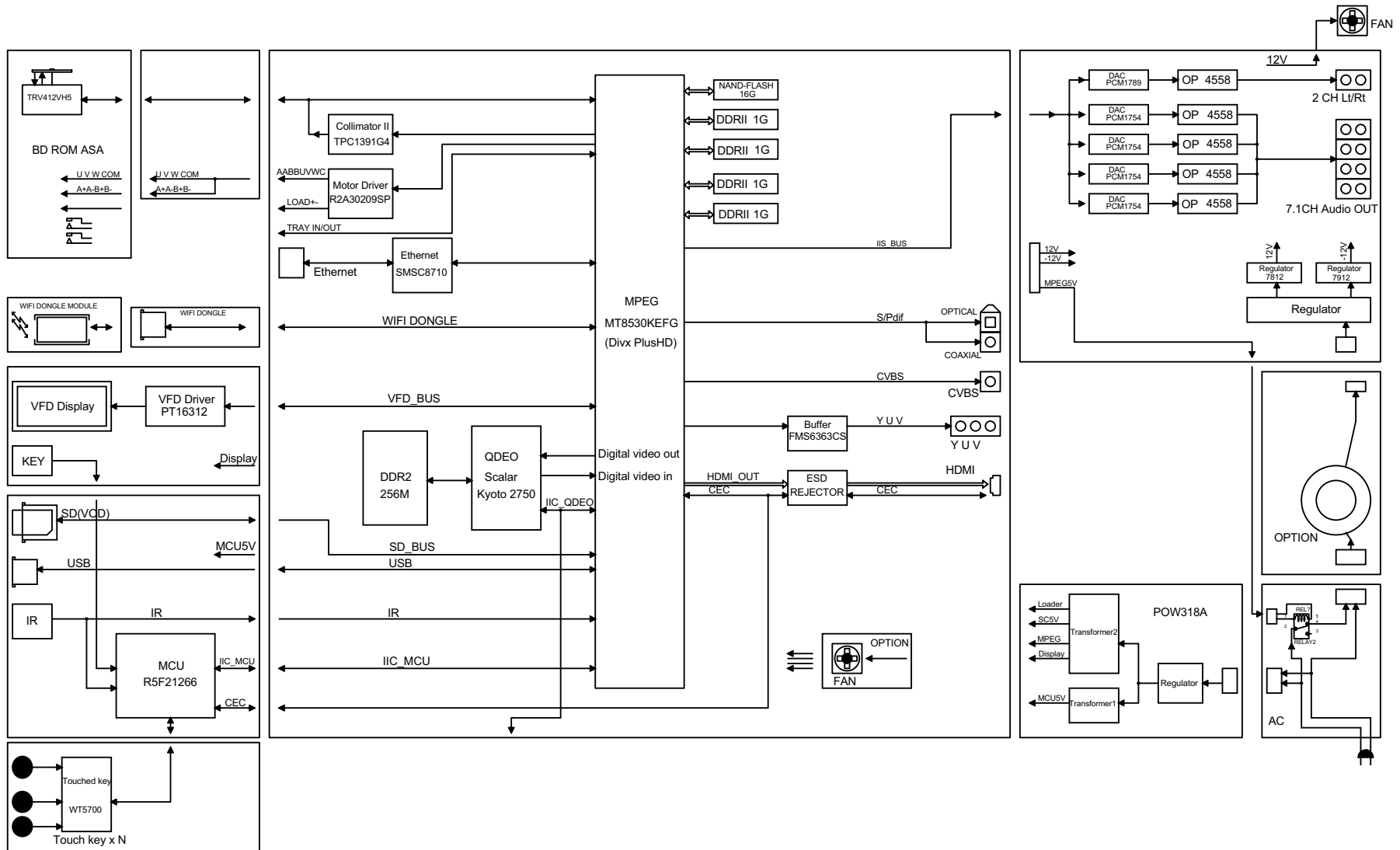


Step5

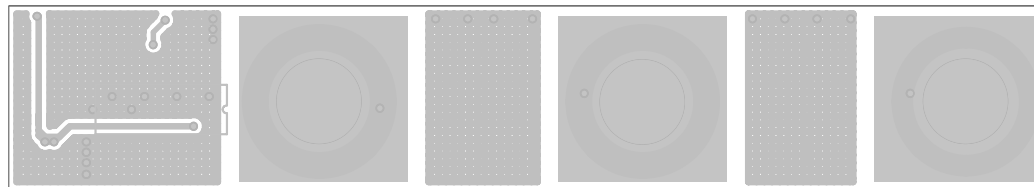
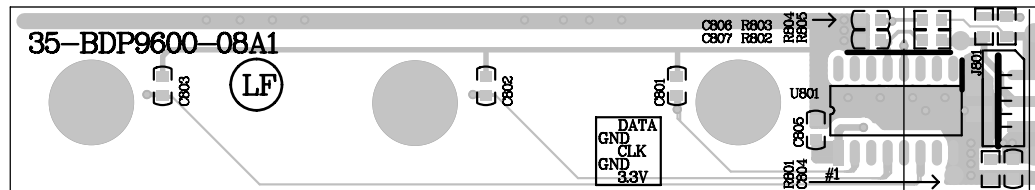
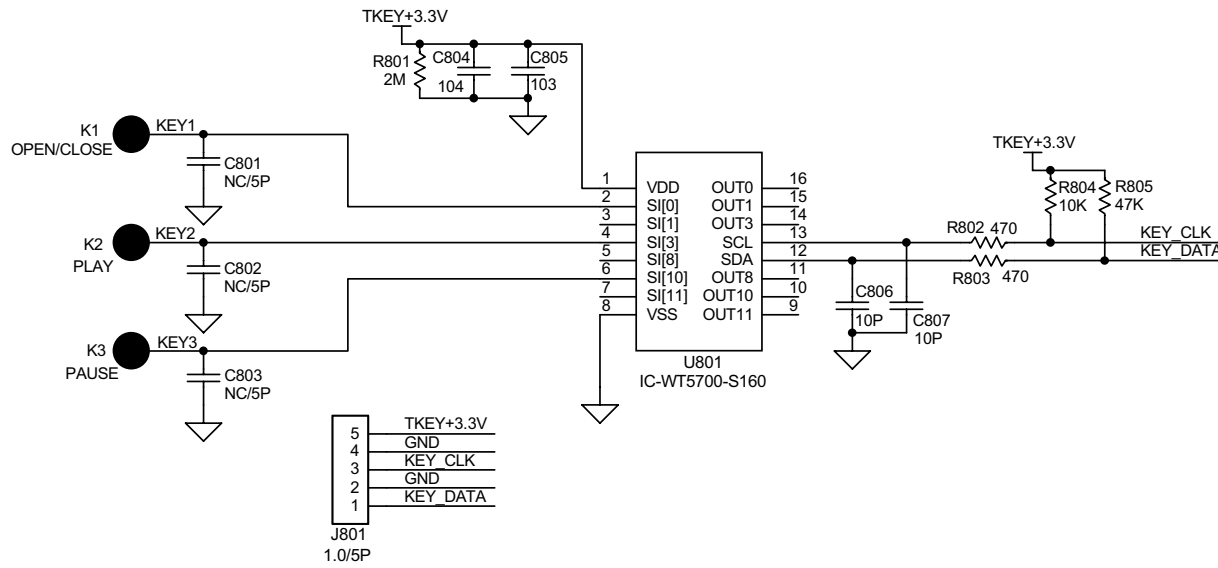
Wait laser check pass to verify the status of the assemble.



