

DVD Player

DVP3110(K)

Service

DVP3110/93

DVP3110K/98/96/75/56/11

Service

Service



Service Manual

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Version 1.1

**CLASS 1
LASER PRODUCT**



3139 785 32631

PHILIPS

Technical Specifications

TV standard	(PAL/50Hz)	(NTSC/60Hz)	Audio performance	
Number of lines	625	525	DA converter	24bits, 192KHz
Playback	Multi standard	(PAL/NTSC)	DVD	fs 96kHz 4Hz---44kHz fs 48kHz 4Hz---22kHz
Video performance				
Video DAC	12 bit, 108MHz		SVCD	fs 48kHz 4Hz---22kHz fs 44.1kHz 4Hz---20kHz
YPbPr	0.7Vpp ---- 75 ohm		CD/ VCD	fs 44.1kHz 4Hz---20kHz
Video output	1Vpp ---- 75 ohm		Signal-Noise (1kHz)	>90dB
Video format				
Digital Compression	MPEG 2 for DVD, SVCD		Dynamic Range (1kHz)	>80dB
	MPEG 1 for VCD		Cross talk (1kHz)	>80dB
DVD			Distortion/Noise (1kHz)	>80dB
Horiz resolution	50Hz	60Hz		MPEG MP3
Vertical resolution	720 pixels	720 pixels		MPEG Audio L3
	576lines	480 lines		
VCD				
Horiz. resolution	50Hz	60Hz	Connections	
Vertical resolution	352 pixels	352 pixels	YPbPr output	Cinch 3x
	288lines	240 lines	Video output	Cinch(yellow)
Audio format			Audio output (L+R)	Cinch (white/red)
Digital	MPEG/AC-3/ PCM	Compressed Digital 16, 20, 24bits fs, 44.1, 48, 96kHz	Digital output	1 coaxial
MP3(ISO 9660)		96,112,128,256kbps & variable bit rate fs,32, 44.1,48 kHz		IEC60958 for CDDA/ LPCM IEC61937 for MPEG1/2, Dolby Digital
Cabinet				
Analogue Sound Stereo			Dimensions (w X h X d)	360 x 37 x 235 mm
Dolby surround compatible downmix from Dolby Digital multi-channel sound			Weight	Approximately 2.0kg
Power consumption				
Power supply Rating			Power supply Rating	110V-240V; 50/60HZ
Power consumption			Power consumption	<10W
			Power consumption in standby mode	<1W

Specifications subject to change without prior notice.

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 $1M\Omega$.
 - 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 "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. 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.

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

Notes

Lead-Free requirement for service

IDENTIFICATION:

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.

Mechanical and Dismantling Instructions

Dismantling Instruction

The following guideline is a general instruction for how to dismantle the player. Detailed operation done according the set unit.

Step1: Remove 5 screws around the Top Cover, then remove the Top Cover (Figure 1).



Figure 1

Step2: If it is necessary to dismantle Loader or Front Panel, It should be remove the Front door assembly first. (Figure 2)
Note: Make sure to operate gently otherwise the guider would be damaged.



Figure 2

Mechanical and Dismantling Instructions

Dismantling Instruction

Step3: If the tray can't open in normal way, you can make it through the instruction as below (Figure 3).
Note: Make sure to operate gently otherwise the guider would be damaged.

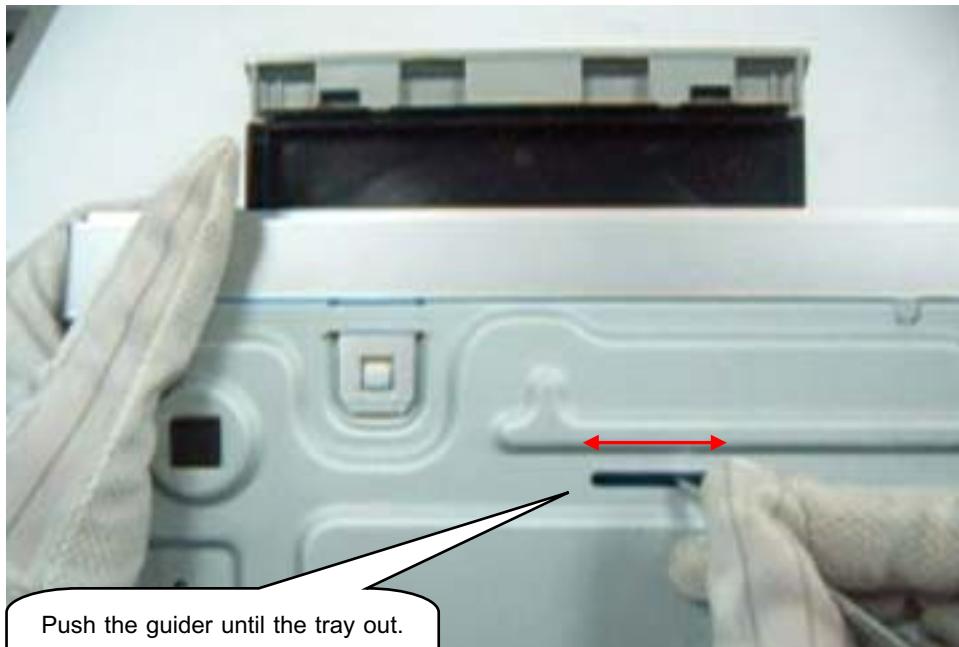


Figure 3

Step4: Dismantling Loader, disconnect the 3 connectors aiming in the below figure, and remove 4 screws around the Loader. (Figure 4)

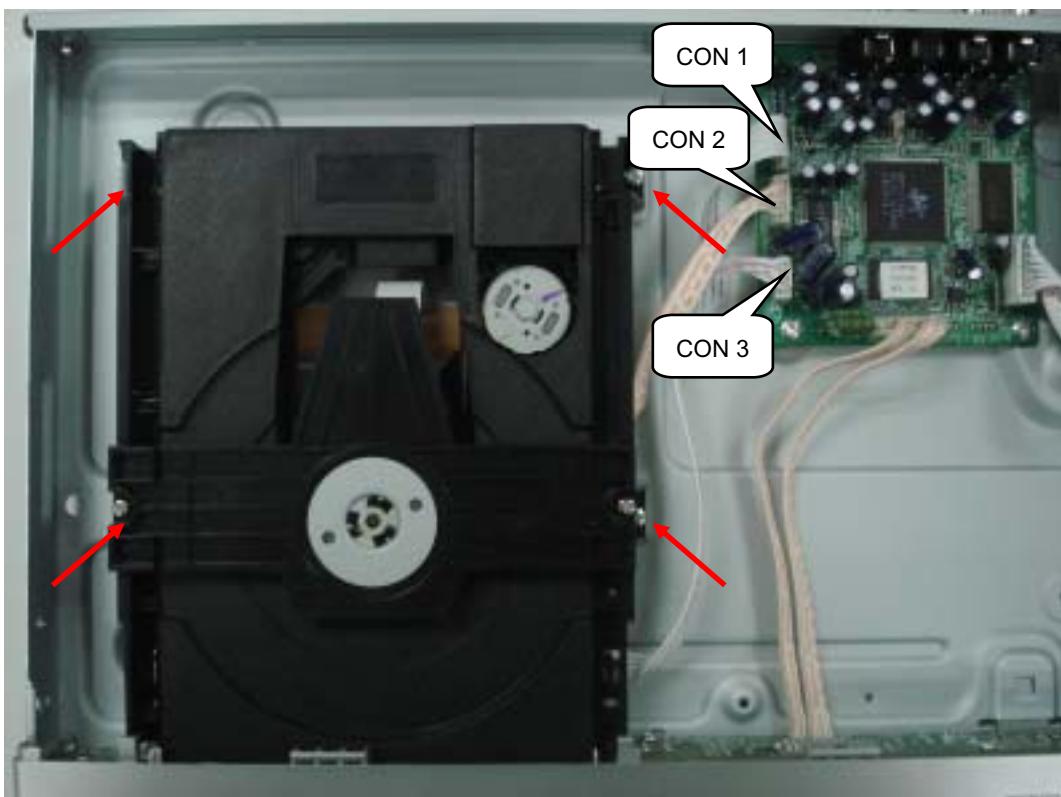


Figure 4

Mechanical and Dismantling Instructions

Dismantling Instruction

Step5: Dismantling Front Panel, disconnect the 1 connector, then release the snaps on the both sides of Front Panel and bottom cabinet , then gently pull the Panel out from the set. (Figure 5 & 6 & 7)

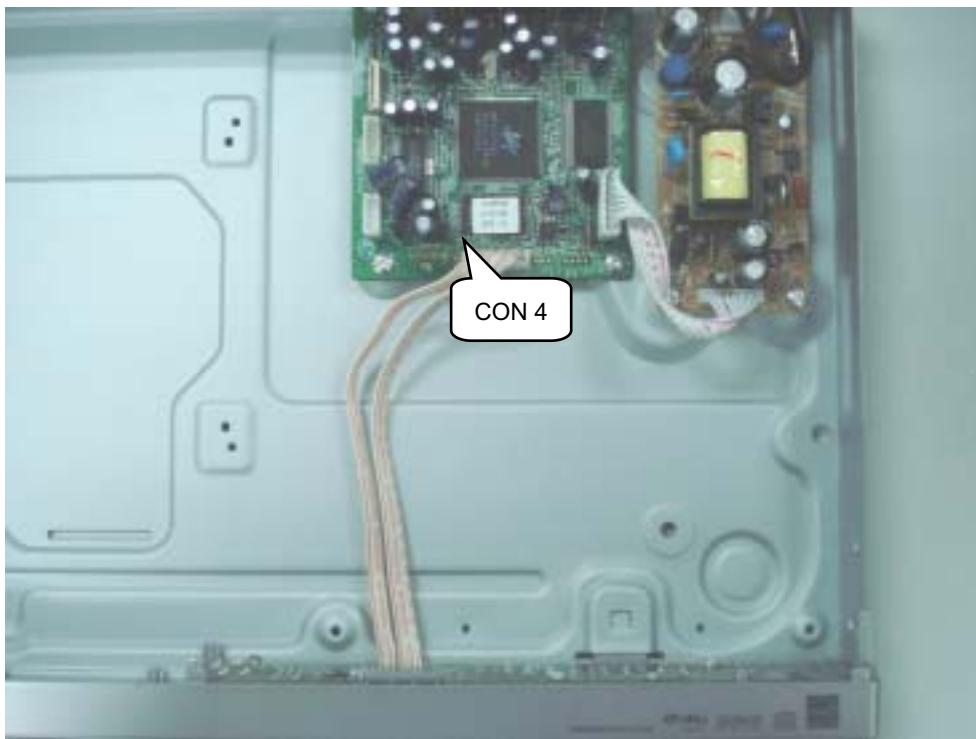


Figure 5

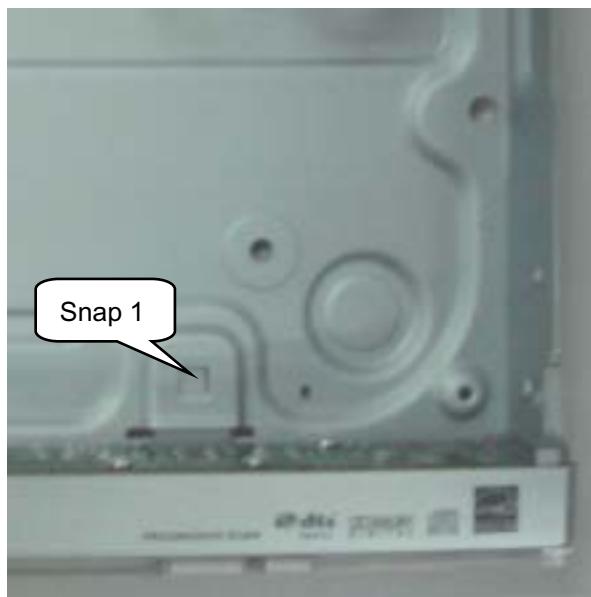


Figure 6

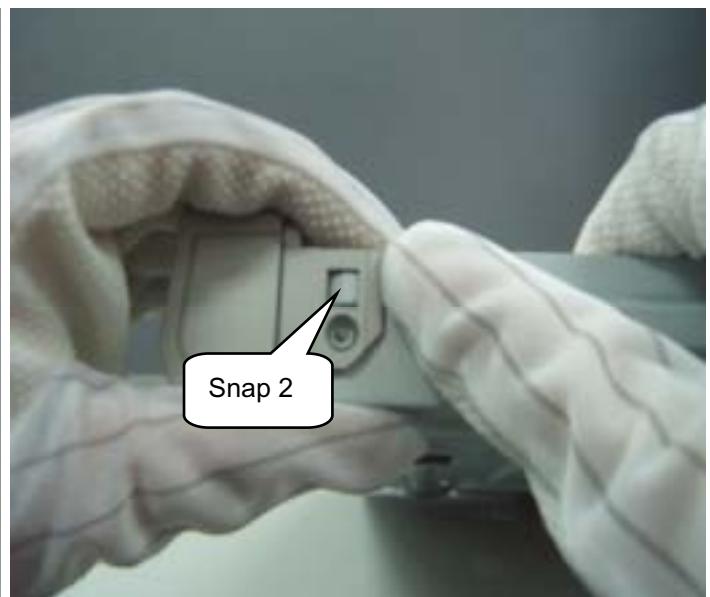


Figure 7

Mechanical and Dismantling Instructions

Dismantling Instruction

Step6: Dismantling Main Board, first disconnect the 1 connector, then remove 4 screws to remove the Main board. (Figure 8)

