

Service

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DVP3000/51

DVP3000K/13/69/75/93

DVP3005K/03/13/69/75/78/93/94

DVP3005/00/02/04/05/69/78/94

DVP3007/69/94

DVP3010/00/02/04/05

DVP3500/37



Service Manual

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Version 1.2

**CLASS 1
LASER PRODUCT**



3139 785 30952

PHILIPS

Technical Specifications

TV standard	(PAL/50Hz)	(NTSC/60Hz)	Audio performance	
Number of lines	625	525	DA converter	24 bits, 192kHz
Playback	Multistandard	(PAL/NTSC)	DVD	fs 96kHz fs 48kHz
Video performance				
Video DAC	12 bit, 108MHz		SVCD	fs 48kHz fs 44.1kHz
PbPr:	0.7Vpp — 75ohm		CD/VCD	fs 44.1kHz
Video output	1Vpp — 75ohm		Signal Noise (1kHz)	>95dB
Video format			Dynamic Range (1kHz)	>85dB
Digital Compression	MPEG 2 for DVD, SVD		Cross talk (1kHz)	>90dB
	MPEG 1 for VCD		Distortion/Noise (1kHz)	>80dB
DVD	50Hz	60Hz	MPEG MP3	MPEG Audio L3
Horiz. resolution	720 pixels	720 pixels	Audio L+R output	1.0~2.0 Vpp into 10K ohm
Vertical resolution	576 lines	480 lines	Connections	
VCD	50Hz	60Hz	YpbPr	Cinch 3x
Horiz. resolution	352 pixels	352 pixels	Video output	Cinch (yellow)
Vertical resolution	288 lines	240 lines	Audio L+R output	Cinch (white/red)
Audio format			Digital output	1 coaxial EC60958 for CDDA/LPCM EC61937 for MPEG 1/2, Dolby Digital
Digital	MPEG/AC-3/ PCM	Compressed Digital 16, 20, 24 bits fs, 44.1, 48, 96kHz	Cabinet	
	M P3 (ISO 9660)	96, 112, 128, 256 kbps & variable bitrate fs, 32, 44.1, 48 kHz	Dimensions (w X h X d)	360 X 43 X 265mm
Analog Sound Stereo			Weight	Approximately 2.0 kg
Dolby surround-compatible downmix from Dolby Digital multichannel sound				
Power consumption				
Power supply	230V for 00/02/03/04/05/13/69/75/93 120~230V for 78			
Power consumption in standby mode	< 0.8W			
Power consumption	< 10W			

Specifications subject to change without prior notice.

Safety instructions, Warnings, Notes

Safety instructions

1. Generalsafety

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 to 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 .
- 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 Lasersafety

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

Laserdevice unit

Type	: Semiconductor laser GaAlAs
Wavelength	: 650nm (DVD)
	: 780nm (VCD/CD)
Outputpower	: 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 .

Warnings

1 General

All IC's 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:

- 1) Complete kit ESD3 (small tablet, 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 trademark of Dolby Laboratories,
Inc. All rights reserved.

Warnings, 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 solderalloys (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 solderpaste is required, please contact the manufacturer of your solder equipment. In general use of solderpaste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - o To reach at least a solder temperature of 400°C,
 - o To stabilize the adjusted temperature at the solder tip
 - o To exchange solder tips for different applications.
- Adjust your solder tools 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-in 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 guidelines show how to dismantle the player.

Step1: Remove 5 screws around the Top Cover. And remove it (Figure 1)

Step2: If it is necessary to dismantle Loader or Front Panel,

It should be remove the front door assembly first. (Figure 2)

If the trace can't open in normal way, you can make it by

pushing the guider manually using the slot below the bottom chassis with a tool (Figure 3)

Note: Make sure to operate gently otherwise the guider would be damaged.



Figure 1



Figure 2



Push the guider until the trace out. Make sure to operate gently to avoid damage happening.

Figure 3

Step3 : Dismantling Loader; First, disconnect the 3 connectors aiming in the figure, and then remove the 2 screws at both sides of the bader, (Figure 4)

Step4 : Dismantling Front Panel: disconnect the 2 connectors aiming in the figure then Release the snaps on the both sides of Front Panel and gently pull the Panel out from the set. (Figure 5& 6)

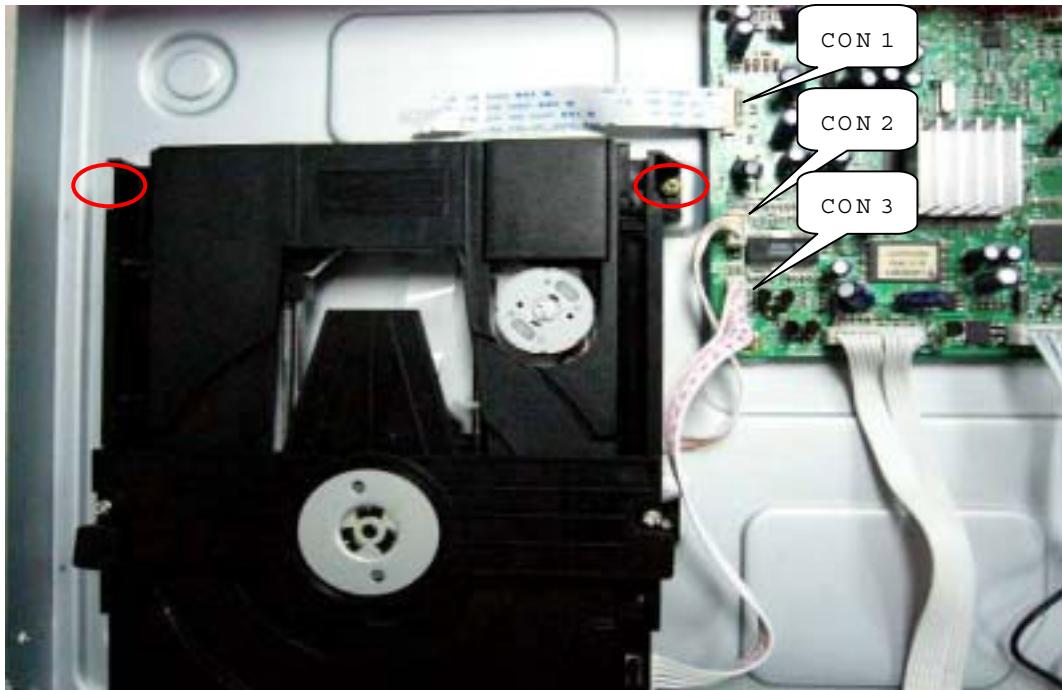


Figure4

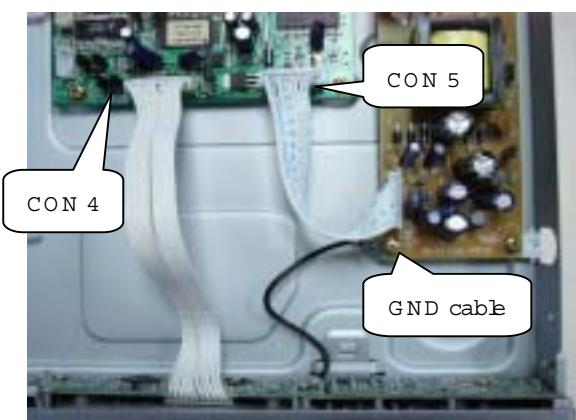


Figure 5

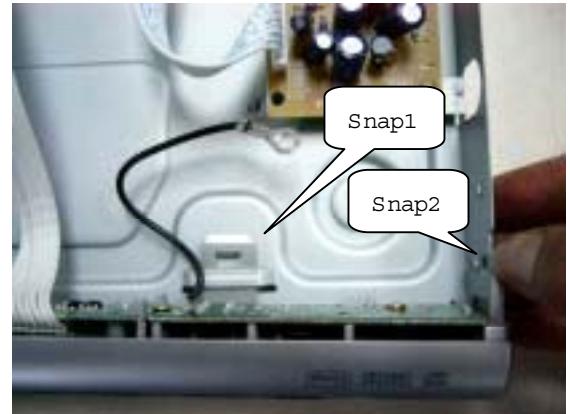


Figure 6

Mechanical and Dismantling Instructions

Step 6: Dismantling Main Board, first disconnect the connector, and then remove the relative screws, (Figure 7)

Step 7: Remove the 3 screws on powerboard to dismantle the powerboard. (Figure8)

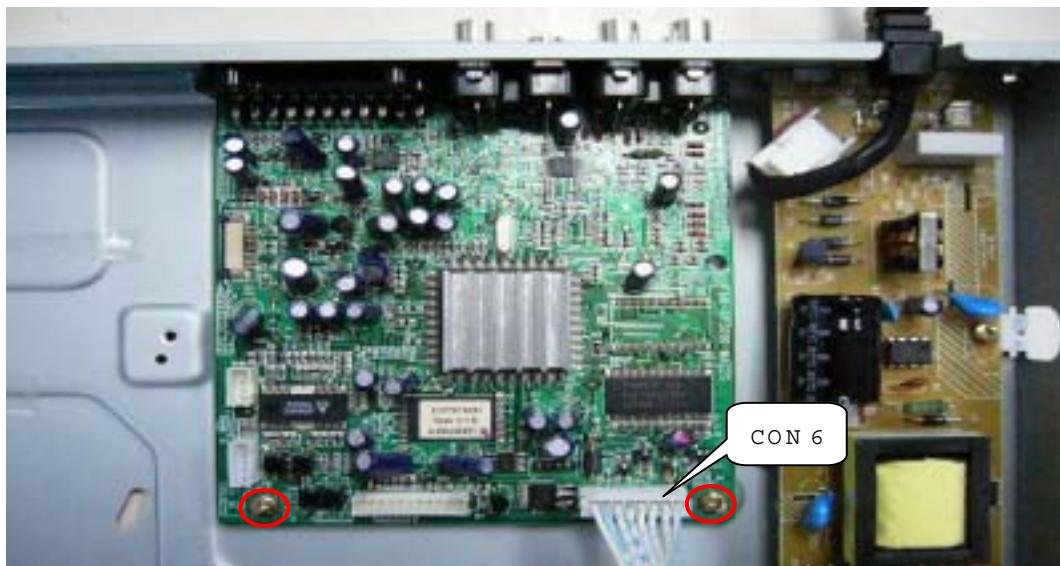


Figure 7

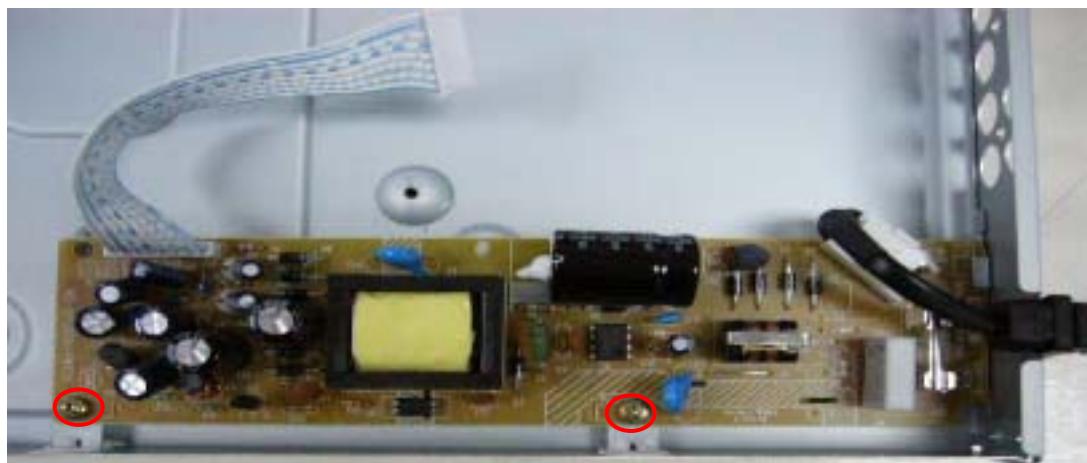


Figure 8

ATTENTION OF REPAIRING

Make sure adding silicon glue to fix the capacitor C4 after repairing, (Avoid the hazard of C4 touching the Top Cover.)



Figure 9

Software upgrade

A. Preparation to upgrade software

- 1) Start the CD Burning software and create a new CD project (Data Disc) with the following setting:

Label: **DVP3XXX**

File System: **DVP3000K_13.BIN** (for DVP3000K/13/75)

DVP3000K_69.BIN (for DVP3000K/69)

DVP3000K_93.BIN (for DVP3000K/93)

DVP3005_00.BIN (for DVP3005/00/05)

DVP3005_02.BIN (for DVP3005/02)

DVP3005_04.BIN (for DVP3005/04)

DVP3005_78.BIN (for DVP3005/78)

DVP3005K_78.BIN (for DVP3005k/78)

DVP3005K_93.BIN (for DVP3005k/93)

DVP3010_00.BIN (for DVP3010/00/05)

DVP3010_02.BIN (for DVP3010/02/04)

DVP3005K_69.BIN (for DVP3005K/03/13/69/75)

Label: _____ (**No need the label name**)

File System: **DVP3000_51.BIN** (for DVP3000/51)

DVP3005_69.BIN (for DVP3005/69)

DVP3500_37.BIN (for DVP3500/37)

DVP3005_94.BIN (for DVP3005/94)

DVP3007_94.BIN (for DVP3007/69/94)

Note: It is required capital letter for the Label name &

the File System name.

- 2) Burn the data onto a blank CDR

B. Procedure for software upgrade:

- 1) Power up 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...