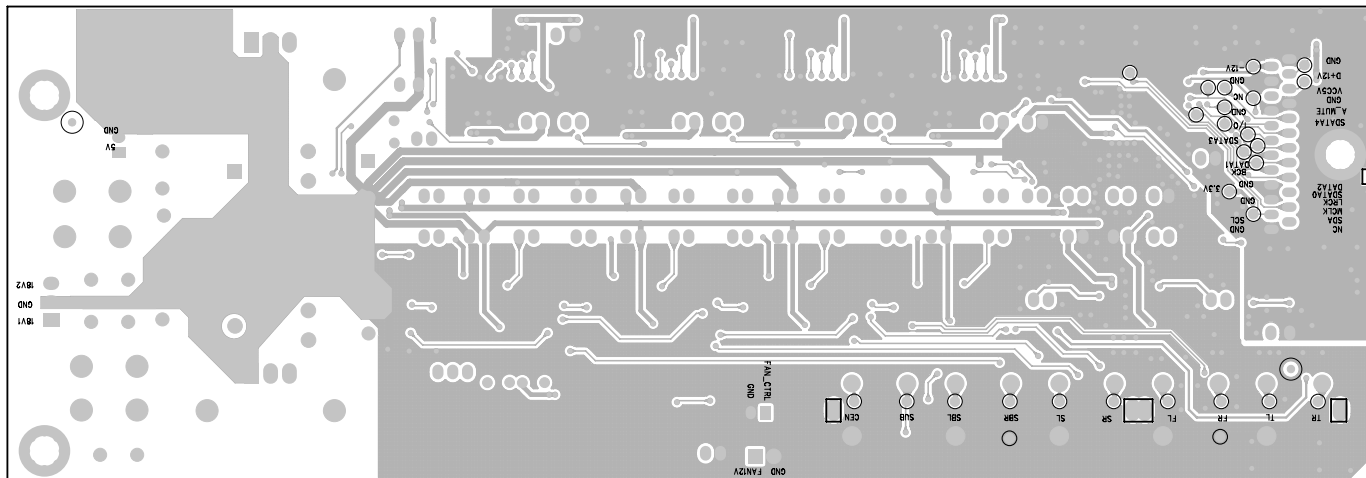
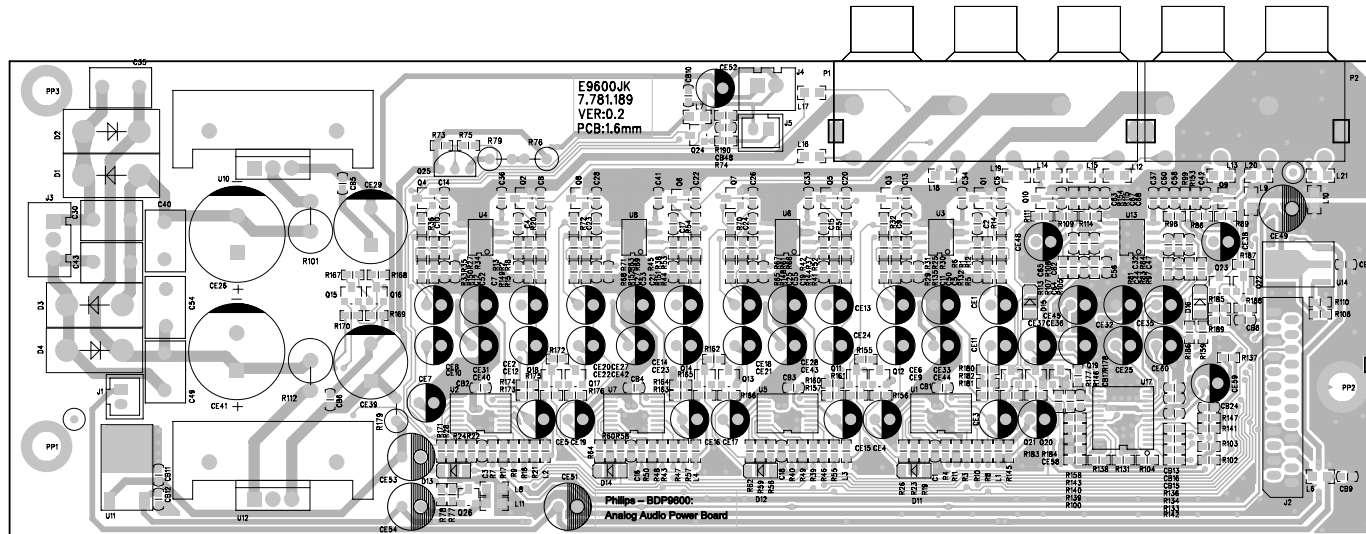
Block Diagram