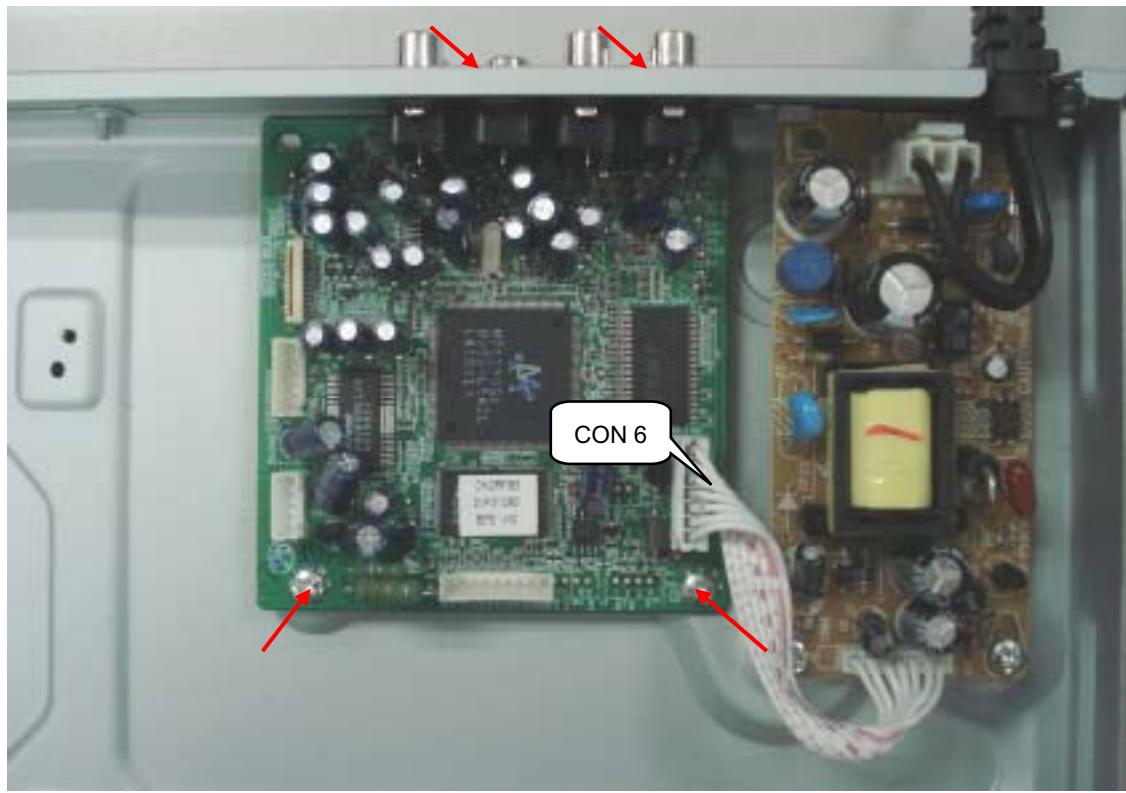


Figure 8

Step7: Remove the 2 screws on Power Board to dismantle the Power Board. (Figure 9)

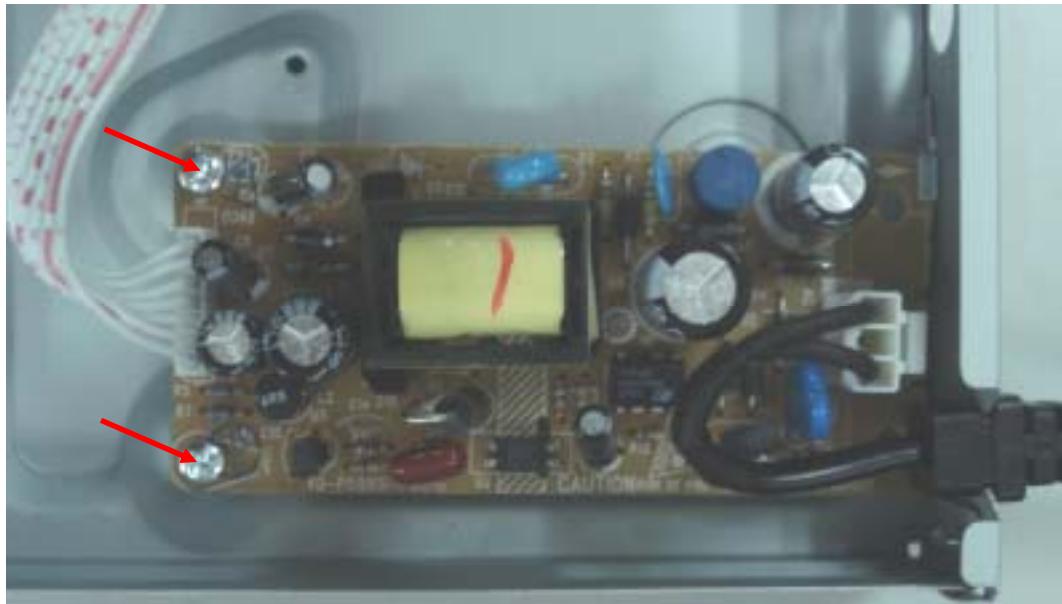


Figure 9

Software upgrade

Preparation to upgrade software

- 1) Start the CD Burning software and create a new CD project (Data Disc) with the following setting:
Label: DVP31XX **(No need the label name)**
File Name: **DVPXXXX_XX.BIN**
Power on the set and open the tray, then press <5><5> to check the File Name.

Note: It is required capital letter for the File System name

- 2) Burn the data onto a blank CDR

B. Read out the software versions to confirm upgrading

- 1) Power on the set and press <Setup> button on the remote control.
- 2) Press <1><3><7><9>button to check the software information.

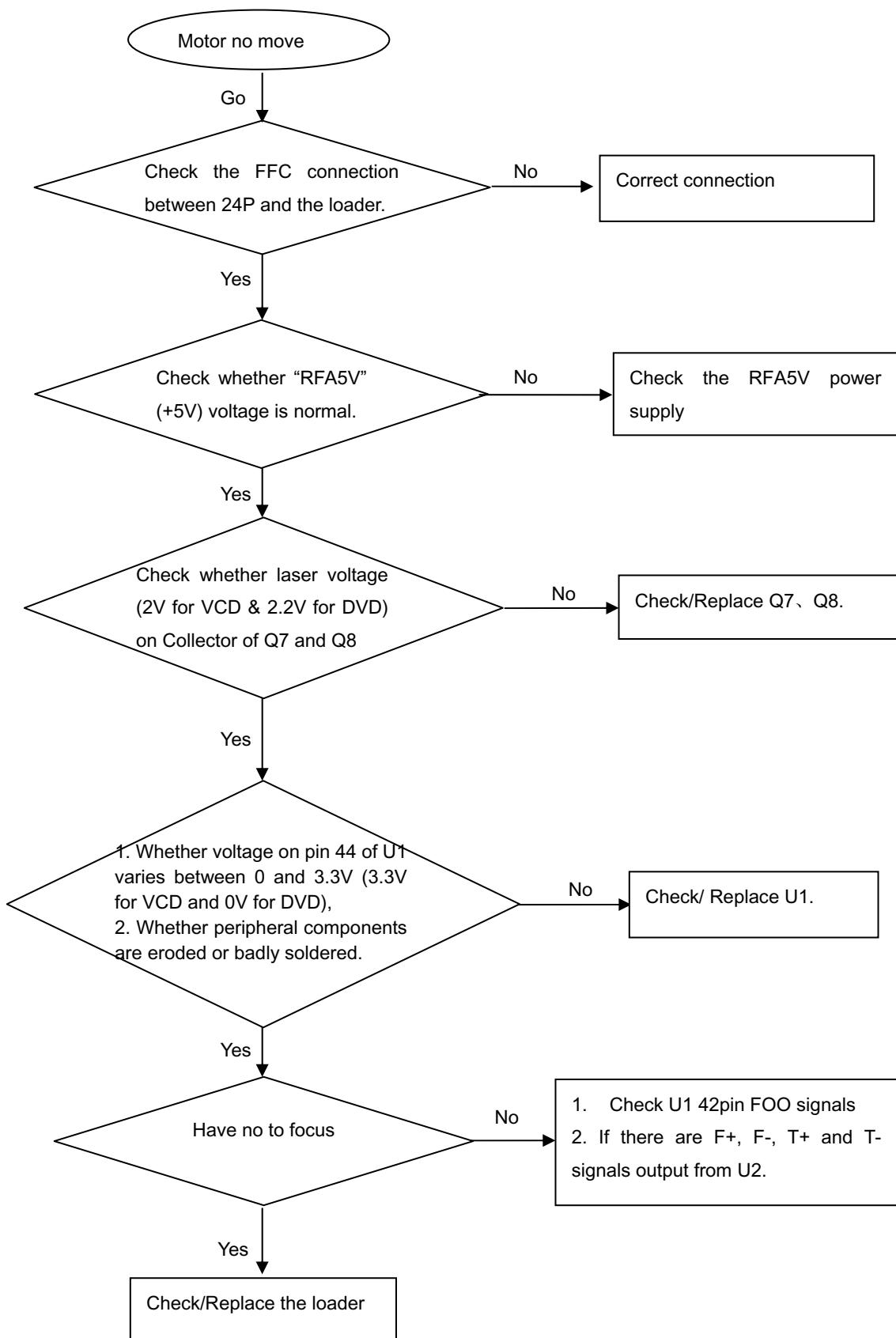
The software version and other information are display on the TV screen as follows:

Version	XX.XX.XX.XX (Main version)
SUB-VER	XX.XX.XX.XX (software version of application software)
8032	XX.XX.XX.XX
Servo	XX.XX.XX.XX (software version of Servo)
RISC	XX.XX.XX.XX
DSP	XX.XX.XX.XX
Region Code	X

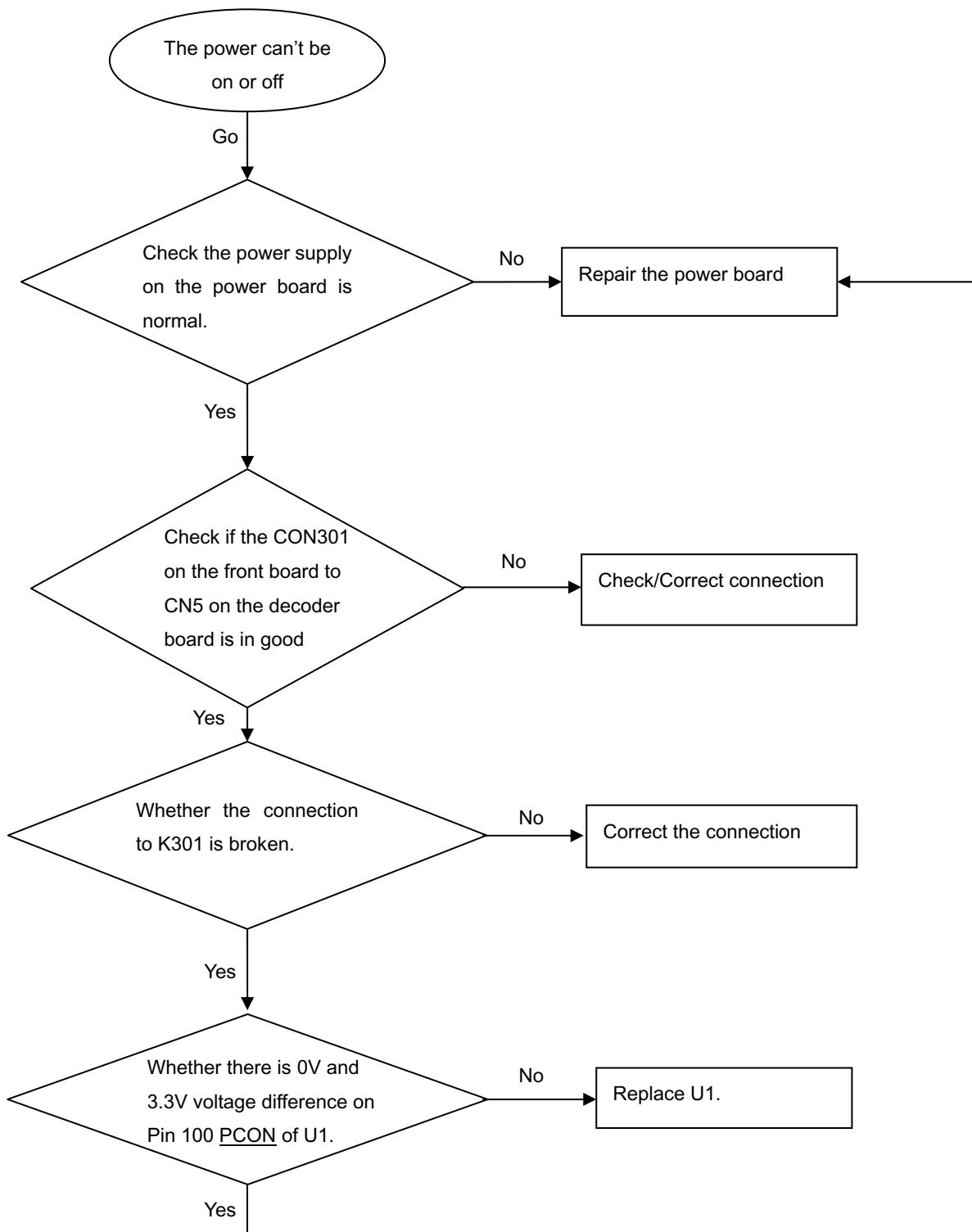
A. Procedure for software upgrade:

- 1) Power on the set and insert the prepared Upgrade CDR.
- 2) The set will starts reading disc & response with the following display TV screen:
Upgrade File DETECTED
Upgrade?
Press Play TO START.
- 3) Press <OK> button to confirm, then screen will display :
Files coping...
UPGRADING...
- 4) The upgraded disc will automatically out when files coping complete, then take out the disc.
- 5) About 1 minute later, the tray will automatically close when upgrading complete.