- 3) The upgraded disc will automatically out when files coping complete, then take out the disc.

- 4) About 1 minute later, the trace will automatically close when upgrading complete.

C. Read out the software versions to confirm upgrading

- 1) Power up the set and press **<system menu>** button on the remote control.

- 2) Press **<1><3><7><9>** button.

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)

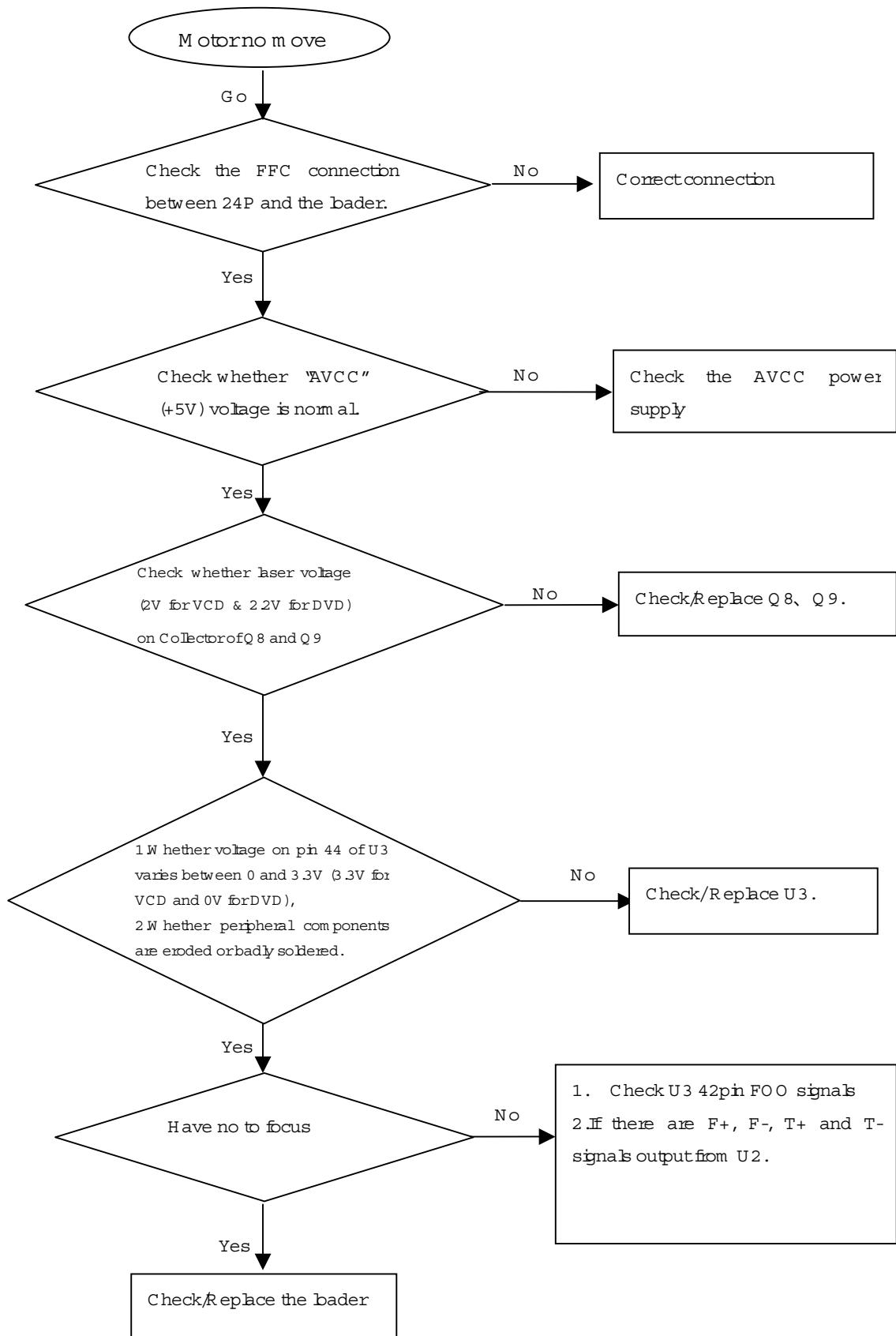
RISC XX.XX.XX.XX

DSP XX.XX.XX.XX

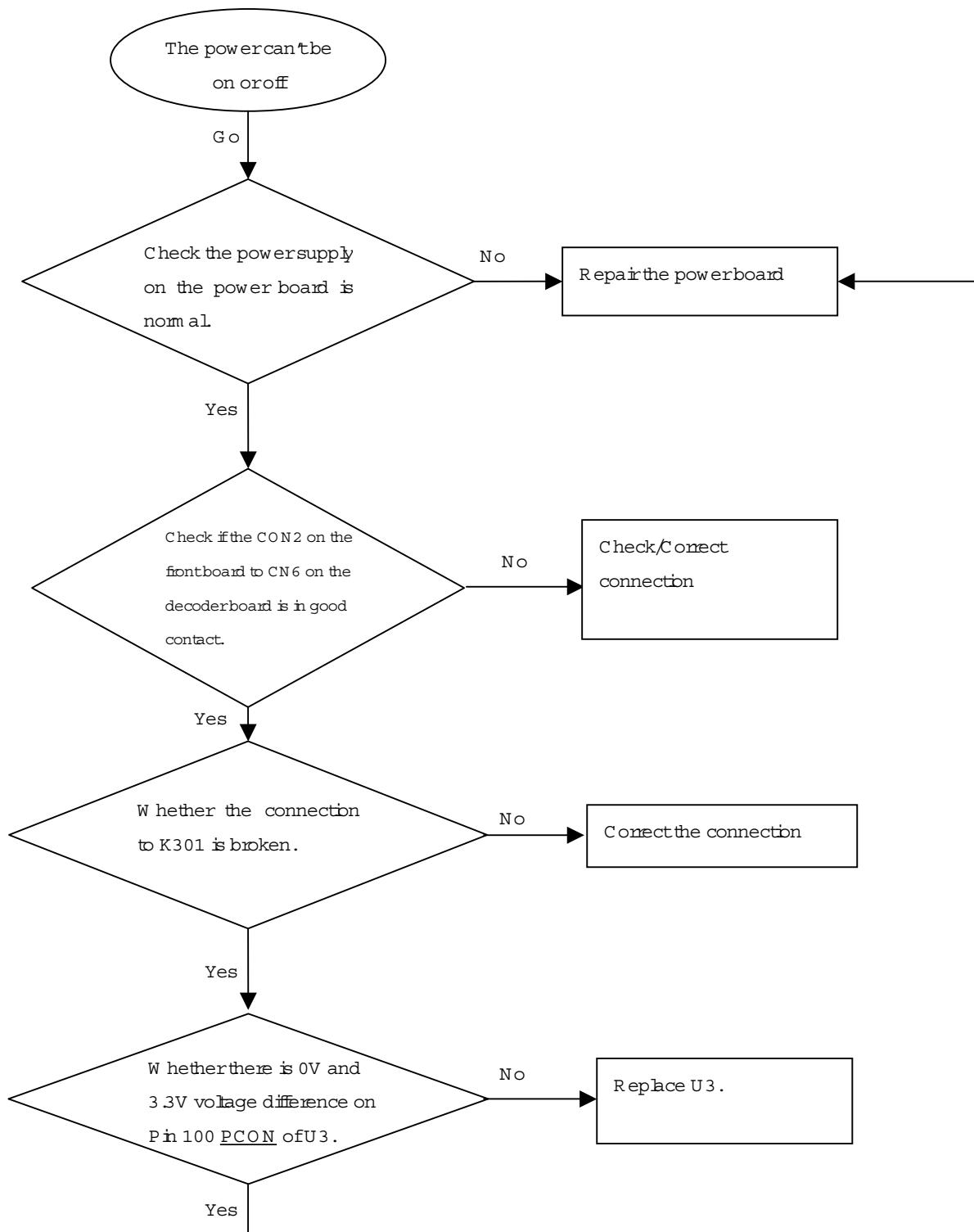
Region Code X

Caution: The set must not be power off during upgrading, in that case the decoder board will be damaged entirely.

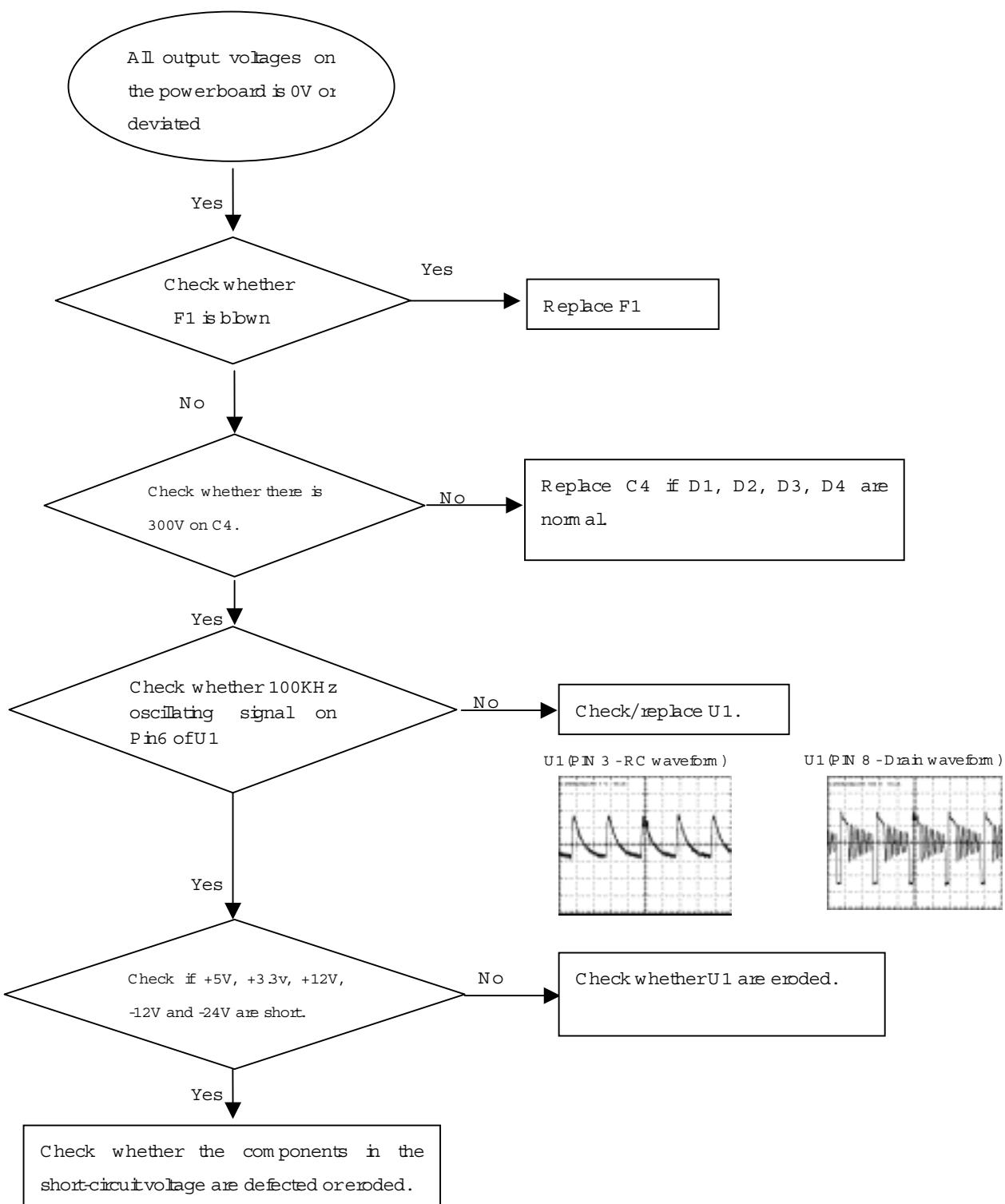
Spindle motor does not move



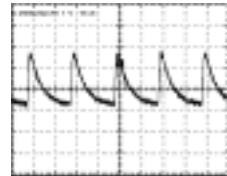
The power can not be on or off



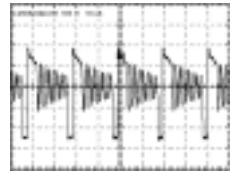
All output voltages on the powerboard is 0V or deviated.



