

Service  
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# Service Manual



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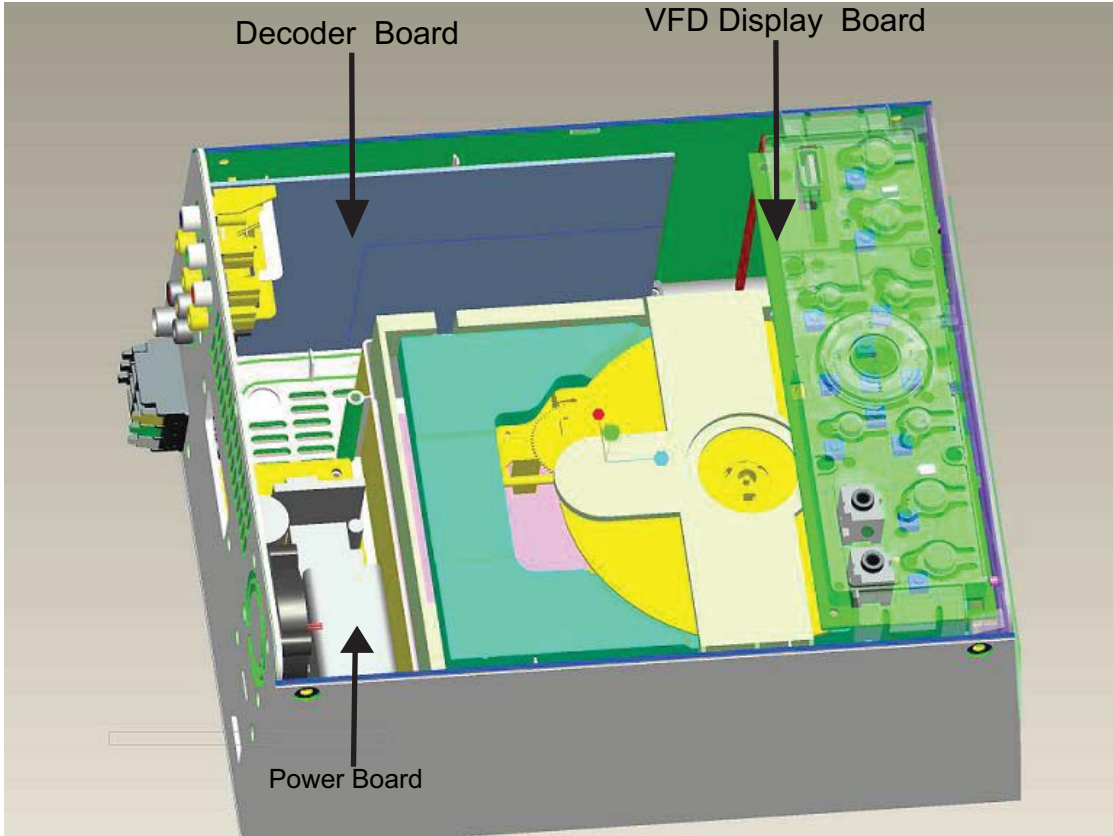
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**Version 1.0**



**PHILIPS**

Location of PC Boards



VERSION VARIATIONS :

Type /Versions:		MCD302										
Board in used:	Service policy	/05	/12	/51	/55	/58	/61	/79	/93	/94	/96	/98
Power Board									M			
Decoder Board									M			
VFD Display Board									C			
Type /Versions:		MCD302										
Features	Feature dffrence	/05	/12	/37	/55	/58	/61	/79	/93	/94	/96	/98
RDS												
VOLTAGE SELECTOR												
ECO STANDBY - DARK												
TDS												
* TIPS : C -- Component Lever Repai M -- Module Lever Repair √ -- Used												

## Electronic Specification

### AMPLIFIER

Rated Output Power ..... 2 x 25 RMS  
 Signal-to-noise ratio .....  $\geq 67$ dB  
 Frequency response ..... 30Hz~16KHz  $\leq 0.1$ dB  
 Aux Input ..... 1V RMS 16kohm

### DISC

Laser Type ..... Semiconductor  
 Disc Diameter ..... 12cm/8cm  
 Support Disc ..... CD-DA,  
 CD-R,CD-RW,MP3-CD,WMA-CD  
 Audio DAC ..... 24Bits/44.1kHz  
 Total Harmonic Distortion .....  $< 0.1\%$ (1kHz)  
 Frequency Response ..... 20Hz~20kHz  
 Signal to Noise Ratio .....  $\geq 67$ dB

### TUNER

FM Tuning Range ..... 87.5-108MHz  
 Tuning grid ..... 100K/50KHz

### Sensitivity

- Mono, 26db S/N Ratio .....  $< 22$ dB  
 - Stereo, 46db SN Ratio .....  $> 43$ dB  
 Selectivity .....  $> 28$ dB  
 Image Rejection ..... -20dB  
 Total Harmonic Distortion .....  $< 1\%$ (1kHz)  
 Signal to Noise Ration .....  $\geq 55$ dB

### SPEAKERS

Speaker Impedance ..... 4 ohm  
 Speaker Driver, base ..... 4"  
 Speaker Driver, tweeter ..... NA  
 Frequency Response ..... 30Hz-16KHz

### GENERAL INFORMATION

Total Output power ..... 50W RMS  
 AC Power ..... 230V/50Hz  
 Operation Power Consumption ..... 50W  
 Standby Power Consumption ..... 40W  
 Eco Standby Power Consumption ..... 4W  
 Headphone Output ..... 0.5W  
 USB Direct ..... Version 2.0

### Dimensions

- Main unit (w x h x d) ..... 200x120x265mm  
 - Speaker box (w x h x d) ..... 150x250x165mm  
 - Subwoofer(w x h x d) ..... NA

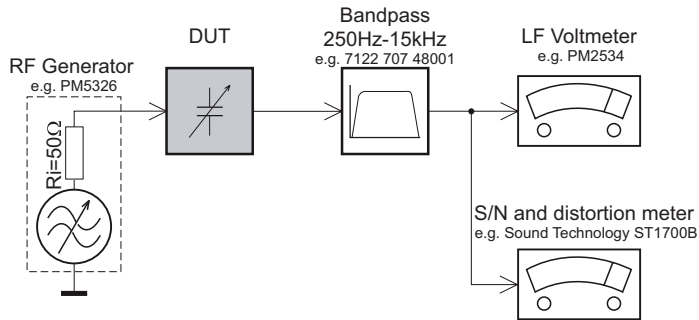
### Weight

- With Packing ..... 7.7KG  
 - Main unit ..... 2.73KG  
 - Speaker box ..... 1.62x2KG  
 - Subwoofer ..... NA

Specifications and external appearance are subject to change without notice.