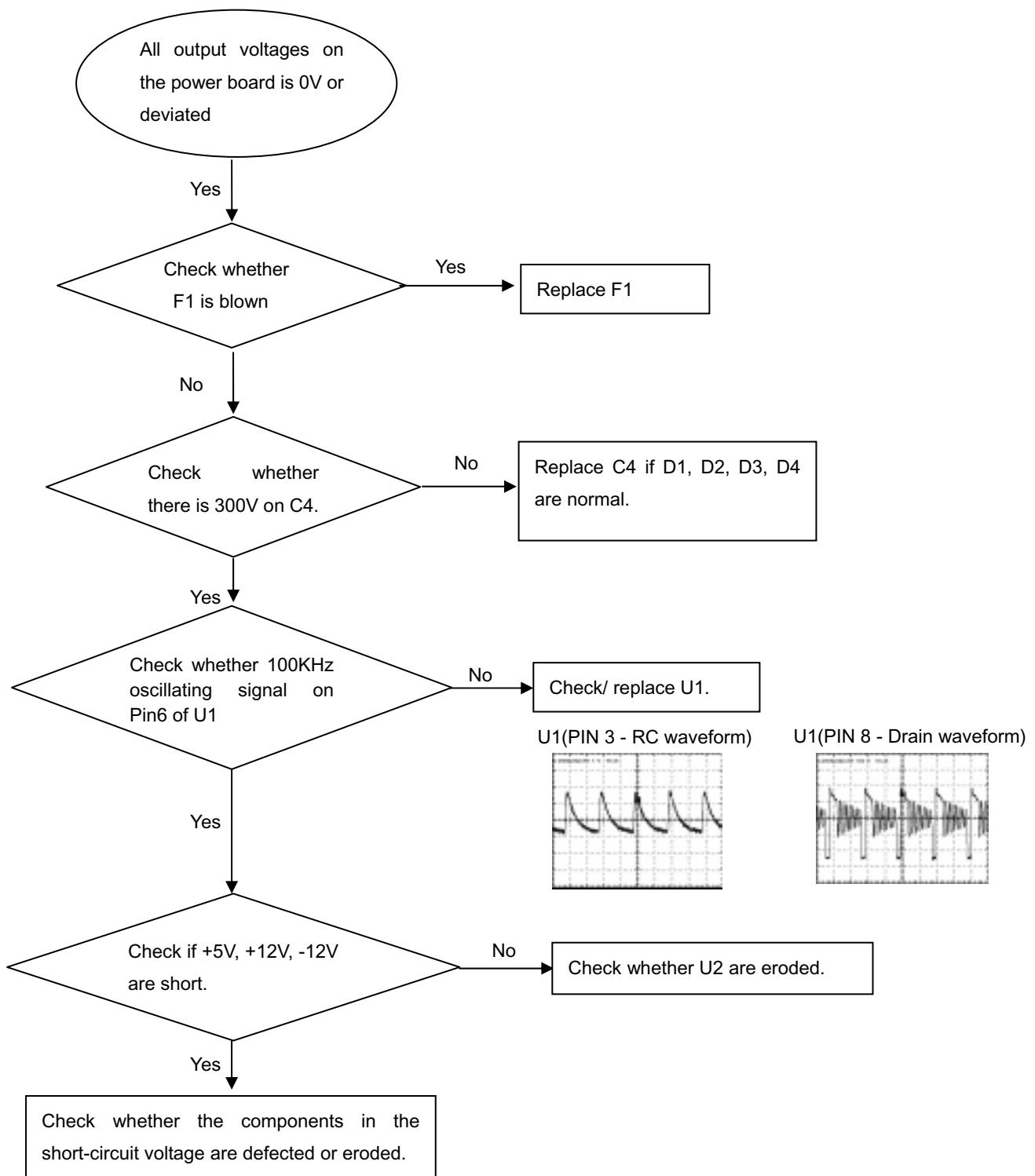
Caution: The set must not be power off during upgrading, Otherwise the Main board will be damaged entirely.

Spindle motor does not move

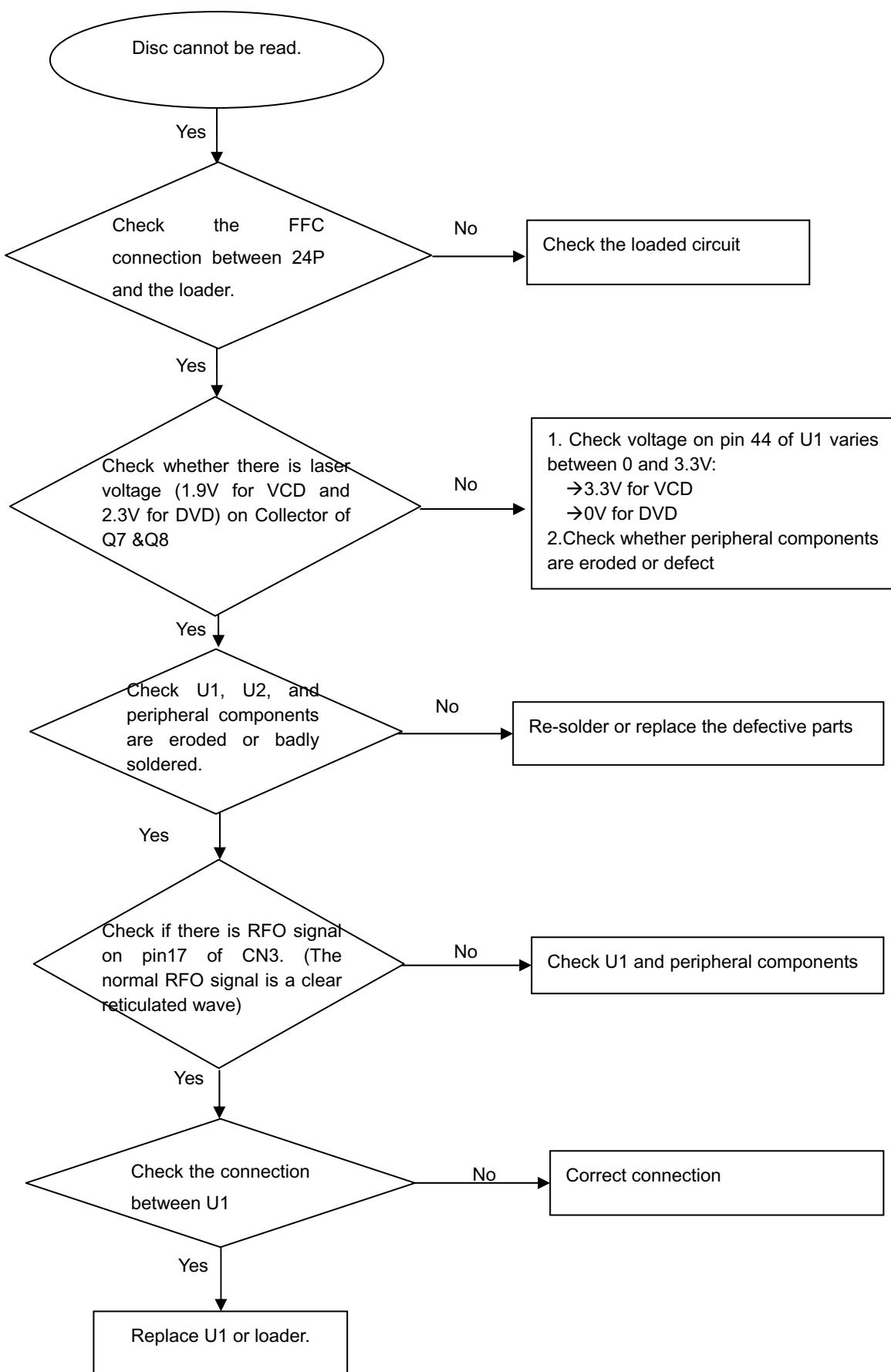
The power can not be on or off

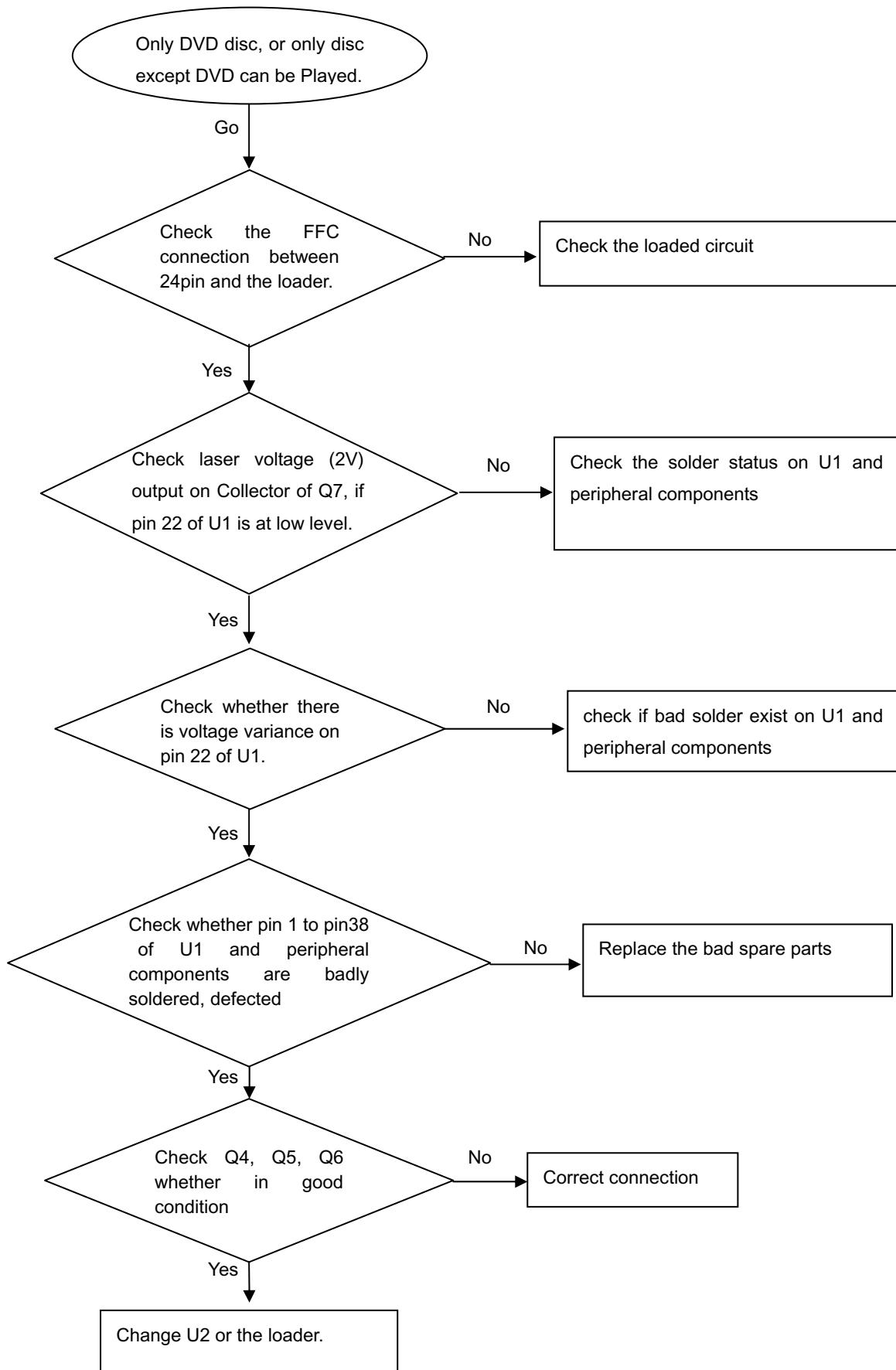


All output voltages on the power board is 0V or deviated.

