

Service
Service
Service



Service Manual

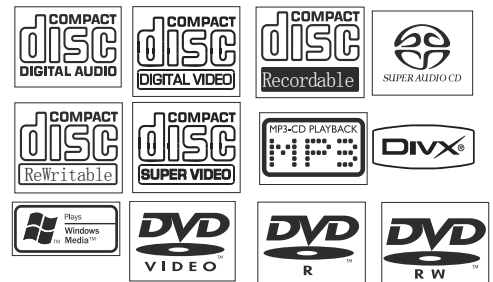


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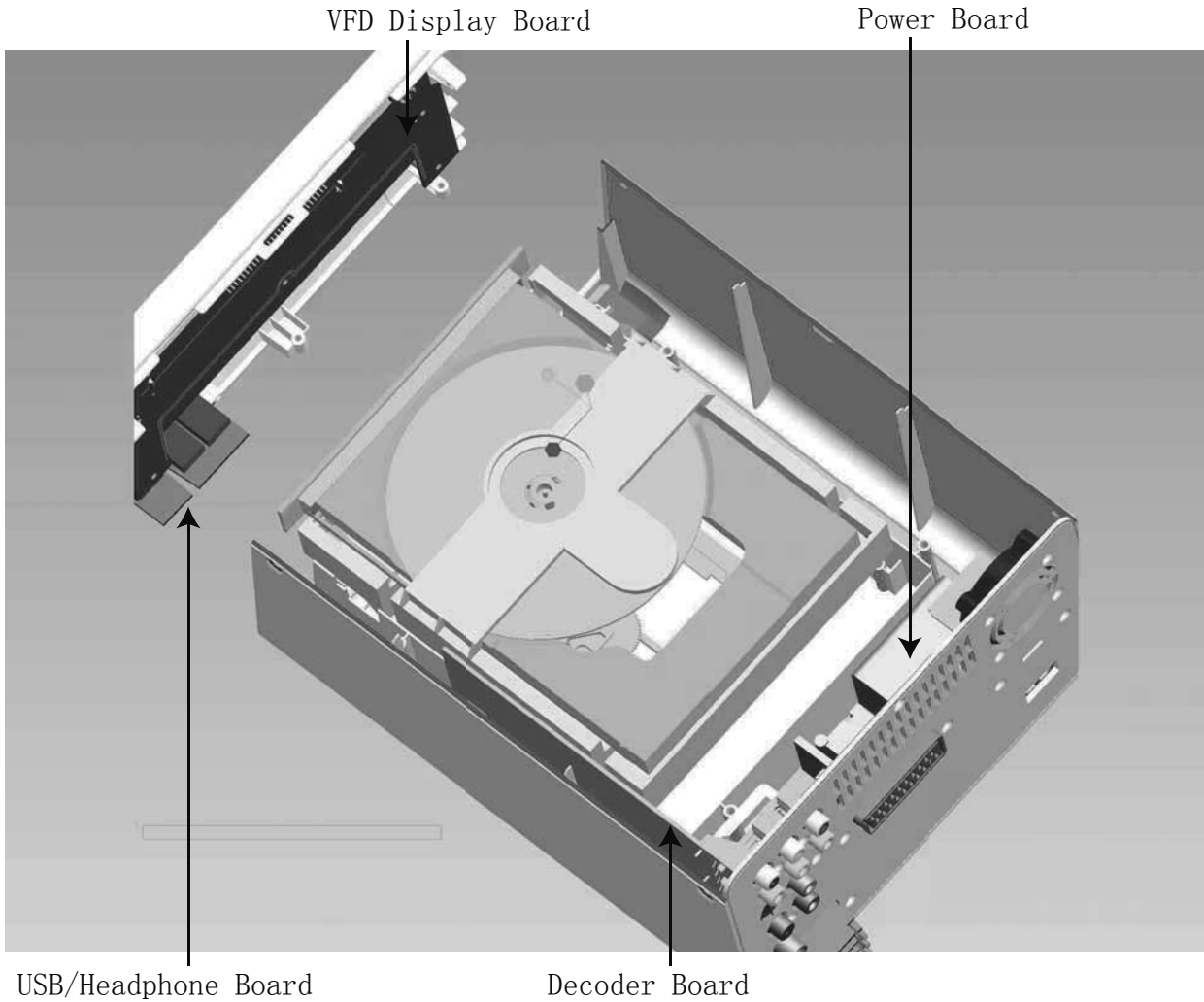
© 3141 785 34011

Version 1.1



PHILIPS

Location of PC Boards



VERSION VARIATION S :

Type /Versions:		MCD183												
		Service policy		/05	/12	/37	/55	/77	/61	/79	/93	/94	/96	/98
Board in used:														
USB/HEADPHONE BOARD			M/C		M/C	M/C		M/C	M/C				M/C	
LCD DISPLAY BOARD			C		C	M/C		M/C	C				M/C	
POWER BOARD			M		M	M		M	M				M	
DECODER BOARD			M		M	M		M	M				M	
Type /Versions:		MCD183												
Features		Feature difference		/05	/12	/37	/55	/77	/61	/79	/93	/94	/96	/98
RDS			√					√						
VOLTAGE SELECTOR														
ECO STANDBY - DARK			√											
TDS														
* TIPS : C -- Component Level Repair. M -- Module Level Repair √ -- Used														

Electronic Specification

AMPLIFIER

Rated Output Power 50W+2X25W RMS
 Signal-to-noise ratio ≥65dBA
 Frequency response 100Hz--15kHz ±3dB
 Aux Input 0.5V/ RMS 47kohm

DISC

Laser Type Simeconductor
 Disc Diameter 12cm/8cm
 Support Disc CD-DA,
 CD-R,CD-RW,MP3,DVD,DVD-RW,DVD+RW
 Audio DAC 1kHz
 Total Harmonic Distortion < 1%
 Frequency Response 20Hz ~ 20KHz
 S/N Ration >65dBA

TUNER

FM Tuning Range 87.5--108 MHz
 Tuning grid 50KHz

Sensitivity

– Mono, 80dB S/N Ratio 5uV
 – Stereo, 80dB S/N Ration 100uV
 Selectivity >22dB
 Image Rejection >25dB
 Total Harmonic Distortion 3%
 Signal to Noise Ration ≥65dBA

SPEAKERS

Speaker Impedance 2x4ohm+8ohm
 Speaker Driver, base 5"
 Speaker Driver, tweeter 3"
 Frequency Response 100Hz +5dB+/-5 15KHz

GENERAL INFORMATION

Total Output power 100W RMS
 AC Power 230V / 50Hz
 Operation Power Consumption 45W
 Standby Power Consumption <6W
 Eco Standby Power Consumption <1W
 Headphone Output 2x15mW 32ohm
 USB Direct Version 2.0

Dimensions

– Main unit (w x h x d) 200x125x270mm
 – Speaker box (w x h x d) 135x255x150mm
 – SUBwoofer(w x h x d) 160x245x245mm

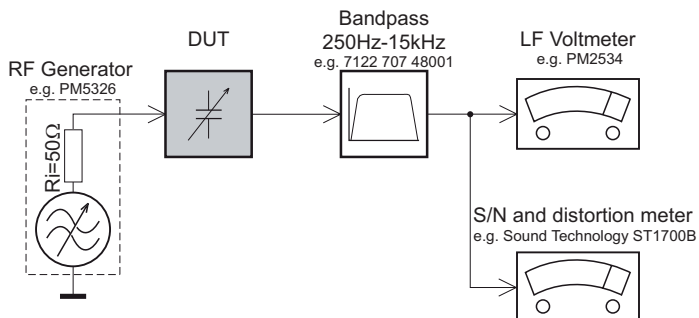
Weight

– With Packing 8.5KG
 – Main Unit 1.3 KG
 – Speaker box 1.25x2KG
 – SUBwoofer..... 2.7KG

Specifications and external appearance are subject to change without notice.

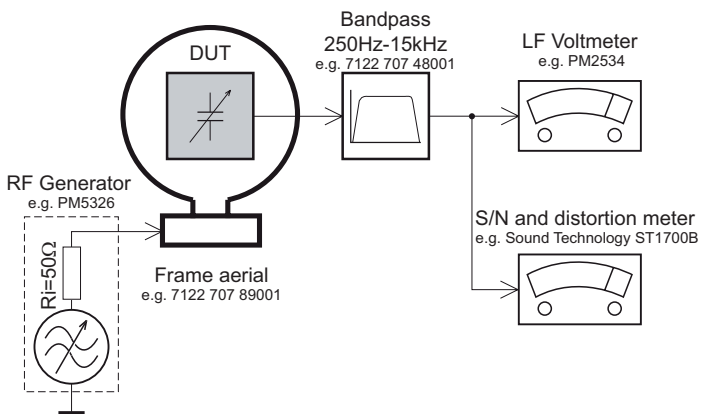
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilotone (19kHz, 38kHz).

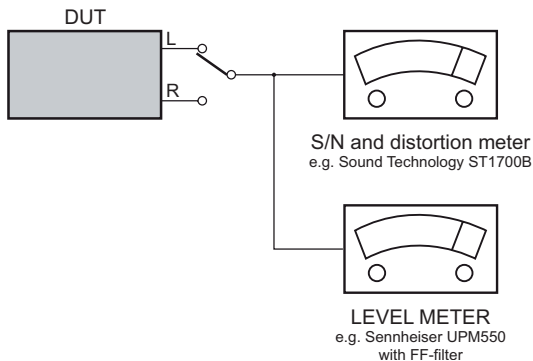
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage. Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

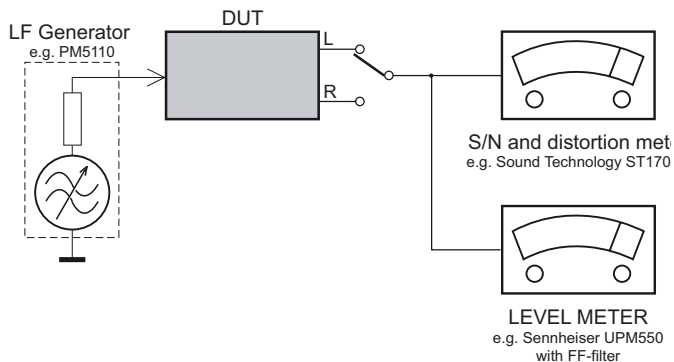
CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)



Recorder

Use Universal Test Cassette Cr02 SBC419 4822 397 30069 or Universal Test Cassette Fe SBC420 4822 397 30071



SERVICE AIDS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.

Keep components and tools also at this potential.

ESD



GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used

Safety components are marked by the symbol .

**CLASS 1
LASER PRODUCT**

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 next rules:



- 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
 - * Lead free

You will find this and more technical information within the "magazine", chapter "workshop news".

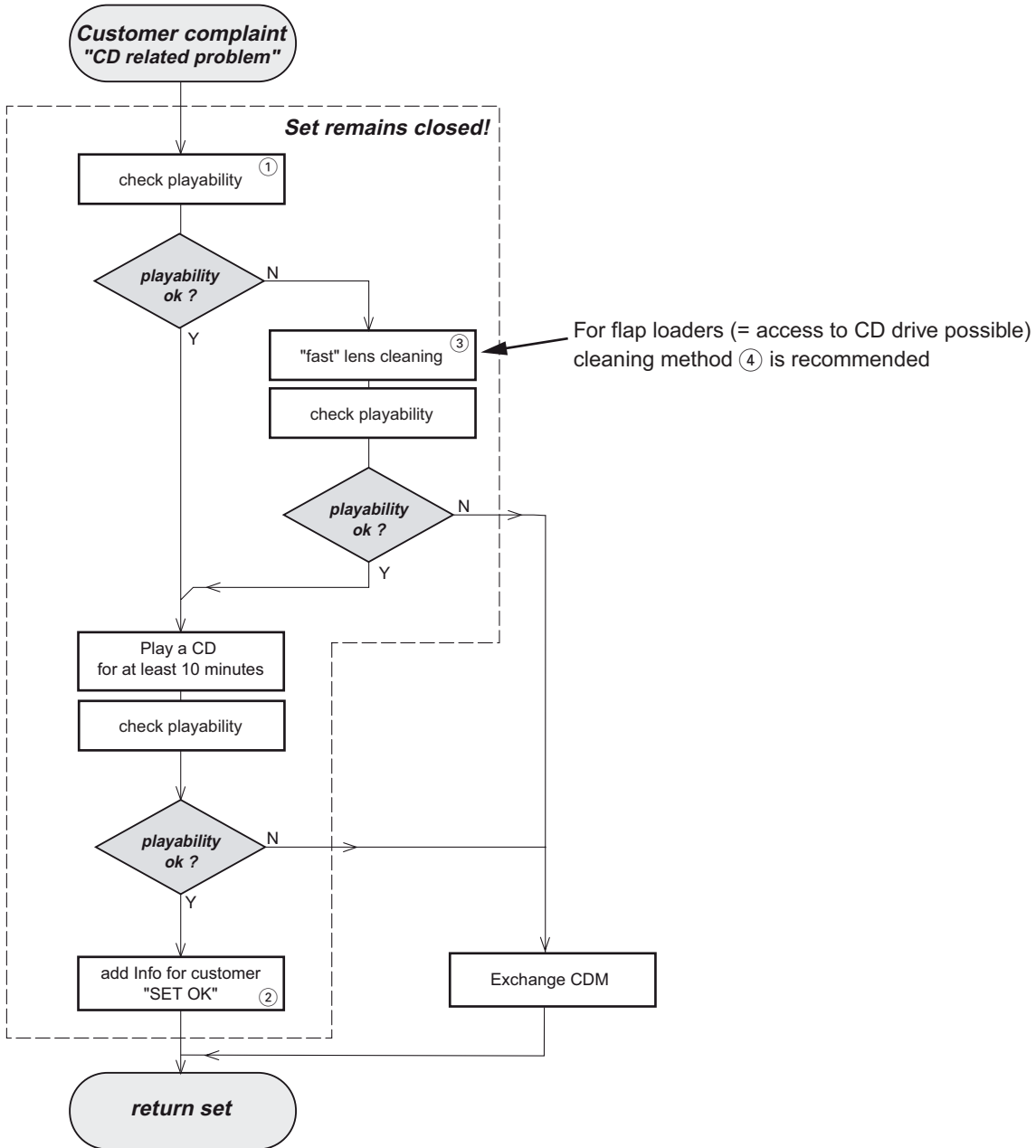
For additional questions please contact your local repair-helpdesk.