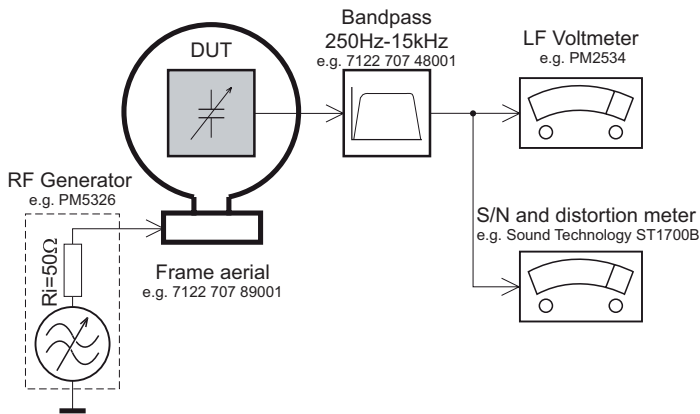
# Measurement Setup

## Tuner FM



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

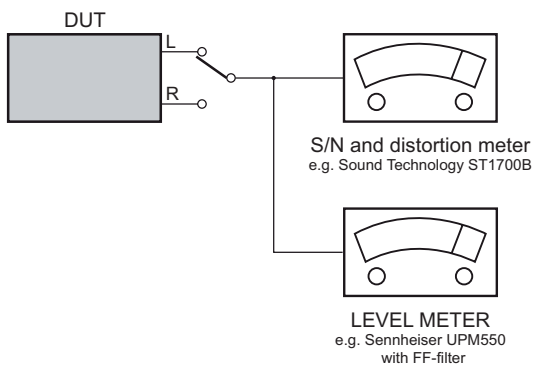
## Tuner AM (MW,LW)



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).

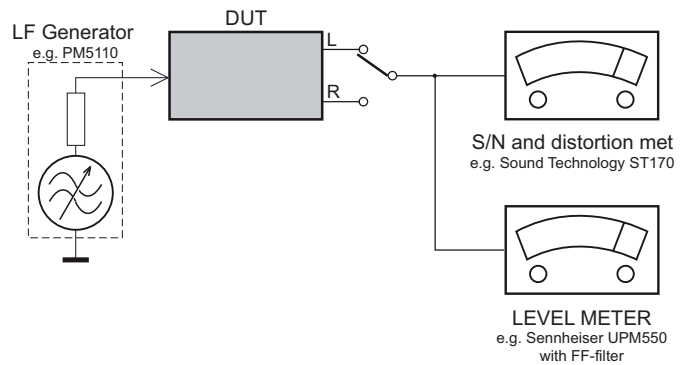
## CD

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



## Recorder

Use Universal Test Cassette **CrO2** 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](http://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.

## Items of Safety Attention

### Maintenance Attention

Attention: Please read <Items of Safety Attention> carefully. If there are unexpected conflicts between safety attention and maintenance attention, please abide to safety attention: Safety first.

Common Maintenance Attention

- ① Before operating, please unplug the AC power cord from the outlet.
  - a) Disassemble any parts.
  - b) Cut-off or re-connect plug and other inserting parts.
  - c) When electrolysis capacitance and test parts is parallel connected, anti-polarity and wrong replace will cause explosion.
- ② Do not spray chemical on the component system, surroundings and any parts.
- ③ Clean the electric junction with a cotton stick which is with cleaning mixture, except there is other demand in this manual.
 

Please notes:

It is a kind of inflammable mixture.

  - ▶ Do not use lubricant to the soldering point, except there is
  - ▶ other demand in this manual

### Common Controlling

During maintenance, please take common controlling to protect component system and electronic parts and prevent damages to the circuit due to improper operation.

Led out wire should be kept away from high-pressure or high-temperature parts.

### ES

Some semi-conductor parts are easily damaged by static charges, these parts are called: ES. They are mainly the cores of transistor lead identification. The following technical ways can be used to reduce the damages by static charges.

Before connecting semi-conductor or the parts. Let off the static charges of the body by connection the earth. In the other hand, to prevent potential electric shock hazard, please use industrial static handle before connecting power for checking the equipment.

- ① After unsoldering the ES parts, put the parts on a electric surface such as aluminum foil to prevent accumulating static charges to damage the parts.
- ② Only use anti-static charges grounded soldering irons to unsolder the parts or solder ES parts.
- ③ Some soldering tin called "Anti-static charges" can also generate charges to damage ES parts.
- ④ Do not use poisonous and caustic agent which these kinds of chemicals can generate static charges to damage the ES parts.
- ⑤ Do not take ES parts out of conductive packages until they are used (mostly replacing ES parts is packed with aluminum foil or similar conductive materials making a short circuit).
- ⑥ After taking replaceable ES parts from Anti-static charges cone, please insert the ES parts in the correctly location soon as possible.
- ⑦ During handing sealed ES parts, reduce the movement of the body (clothes rubbing and moving on the rug can generate static charge to damage the ES parts.)

### Common Soldering Rules

- ① Use only grounded low-voltage soldering iron, and proper size and shape which can sustain the temperature of soldering horn to range from 350 to 390.
- ② Use rosin flux which is demanded by RMA ; include 60%Tin 40% lead.
- ③ To maintain soldering iron and its tin very well.
- ④ Use the wire brush but not spray cleaners such as Freon to clean the soldering surface.
- ⑤ Adopt the melting ways:
  - a) The temperature of soldering horn range from 350 to 390.
  - b) Heat up the parts pin, until soldering tin is molten.
  - c) Use the desoldering pump to suck out the molten soldering tin quickly.

Note: Quickly operating can prevent superheating the electronic-plating copper.
- ⑥ Adopt the following soldering ways.
  - a) The temperature of soldering horn range from 350 to 390.
  - b) Hold the soldering iron and welding rod pointed to the parts pin, until soldering tin is molten. Then move the soldering horn quickly to the location that you want to solder.

Note: Quickly operating can prevent superheating electronic-plating copper of printed circuit board.