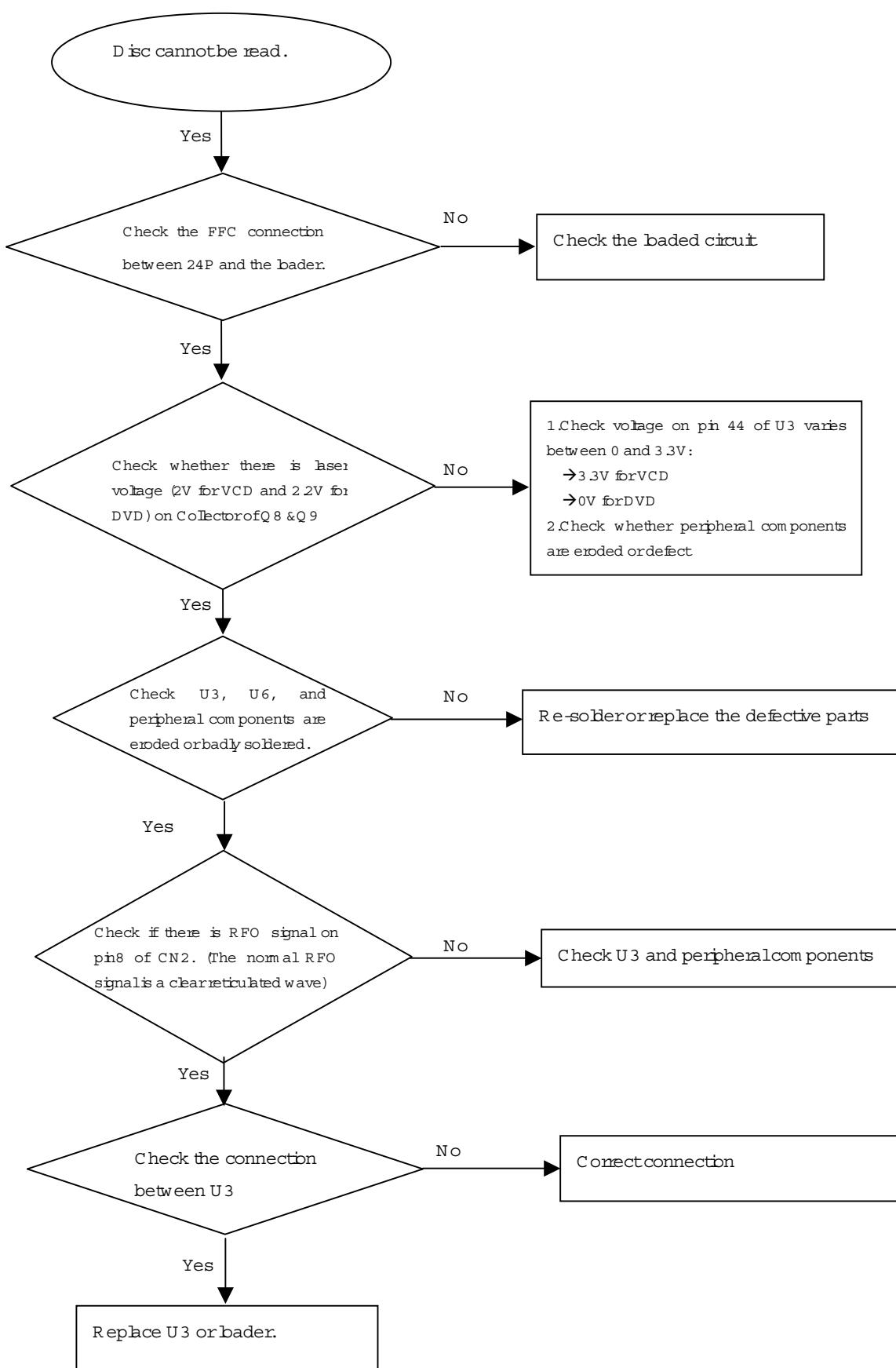
U1 (PIN 3 - RC waveform)



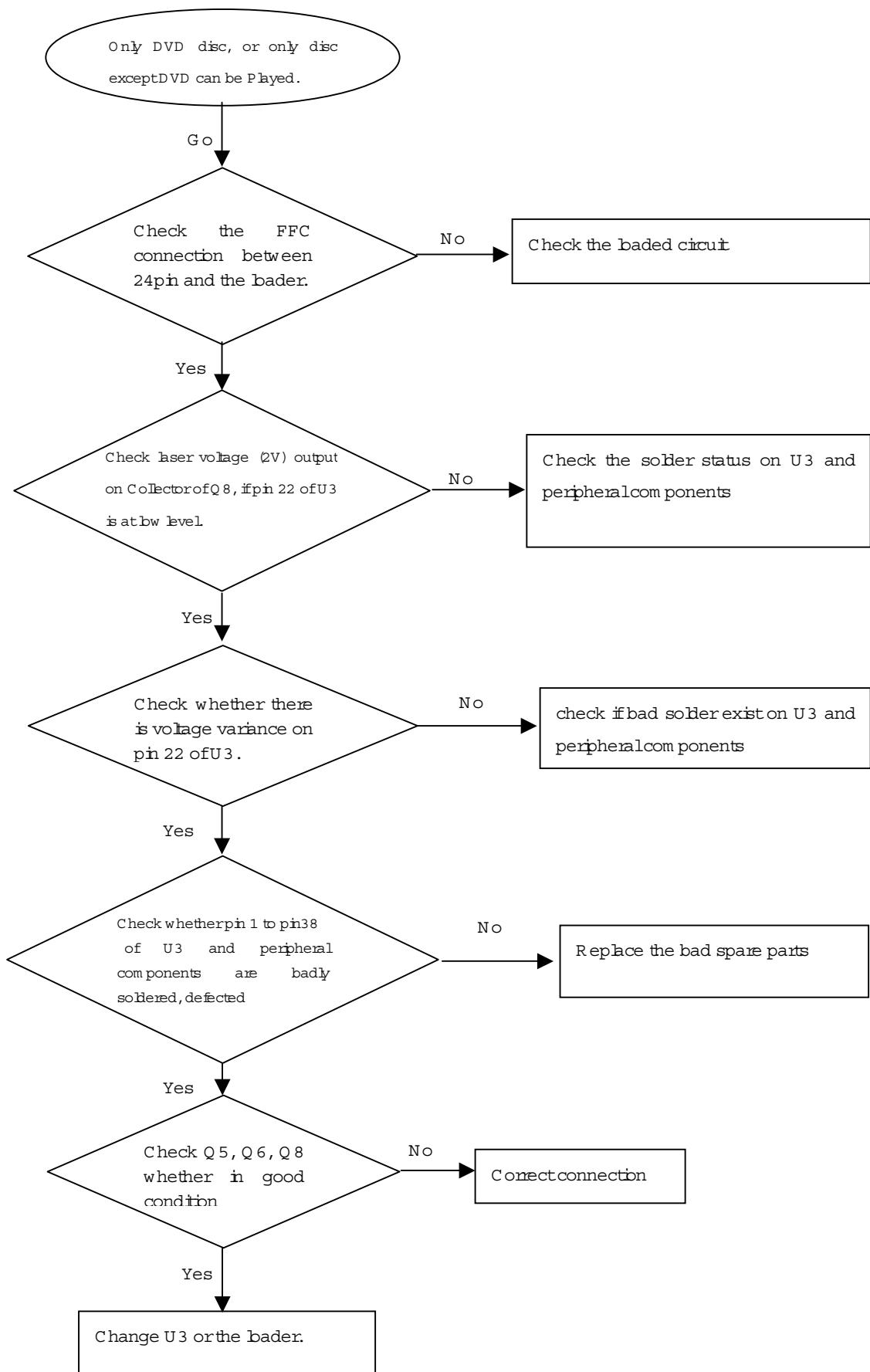
U1 (PIN 8 - Drain waveform)



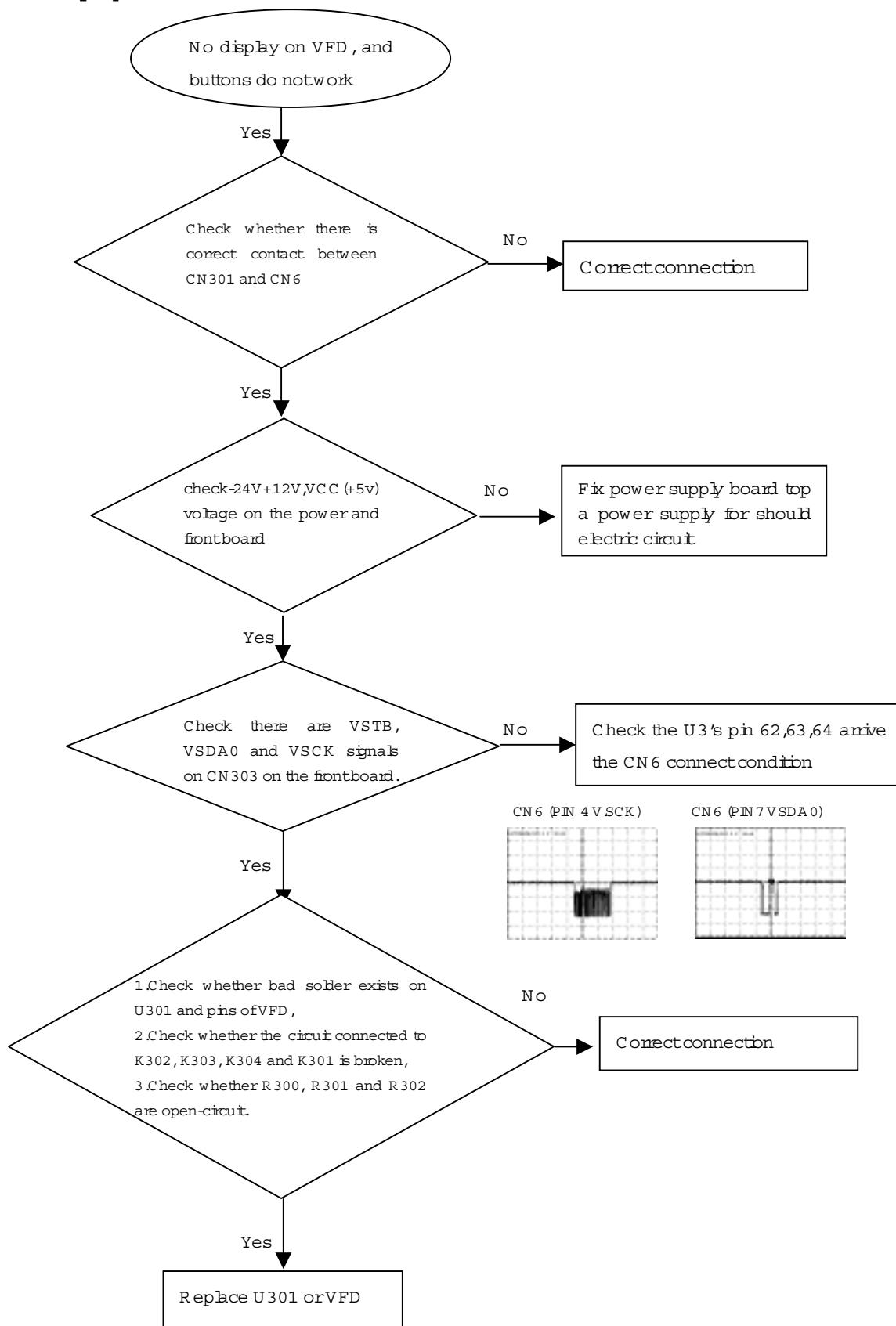
Disc cannot be read.



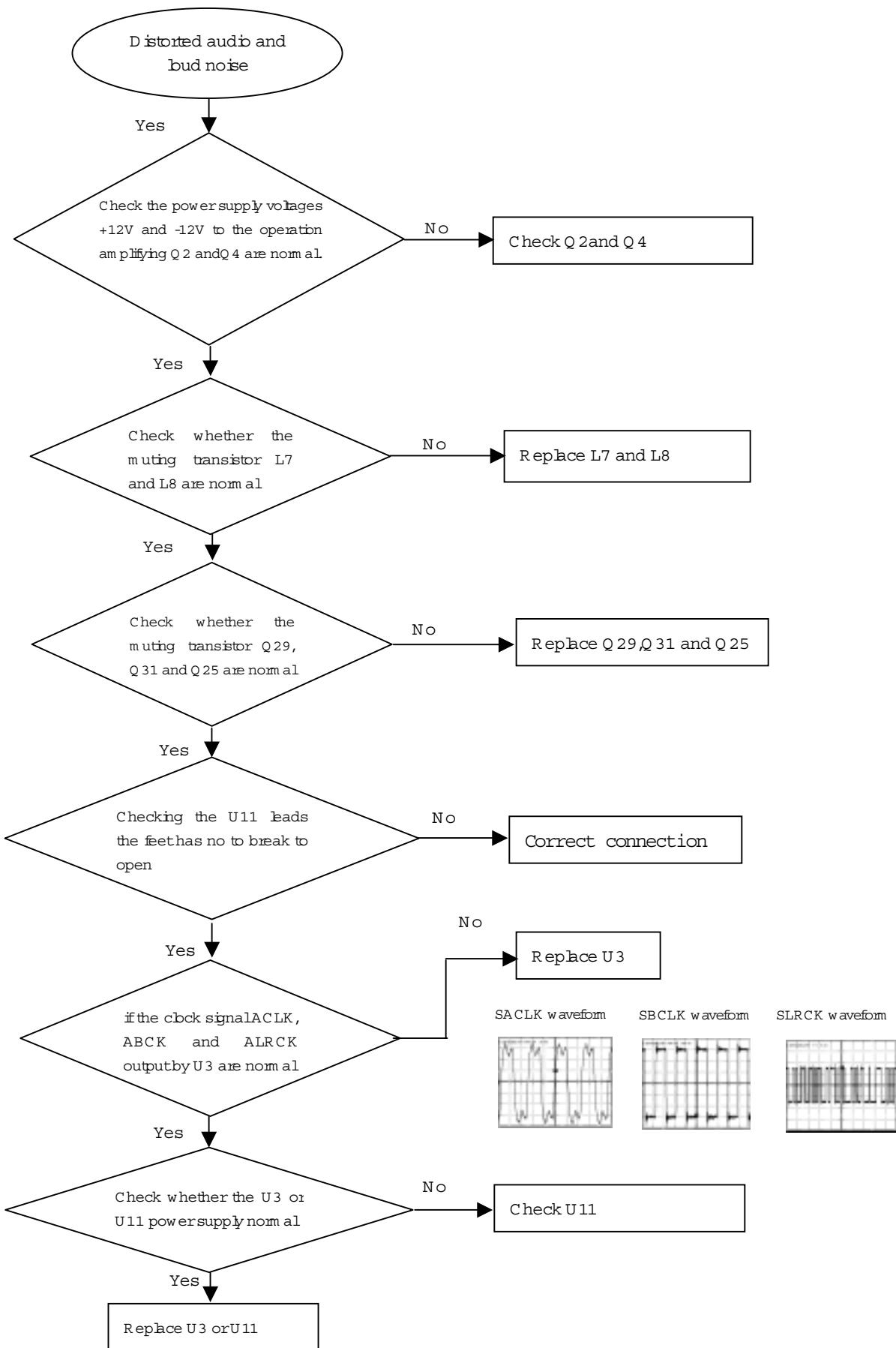
Only DVD disc or only disc except DVD can be played