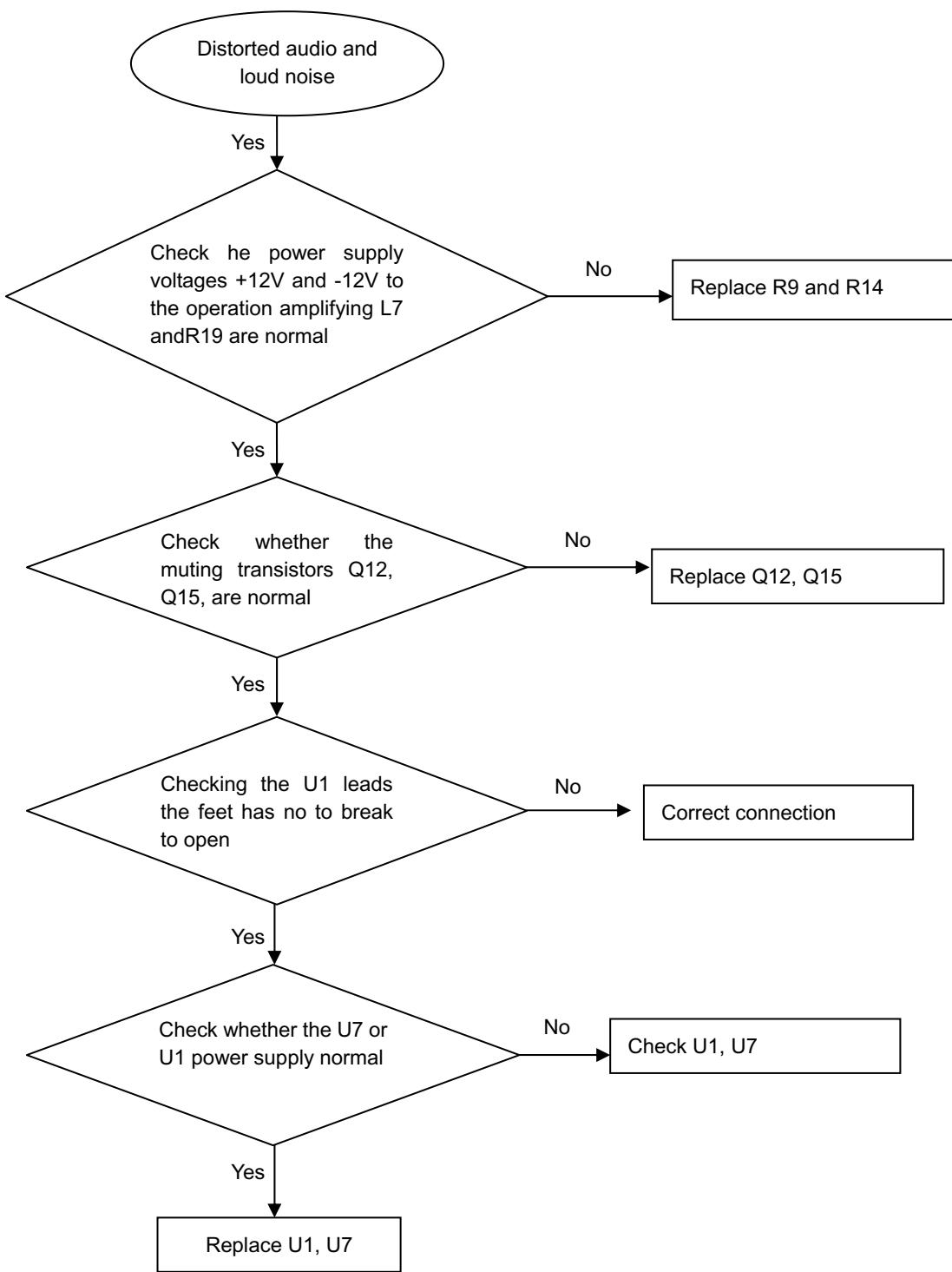


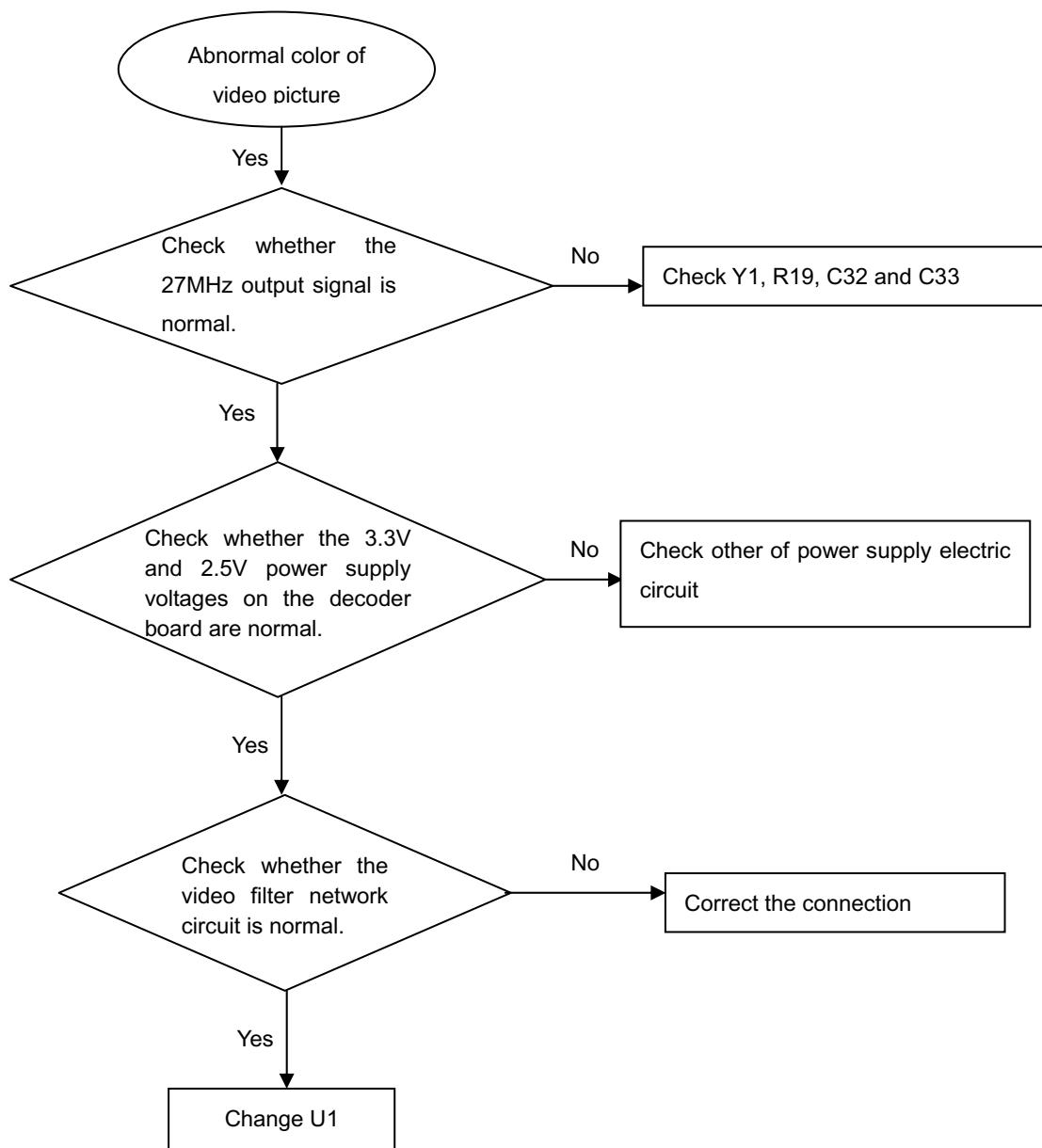
Disc cannot be read.

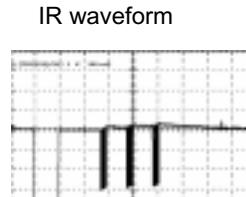
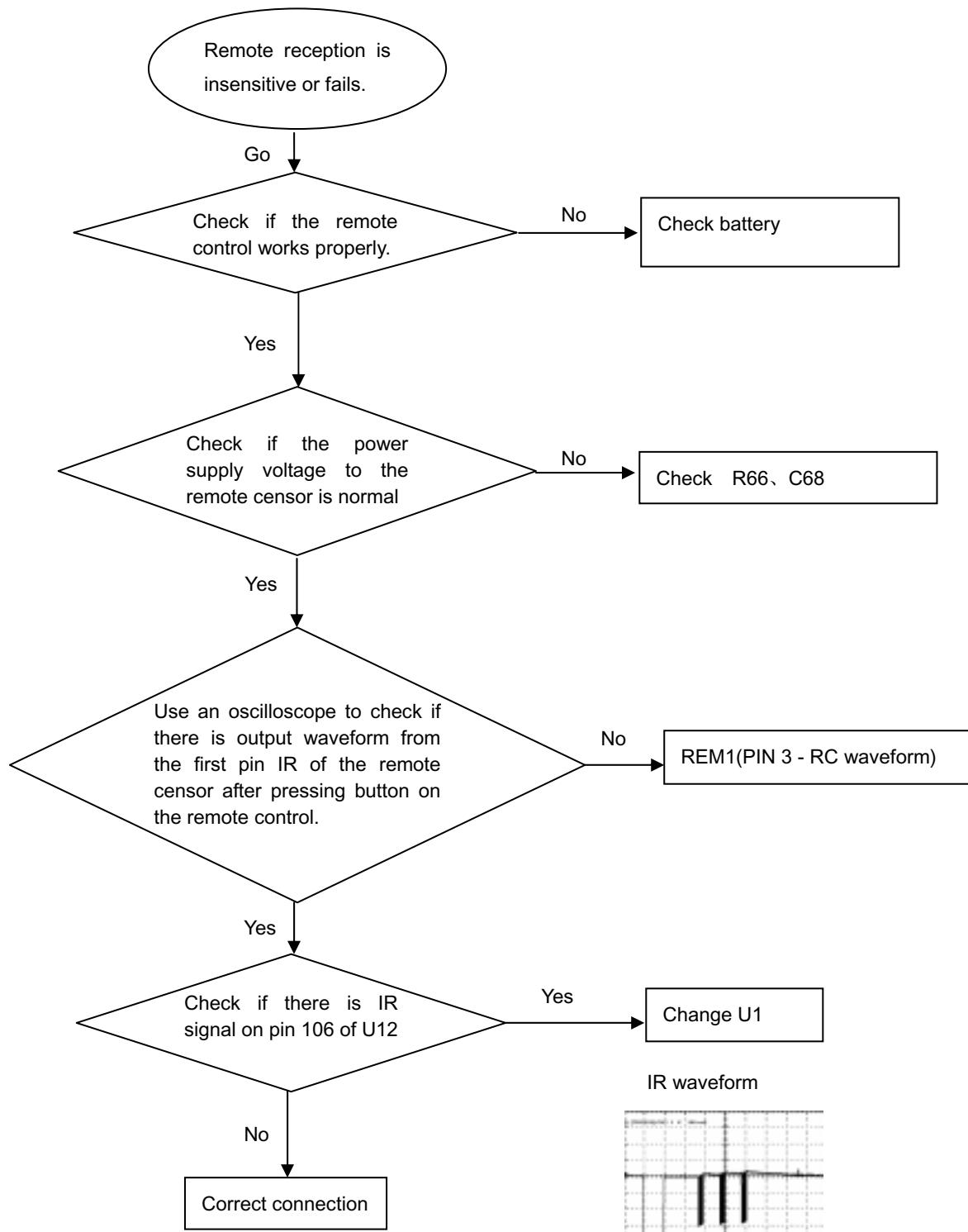


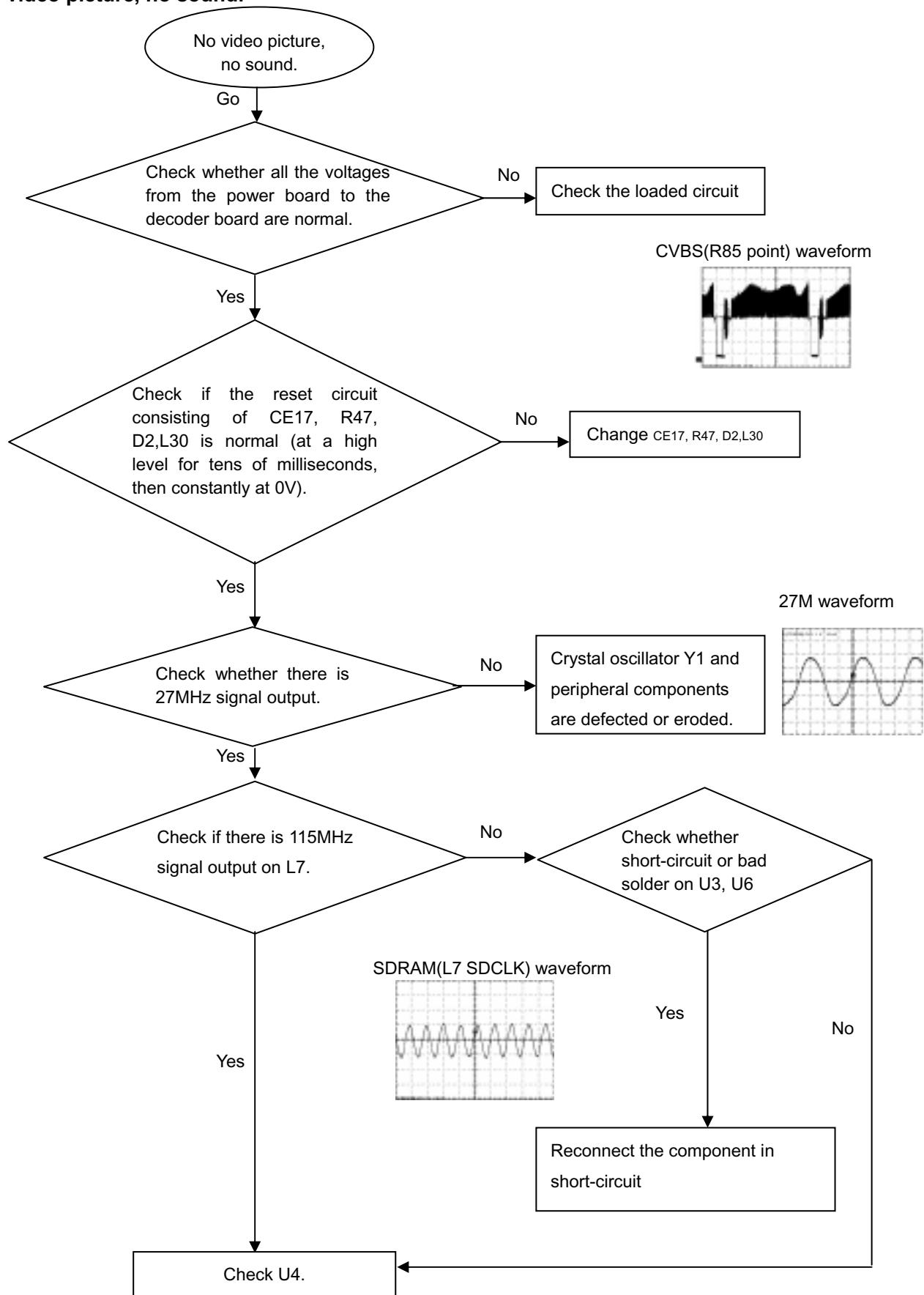
Only DVD disc or only disc except DVD can be played