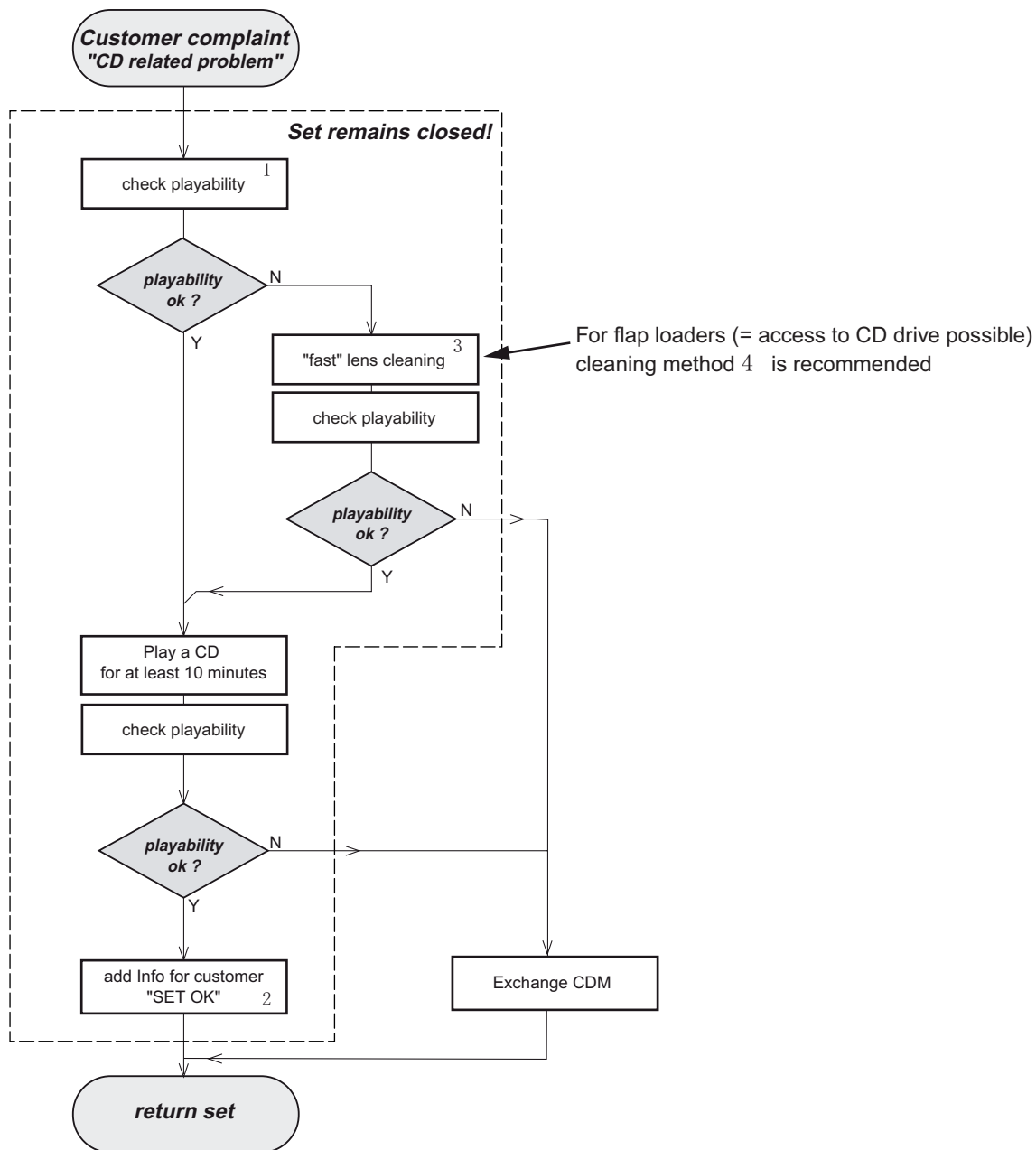
  - c) Check the welting zone carefully, then brush the unwanted soldering tin away with a wire brush.

### Unsolder/Replace IC

Notes:

- ① Do not touch the IC body directly with soldering iron.
  - ② Pre-heating soldering iron at about 130 for some seconds avoid the damages caused by IC heated suddenly.
  - ③ For normal IC, the temperature of the solder horn is about 350, and can increase to 390 for some bigger IC.
  - ④ Use the filamentous welding rod and solder which thickness is about 0.3mm to solder thin IC and add the solder as needed.
  - ⑤ Replace the IC carefully and solder it quickly.
  - ⑥ After unsoldering the IC, clean the basic board carefully to ensure the board is usable.
  - ⑦ Prevent the molten soldering tin dripping on the board which will engender a short circuit.
  - ⑧ Aim at the first terminal and fix it, then aim at other terminals for correctly inserting IC. You can solder quickly just like this.
  - ⑨ Before operating, please make sure the IC is unusable. Do not unsolder repeatedly.
  - ⑩ During soldering especially soldering a thin IC with many pins, check the weld carefully.
  - ⑪ After replacing, check that there is not soldering leak, rosin joint, short circuit and so on.
- Unsolder:
- ① Use the soldering iron to melt the soldering tin.
  - ② Before unsoldering IC, suck out the molten solder tin.
- Replace:
- ① Make sure all the IC pins are on their correct location, then solder.
  - ② Use a wire brush to clean the welting zone.

Instruction On CD Playability



1 - 4 For description - see following pages

## Instruction On CD Playability

### PLAYABILITY CHECK

For sets which are compatible with **CD-RW** discs  
 use CD-RW Printed Audio Disc .....7104 099 96611  
 TR 3 (Fingerprint)  
 TR 8 (600µ Black dot) **maximum at 01:00**

- playback of these two tracks without audible disturbance  
 playing time for: Fingerprint  $\geq 10$ 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 444A .....4822 397 30245  
 TR 14 (600µ Black dot) **maximum at 01:15**  
 TR 19 (Fingerprint)  
 TR 10 (1000µ wedge)

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

### 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.

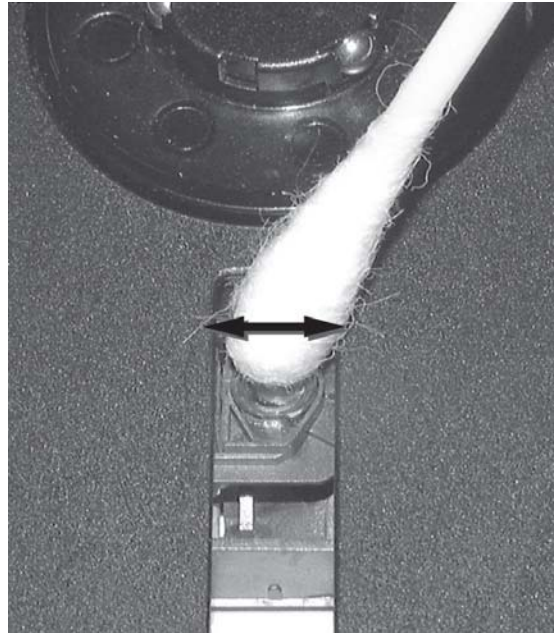
### LIQUID LENS CLEANING

**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.



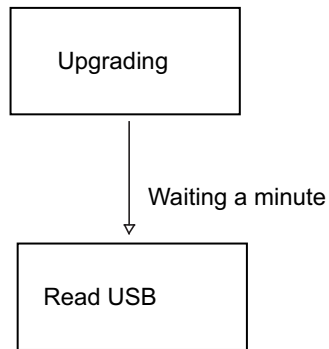


## Software Version Check & Upgrade

### Upgrade software

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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.