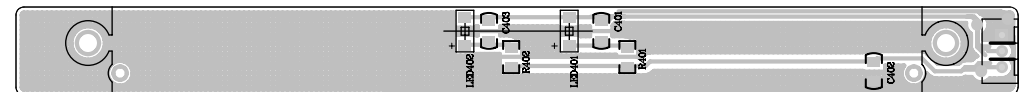
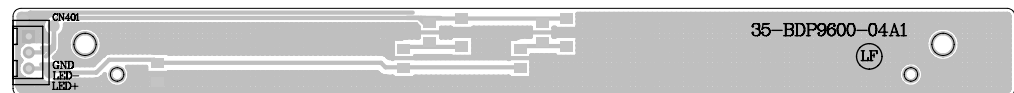
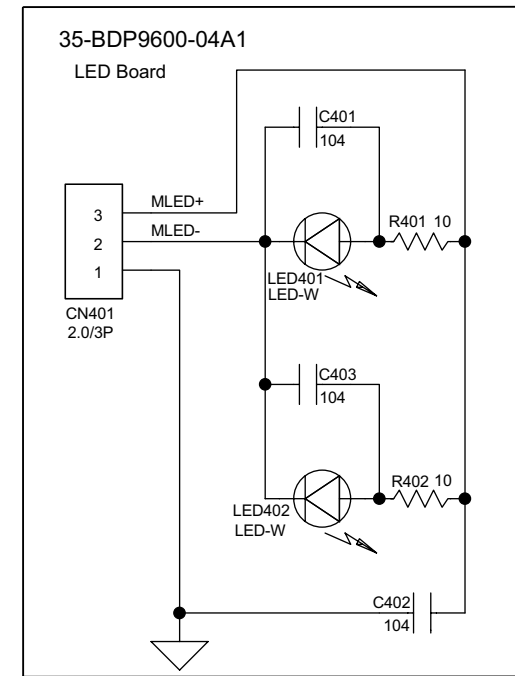
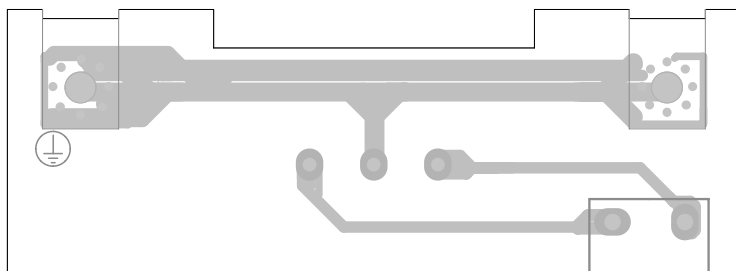
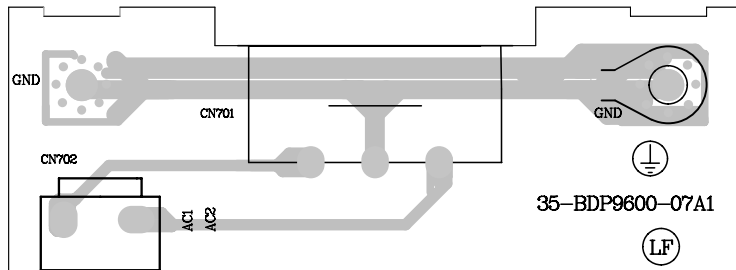
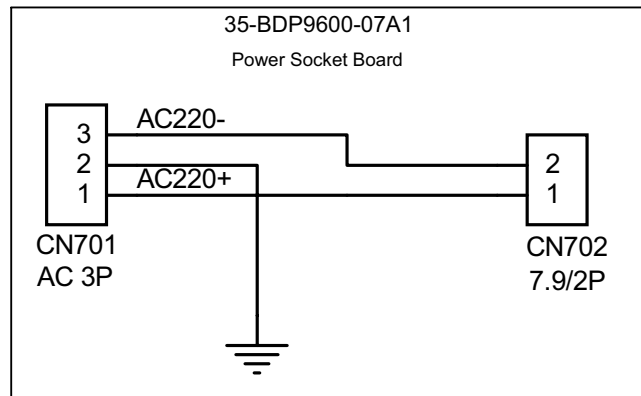
Touch Key Board -- Circuit and Layout Diagram