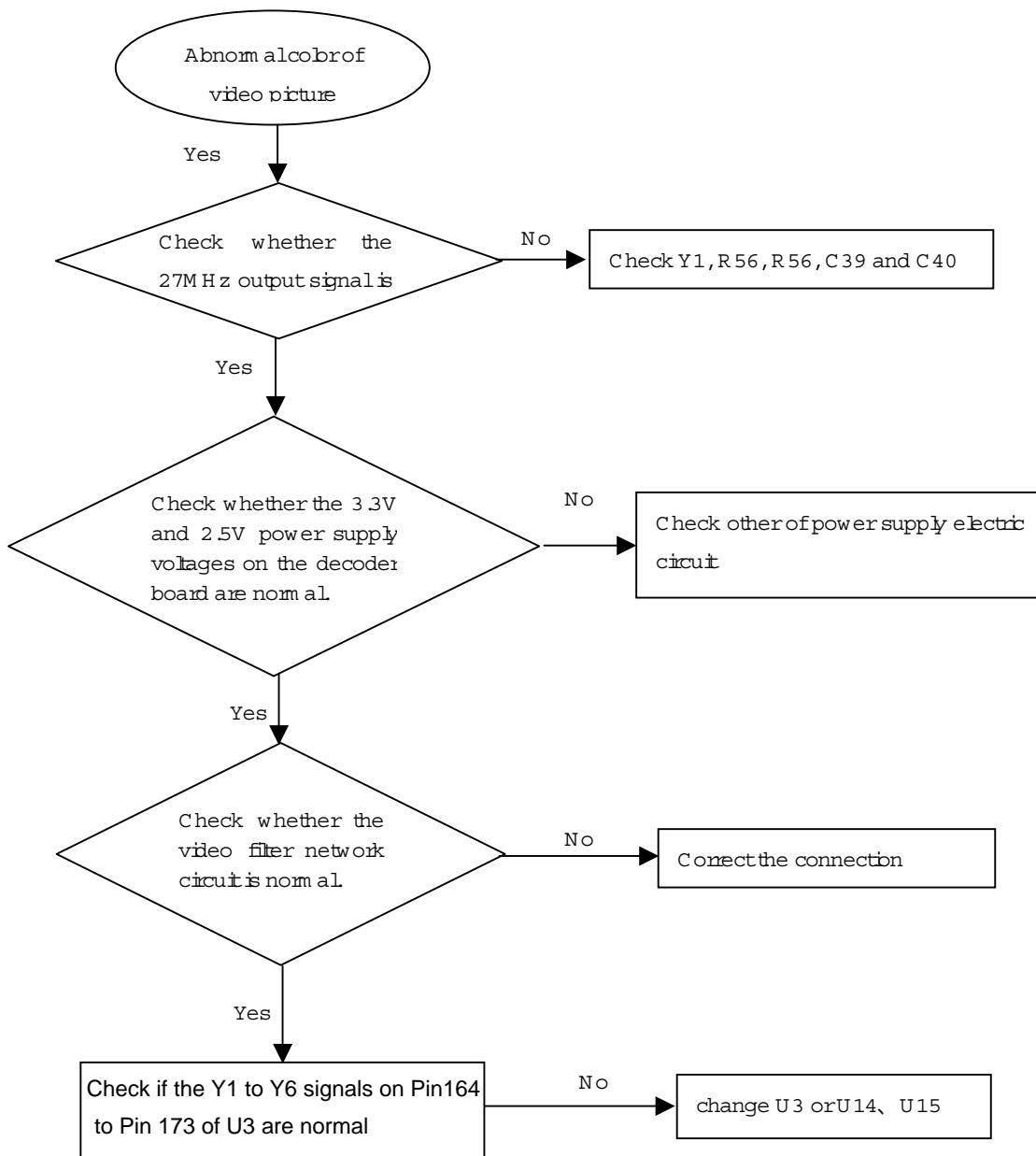
No display on VFD , and buttons do not work



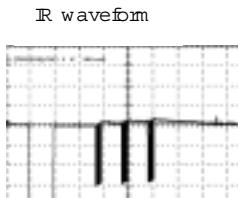
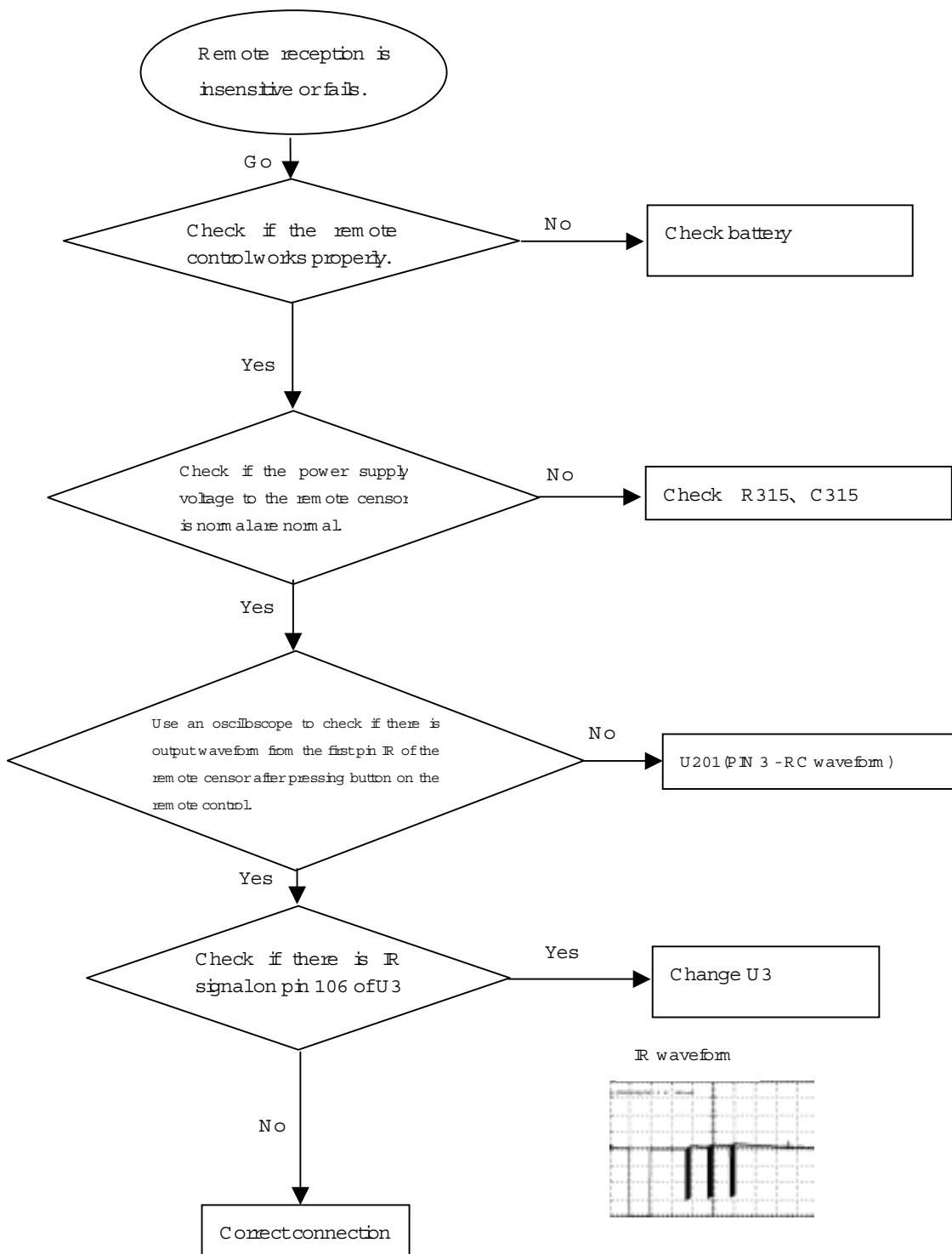
Distorted audio and loud noise