SERVICE INSTRUCTION

Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the AC Power lead for external damage.
- Check the strain relief of the AC Power cord for proper function.
- Check the electrical DC resistance between the AC Power Plug and the secondary side (only for sets which have a AC Power isolated power supply):
 1. Unplug the AC Power cord and connect a wire between the two pins of the AC Power plug.
 2. Set the AC Power switch to the "on" position (keep the AC Power cord unplugged!).
 3. Measure the resistance value between the pins of the AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be larger than 4.5 Mohm (For U.S. it should be between 4.2 Mohm and 12 Mohm).
 4. Switch "off" the set, and remove the wire between the two pins of the AC Power plug.
- Check the cabinet for defects, to avoid touching of any inner parts by the customer.

INSTRUCTIONS ON CD PLAYABILITY



① - ④ For description - see following pages

INSTRUCTIONS ON CD PLAYABILITY

①

PLAYABILITY CHECK

For sets which are compatible with **CD-RW** discs
 use CD-RW Printed Audio Disc7104 099 96611
 TR 3 (Fingerprint)
 TR 8 (600 μ Black dot) **maximum at 01:00**

- playback of these two tracks without audible disturbance
 playing time for: Fingerprint ≥ 10 seconds
 Black dot from 00:50 to 01:10
- jump forward/backward (search) within a reasonable time

For all other sets
 use CD-DA SBC 444A4822 397 30245
 TR 14 (600 μ Black dot) **maximum at 01:15**
 TR 19 (Fingerprint)
 TR 10 (1000 μ wedge)

- playback of all these tracks without audible disturbance
 playing time for: 1000 μ wedge ≥ 10 seconds
 Fingerprint ≥ 10 seconds
 Black dot from 01:05 to 01:25
- jump forward/backward (search) within a reasonable time

②

CUSTOMER INFORMATION

It is proposed to add an addendum sheet to the set which informs the customer that the set has been checked carefully - but no fault was found.

The problem was obviously caused by a scratched, dirty or copy-protected CD. In case problems remain, the customer is requested to contact the workshop directly.

The lens cleaning (method ③) should be mentioned in the addendum sheet.

The final wording in national language as well as the printing is under responsibility of the Regional Service Organizations.

④

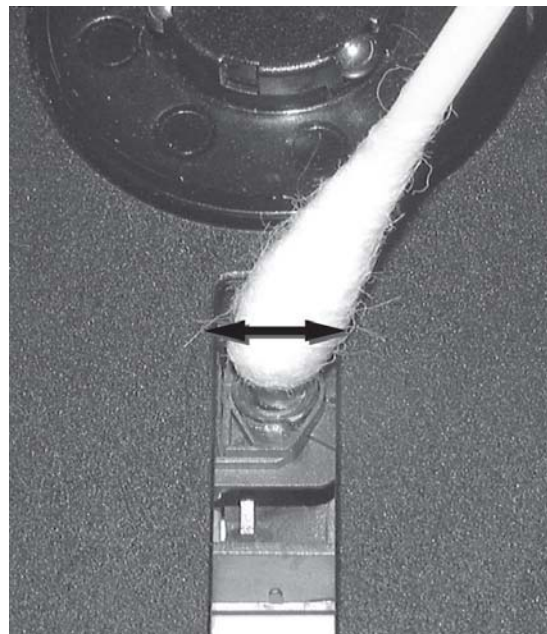
LIQUID LENS CLEANING

Before touching the lens it is advised to clean the surface of the lens by blowing clean air over it. This to avoid that little particles make scratches on the lens.

Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use "Cleaning Solvent

The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. Clean the lens gently (don't press too hard) with a soft and clean cotton bud moistened with the special lens cleaner.

The direction of cleaning must be in the way as indicated in the picture below.



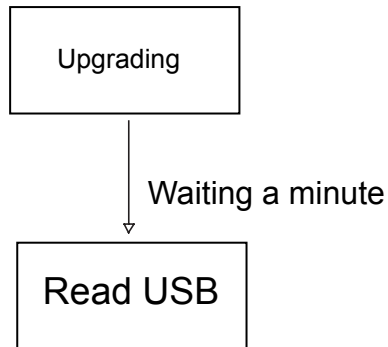
Software Version Check & Upgrade

Upgrade software

1. Download the software from Philips support website:

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

2. Load the CD Disc or USB device with software, Software upgrade procedure starts automatically



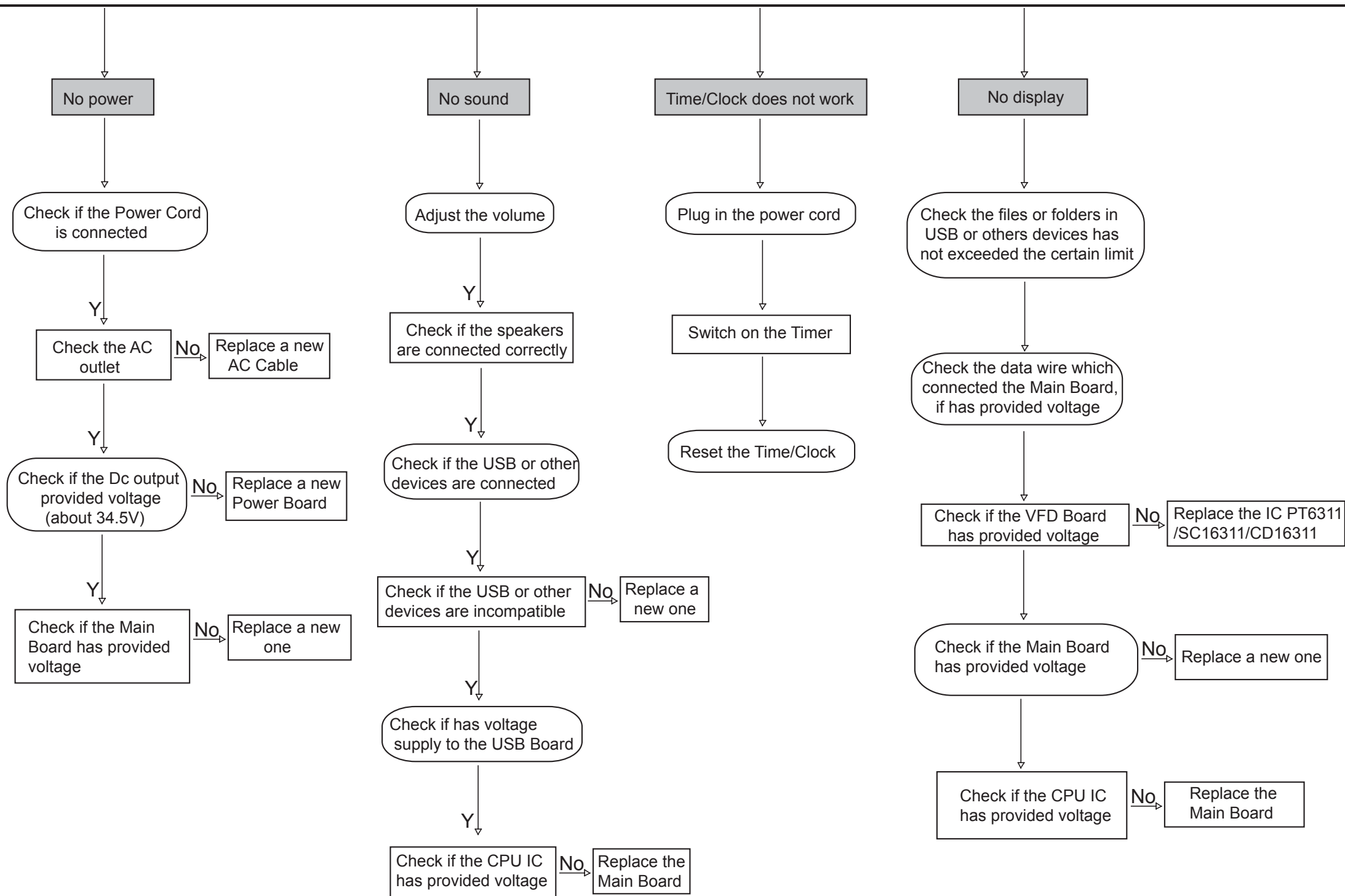
Software upgrade finish.

Software version and date check

1, Power on the unit without loading the USB and Disc in it, then press the "811502" on remote control

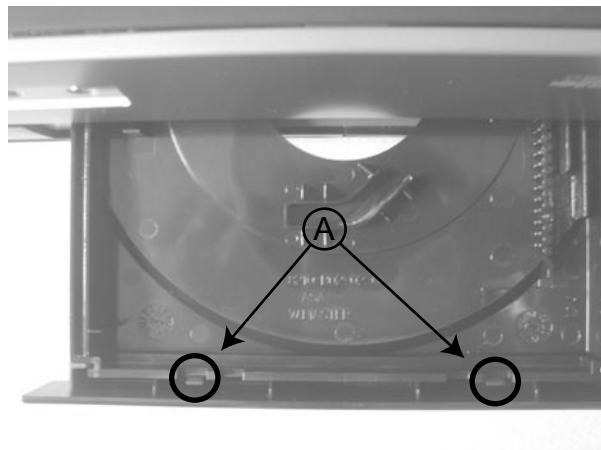
Ver: MCD183/xx Vxxx
Date: Mmm dd yyyy
Time: hh:mm:ss

Malfunction Follow Check Chart

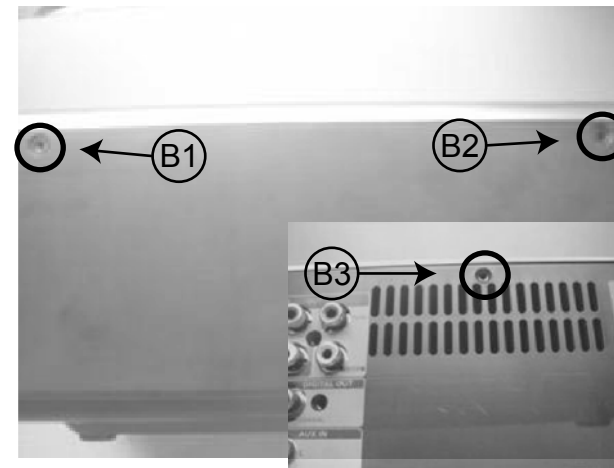


Disassembly Diagram

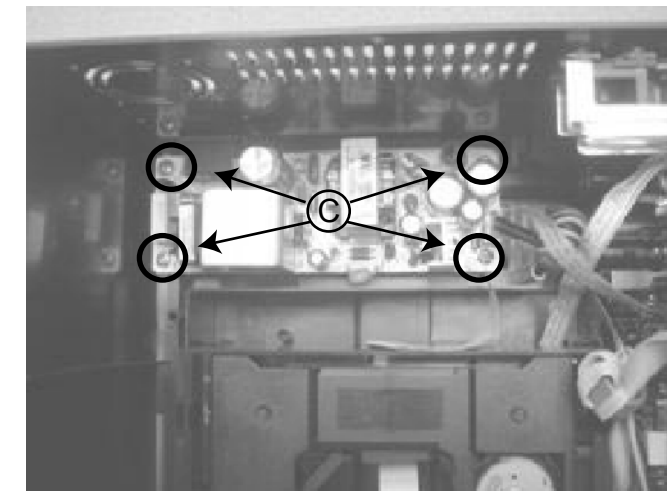
A, Open the DVD tray and then loose 2pcs screws to remove the door



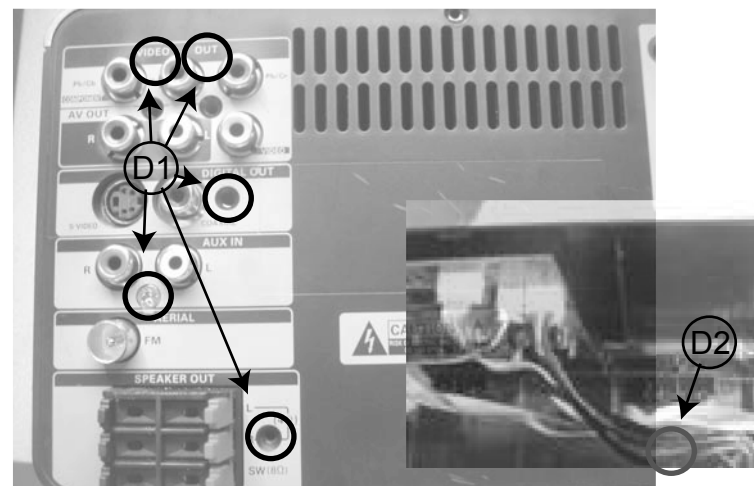
B, Remove the top cabinet.
B1. Loose 2pcs screws(3 x 12 KB) of the L&R sides(front-end)
B2. Loose 2pcs screws(3 x 8 KB) of the L&R sides(back-end)
B3. Loose 1pcs screws(3 x 10 FA) of the back sides