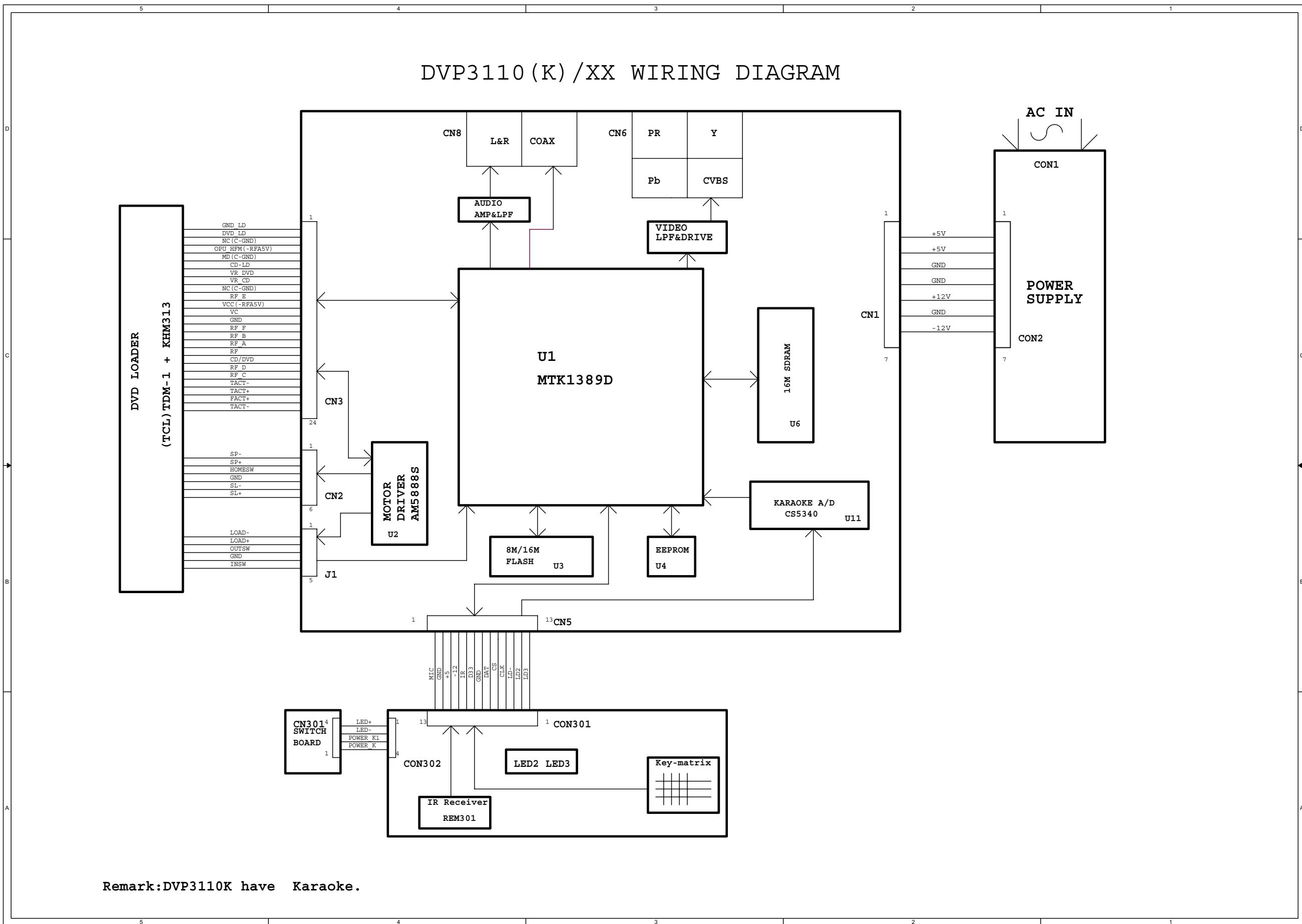
Distorted audio and loud noise

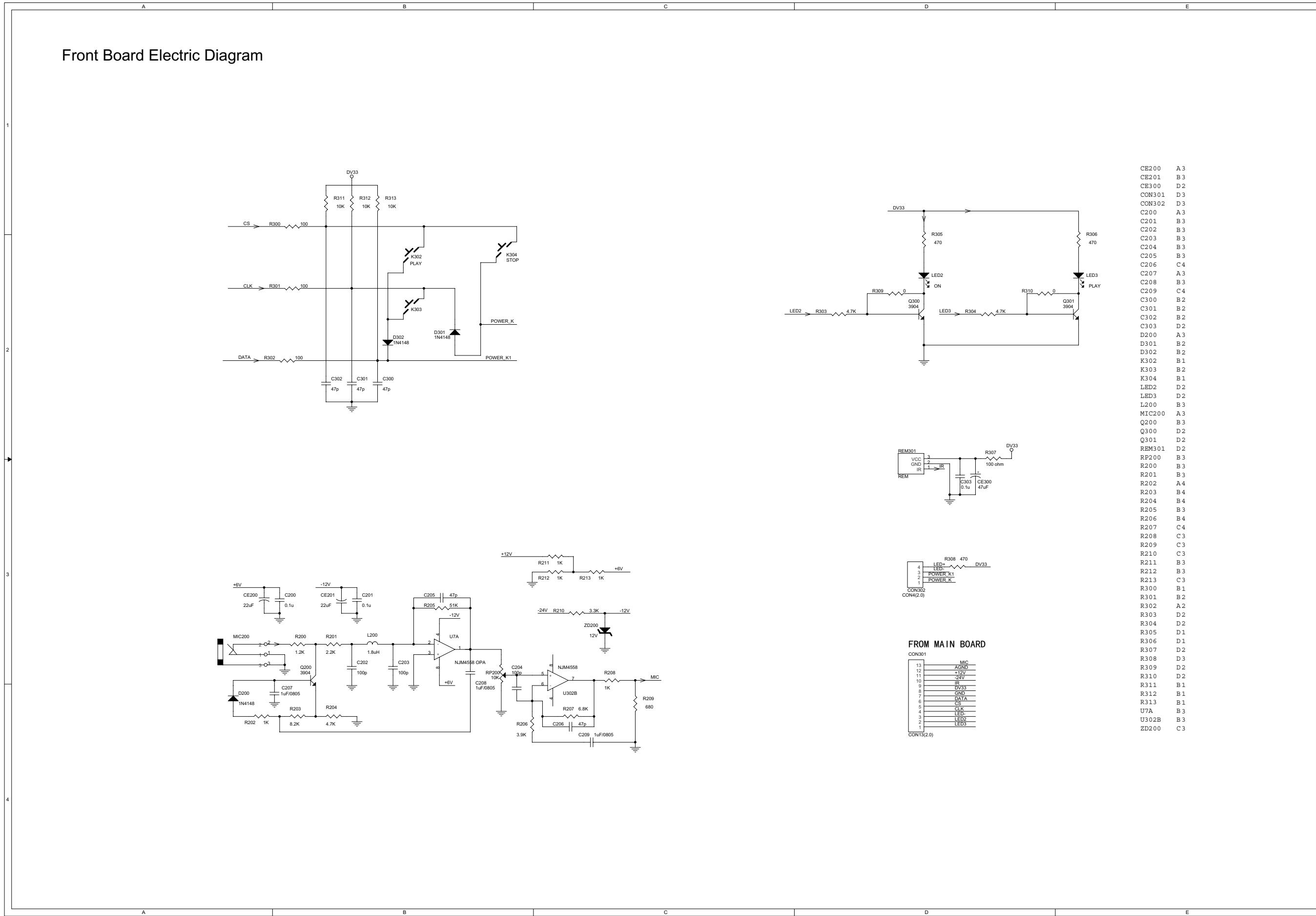


Abnormal color of video picture

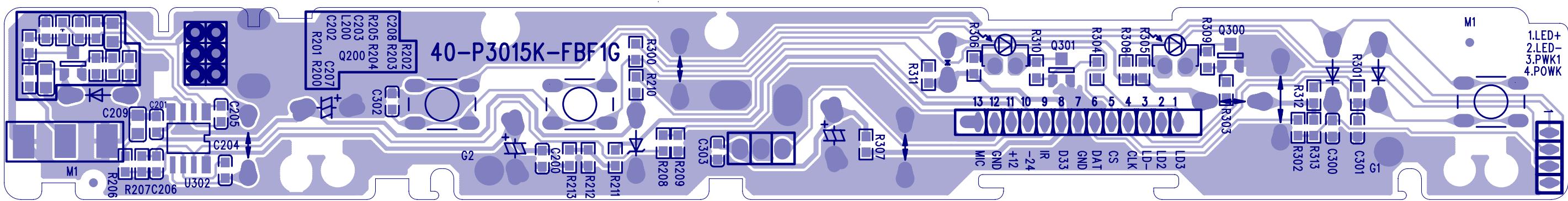
Remote reception is insensitive or fails.


No video picture, no sound.

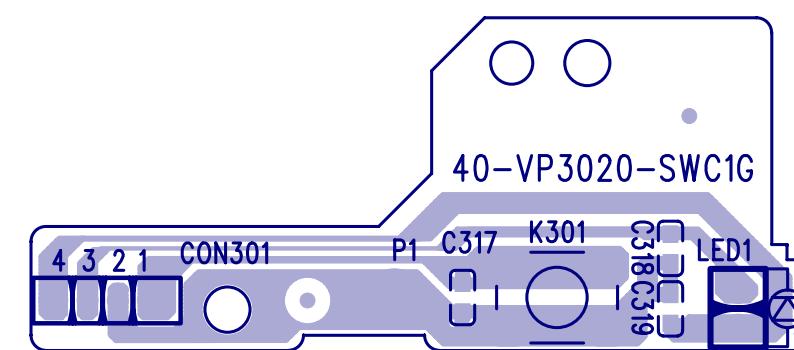


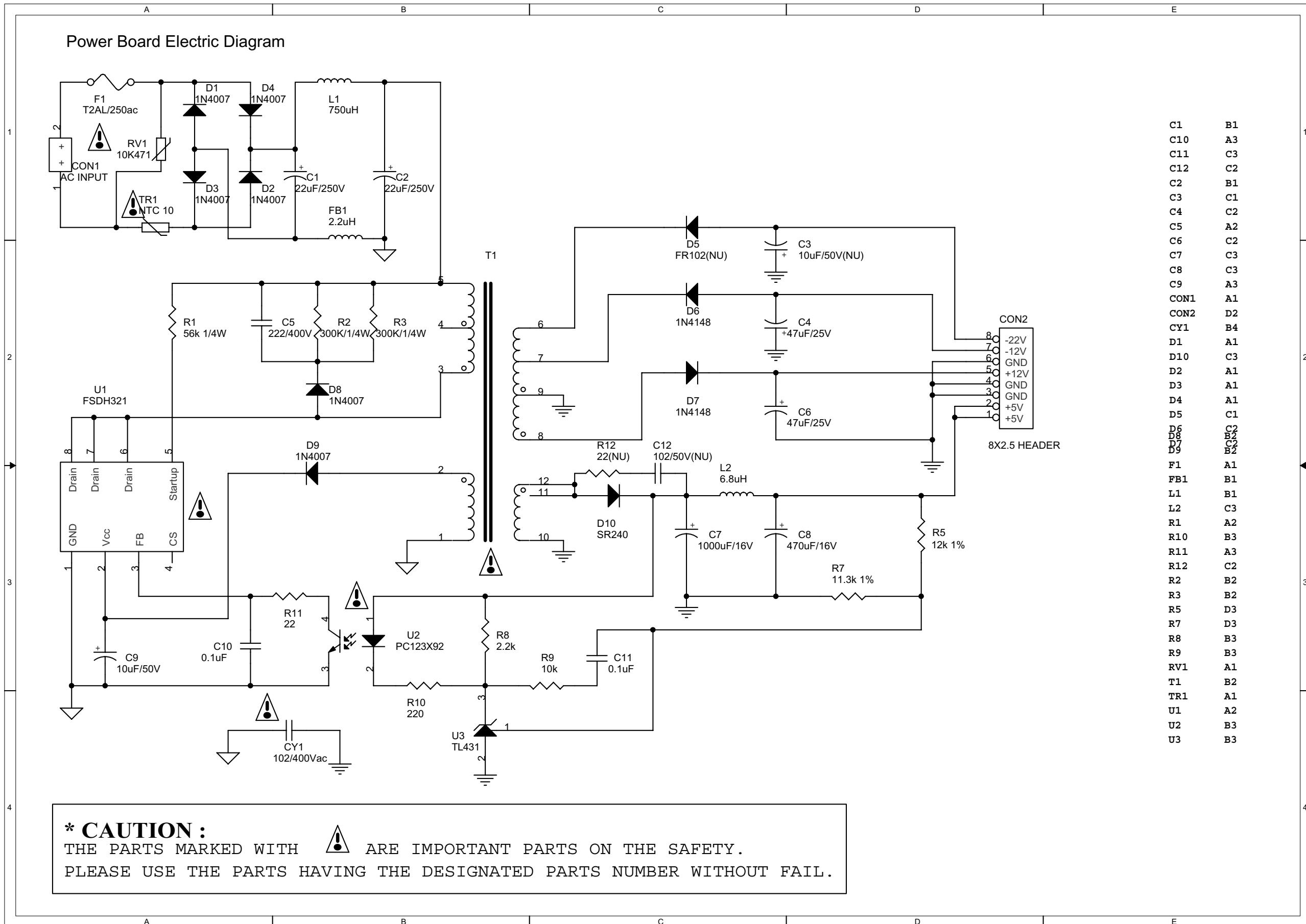


Front Board Print-Layout (Bottom Side)