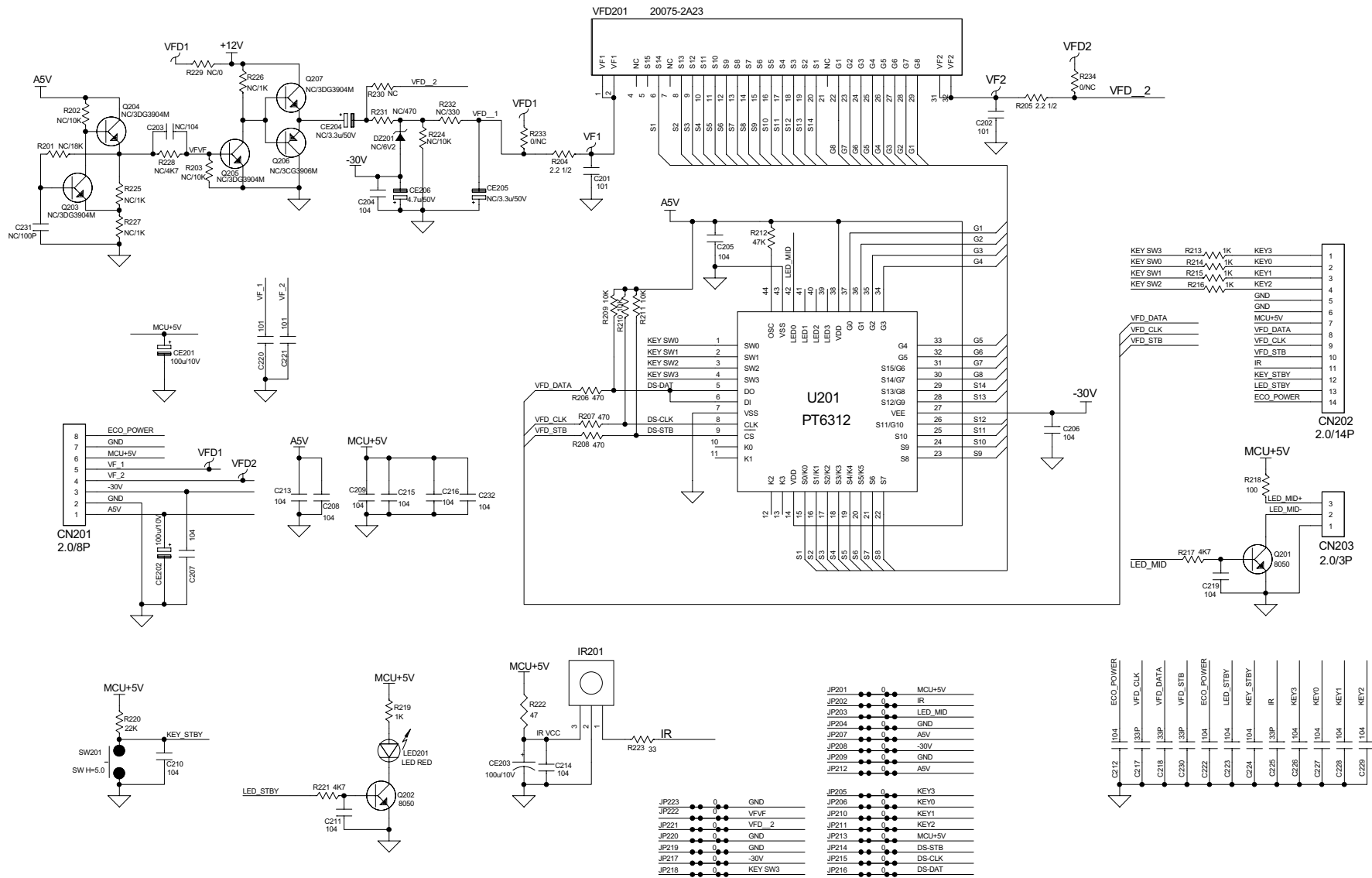
Output Board -- Layout Diagram



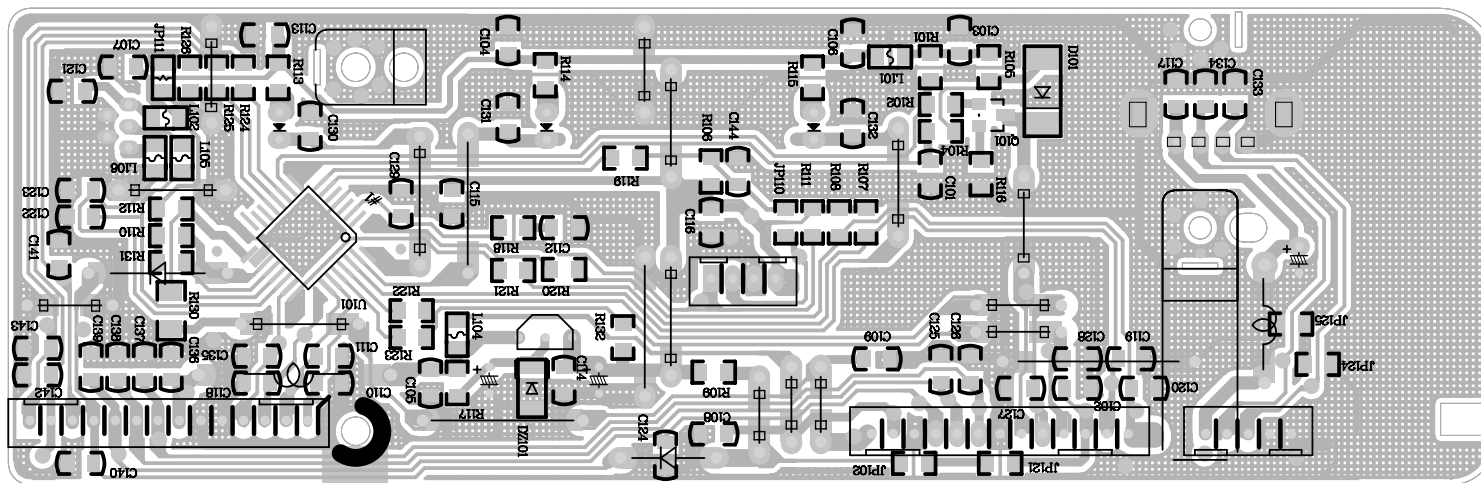
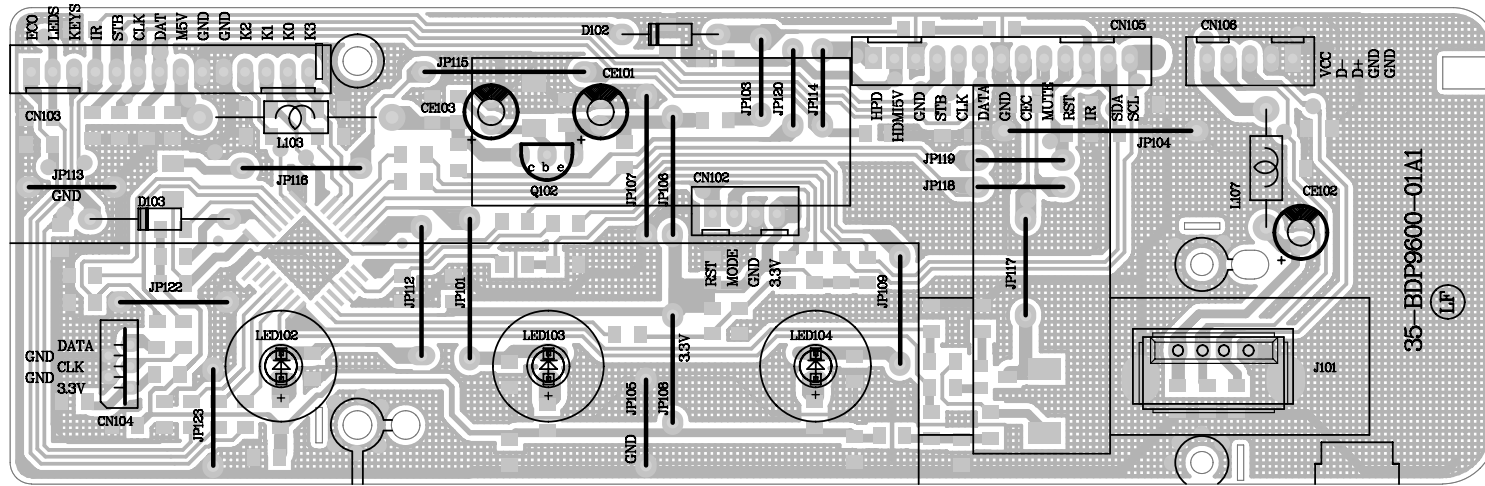
Power Socket and LED Board -- Circuit and Layout Diagram