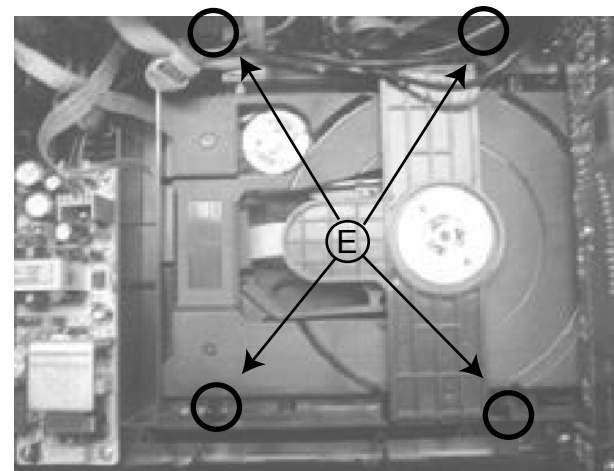
C, Loosed 4pcs screws(3 x 10 BA)to remove the Power Board



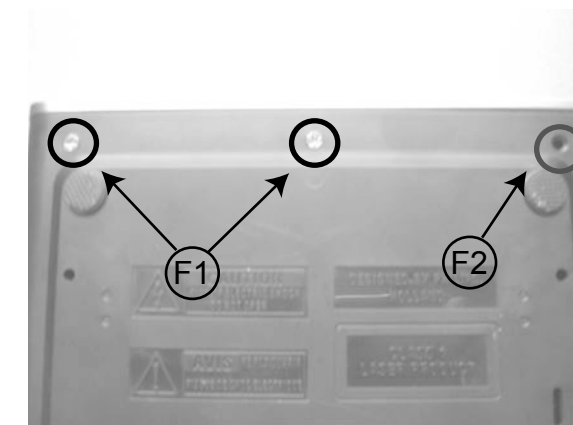
D, Remove Decoder Board
D1. Loose 5pcs screws(3 x 10 FA)
D2. Loose 1pcs screw(3 x 8 BA)



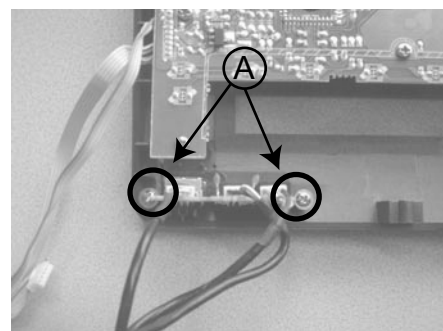
E, Loose 4pcs screws(3 x 10 PWA) to remove DVD Loader Driver



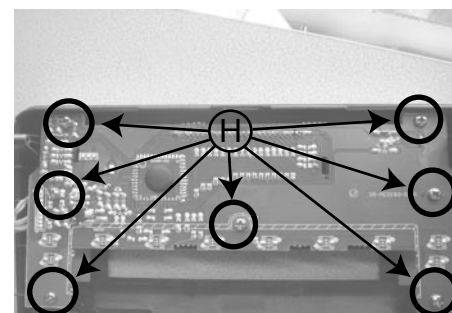
F, Remove Front Cabinet
F1. Loose 2pcs screws(3 x 10 FA)
F2. Loose 1pcs screw(3 x 6 FMTT)



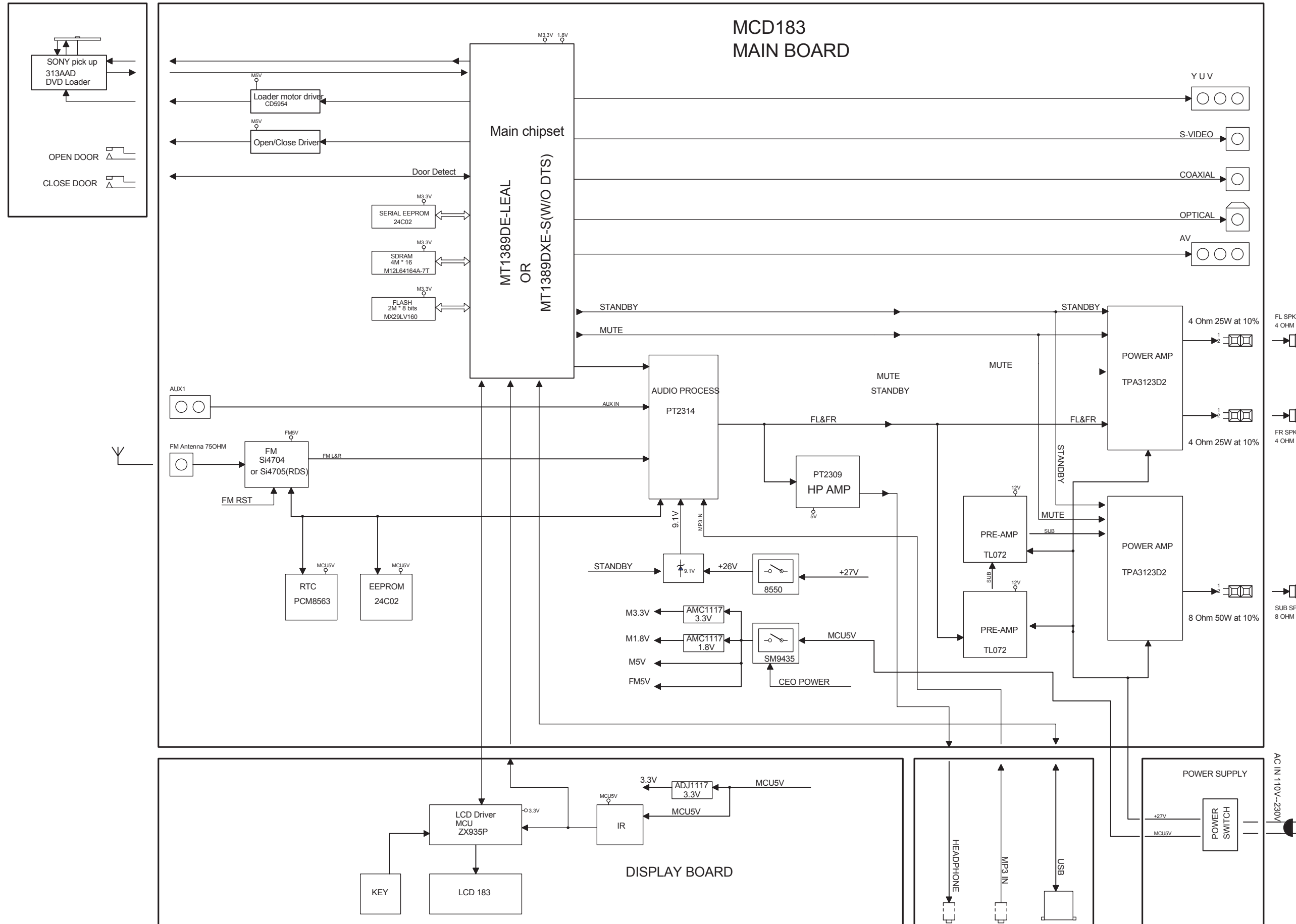
G, Loosed 2pcs screws(3 x 6 PWT) to remove Headphone Board



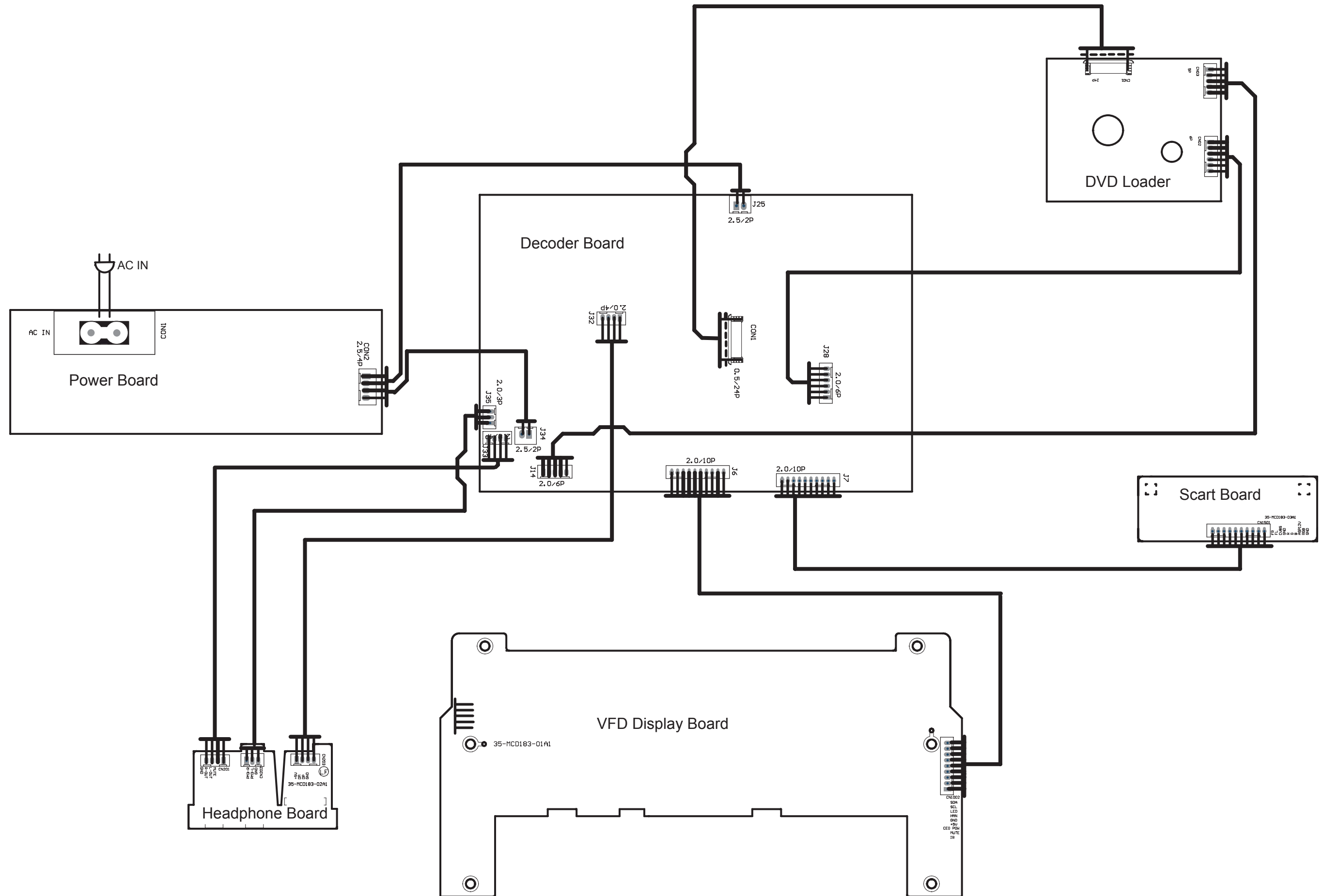
H, Loosed 7pcs screws(3 x 8 PA) to remove the Display Board