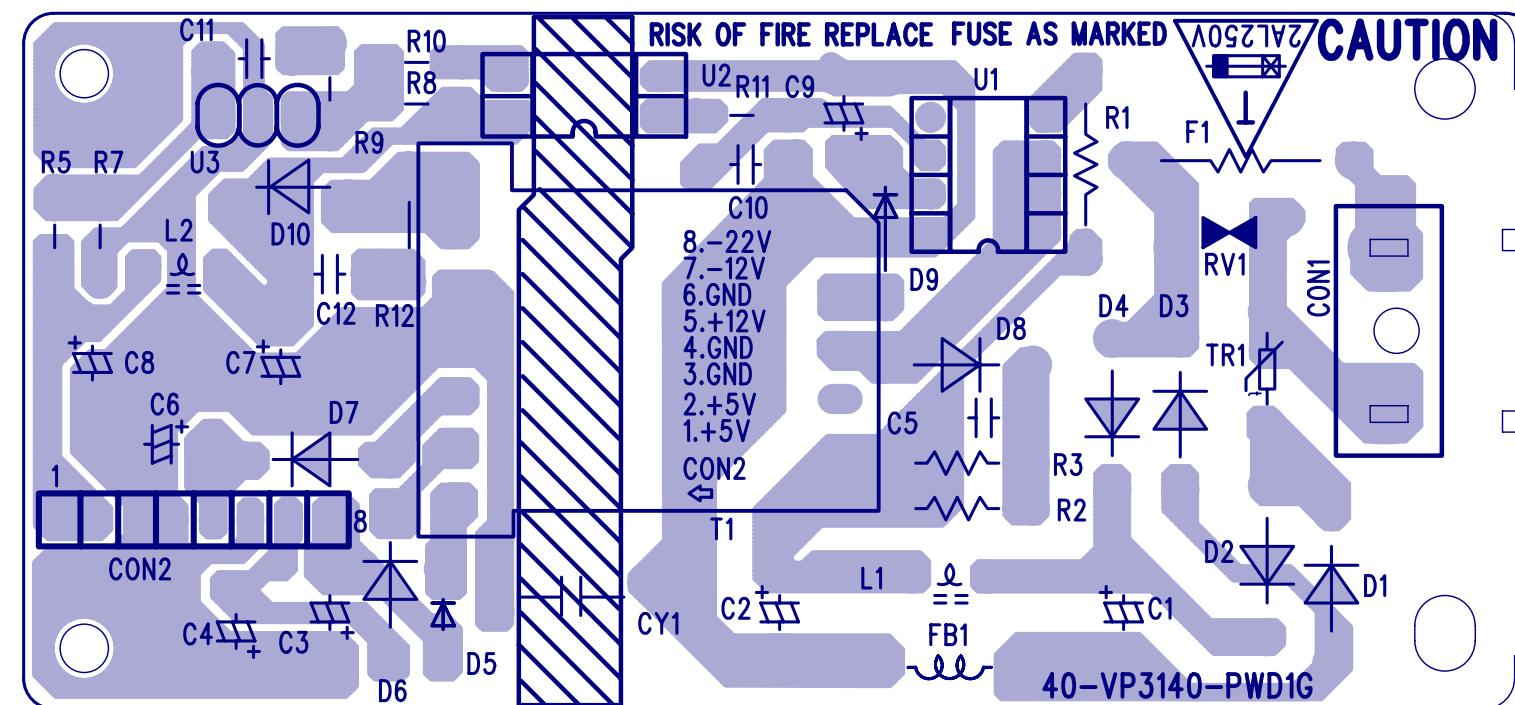


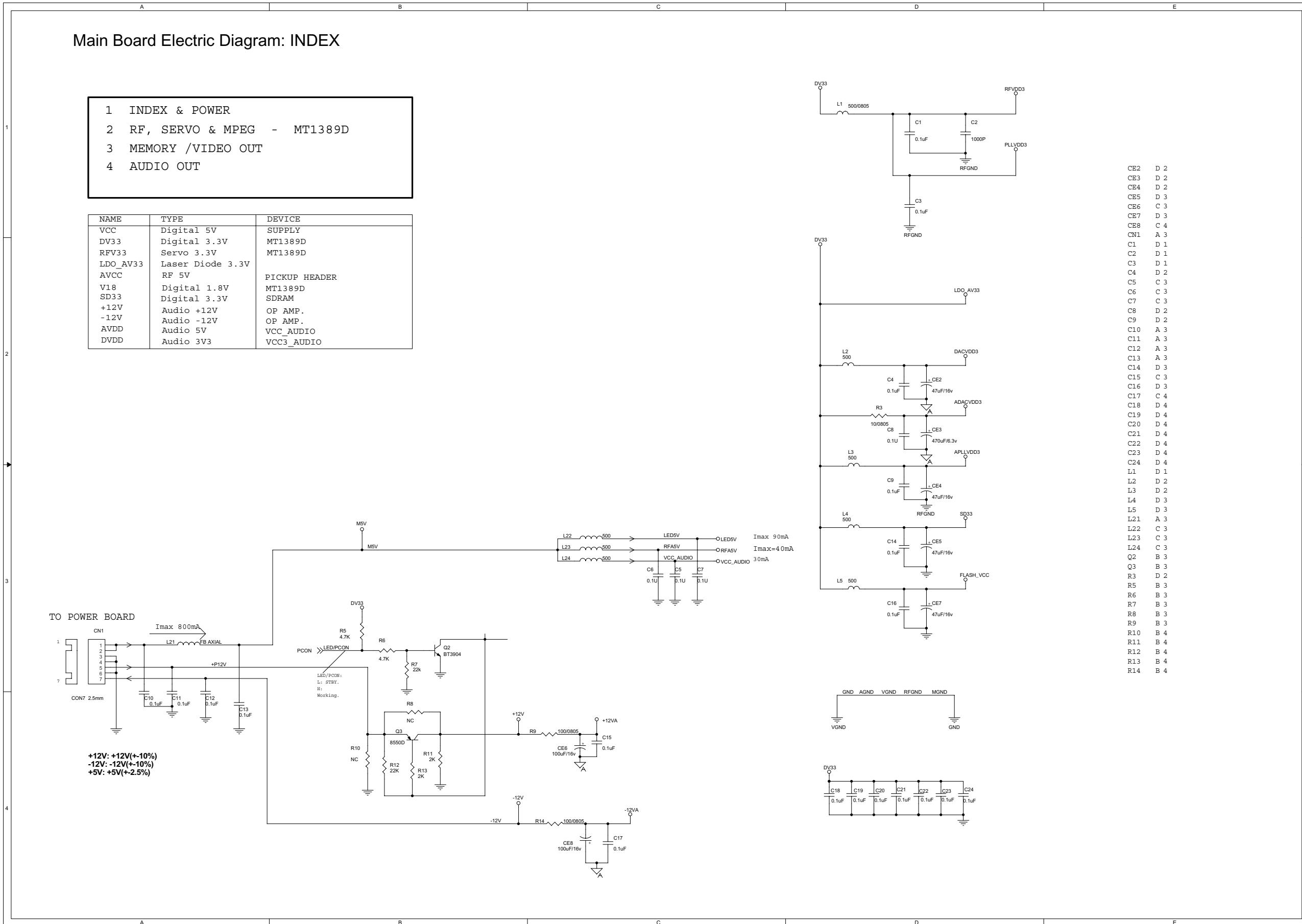
Switch Board Print-Layout (Bottom Side)