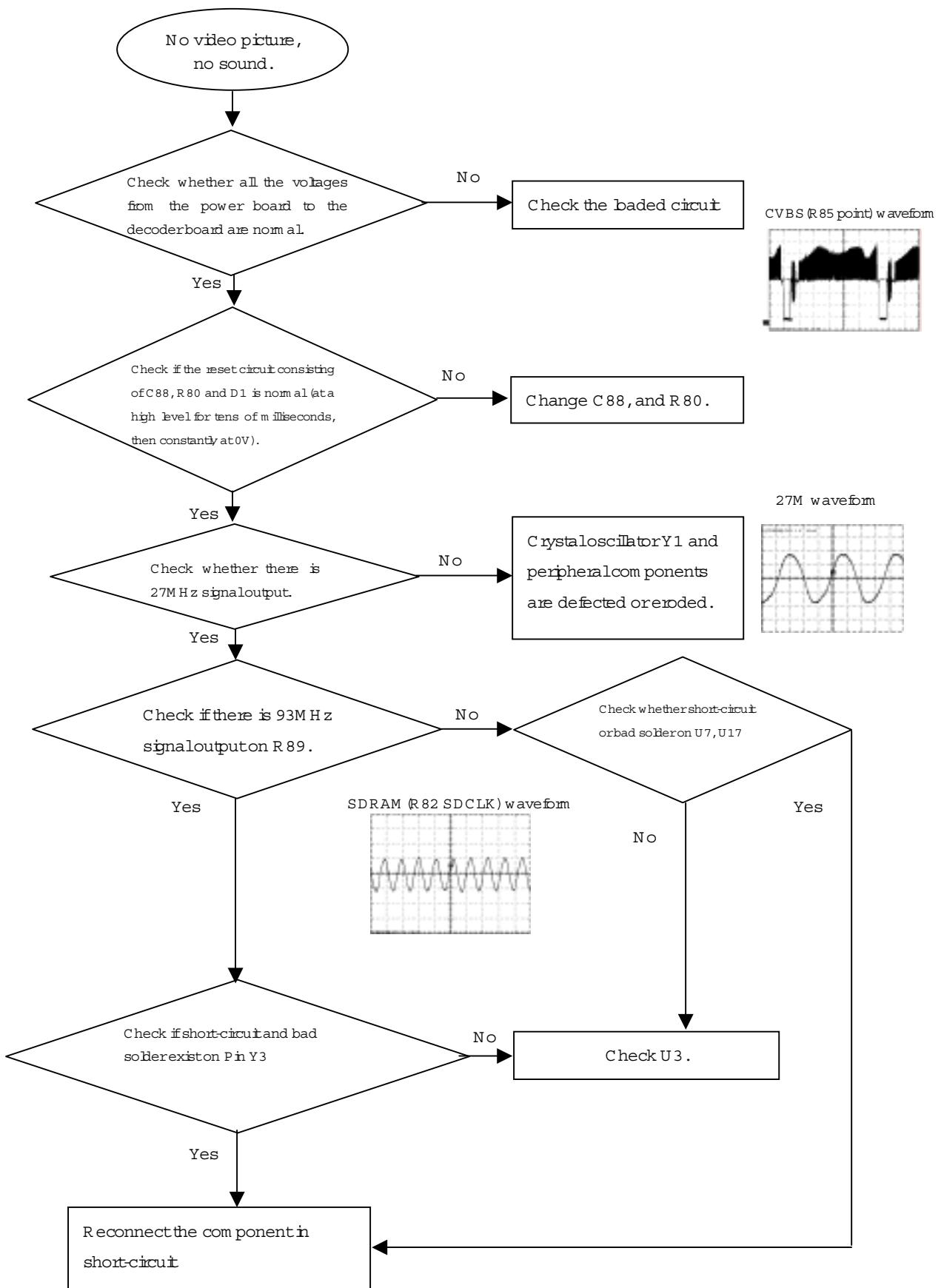
Abnorm alcolor of video picture

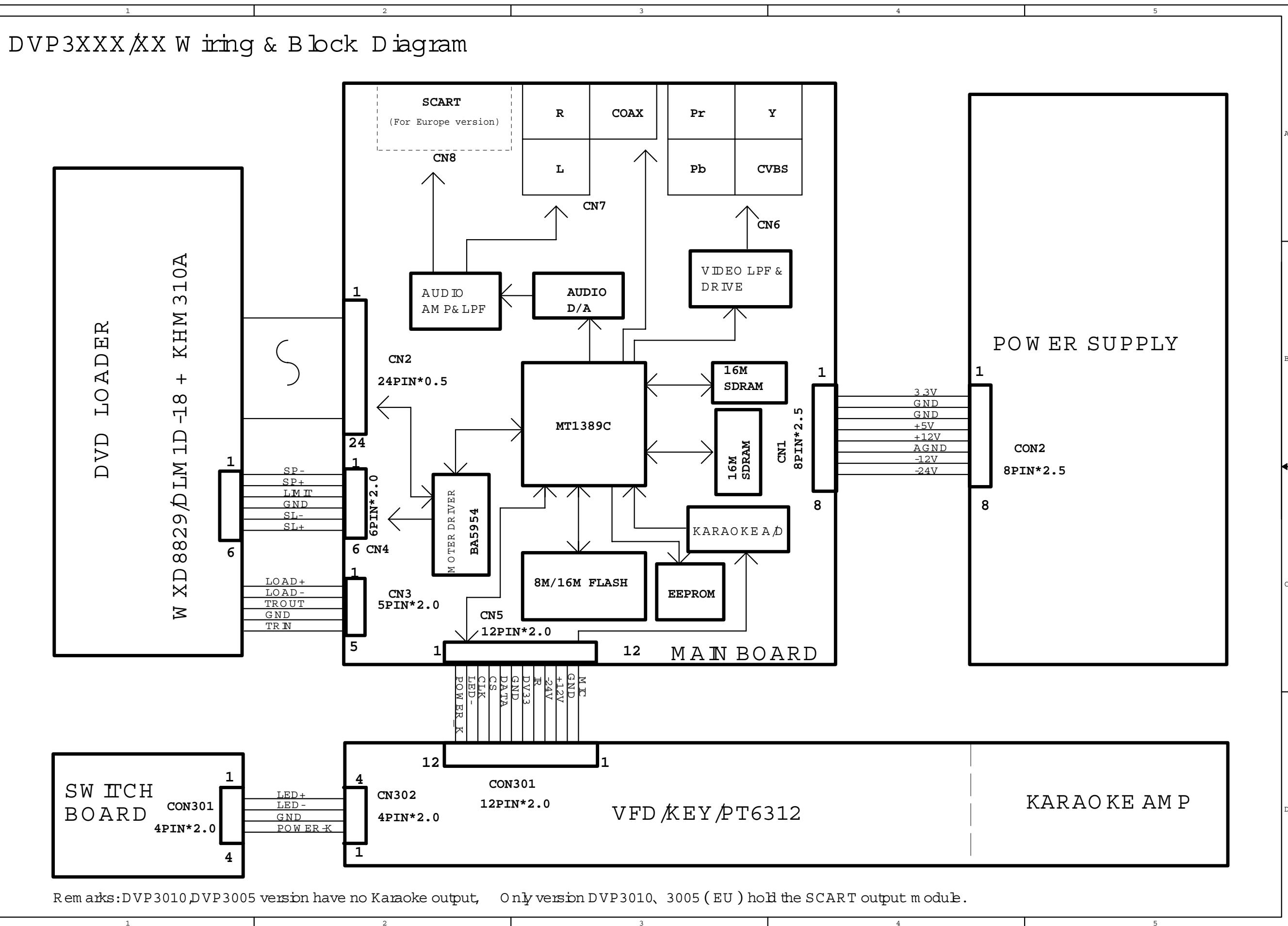


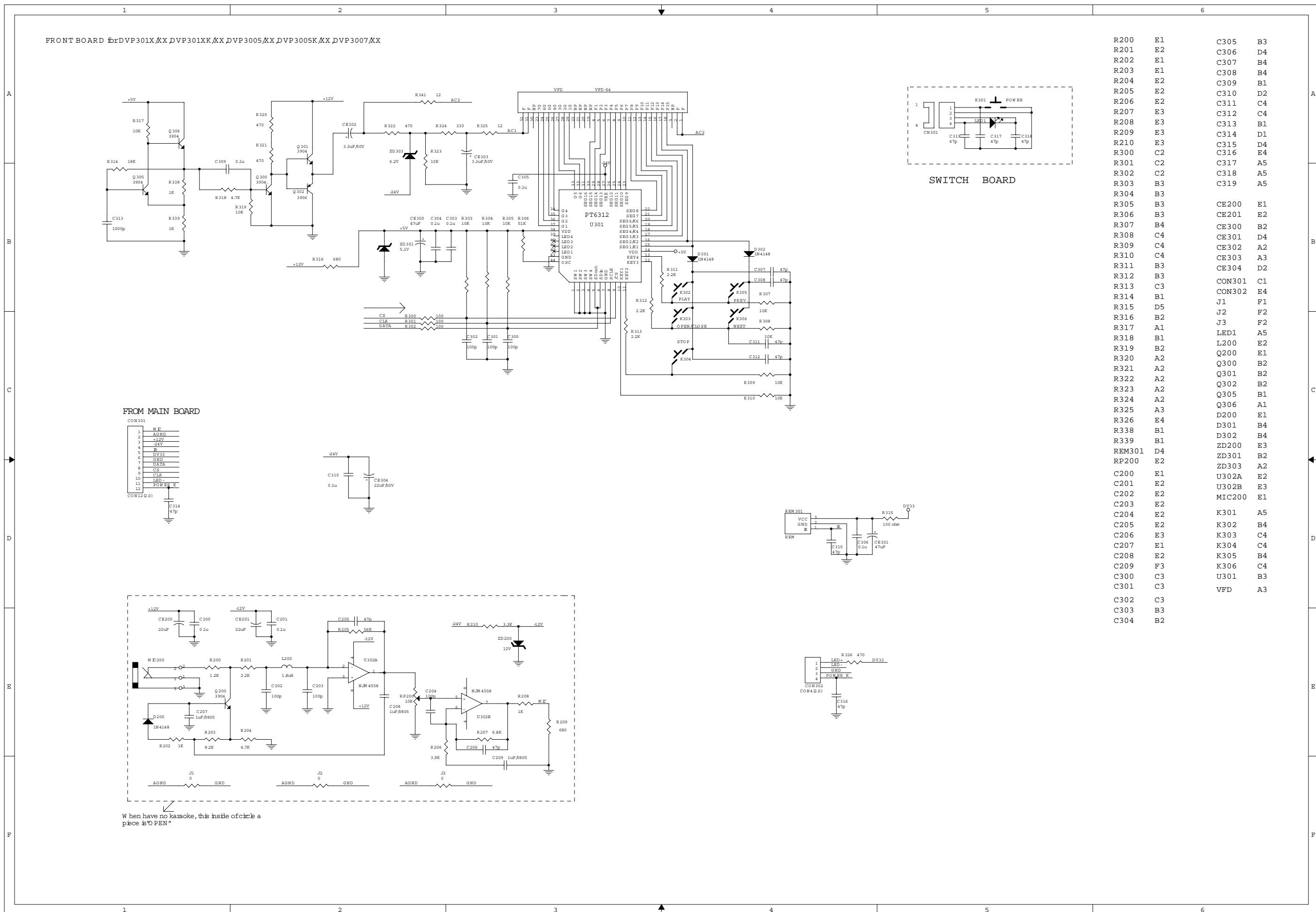
Remote reception is insensitive or fails.



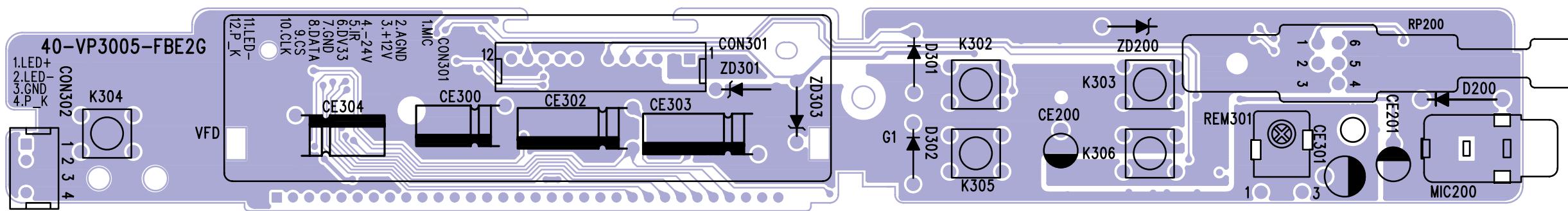
No video picture, no sound.