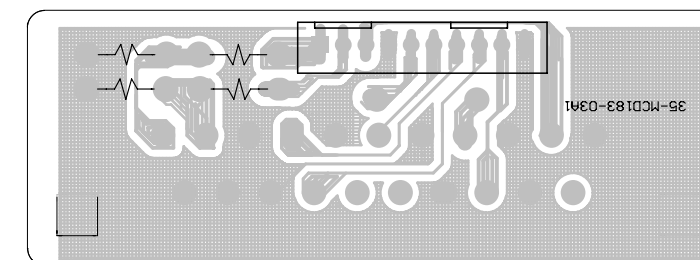
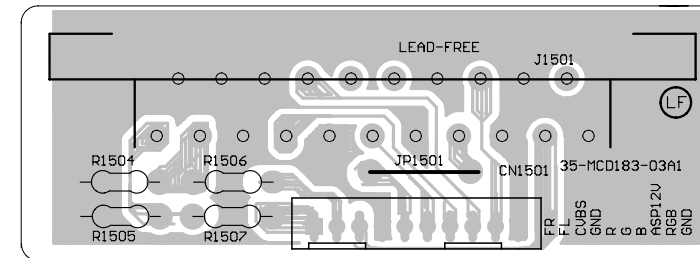
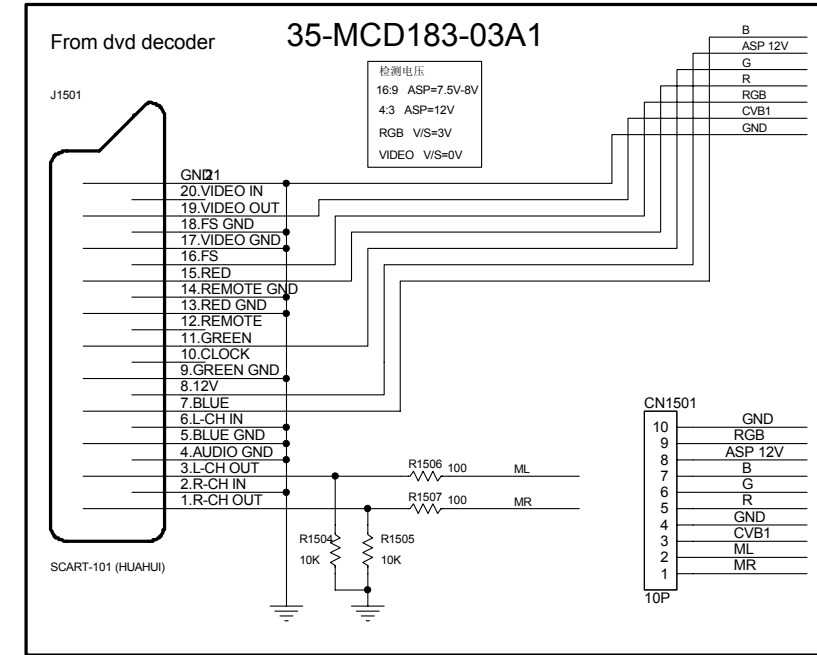
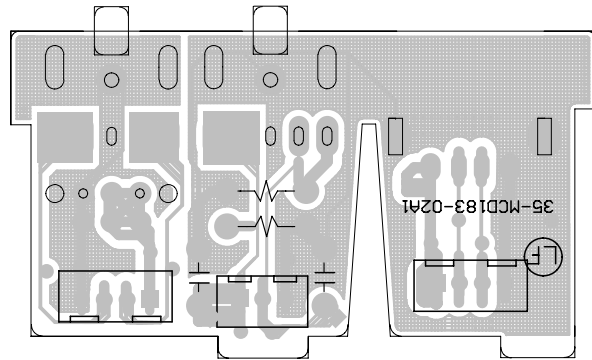
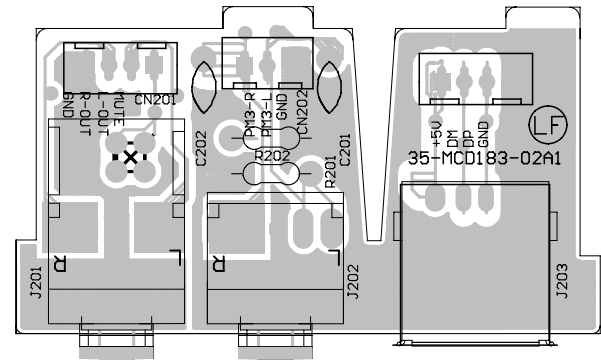
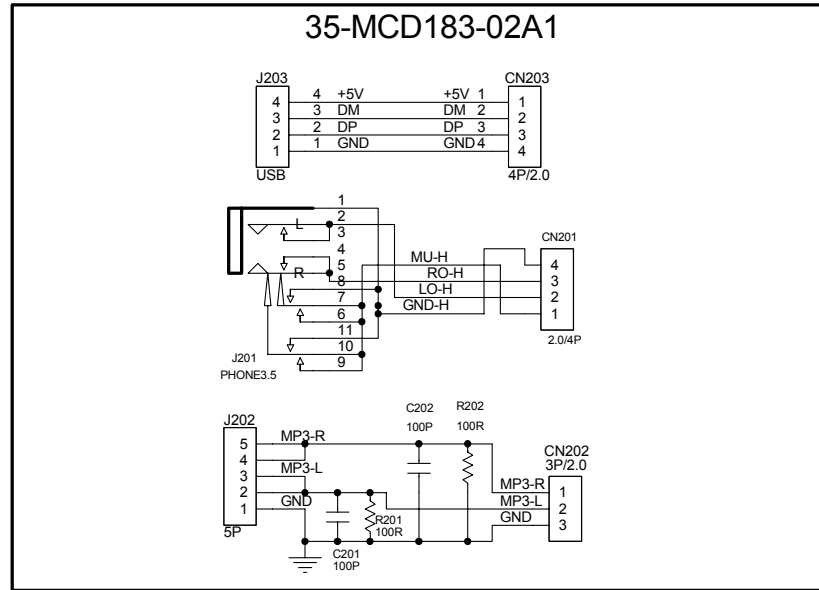
Block Diagram

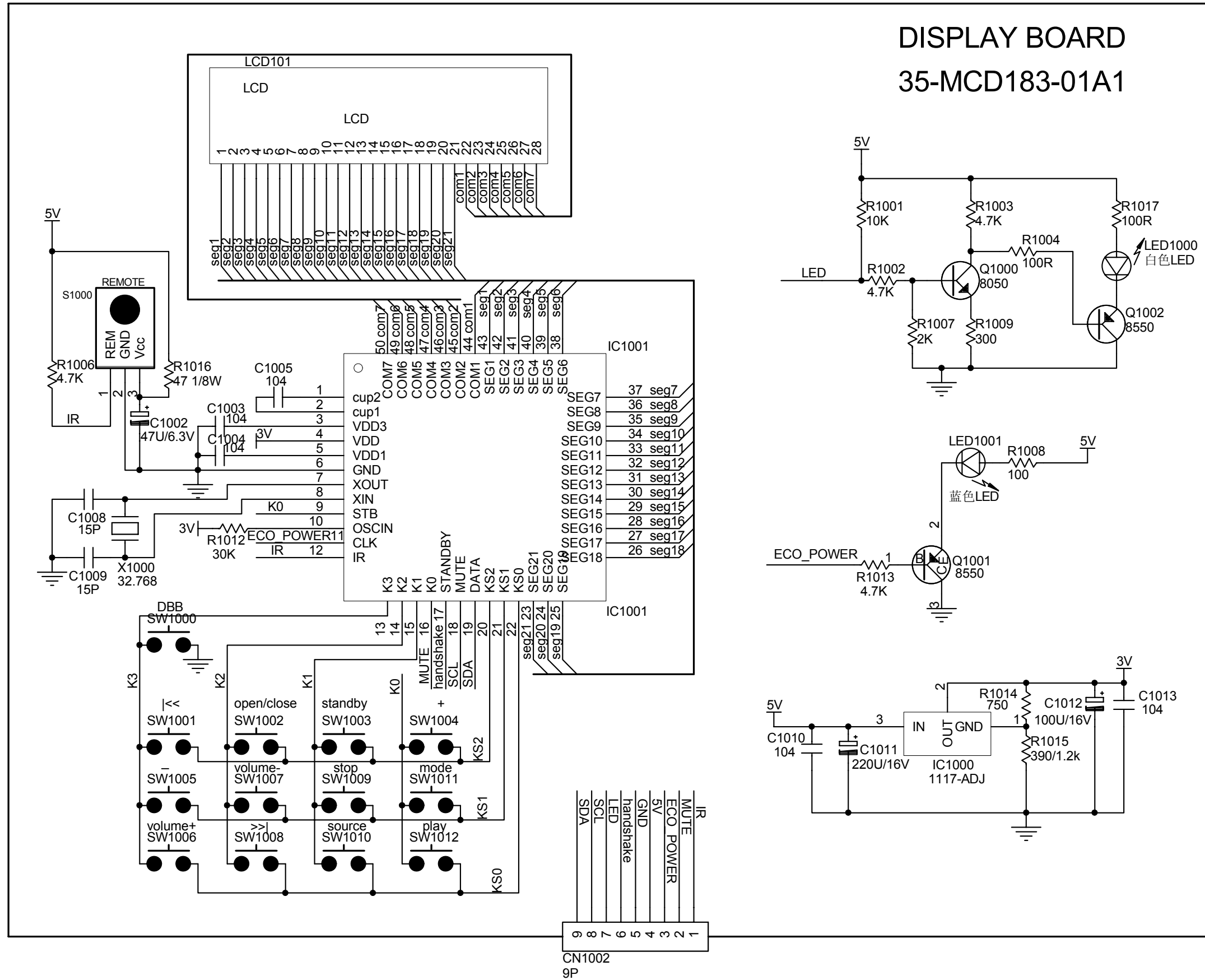


Wiring Diagram

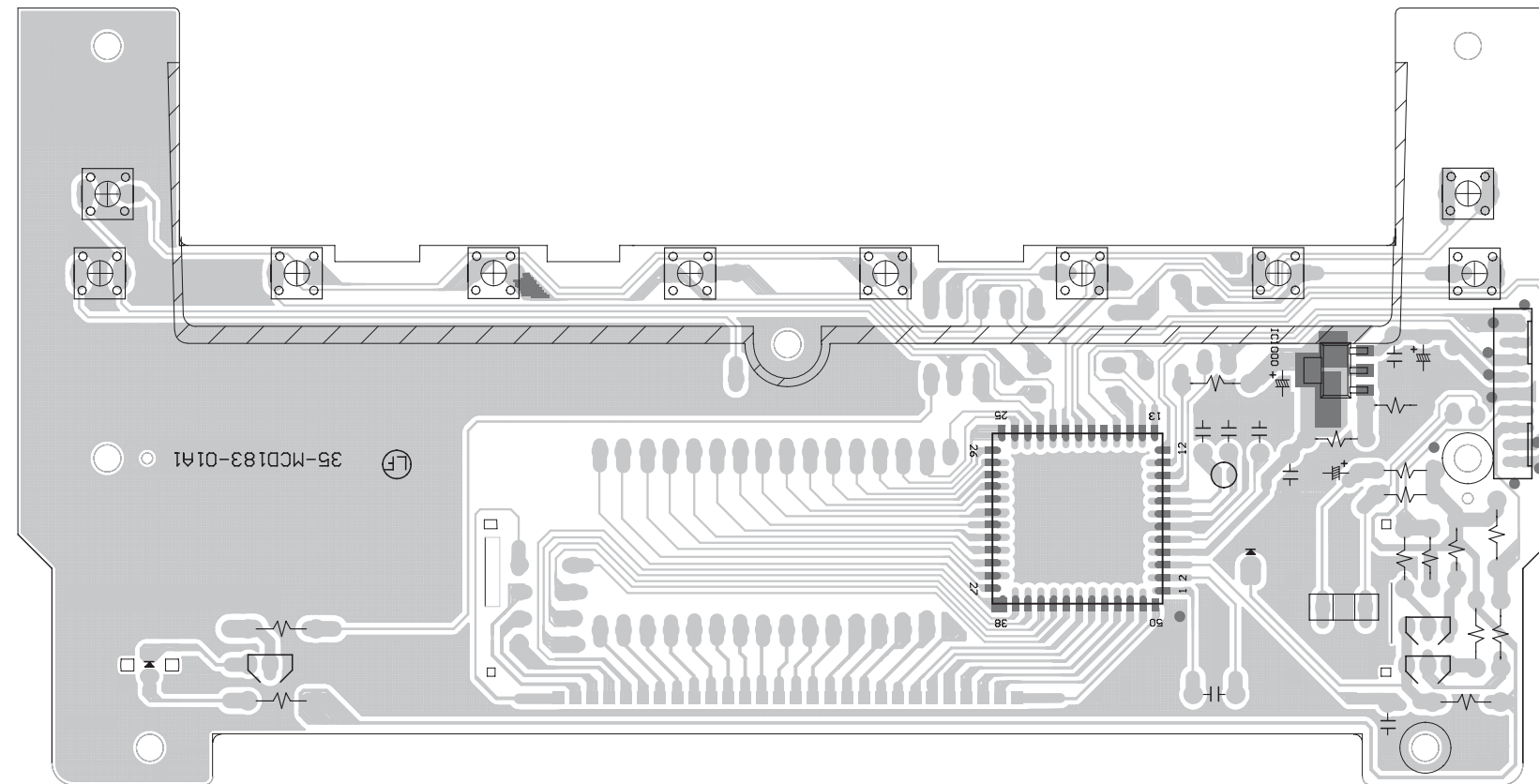
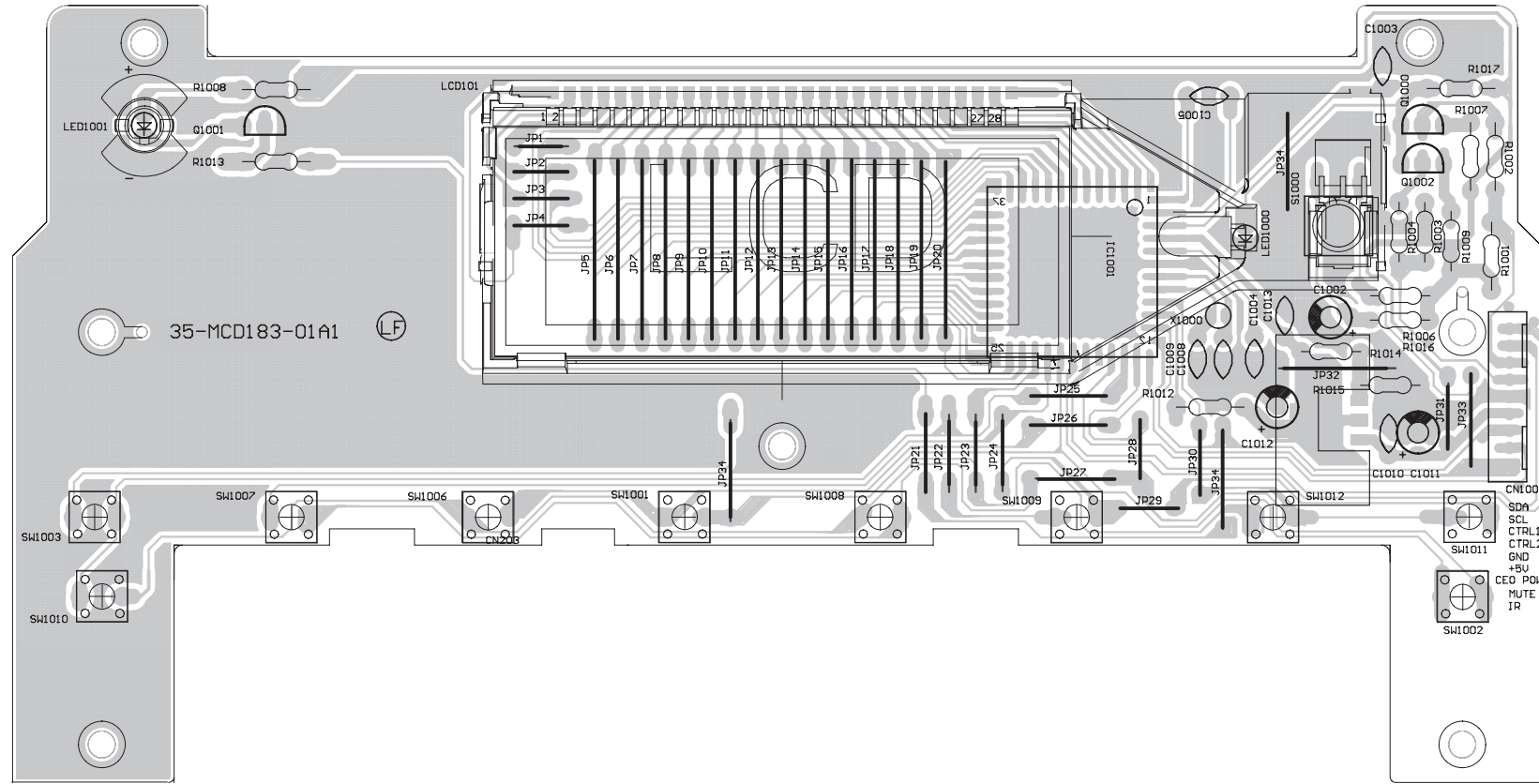