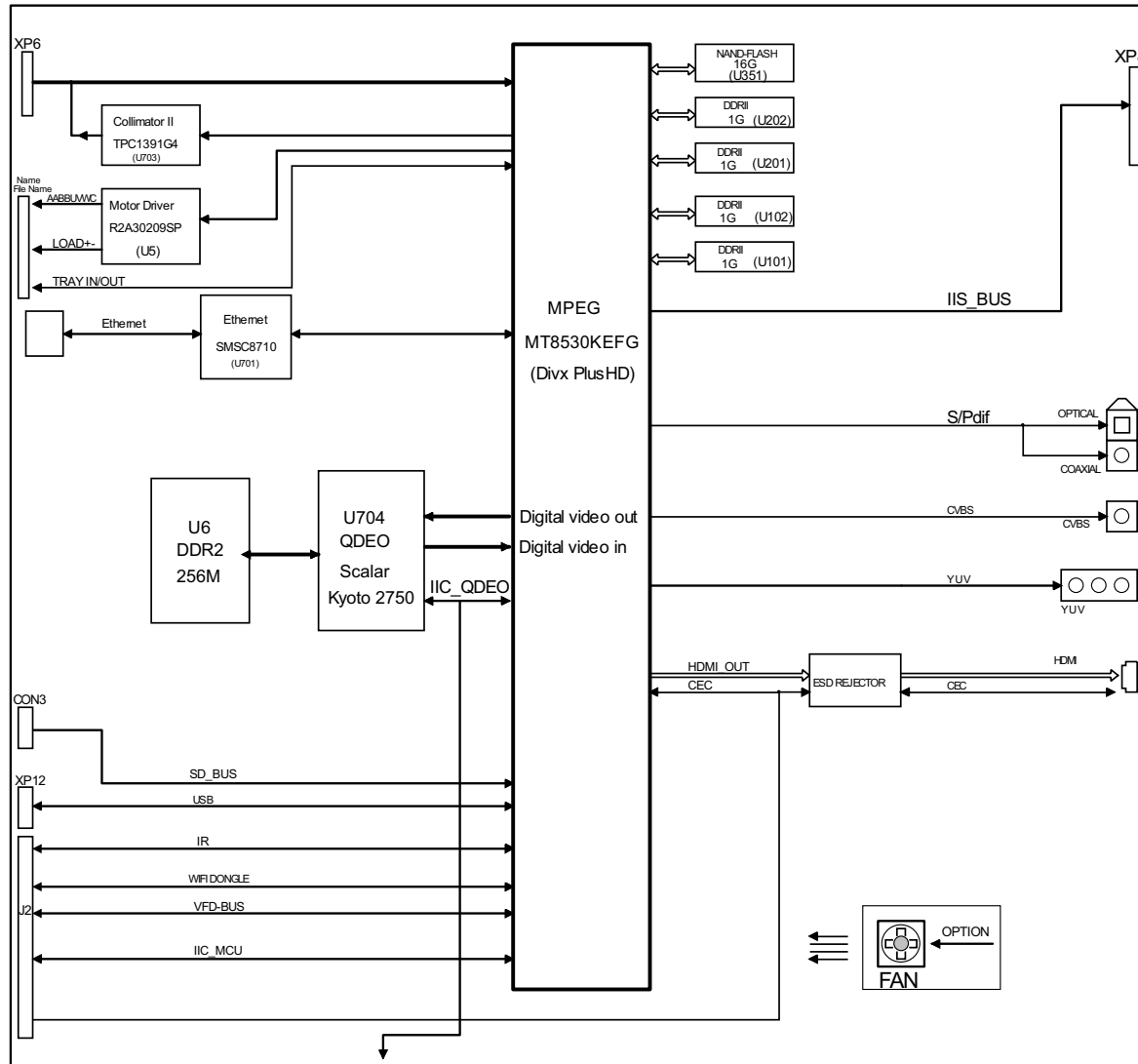
VFD Display Board -- Circuit Diagram