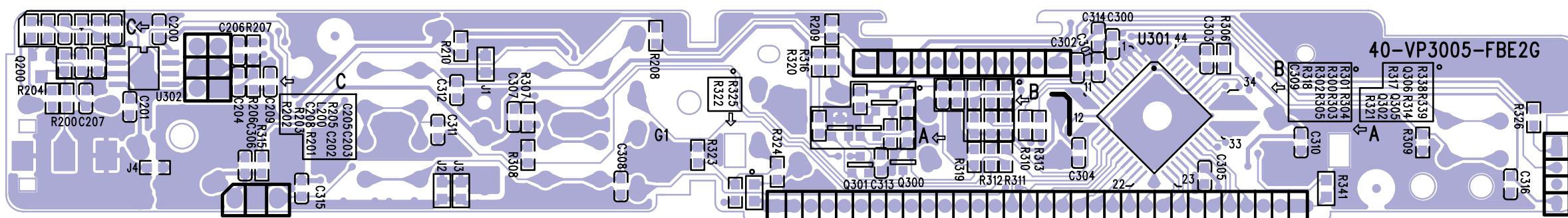




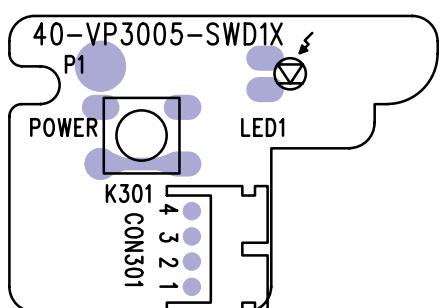
FrontBoard Top Side



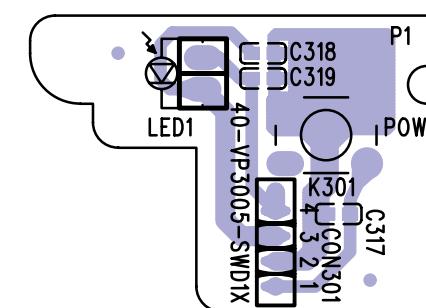
FrontBoard Bottom Side

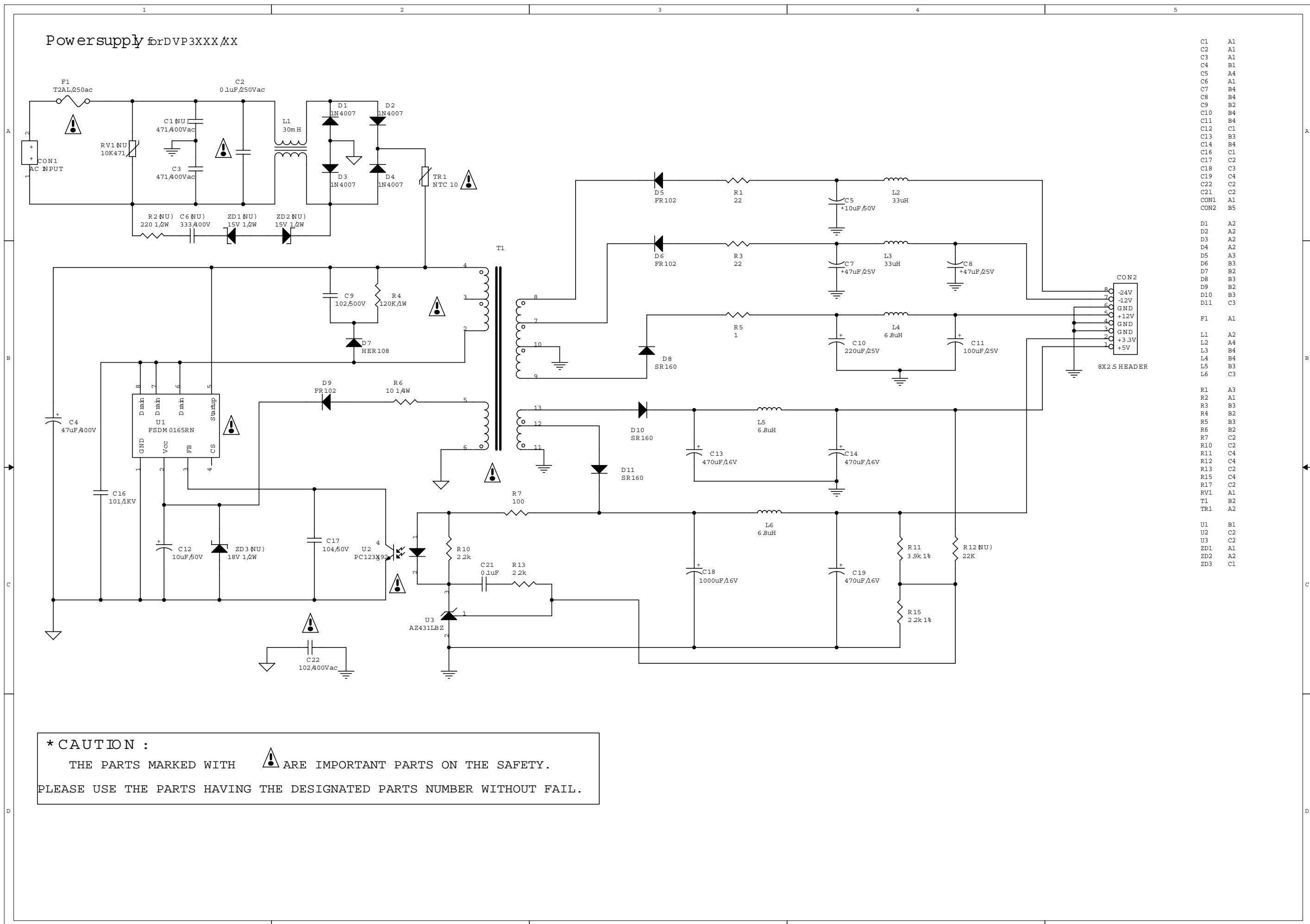


Switch Board Top Side

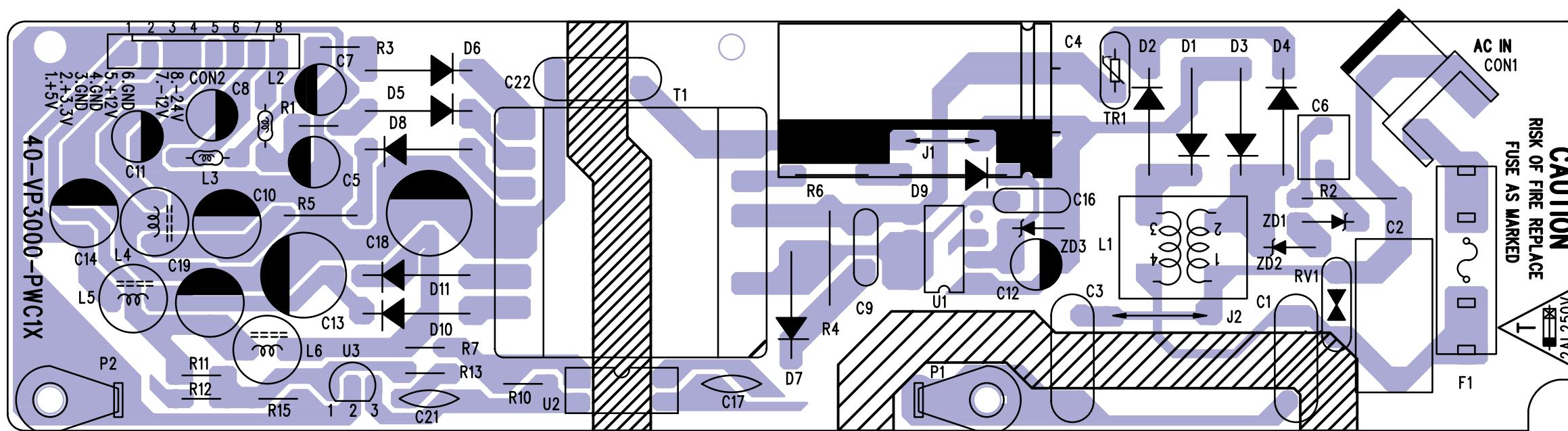