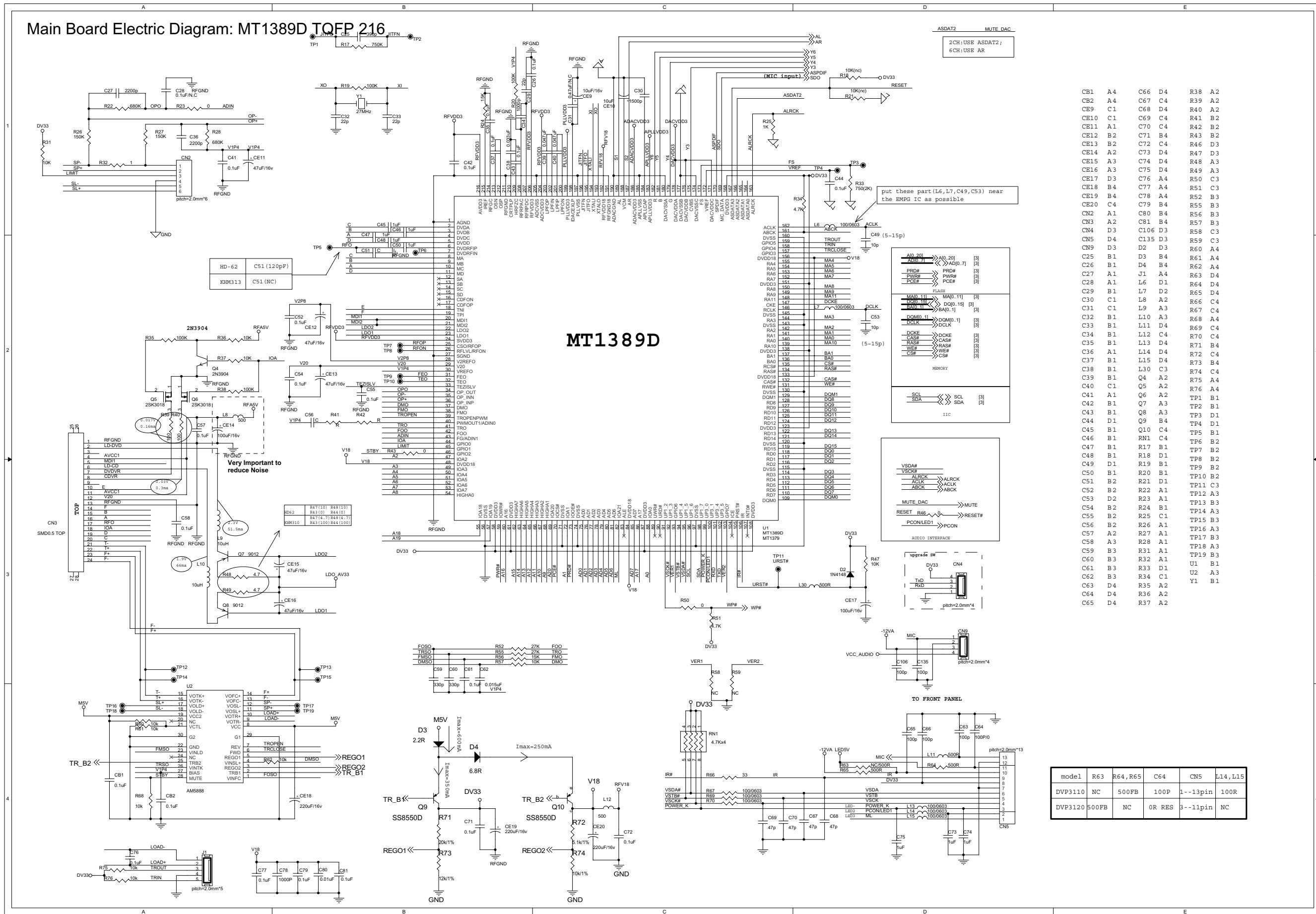


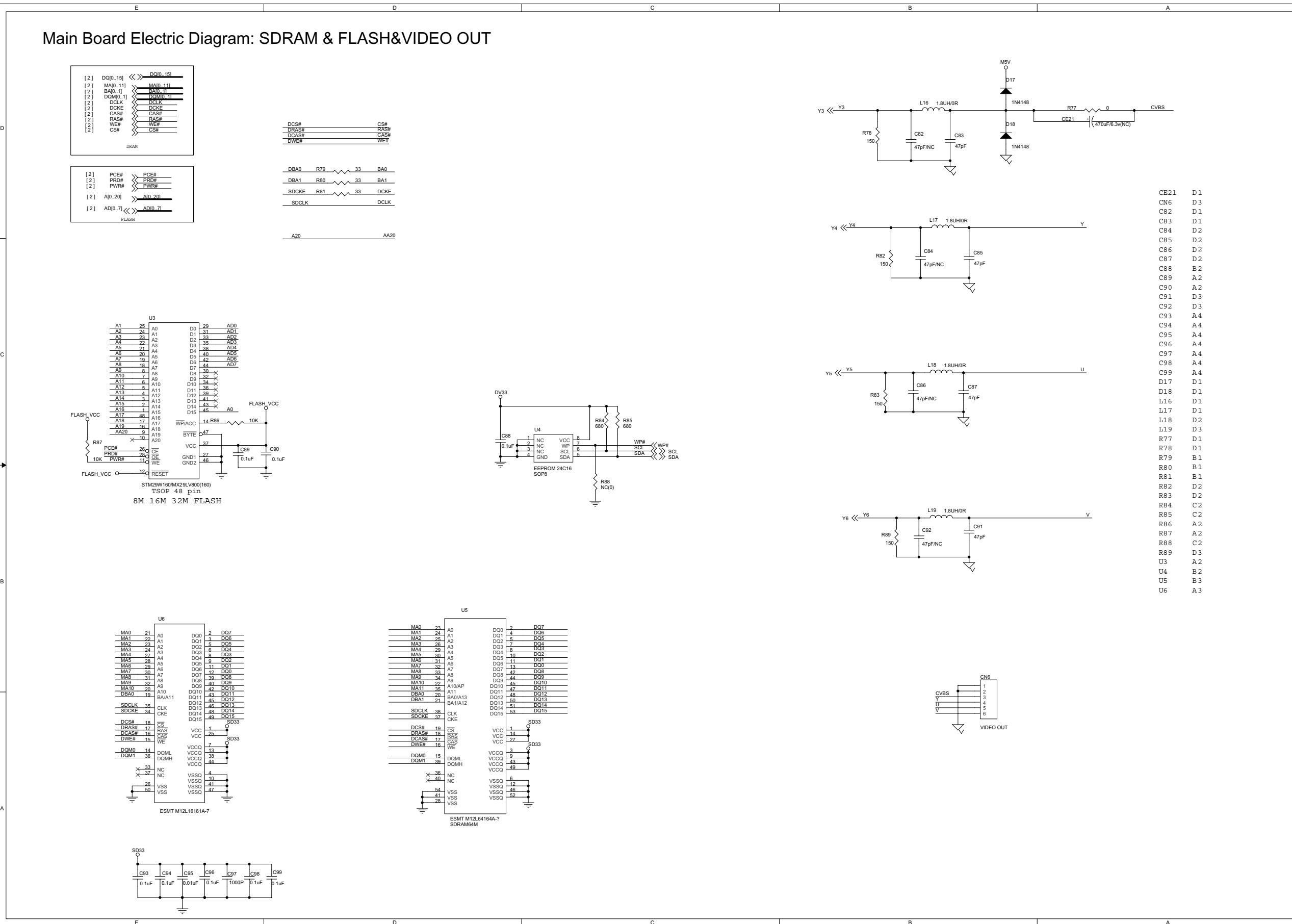


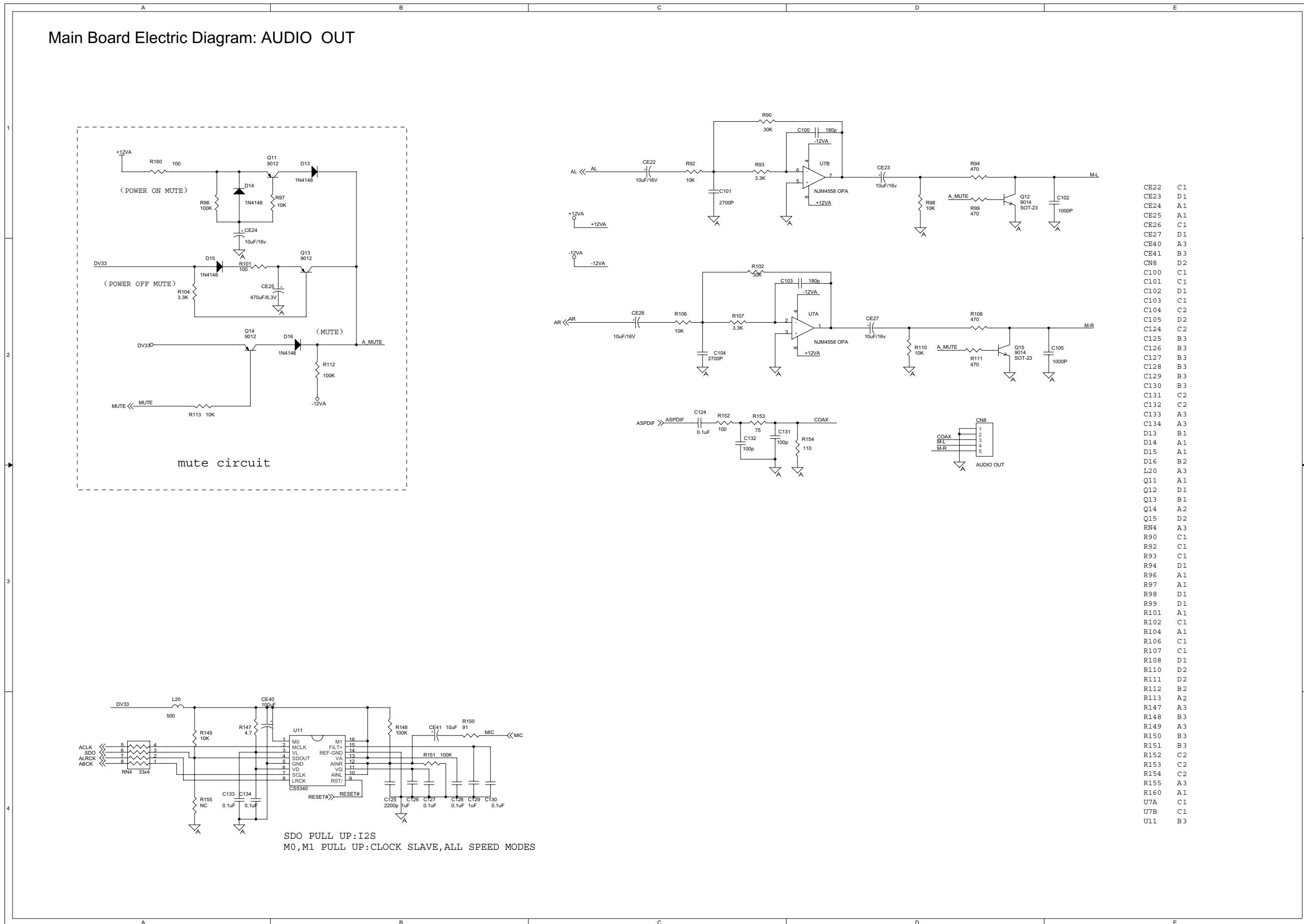
Power Board Print-Layout (Bottom Side)