Small Board -- Layout & Circuit Diagram

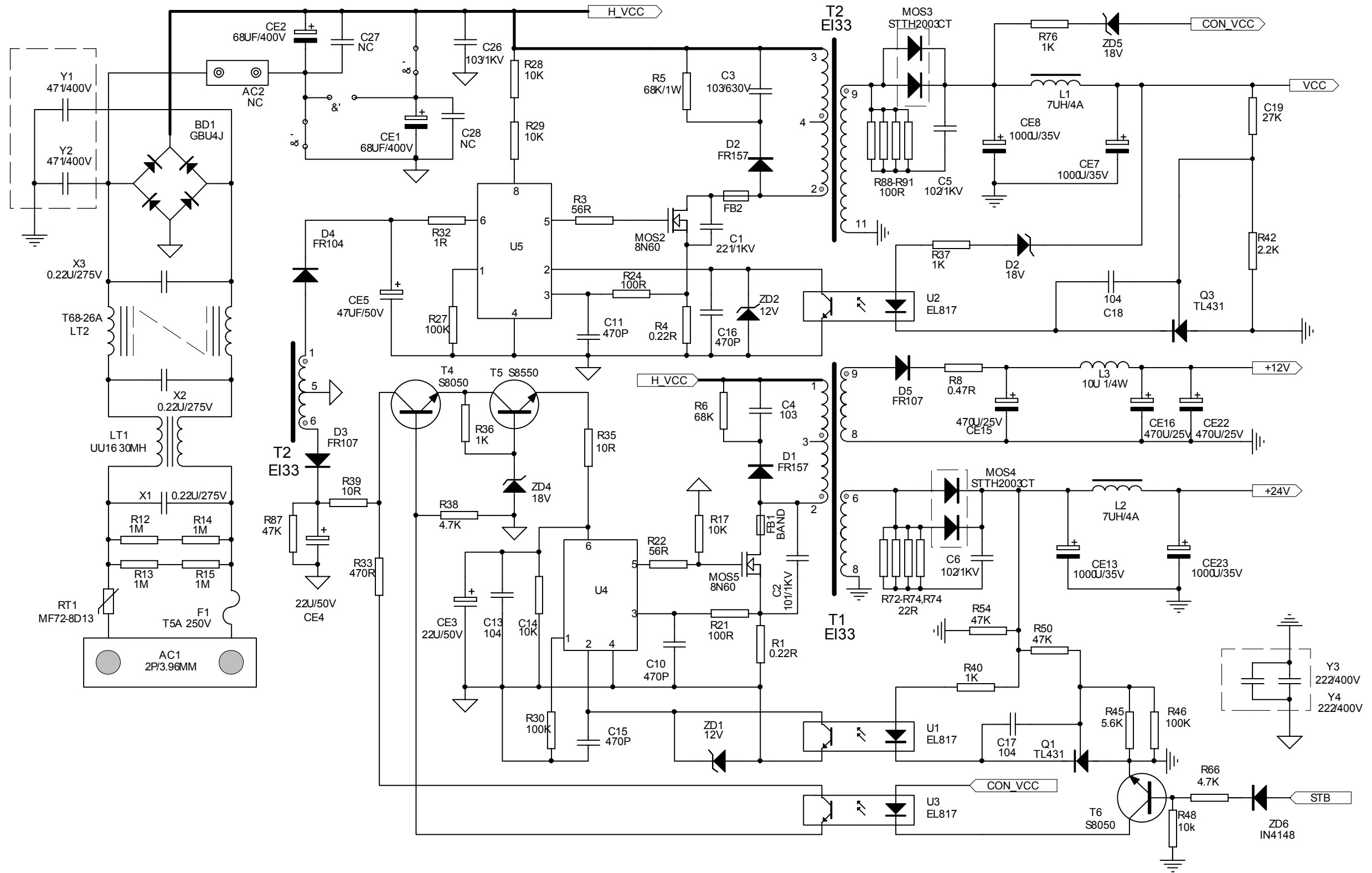




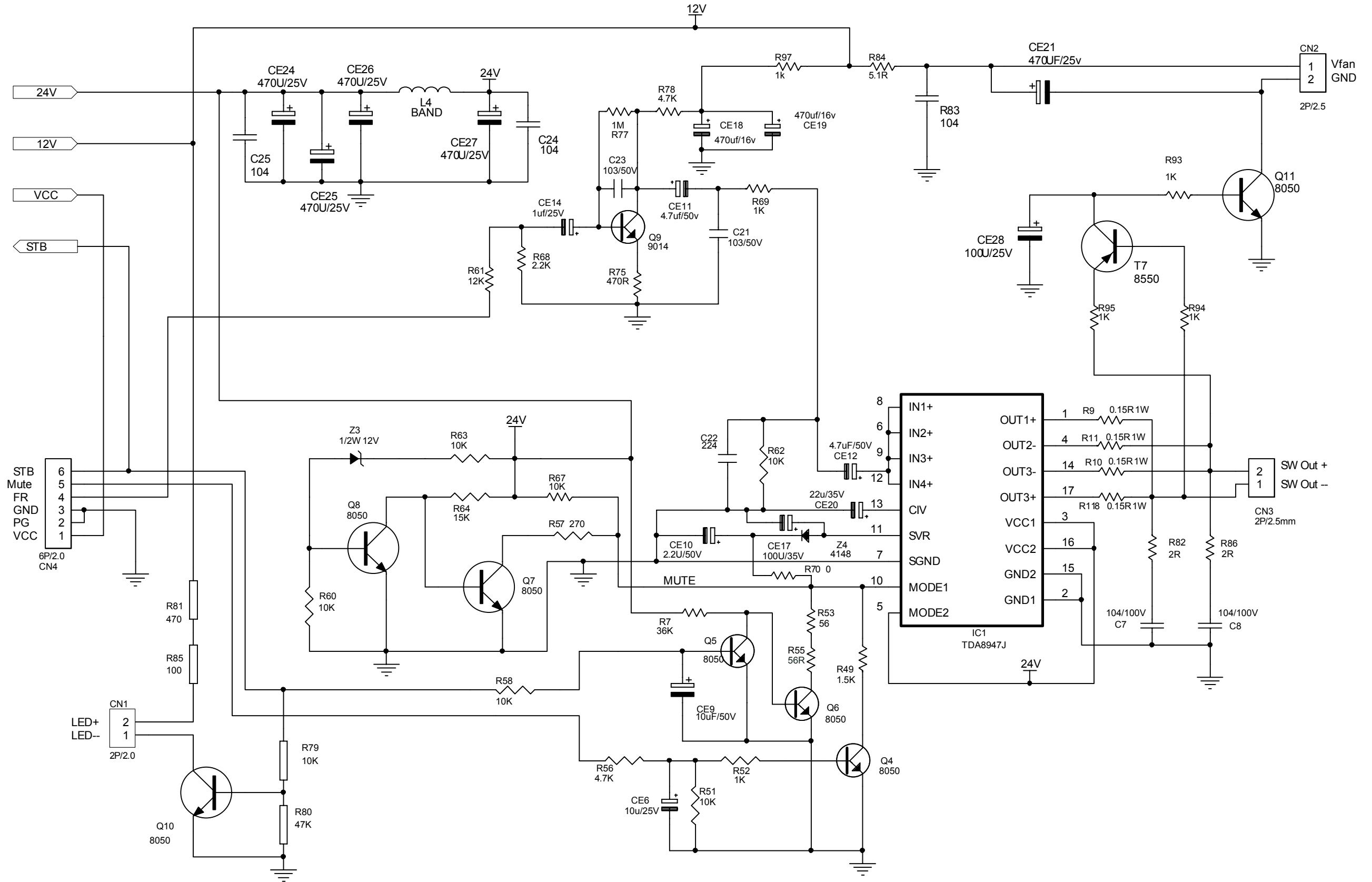
LCD Display Board -- Layout Diagram



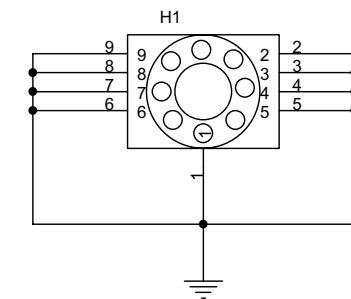
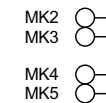
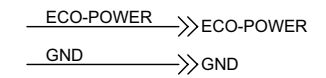
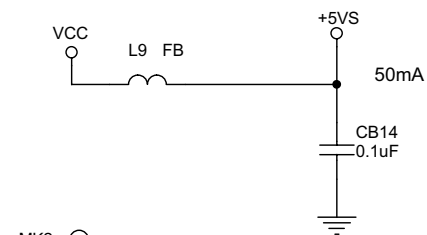
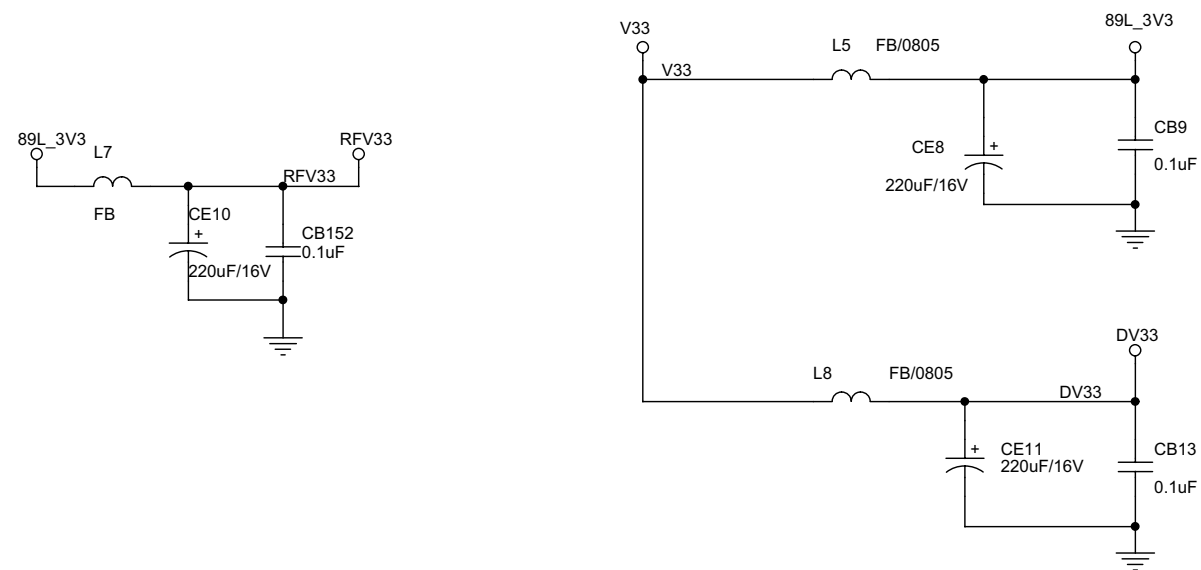