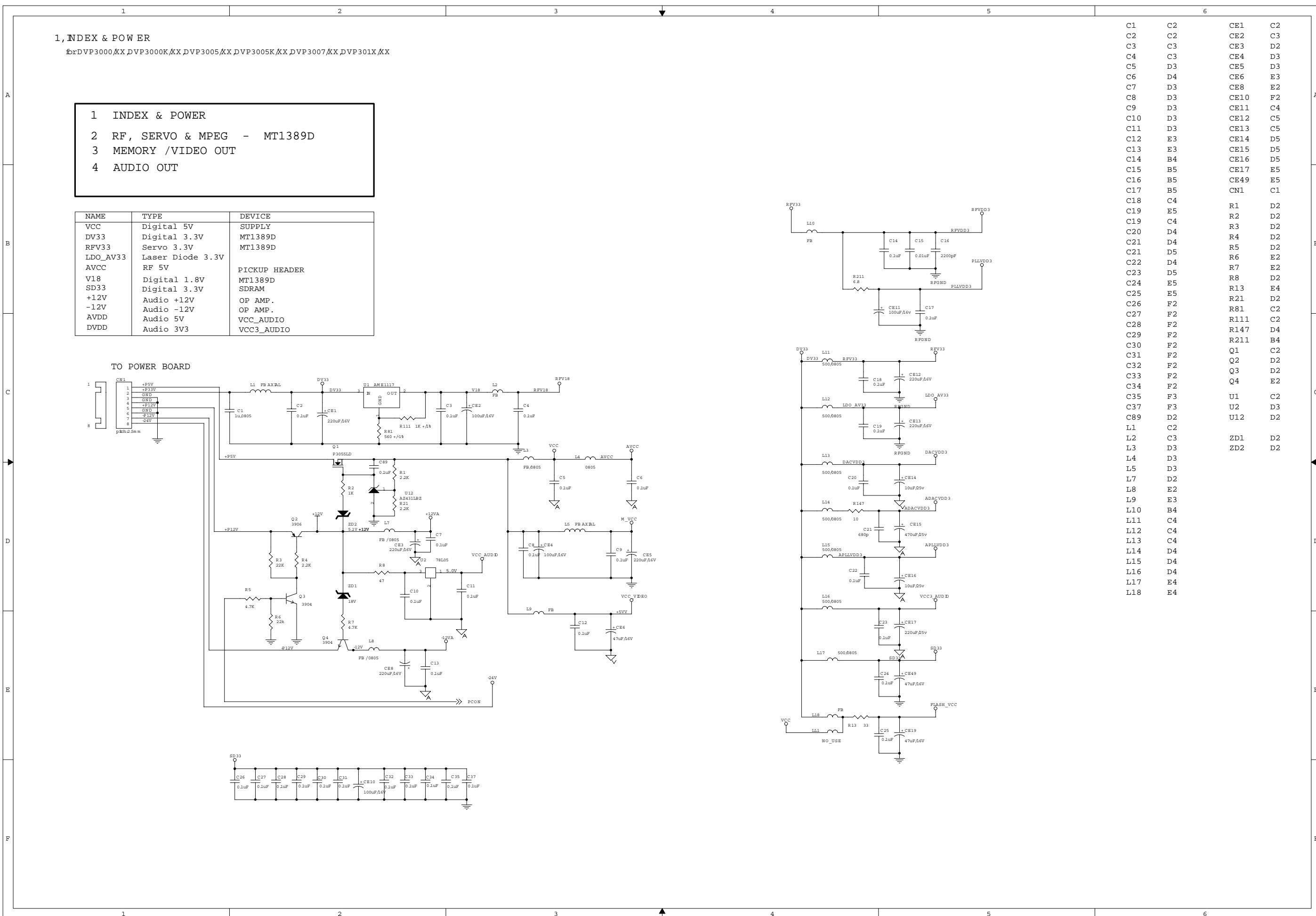
Switch Board Bottom Side

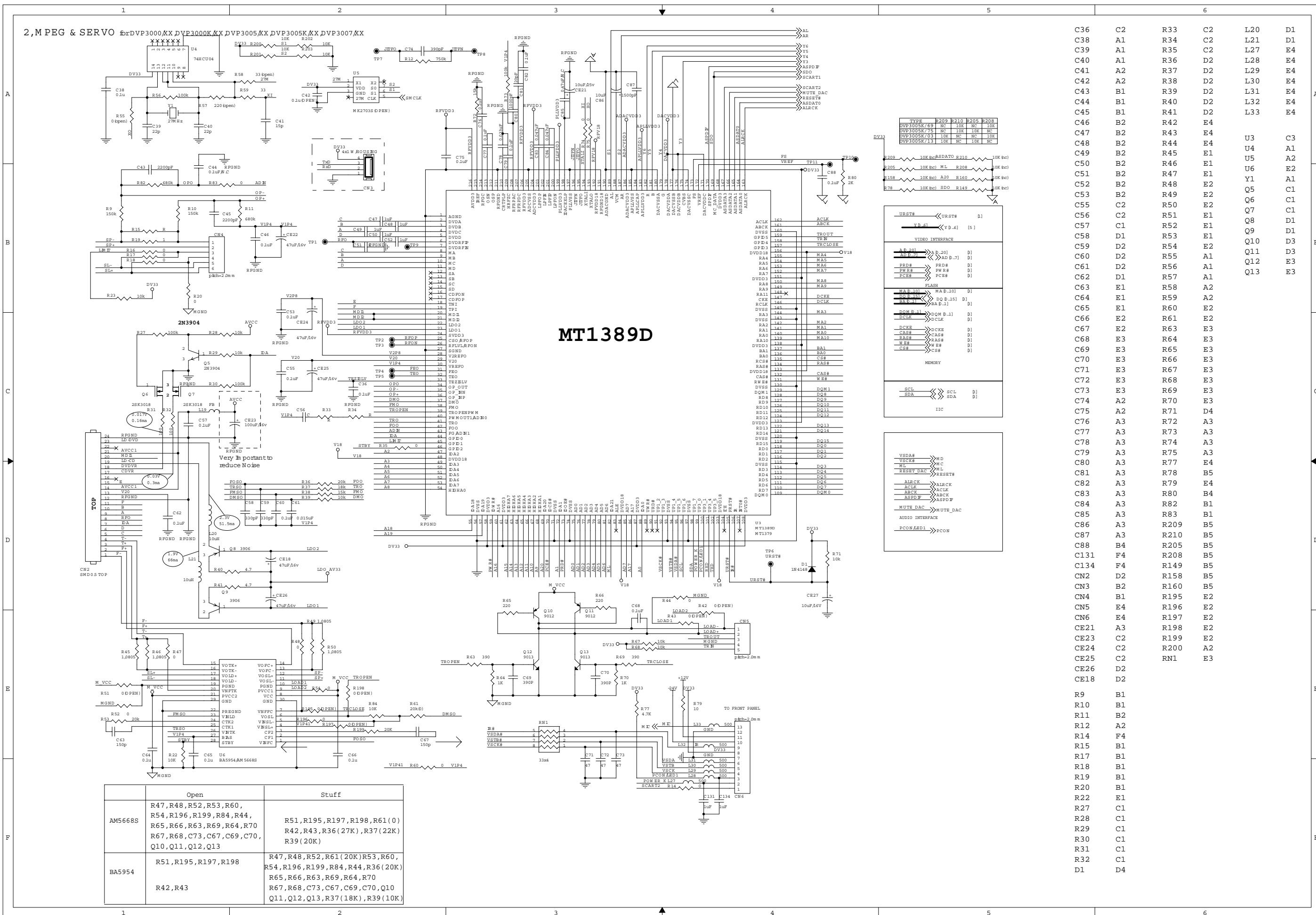


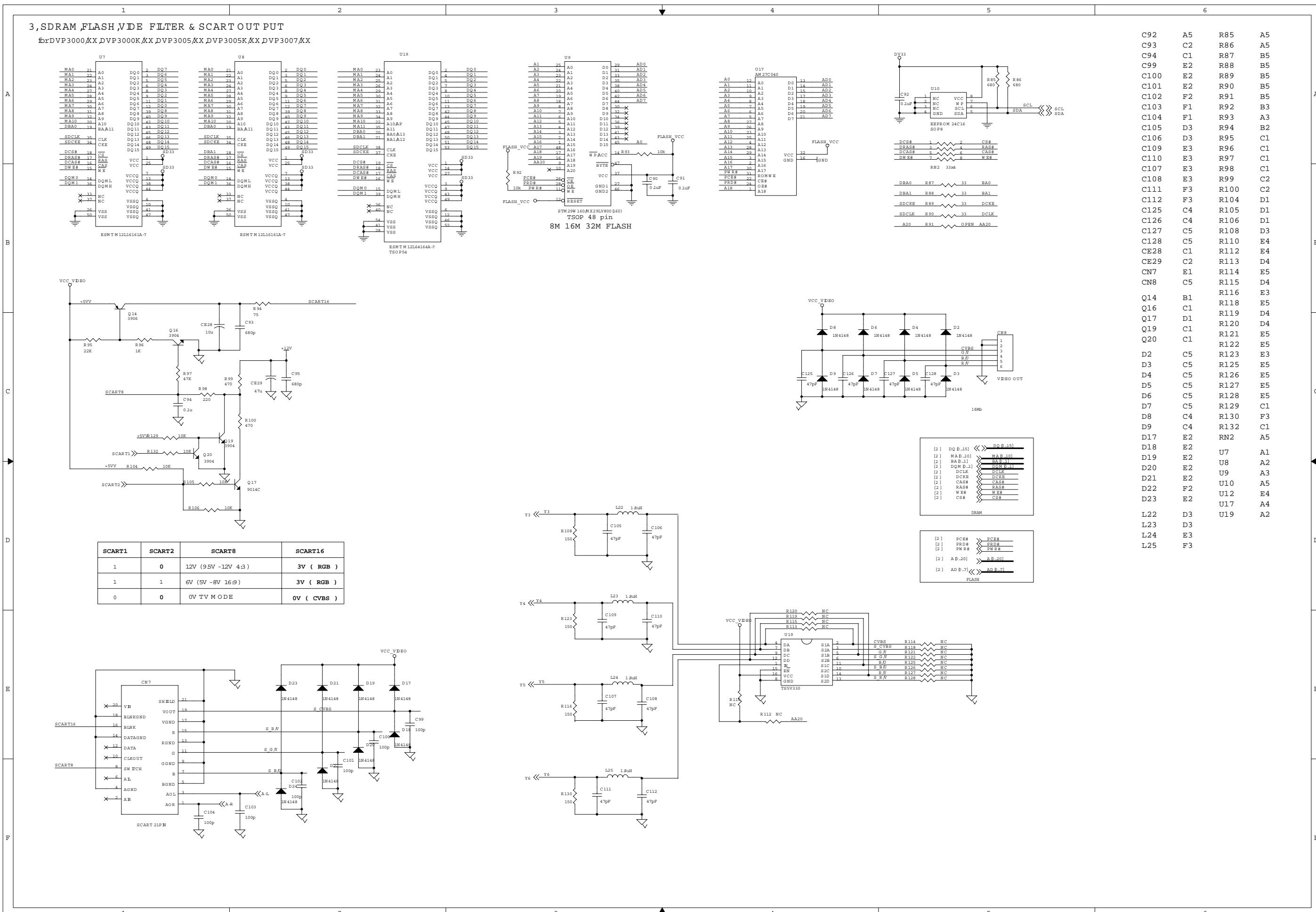


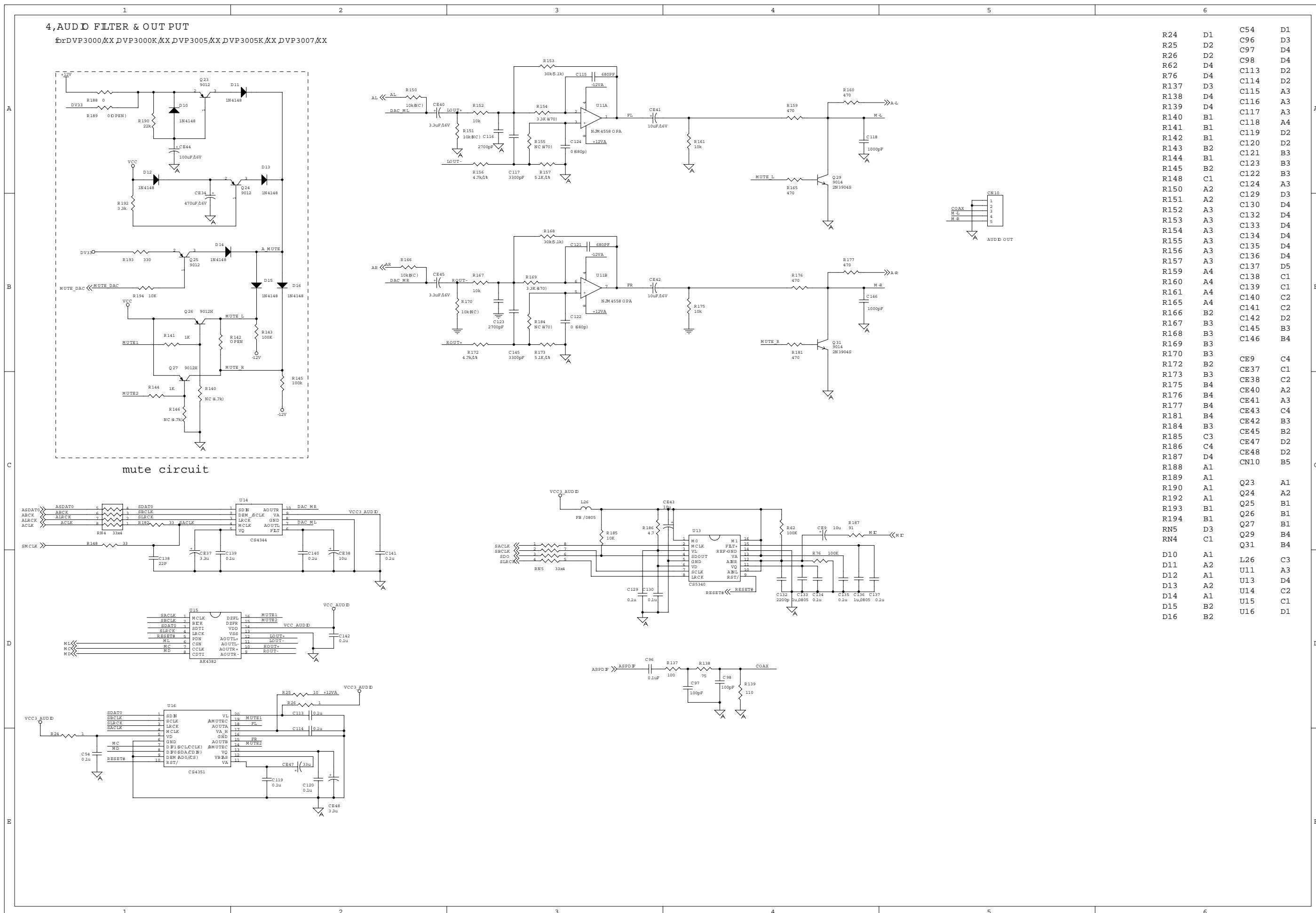
PowerBoard Top Side

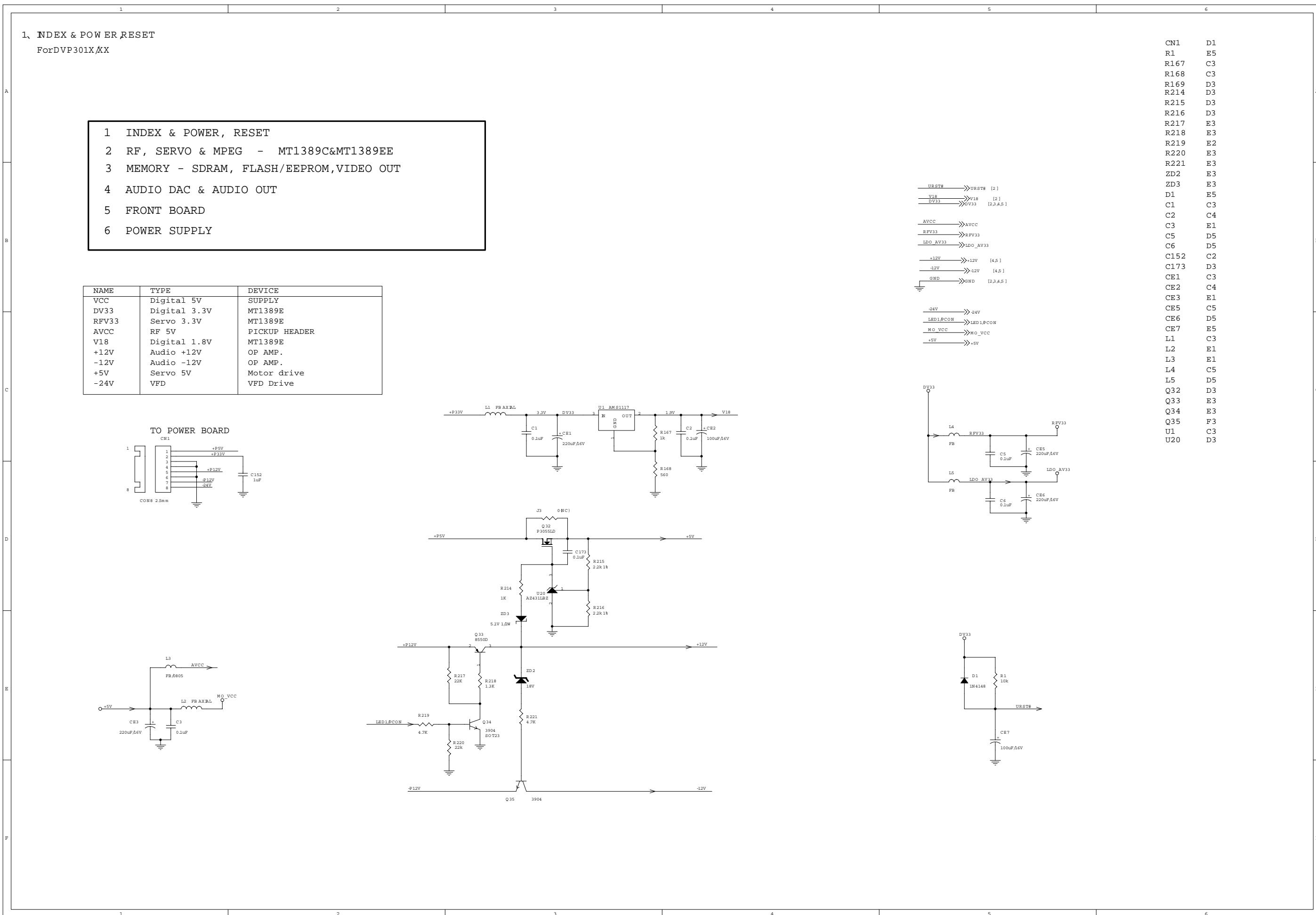