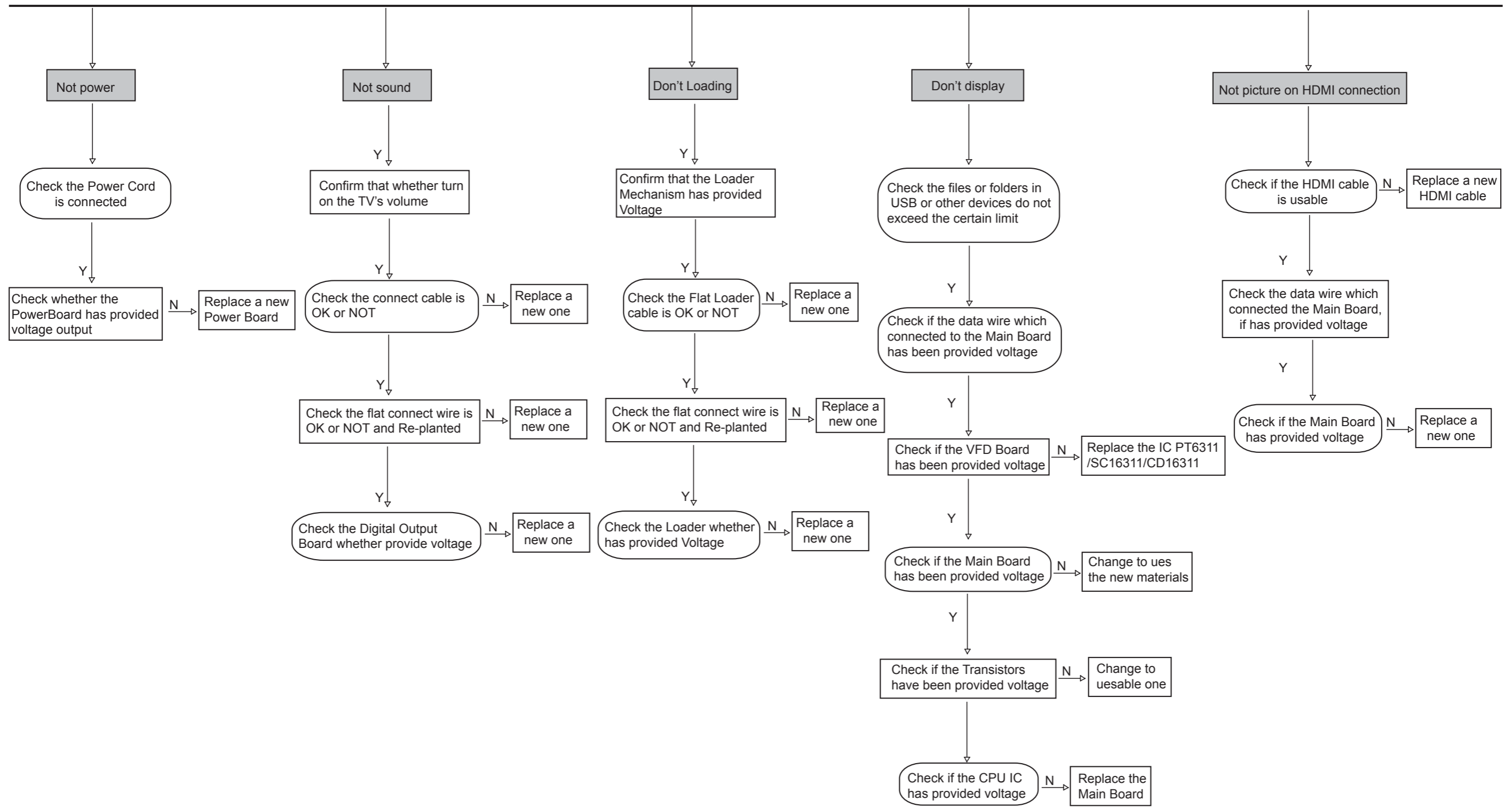
### Software version and date check

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

```
Ver: MCD302/xx Vxxx  
Date: Mmm dd yyyy  
Time: hh:mm:ss
```

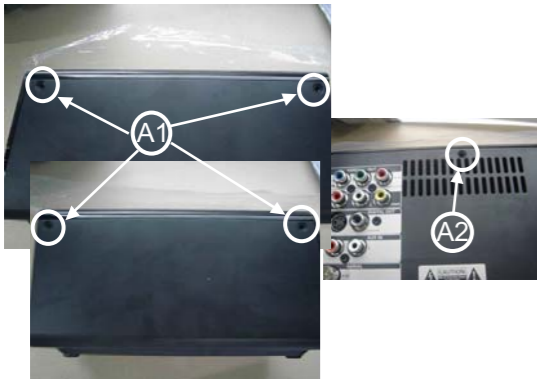
Malfunction Follow Check Chart



Disassembly Diagram

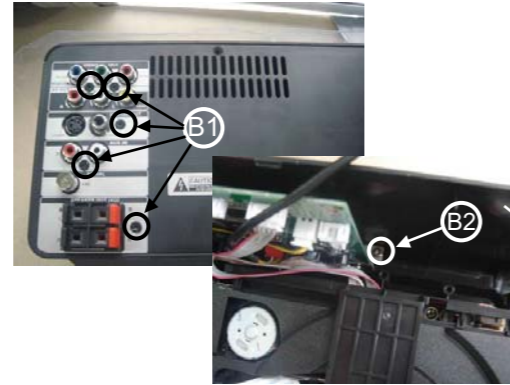
A. Remove the Top Cover

- A1. Loose 4pcs screws(3 x 8 KA)
- A2. Loose 1pc screw(3 x 10 FA)



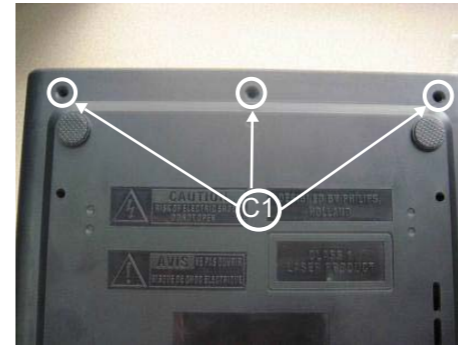
B. Remove the Decoder Board

- B1. Loose 5pcs screws(3 x 10 FA)
- B2. Loose 1pc screw(3 x 8 BA)



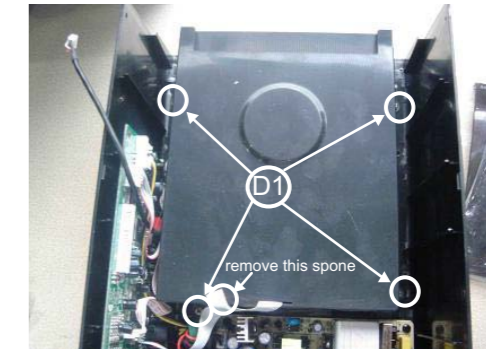
C. Remove Front Cabinet

- C1. Loose 3pcs screws(3 x 10 FA)