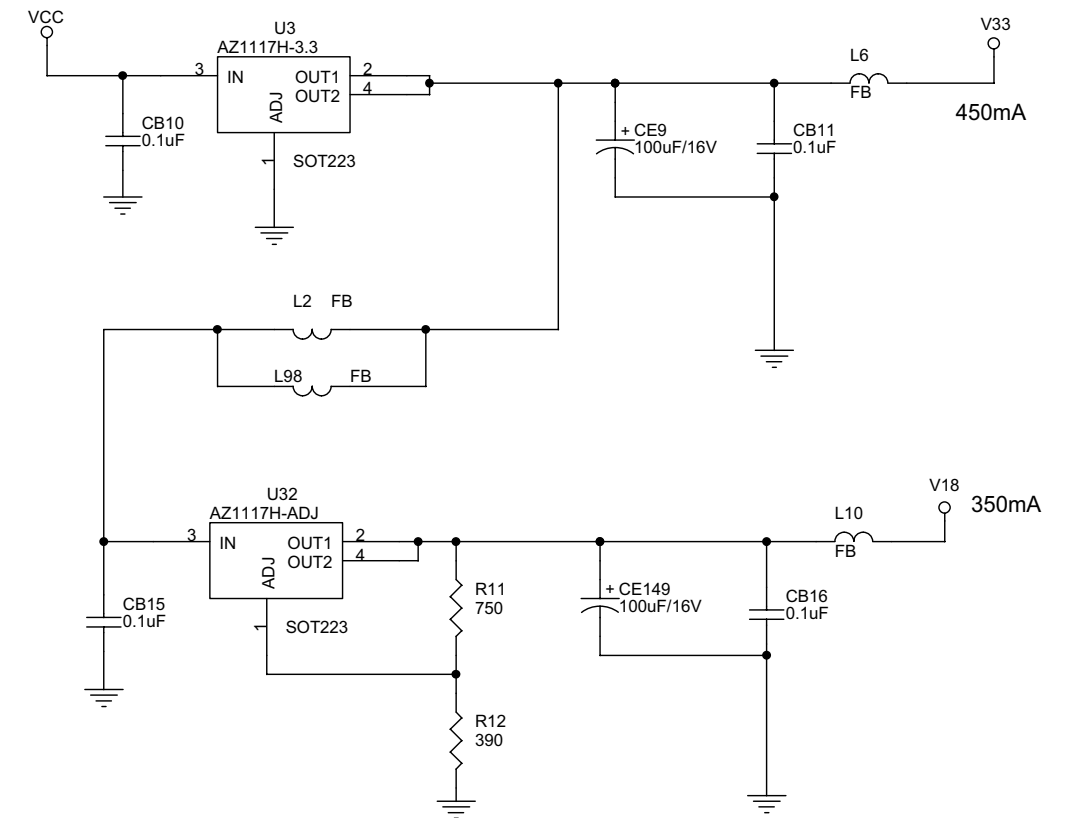
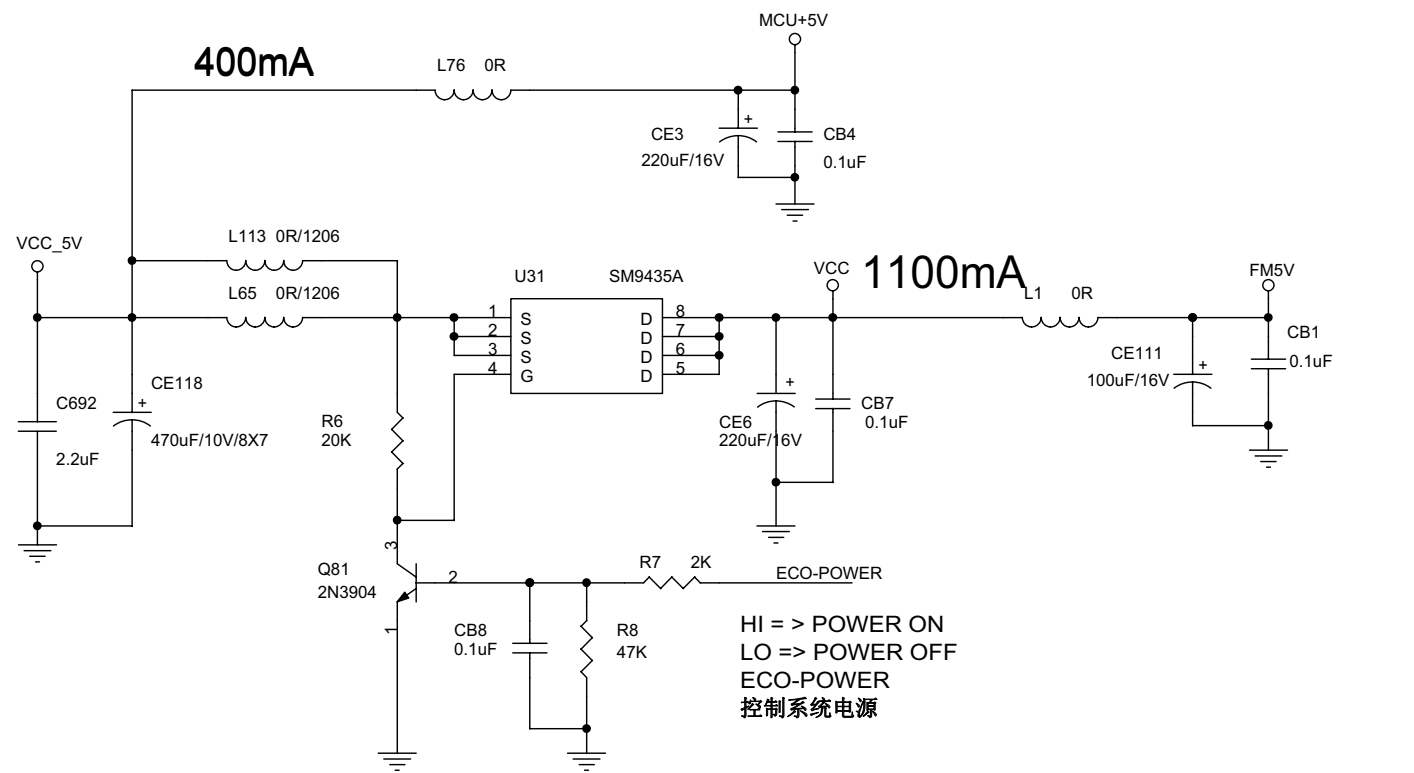
Power Board -- Circuit Diagram -- Part1



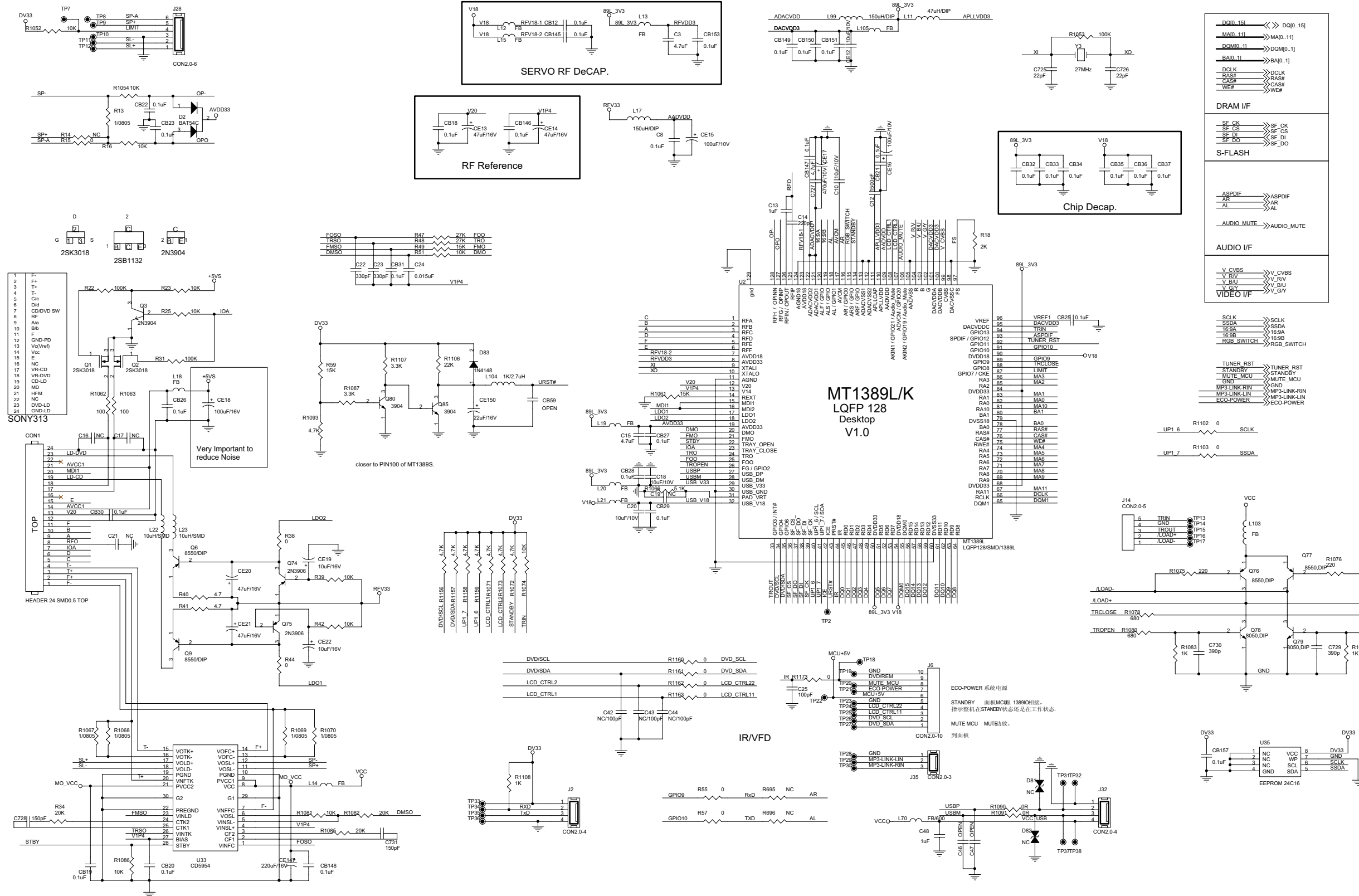
Power Board -- Circuit Diagram -- Part2

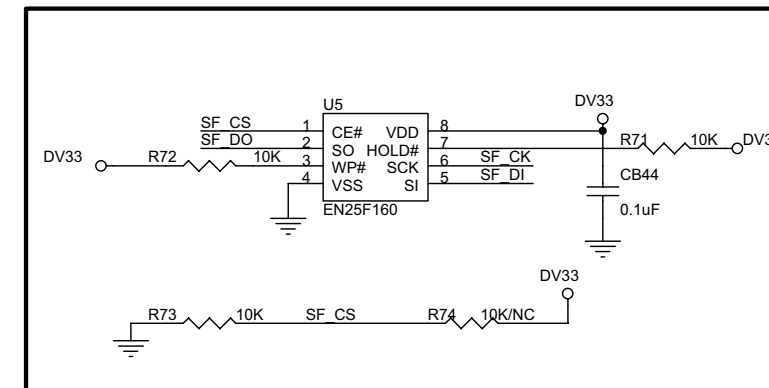
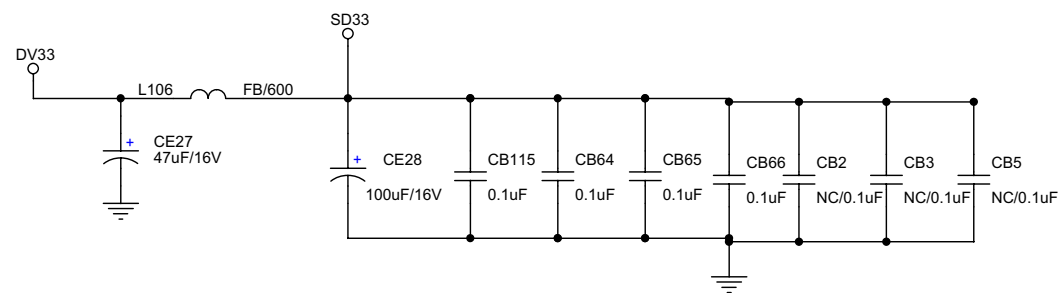
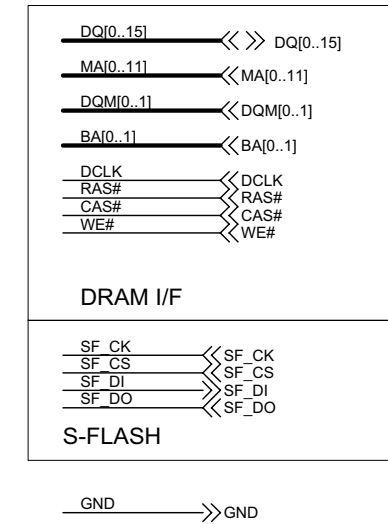
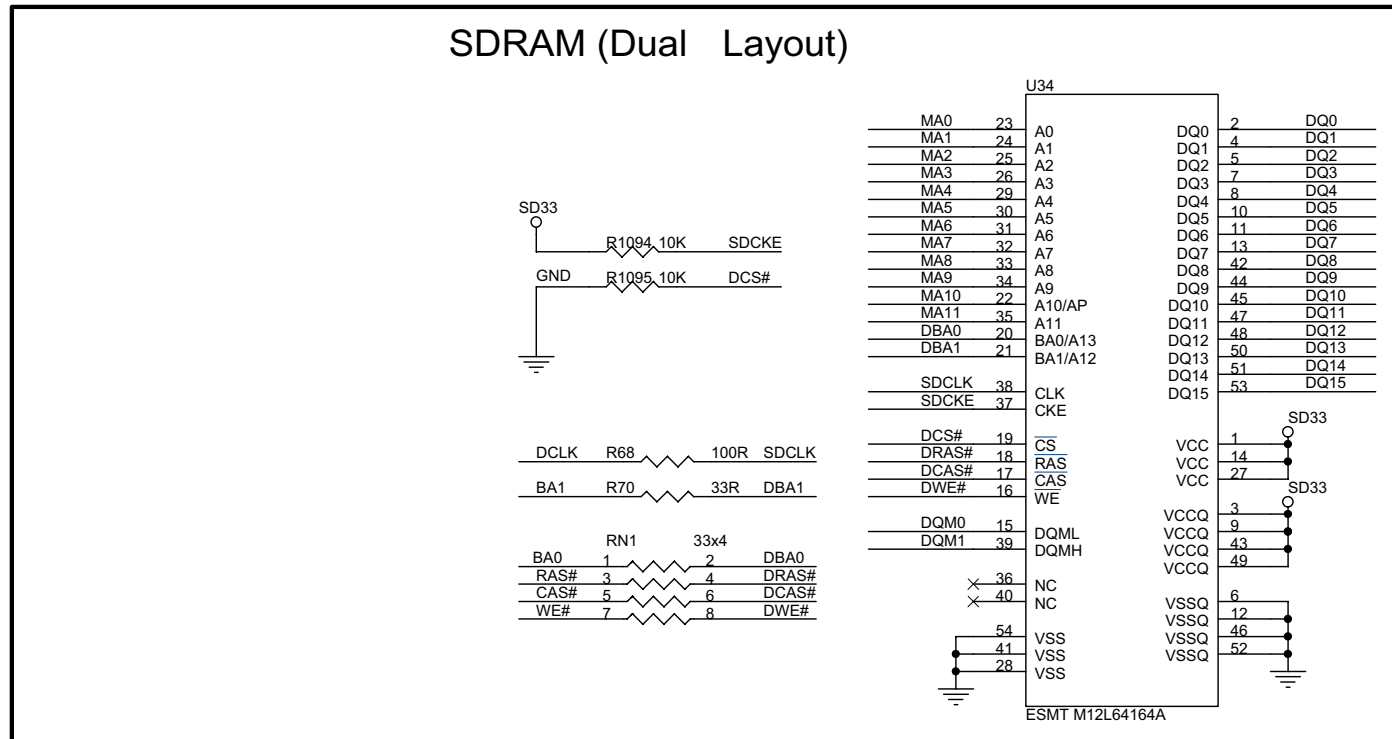