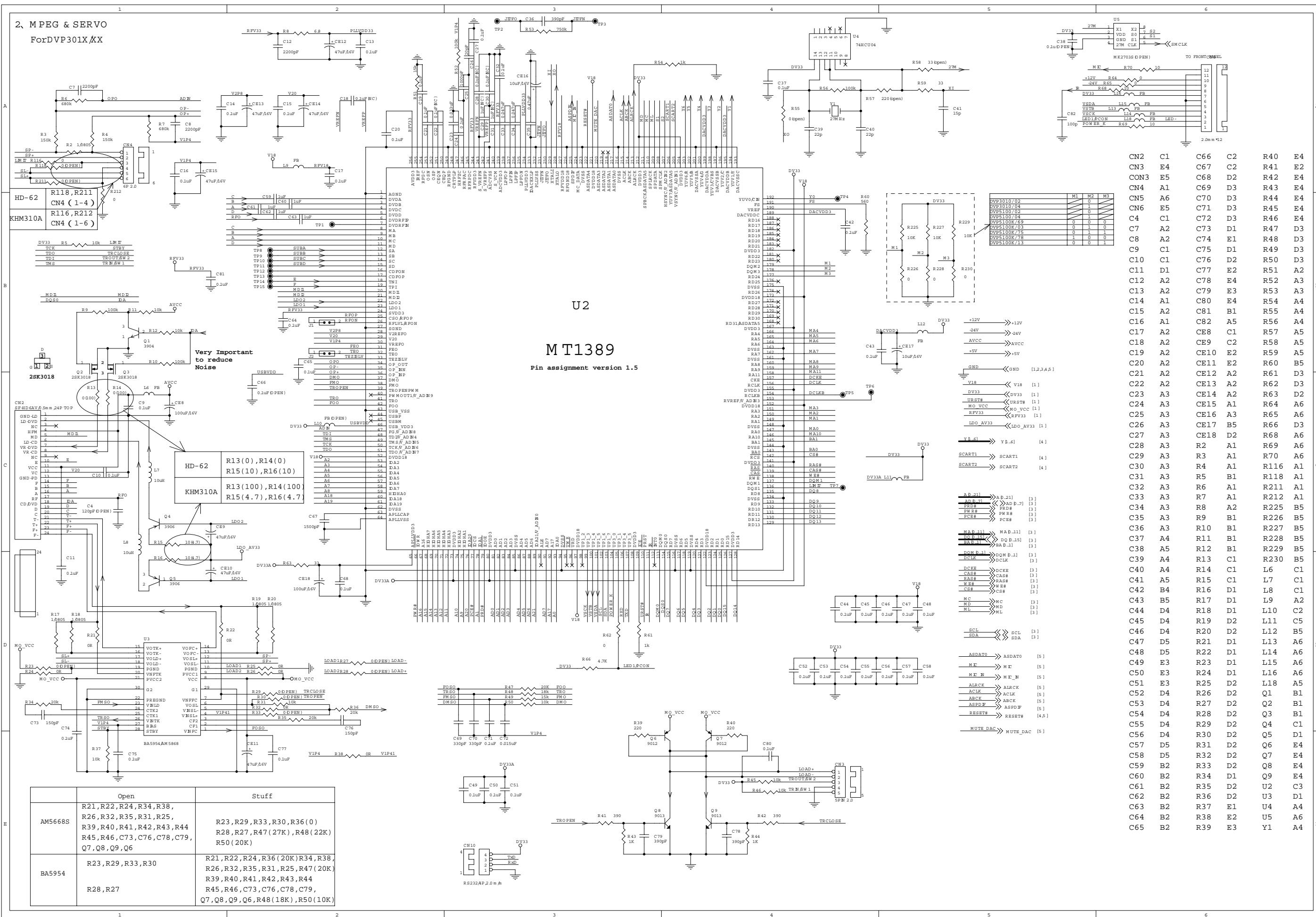


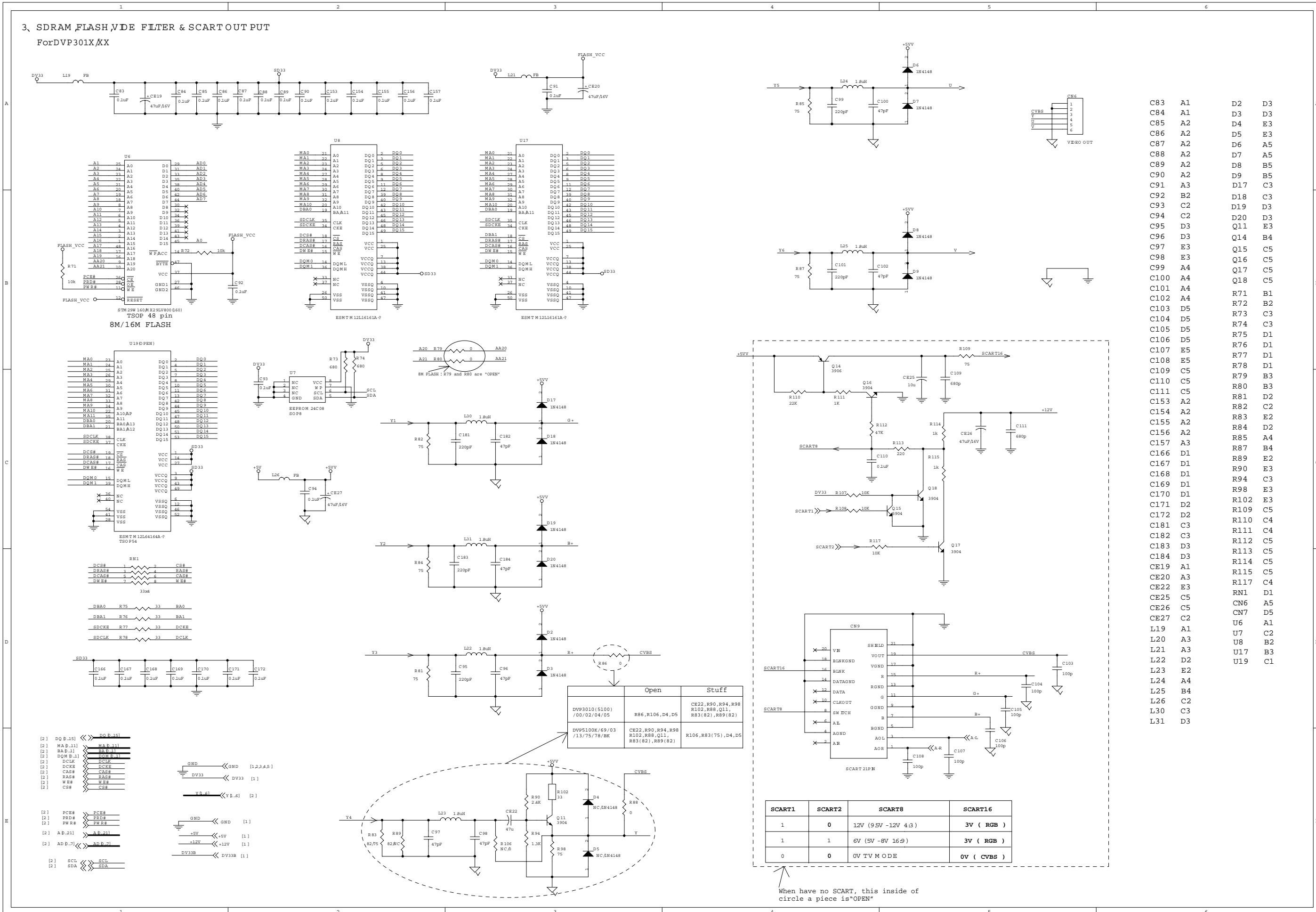


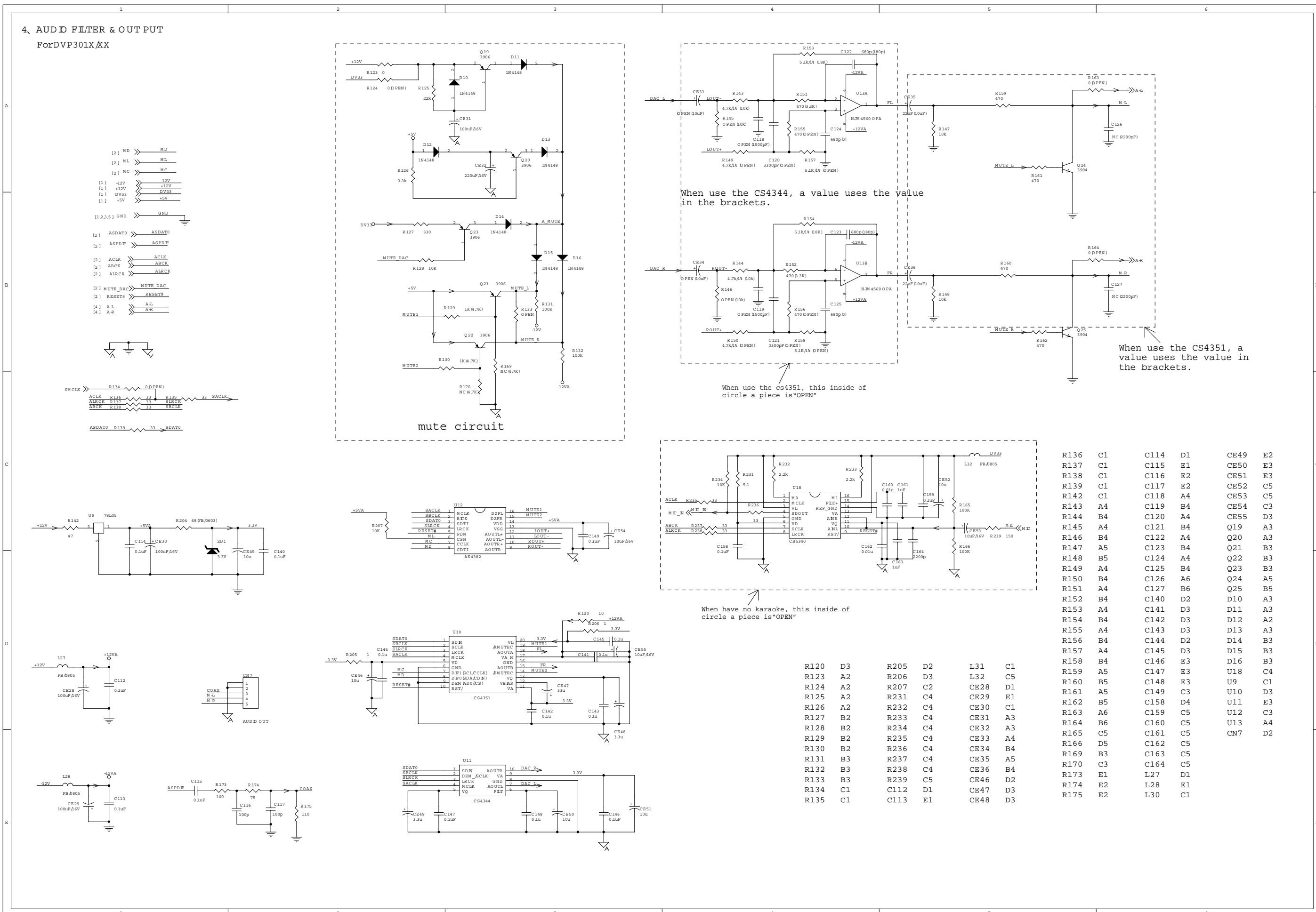




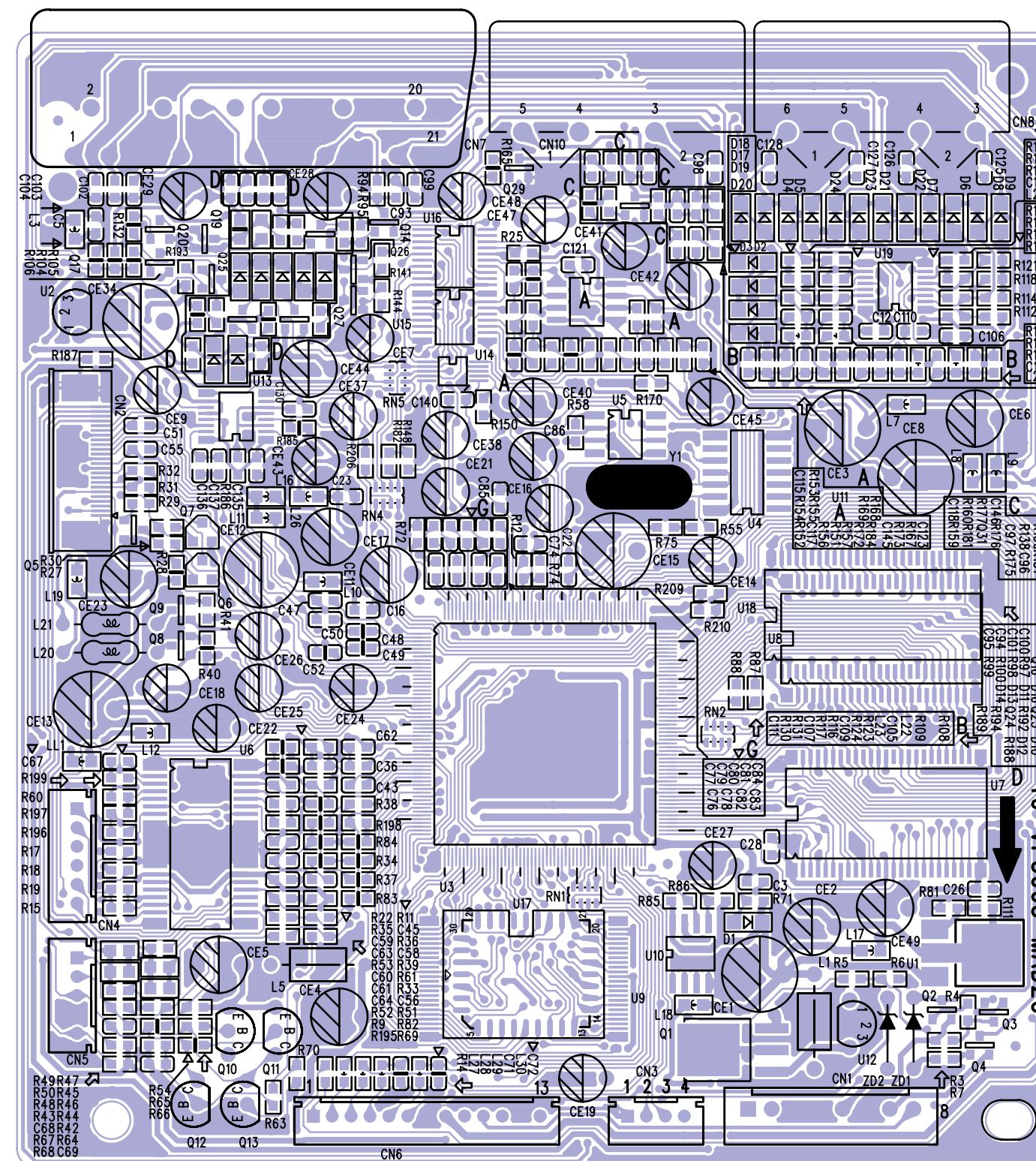




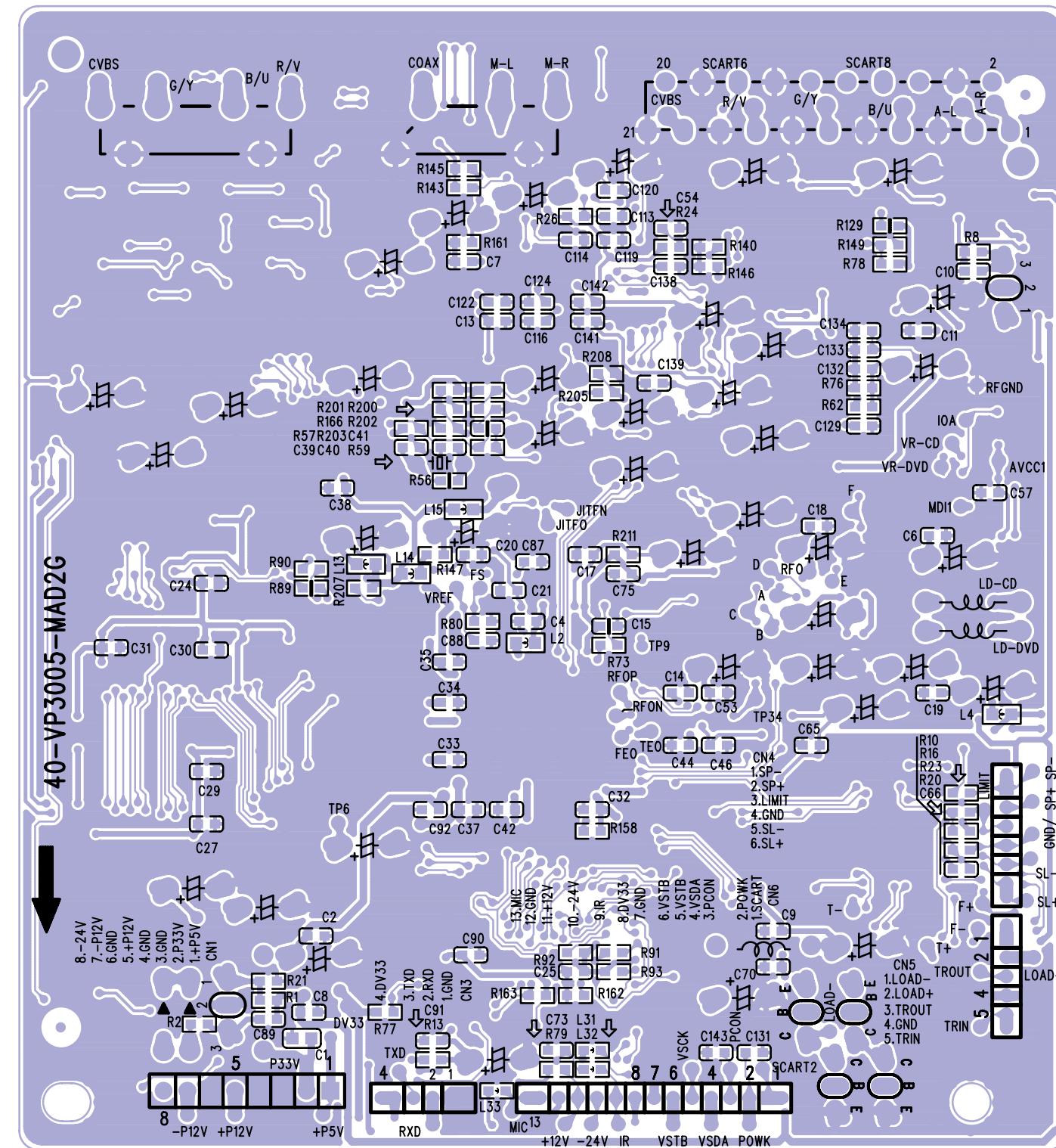




M peg Board Top Side



M peg Board Bottom Side



Mechanical Exploded view