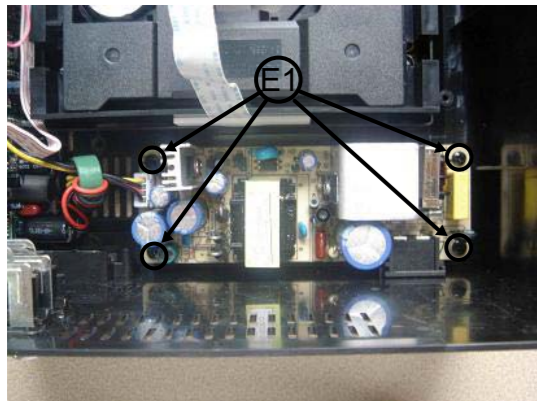
D. Remove the Dusstproof Cover

- D1. Loose 4pcs screws(3 x 8 BA)



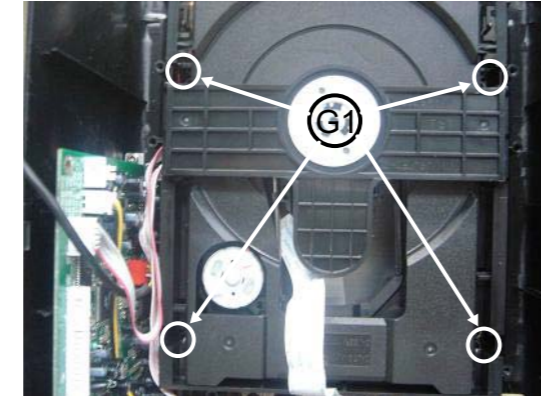
E. Remove the Power Board

- E1. Loose 4pcs screws(3 x 10 BA)



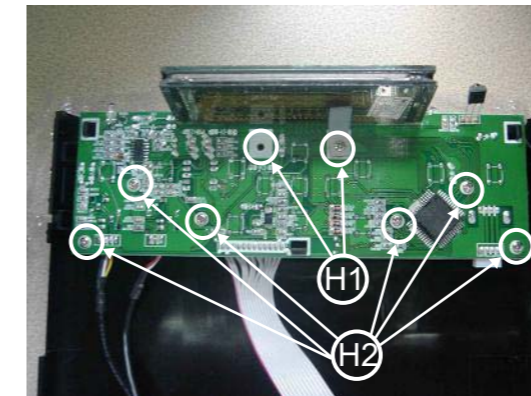
G. Remove the Loader Driver Mechanism

- G1. Loose 4pcs screws(3 x 10 PWA)