Decoder Board -- Circuit Diagram

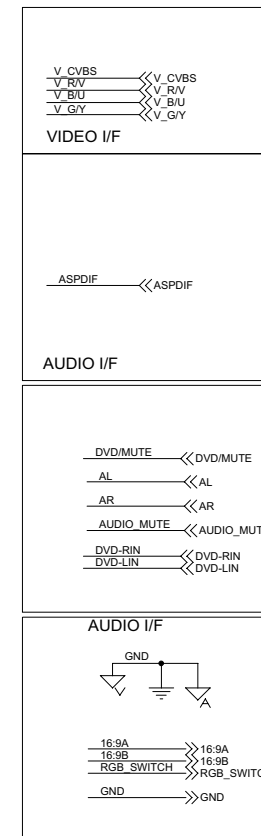
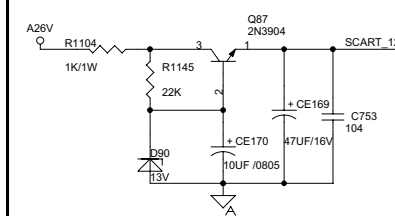
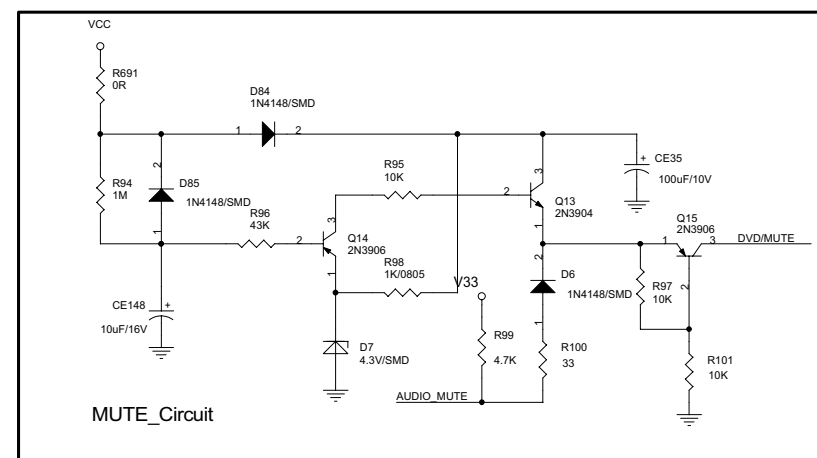
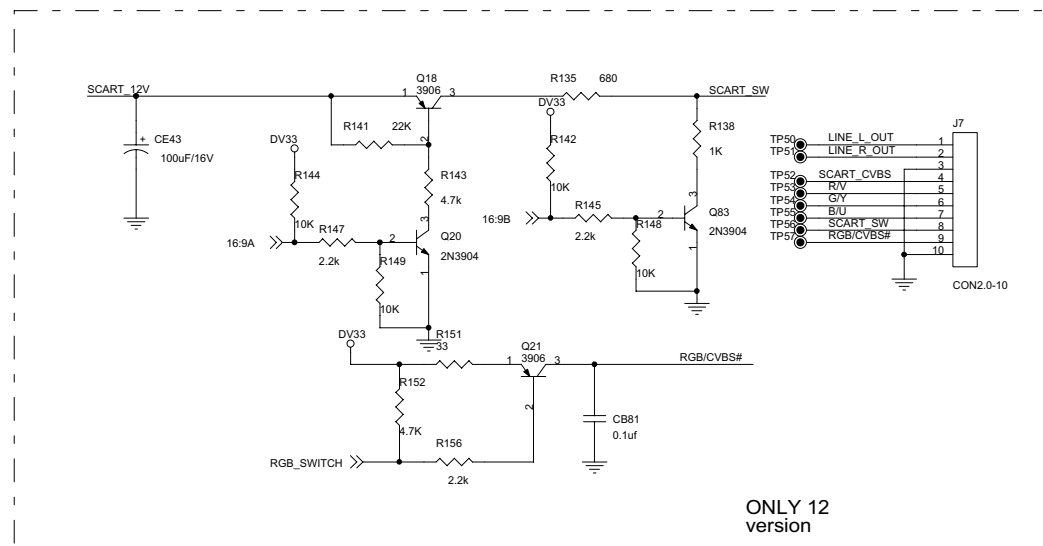
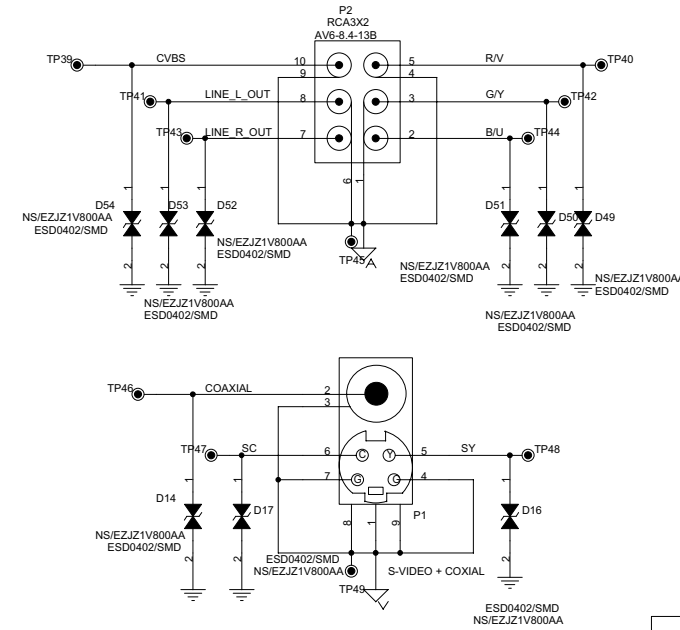
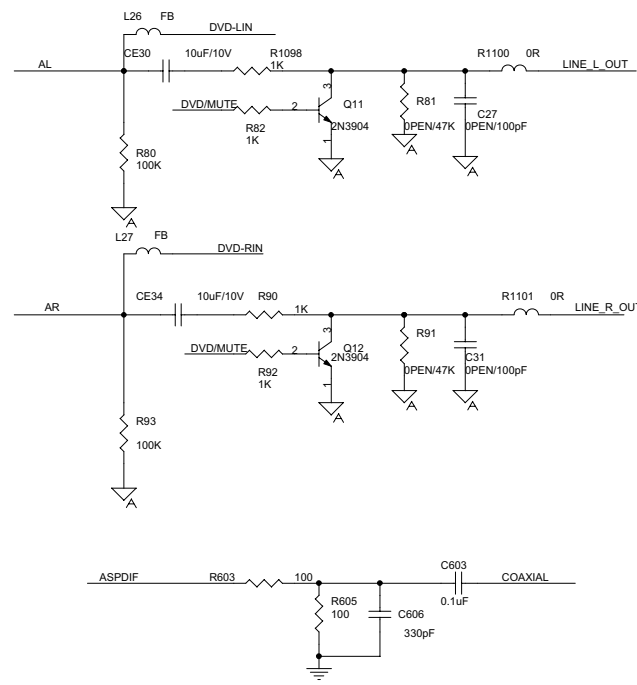
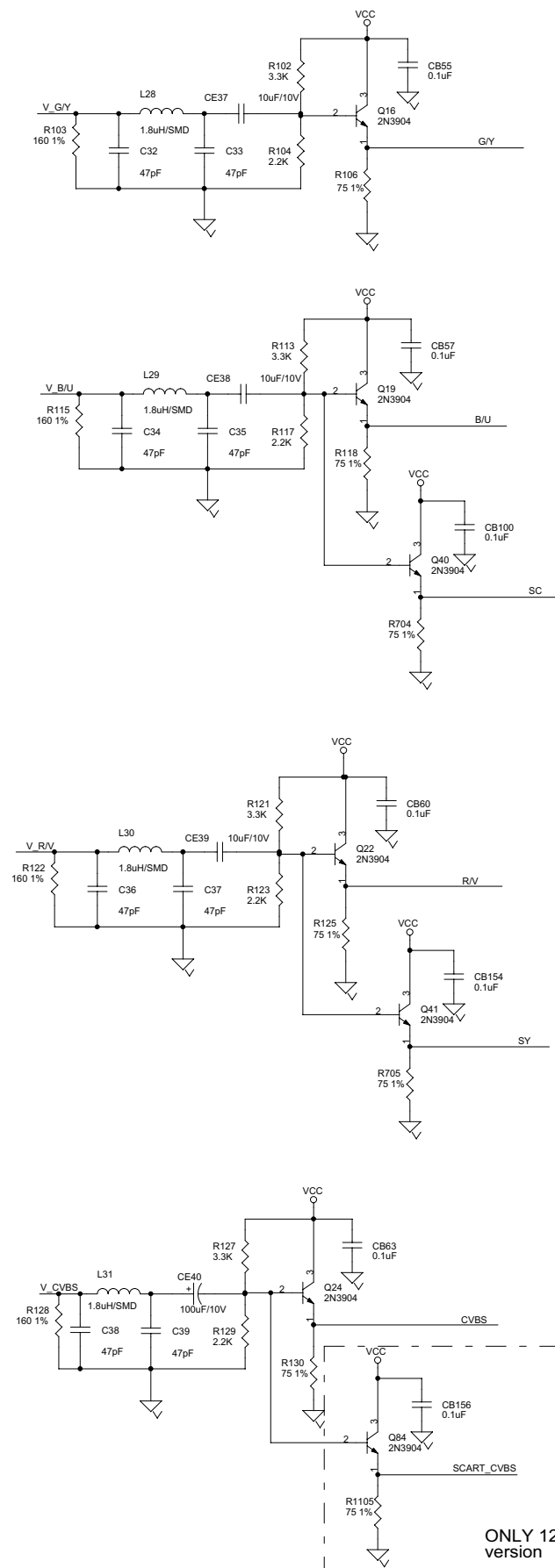