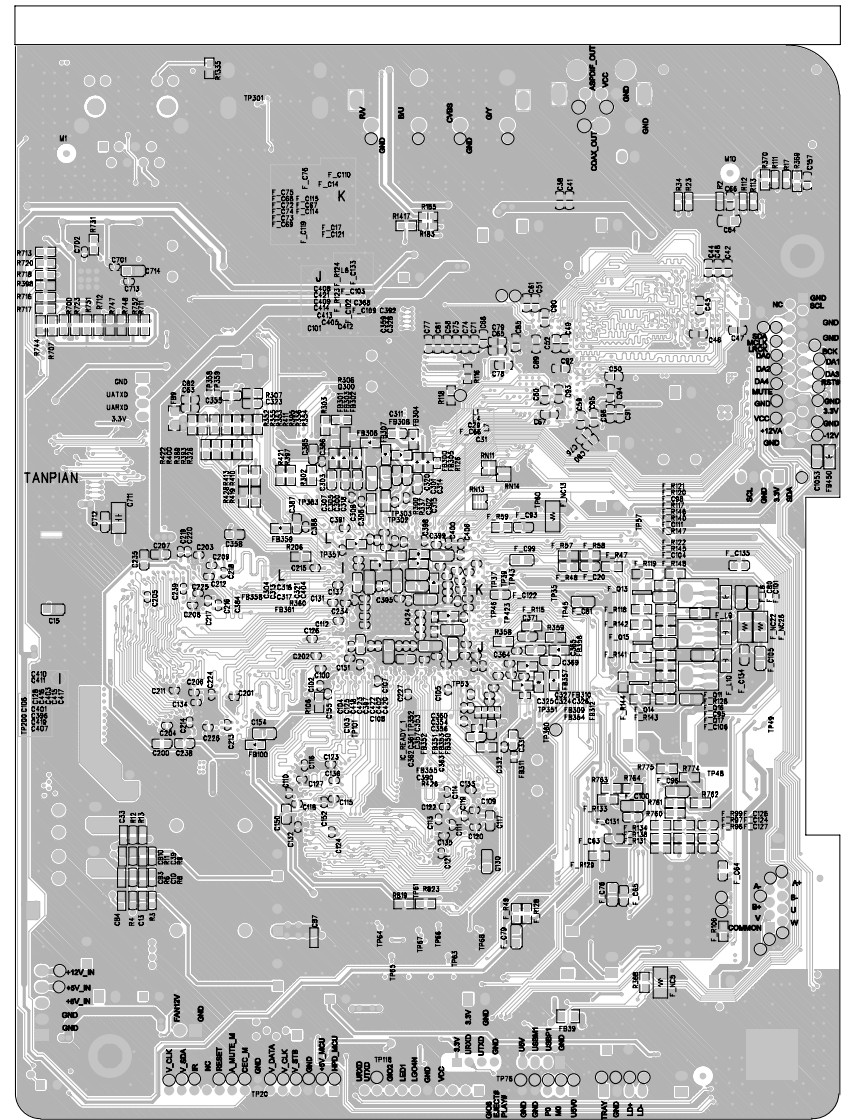
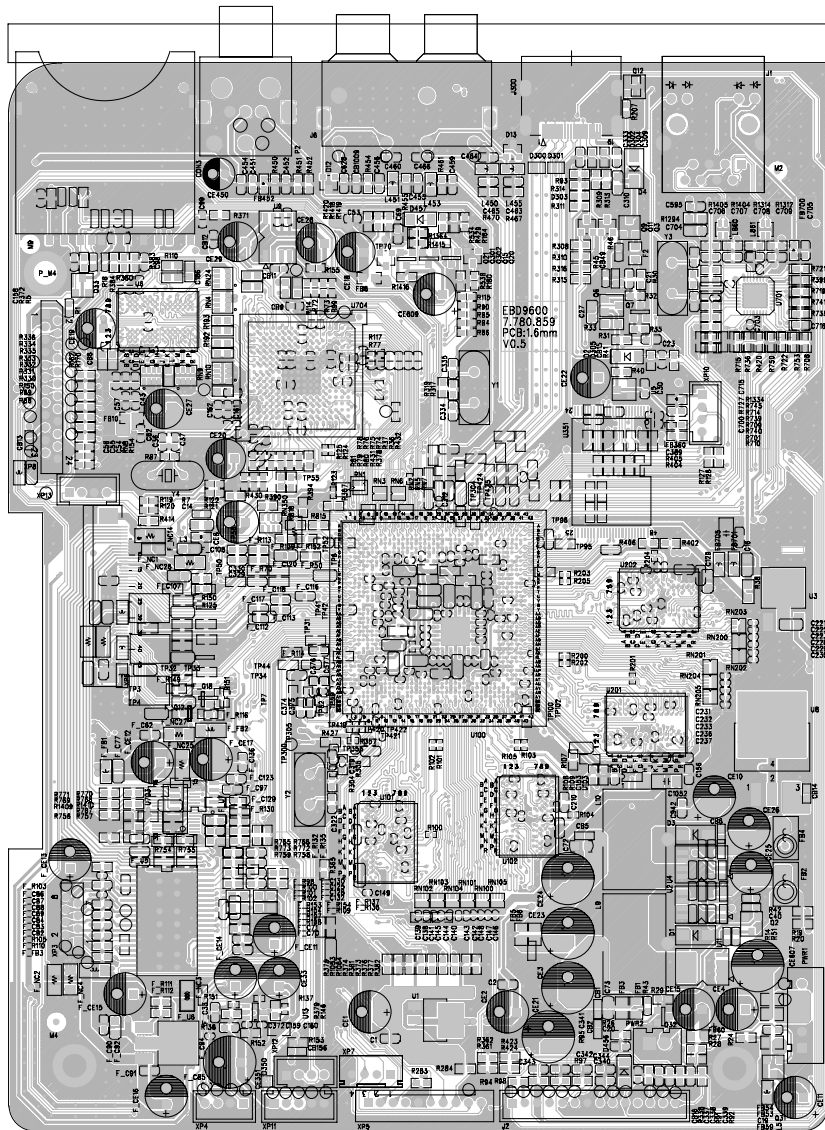
MCU Board -- Layout Diagram