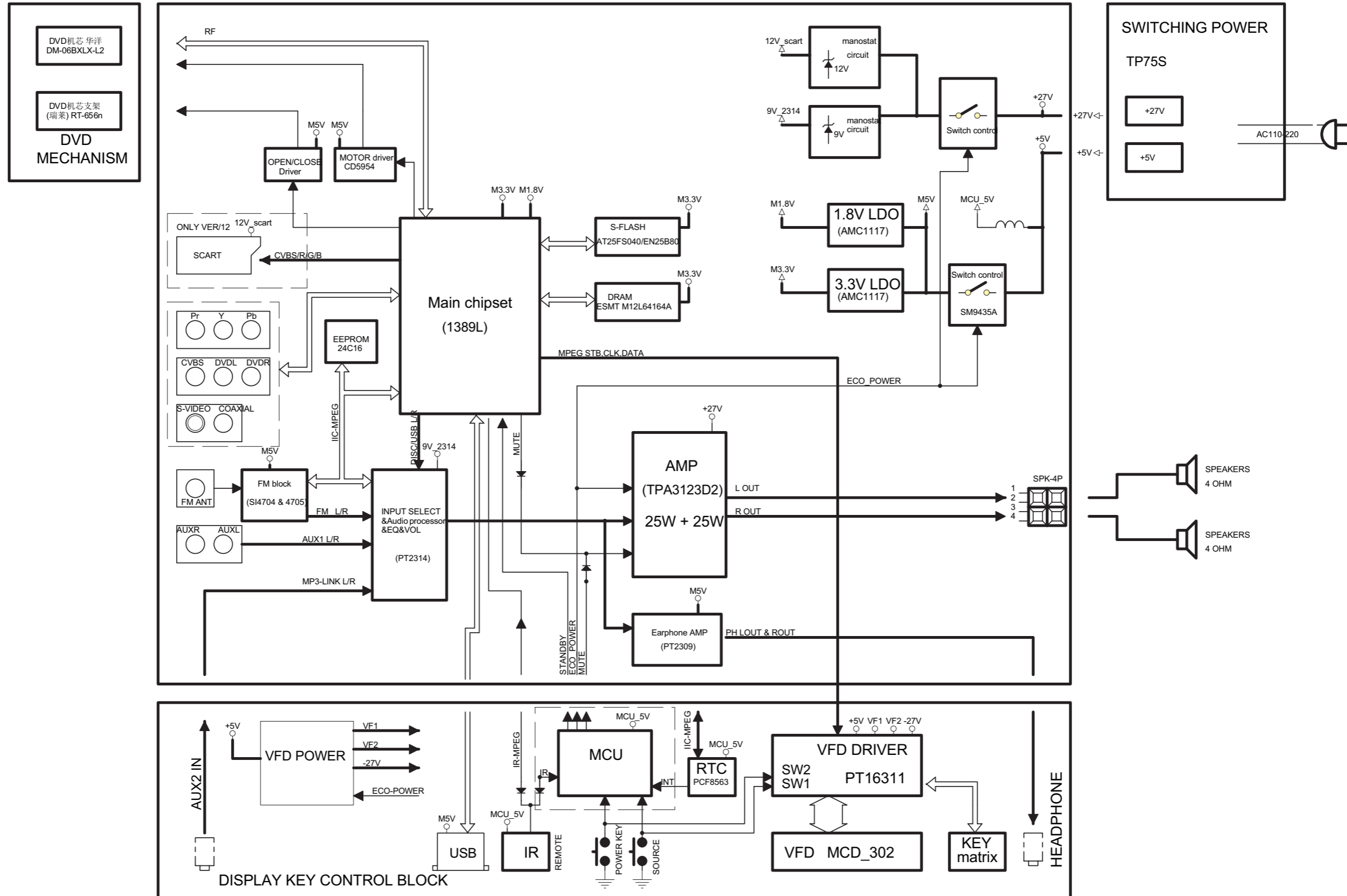


H. Remove the Display Board

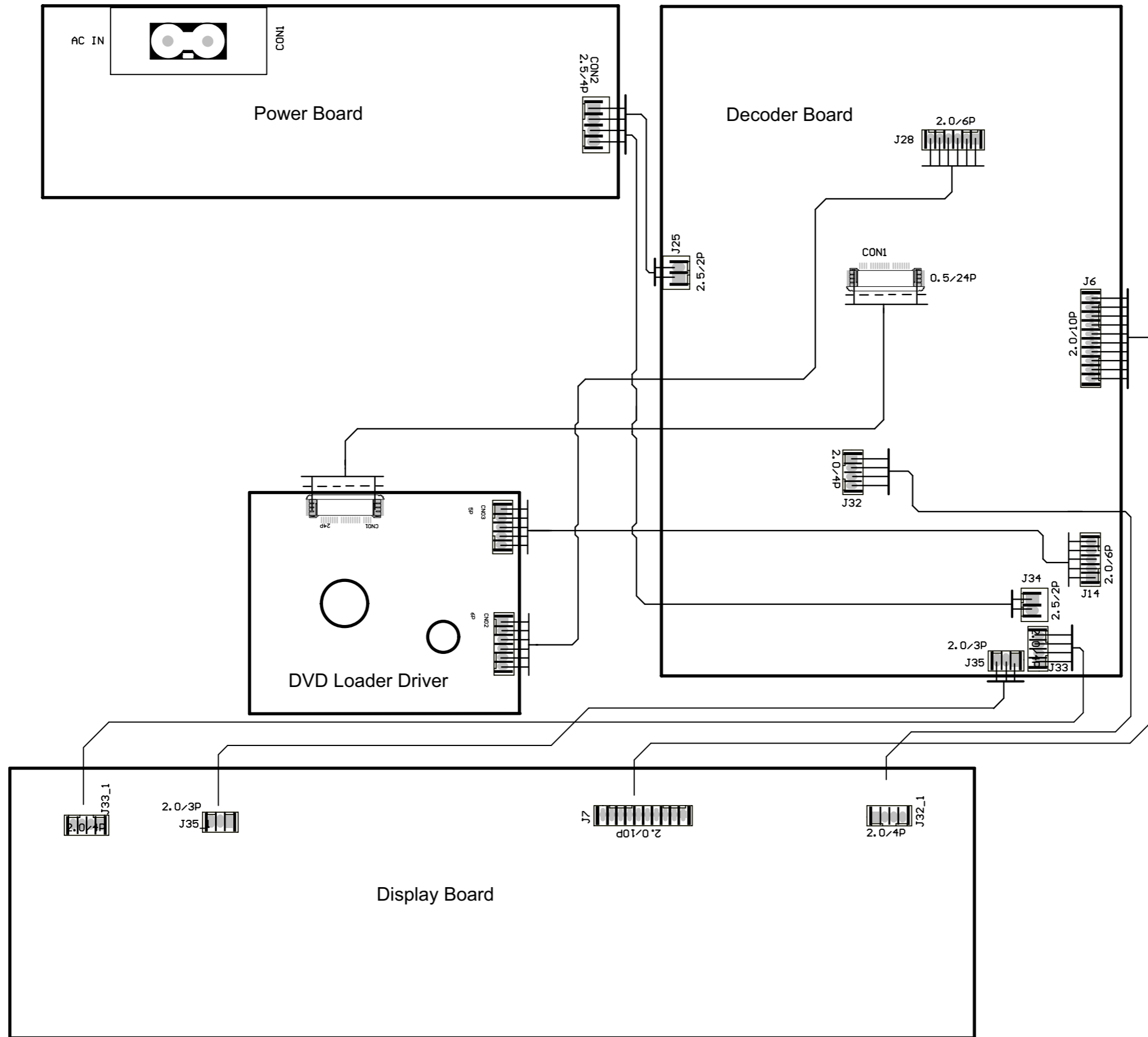
- H1. Loose 2pcs screws(2.6 x 10 PA)
- H2. Loose 6pcs screws(2.6 x 8 PA)