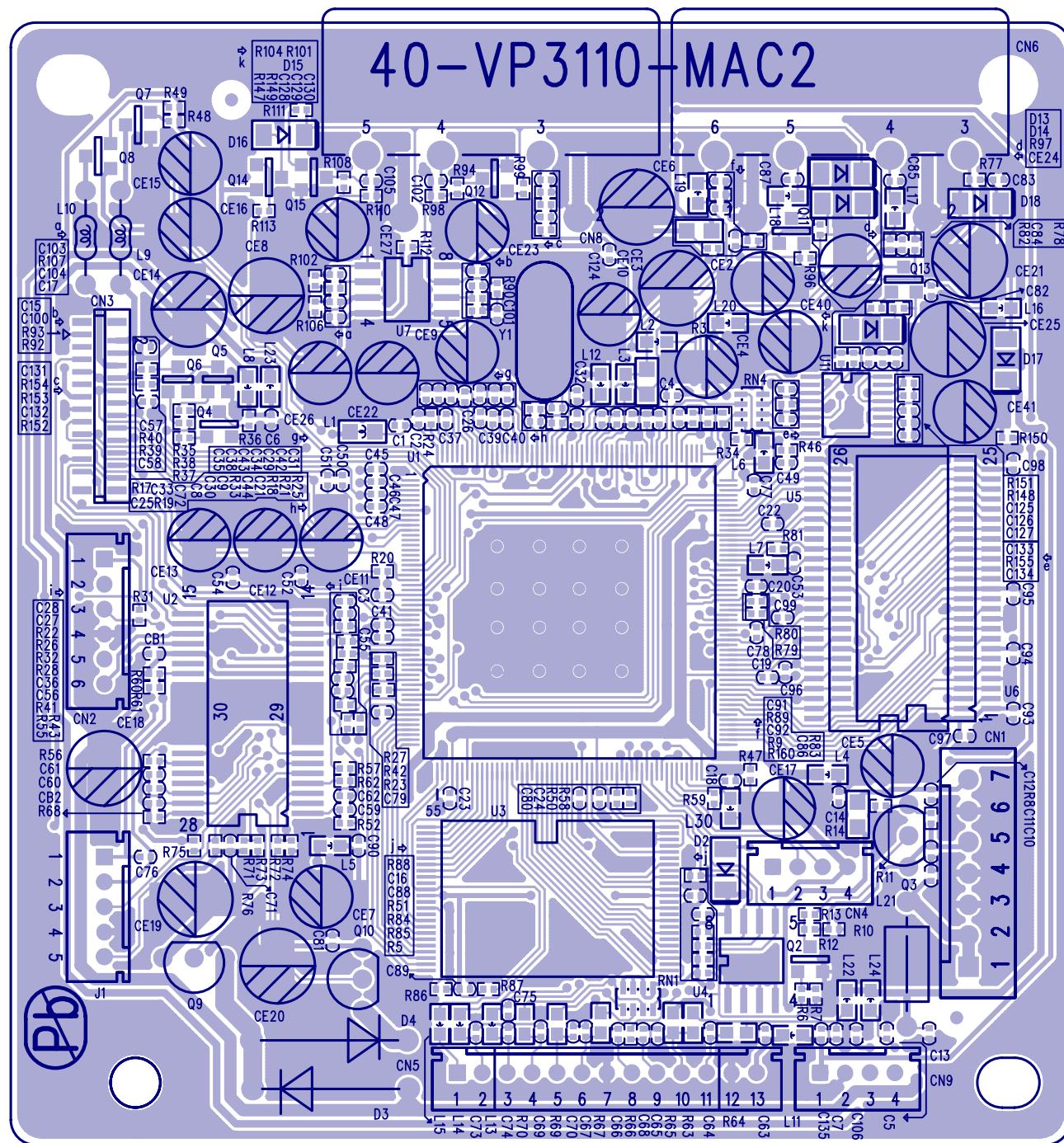




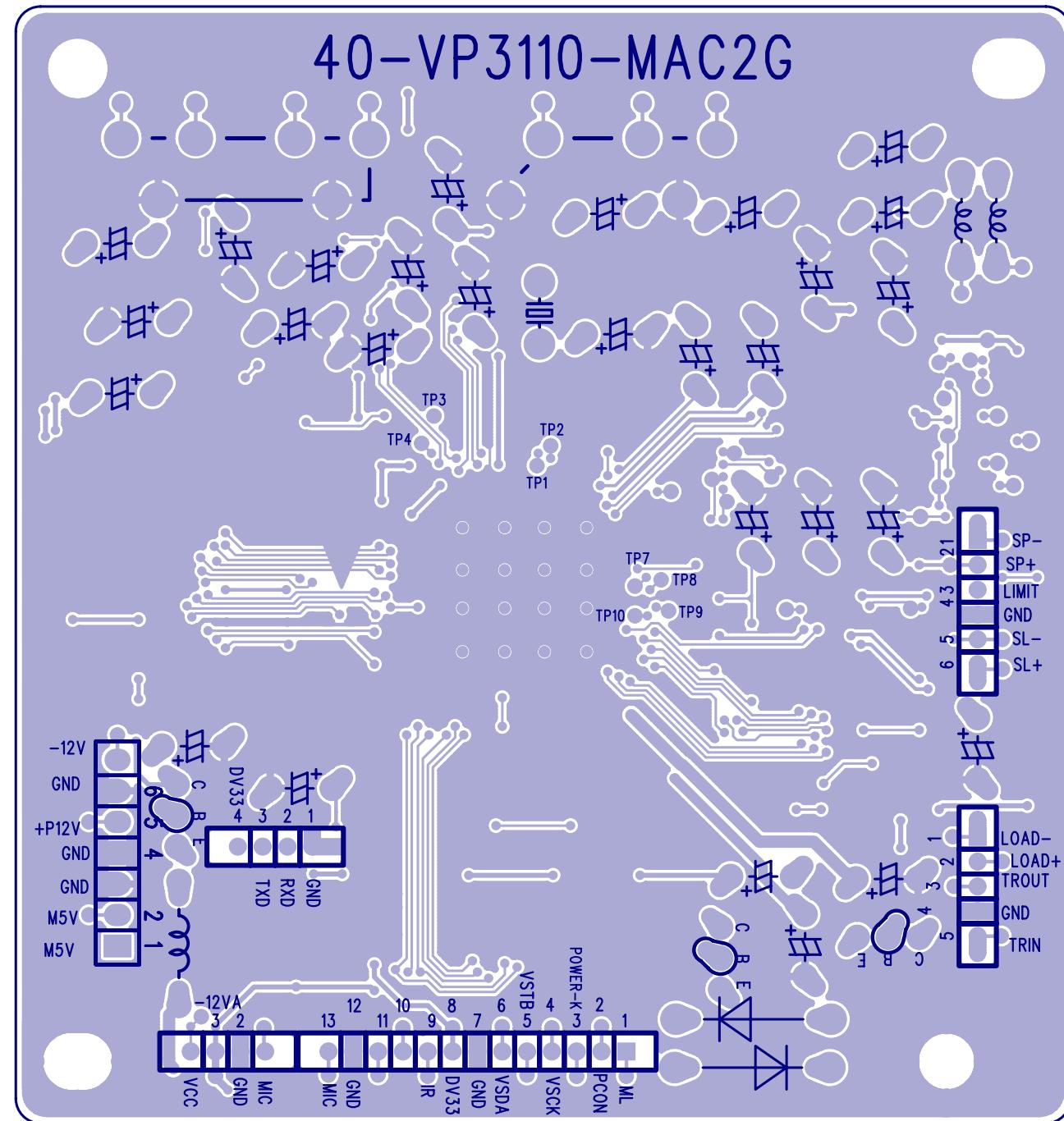




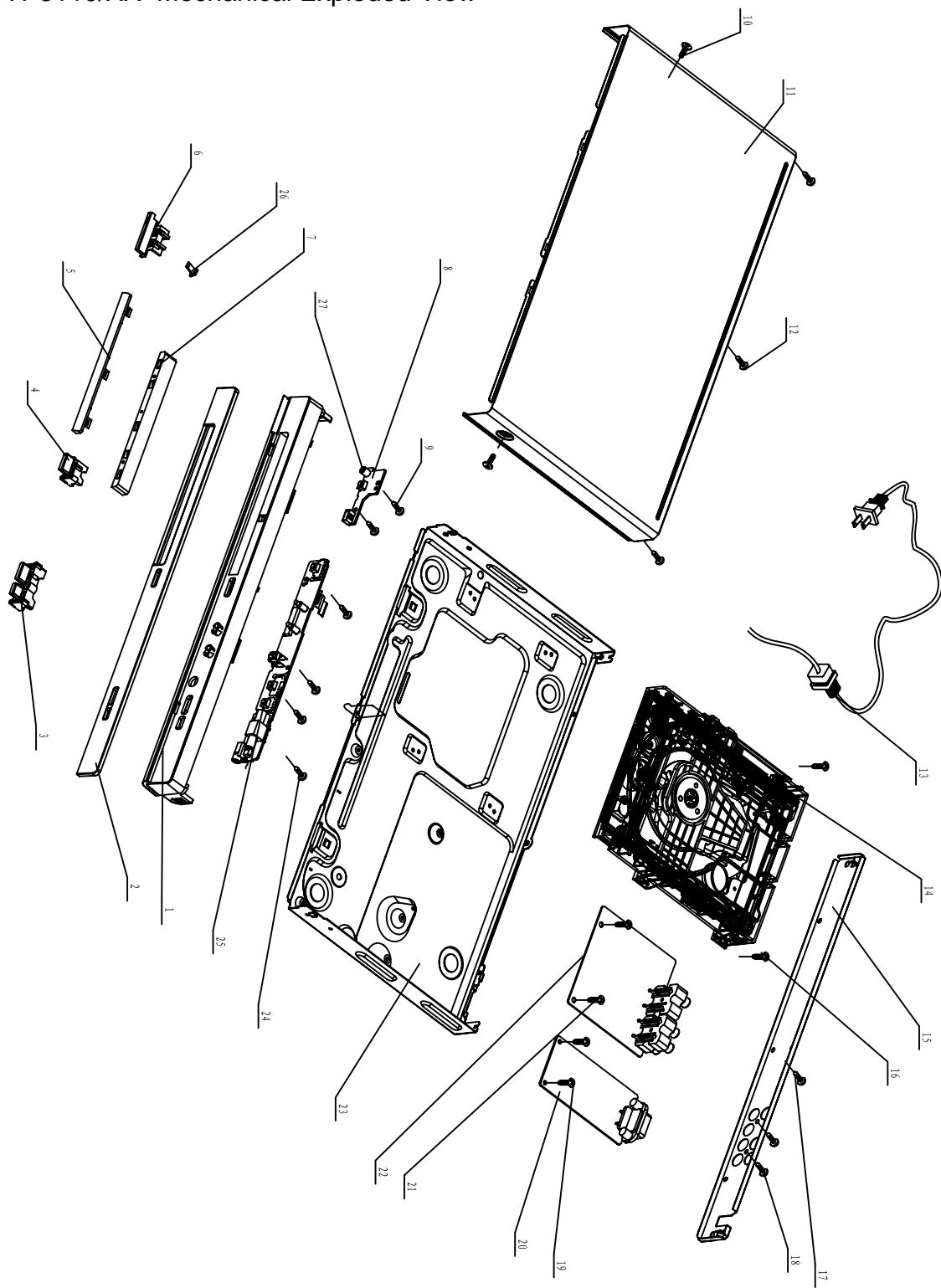
Main Board Print-Layout (Top Side)



Main Board Print-Layout (Bottom Side)



DVP3110/XX Mechanical Exploded View



Remark:

Ass'y1 is the assembled component for location 1,2,3,4,6,26

Ass'y2 is the assembled component for location 5,7

It's a general Mechanical Exploded View for DVP3110/XX, Detailed information please refer to Model set.

ENCASING & ACCESSORIES PARTS LIST				SCREW LIST			
No	12NC No.	Part Name	Q'ty	No	12NC No.	Part Name	Q'ty
Ass'y1	996510001772	Front Panel ass'y	1	9	/	S/T Screw B2.6X8 BF	2
Ass'y2	996510001771	Front Panel door	1	10	/	Triangle M/C Screw 3*6	2
8	996500034178	Ass'y-Switch Board	1	12	/	Triangle M/C Screw B3*6	3
11	996510001775	Top cover	1	16	/	Machine Screw	4
13	996510001206	Power Cord	1	17	/	Machine Screw	1
				18	/	S/T Screw B 3 X 8 BF	2
14	996510001763	Loader	1	19	/	Triangle M/C Screw B3*6	2
15	996510001773	Rear Cabinet	1	21	/	Triangle M/C Screw B3*6	2
20	996510001673	Ass'y-Power Board	1	24	/	S/T Screw B2.6X8 BF	4
22	996510001761	Ass'y-Main Board	1				
23	996510001774	Bottom Cabinet	1				
25	996510001762	Ass'y-Front Board	1				
27	/	LED Support	1				

Accessory

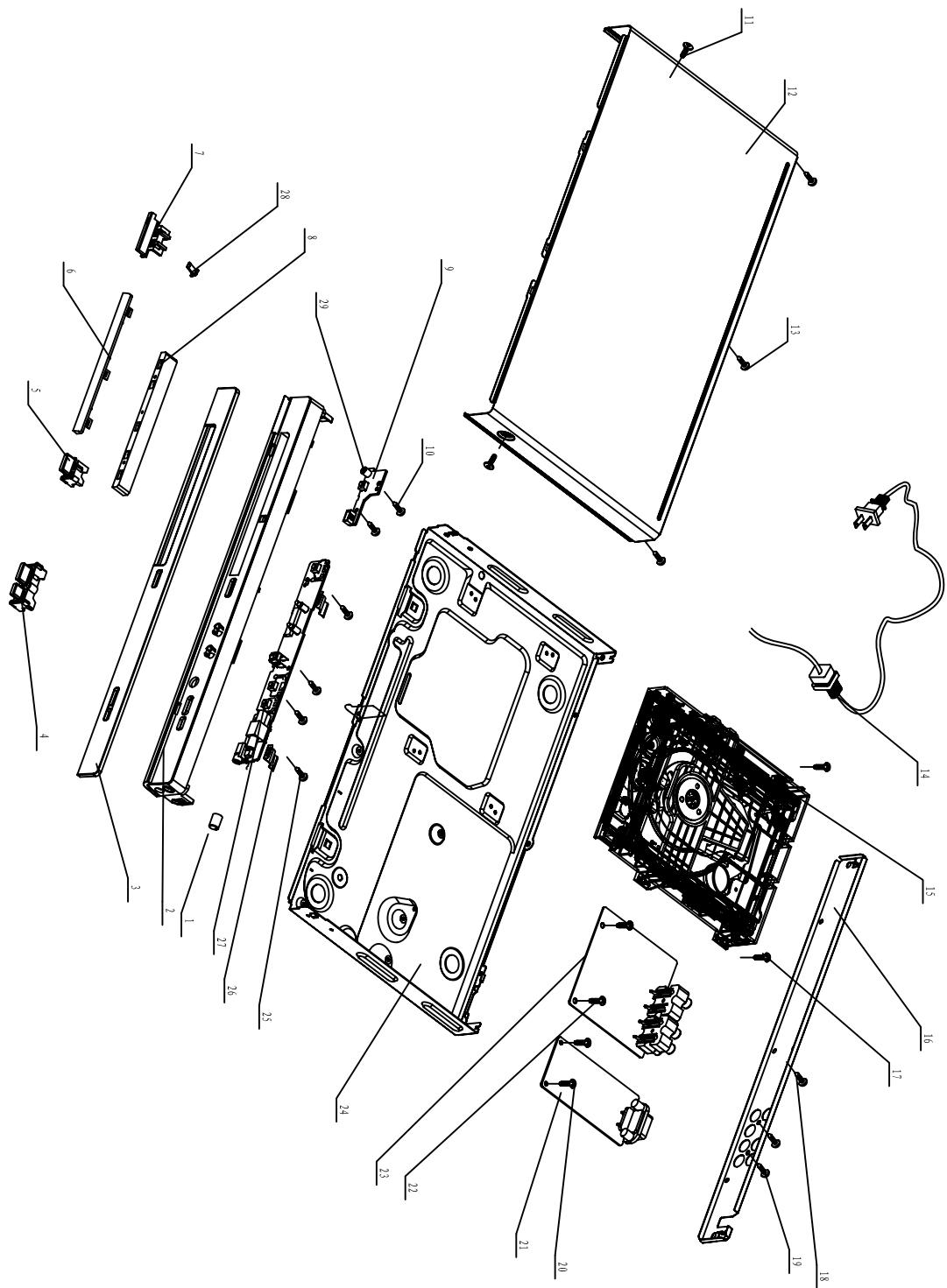
DBOX	996510001769	DISPLAY BOX	1
AV Cable	996510001106	VIDEO CABLE 1500mm	1
RC	996510001764	REMOTE CONTROL	1
PBAG	996510001768	POLY BAG	1
RBuffer	996510001770	RIGHT CARD	1
LBuffer	996510001214	LEFT CARD	1

Cable

CON302	996510000547	4P HS	1
CON301	996510001767	CABLE 9PIN (PH-9Y/JC20-9Y)	1
CN1	996510001169	TJC3-7Y/SCN-7P L=80MM	1
MAINJ1	996510001766	CABLE HS 5P 2468#26 150MM	1
CN3	996510001765	CABLE FFC 24PIN 0.5PITCH 220MM	1

Note:Only the parts mentioned in this list are normal service spare parts

DVP3110K/XX Mechanical Exploded View



Remark:

Ass'y1 is the assembled component for location 2,3,4,5,7,28

Ass'y2 is the assembled component for location 6,8

It's a general Mechanical Exploded View for DVP3110K/XX, Detailed information please refer to Model set.

ENCASING & ACCESSORIES PARTS LIST				SCREW LIST			
No	12NC No.	Part Name	Q'ty	No	12NC No.	Part Name	Q'ty
1	/	Knob	1	10	/	S/T Screw B2.6X8 BF	2
Ass'y1	996510001785	Front Panel ass'y	1	11	/	Triangle M/C Screw 3*6	2
Ass'y2	996510001784	Front Panel door	1	13	/	Triangle M/C Screw B3*6	3
9	996500034178	Ass'y-Switch Board	1	17	/	Machine Screw	4
12	996510001775	Top cover	1	18	/	Machine Screw	1
14	996510001179	Power Cord for DVP3110K/56	1	19	/	S/T Screw B 3 X 8 BF	2
	996510001537	Power Cord for DVP3110K/98		20	/	Triangle M/C Screw B3*6	2
	996510002166	Power Cord for DVP3110K/75		22	/	Triangle M/C Screw B3*6	2
	996510005908	Power Cord for DVP3110K/11		25	/	S/T Screw B2.6X8 BF	4
15	996510001763	Loader	1				
16	996510002222	Rear Cabinet for DVP3110K/56/75	1				
	996510001786	Rear Cabinet for DVP3110K/98					
	996510005909	Rear Cabinet for DVP3110K/11					
21	996510001190	Ass'y-Power Board for DVP3110K/98	1				
	996510001165	Ass'y-Power Board for DVP3110/56/75					
	996510005904	Ass'y-Power Board for DVP3110K/11					
23	996510001776	Ass'y-Main Board	1				
24	996510001774	Bottom Cabinet	1				
26	/	Earthing Plate	1				
27	996510001777	Ass'y-Front Board	1				
29	/	LED Support	1				
<hr/>							
Accessory							
LBuffer	996510001214	LEFT CARD	1				
RBuffer	996510001783	RIGHT CARD for DVP3110K/98	1				
DBOX	996510001782	DISPLAY BOX	1				
DBOX	/	DISPLAY BOX for DVP3110K/11					
AV Cable	996510001106	VIDEO CABLE 1500mm	1				
RC	996510001778	REMOTE CONTROL	1				
PBAG	996510001768	POLY BAG	1				
Cable							
CN1	996510001169	TJC3-7Y/SCN-7P L=80MM	1				
CN3	996510001765	CABLE FFC 24PIN 0.5PITCH 220	1				
CON301	996510001779	CABLE HS 13P 2468#26 150MM I	1				
CON302	996510000547	4P HS	1				
J1	996510001766	CABLE HS 5P 2468#26 150MM	1				

Note:Only the parts mentioned in this list are normal service spare parts

REVISION LIST

Version 1.0

* Initial release

Version 1.1

*Include DVP3110K/11

Remark: This Service manual only for Philips Service repairment, Please Don't transmitte or forward it to others.