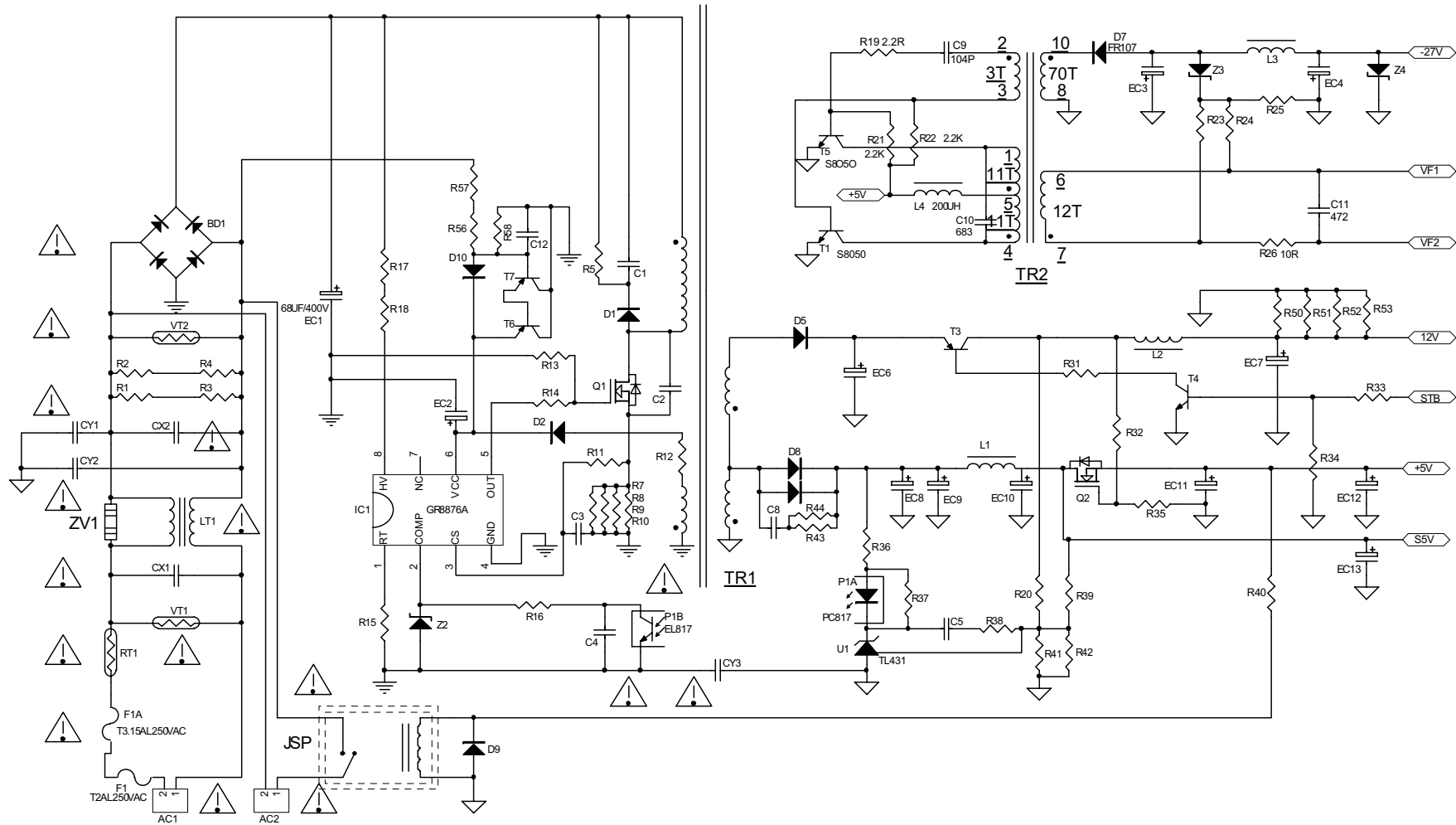
Decoder Board Block Diagram



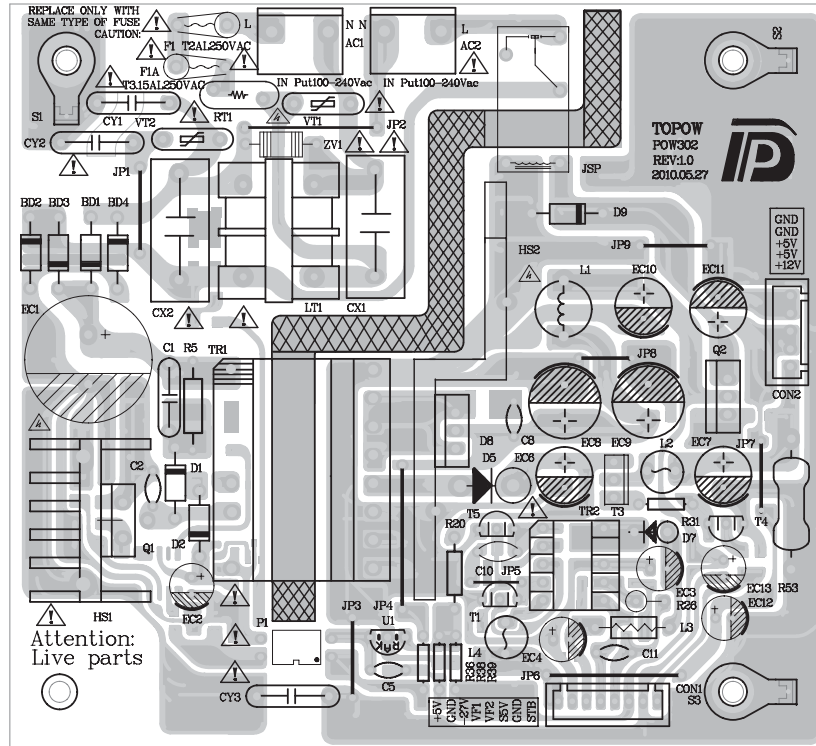
Decoder Board -- Layout Diagram



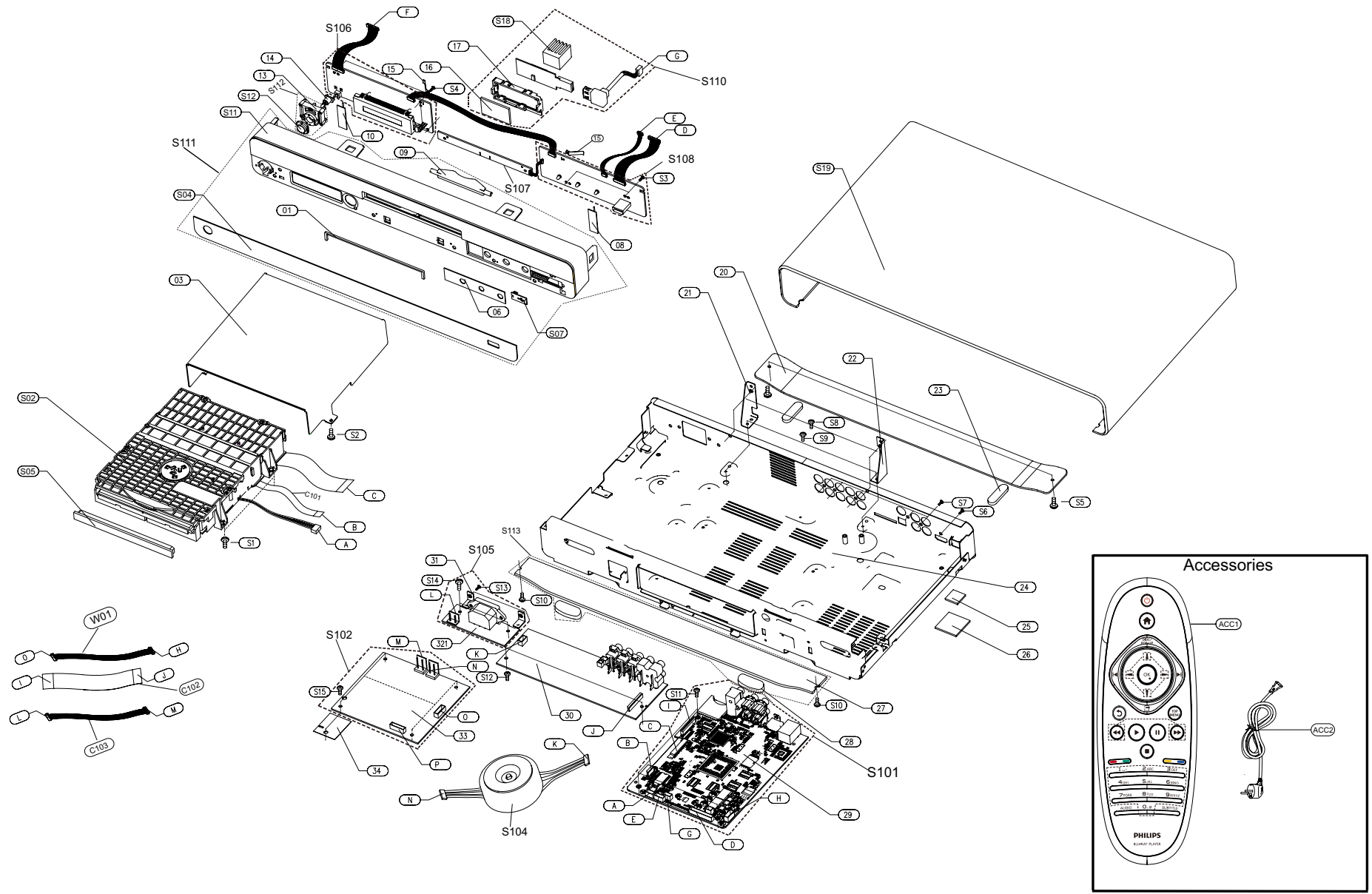
Power Board -- Circuit Diagram