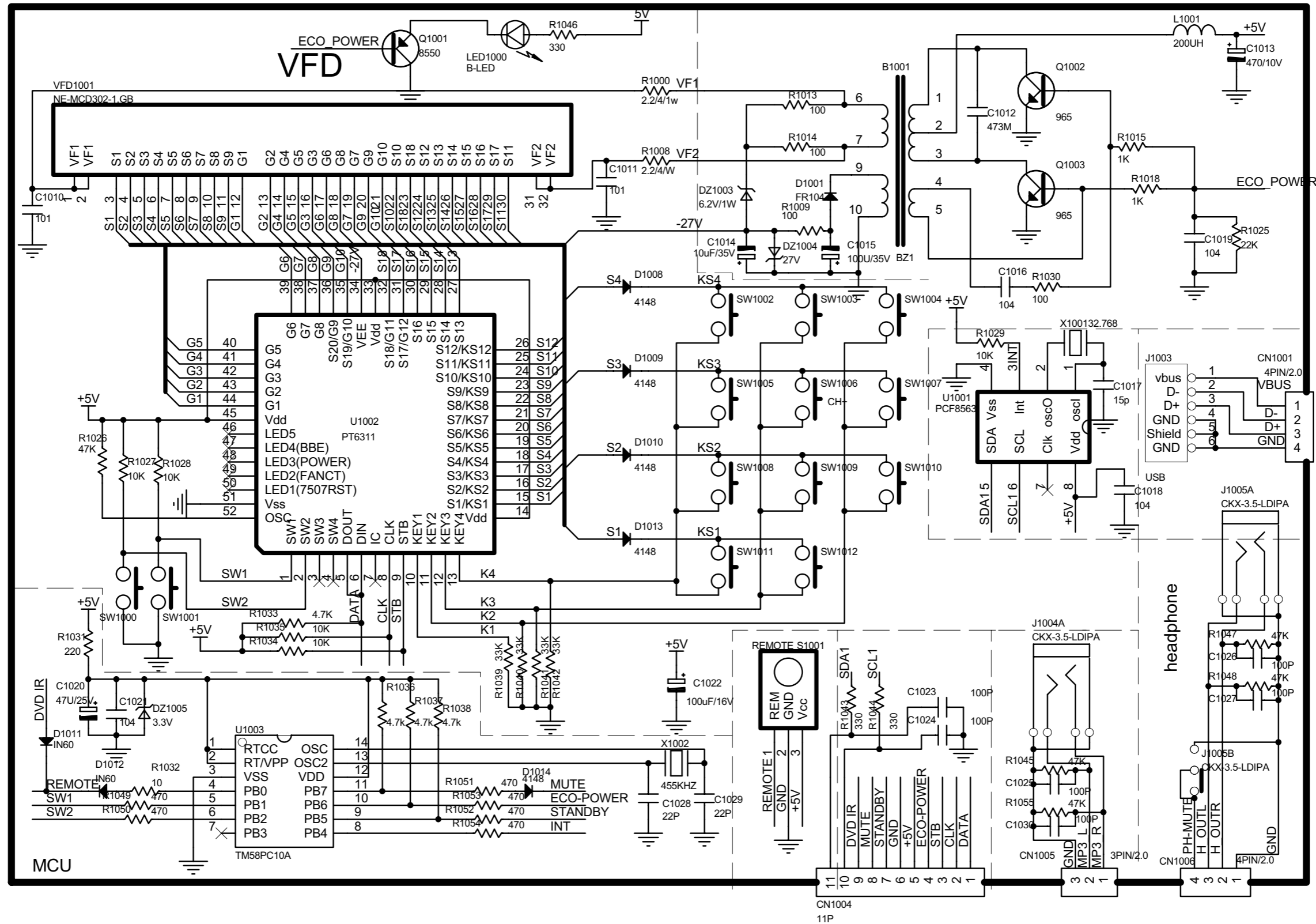
Block Diagram



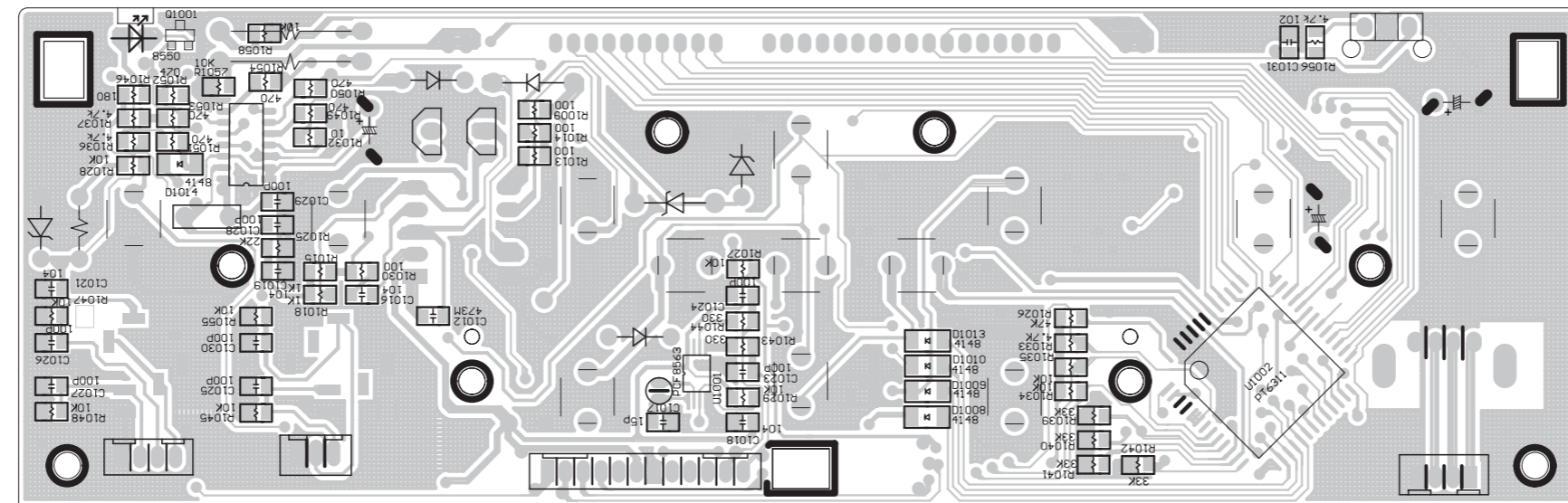
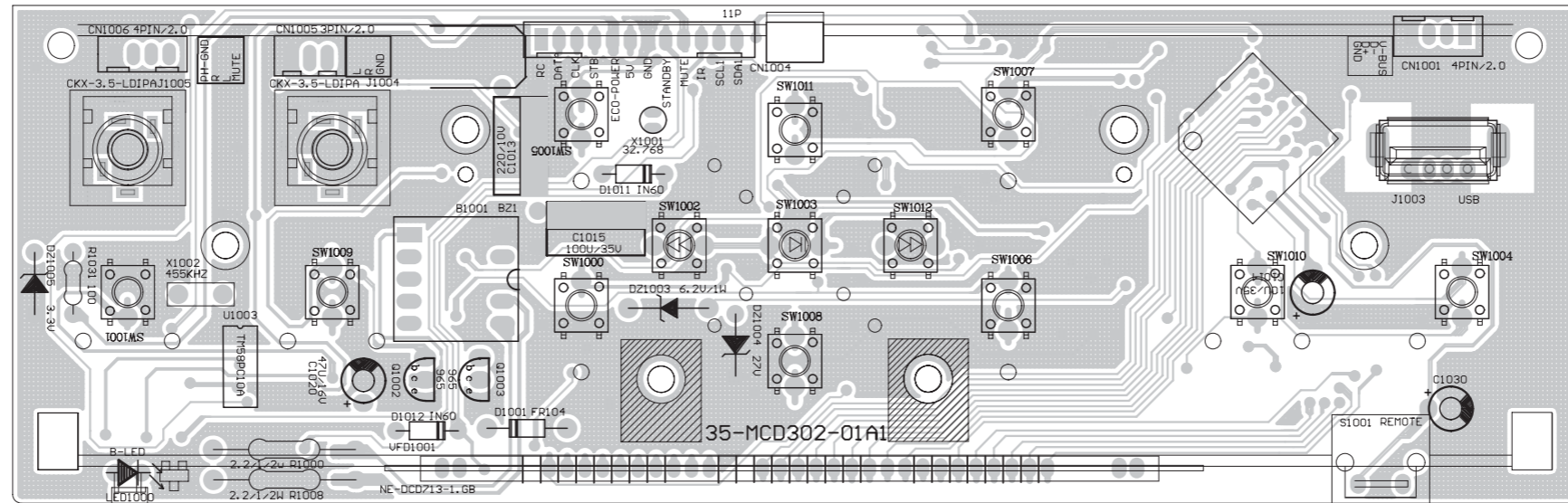
Wiring Diagram