Decoder Board -- Circuit Diagram

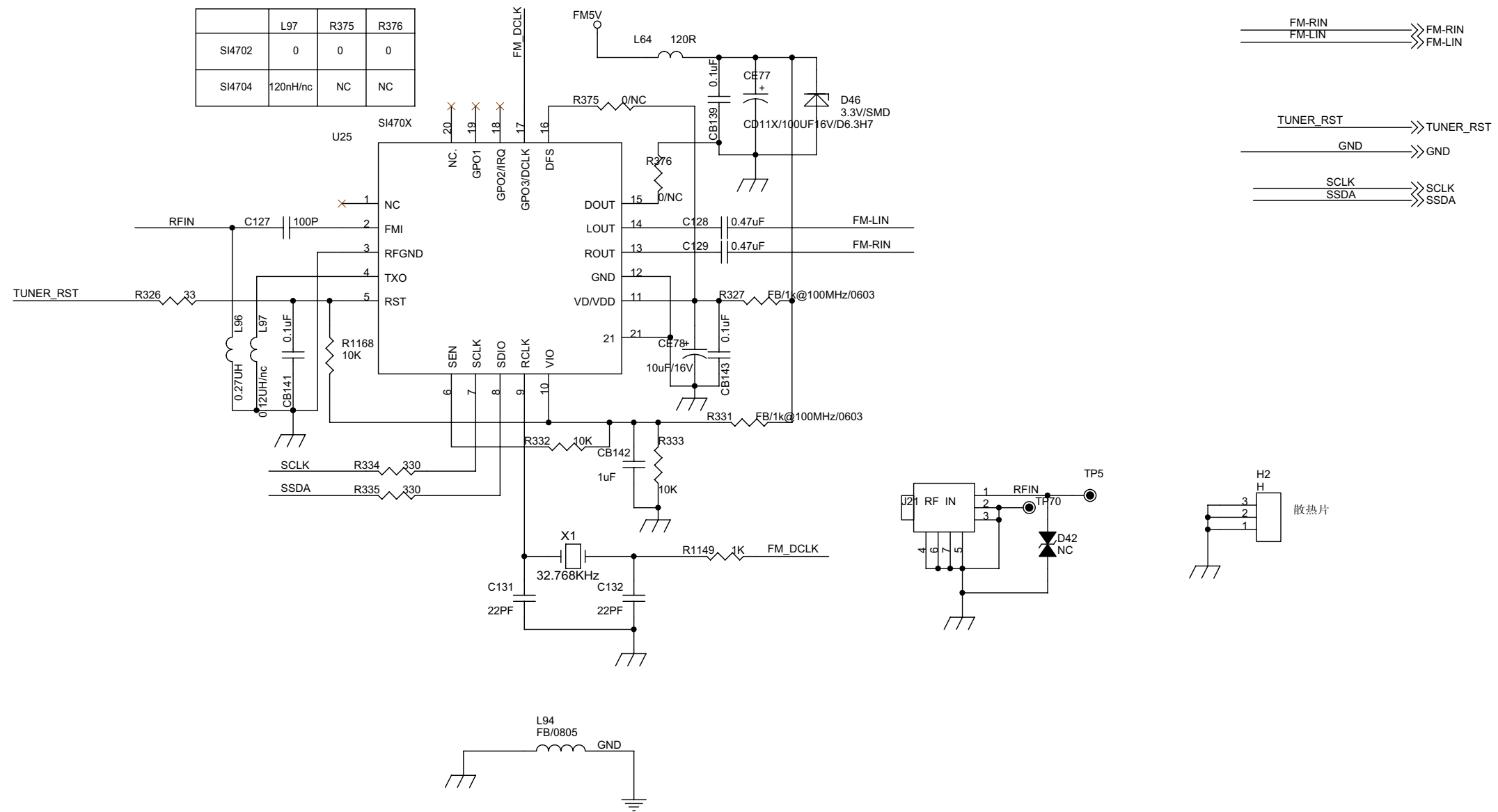




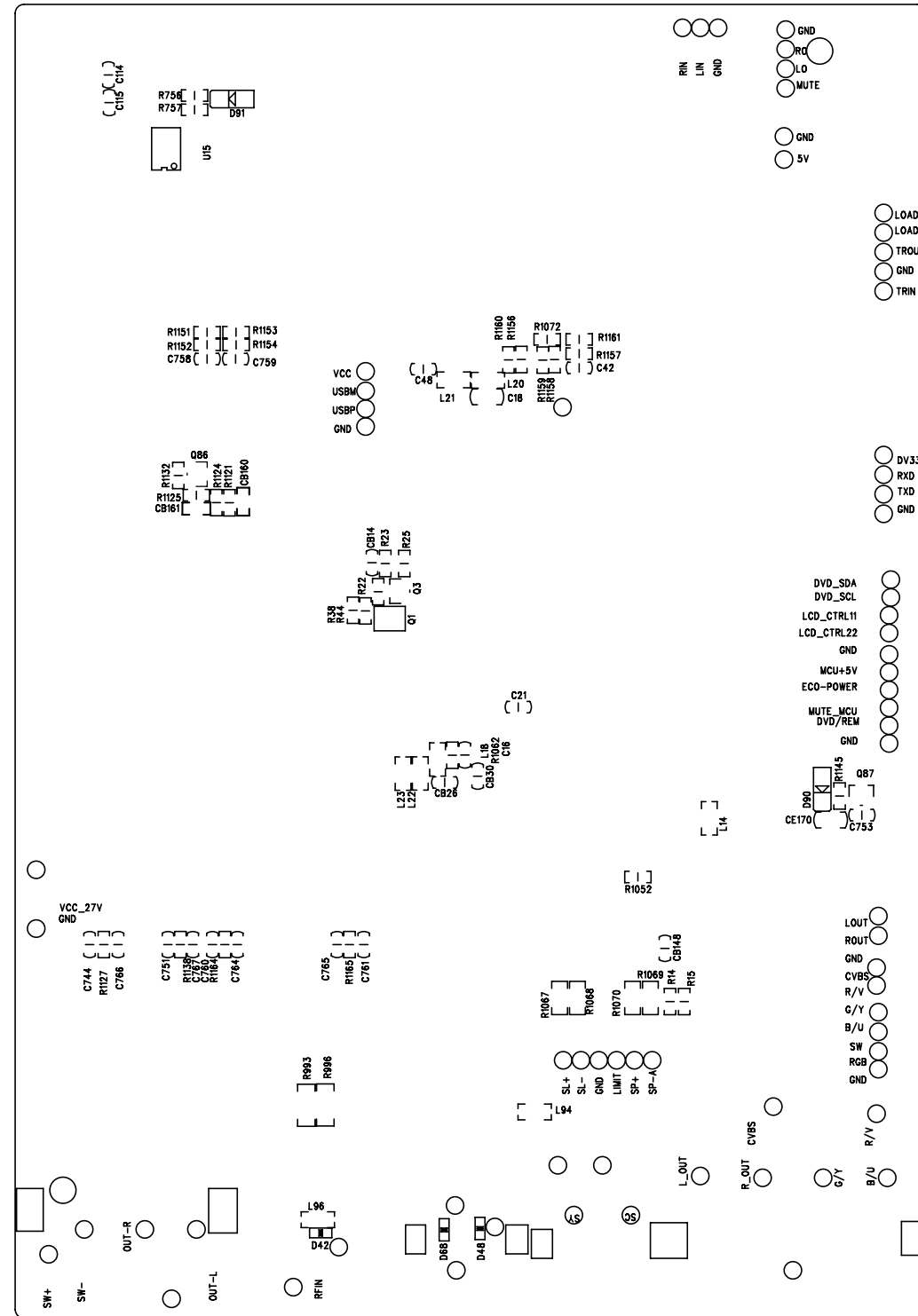
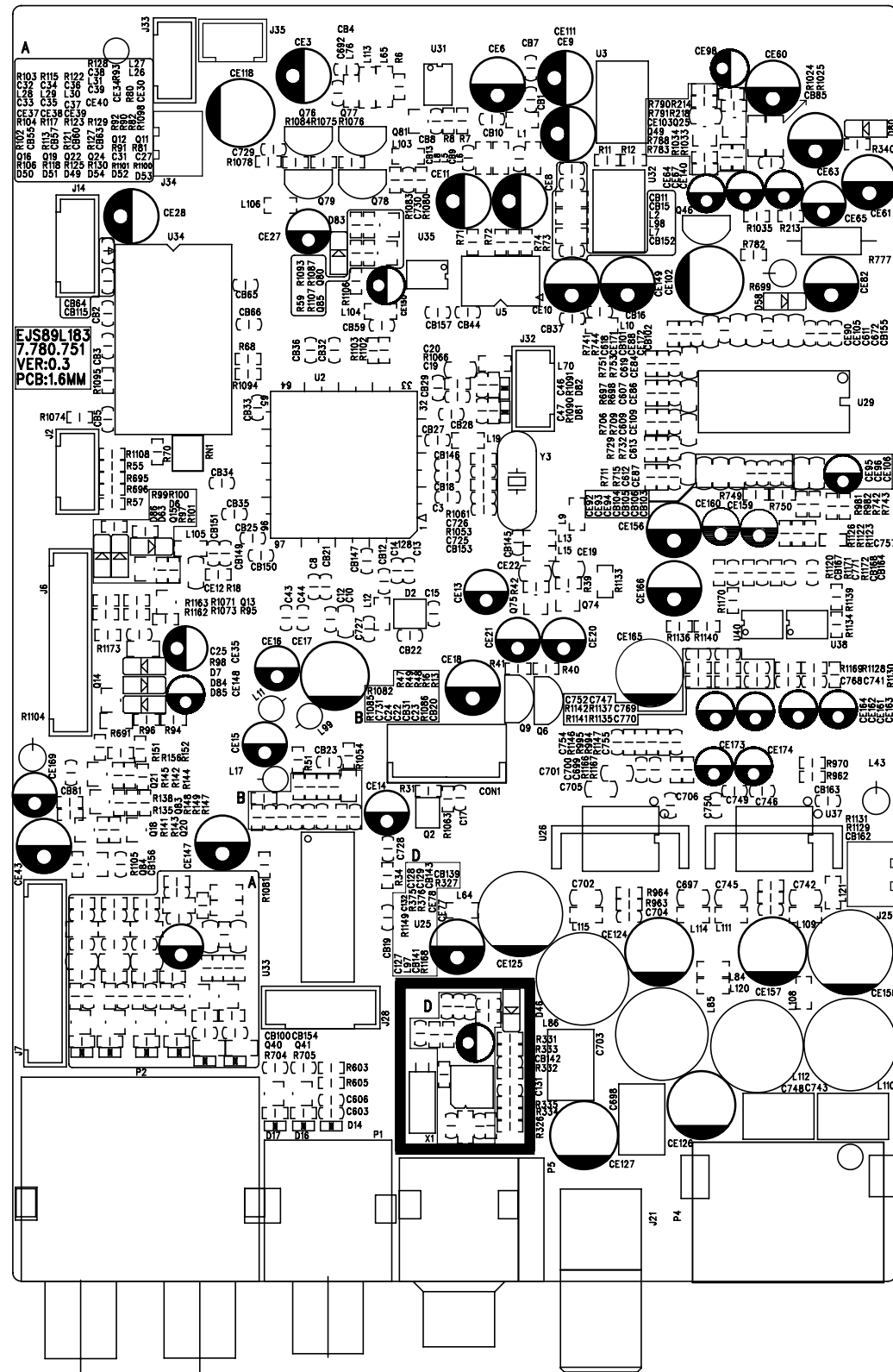
Decoder Board -- Circuit Diagram



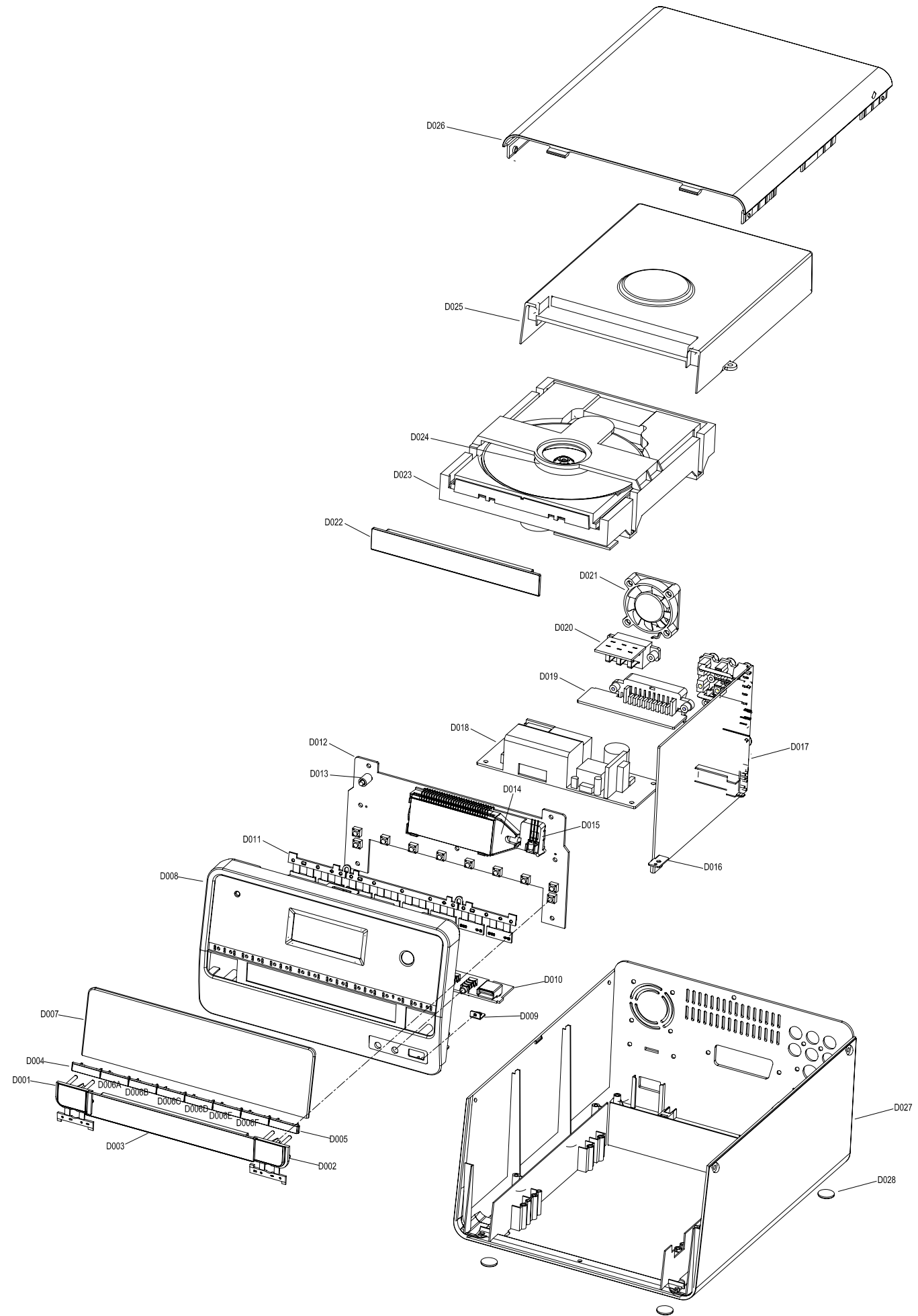
Decoder Board -- Circuit Diagram



Decoder Board -- Layout Diagram



Exploded View



REVISION LIST

Version 1.0 (3141 785 34010)

* Initial Release;

Version 1.1 (3141 785 34011)

* Add partlist for /77;