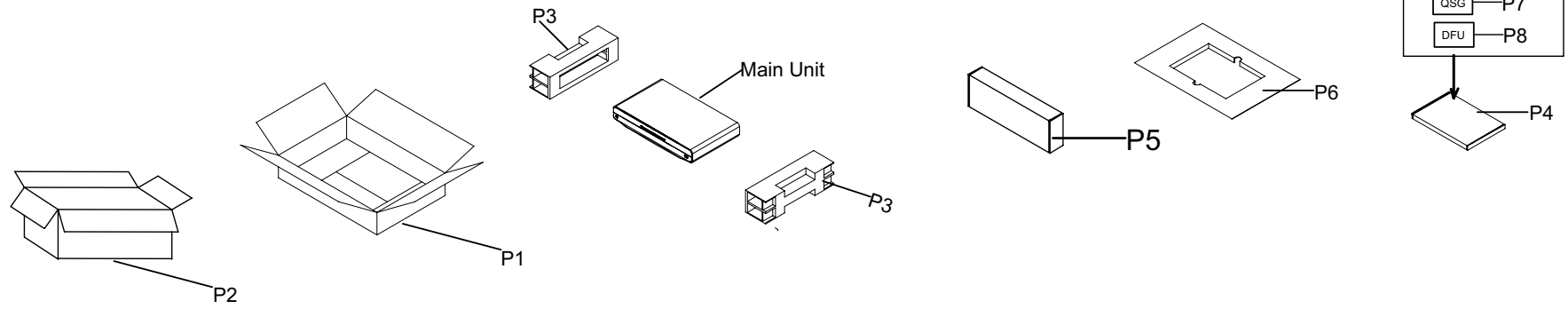
Power Board -- Layout Diagram



Exploded View



Exploded View-Packing (/93 Version)



Revision List

Revision List

Version 1.0

* Initial Release

Version 1.1

* Addition of BDP9600/51