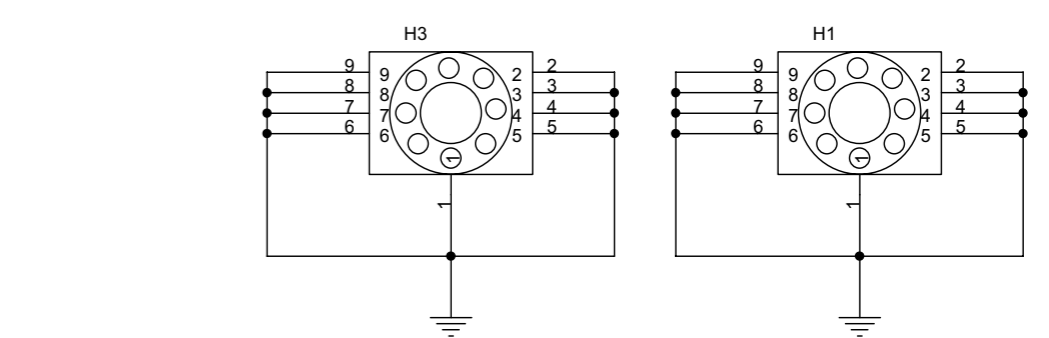
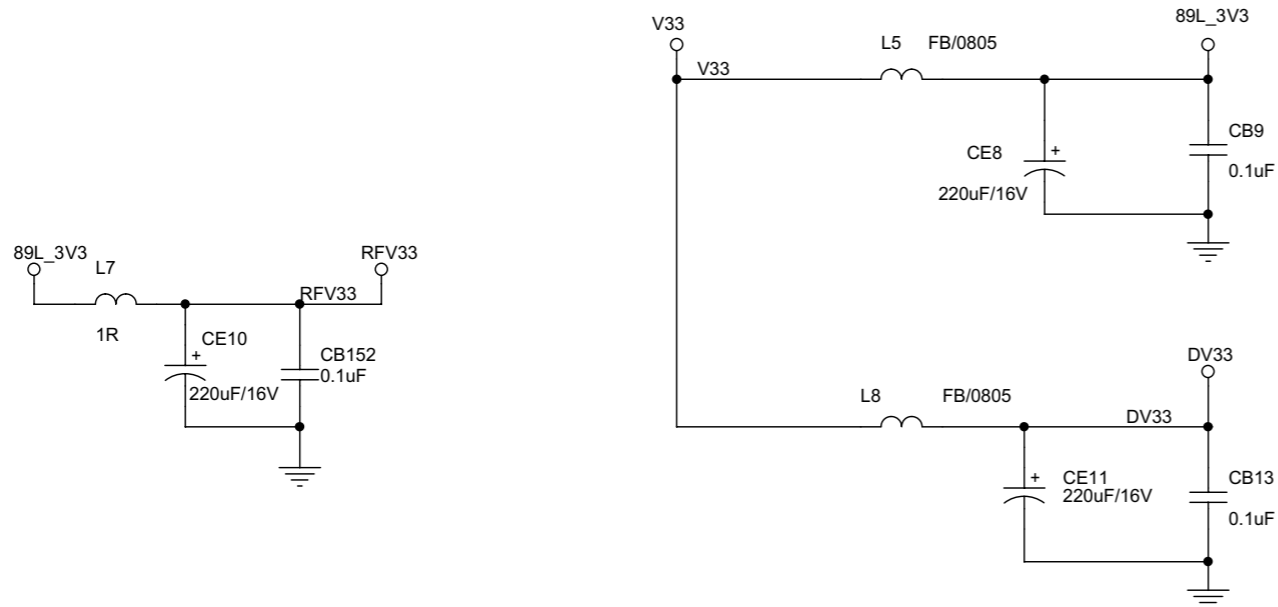
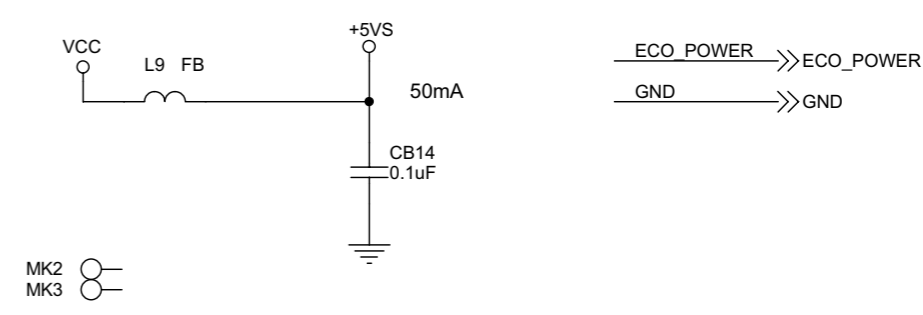
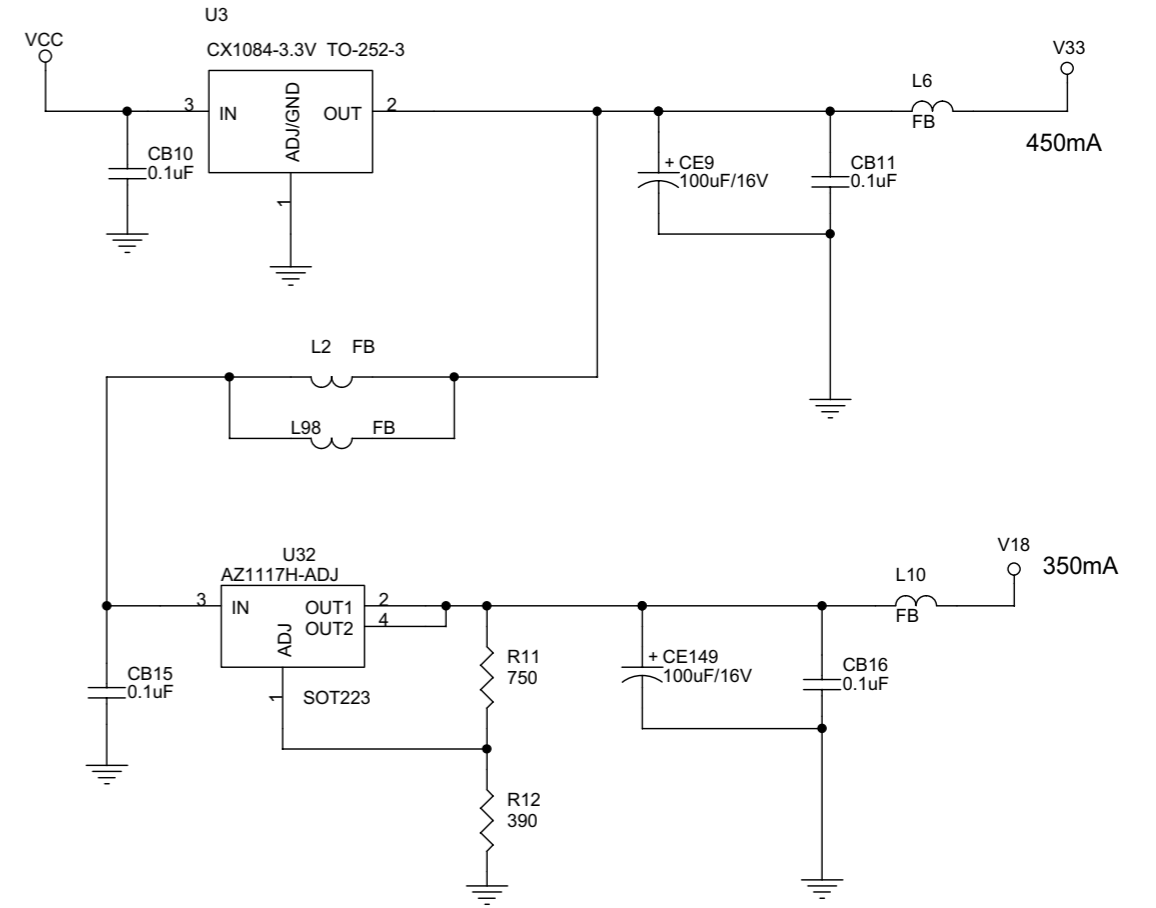
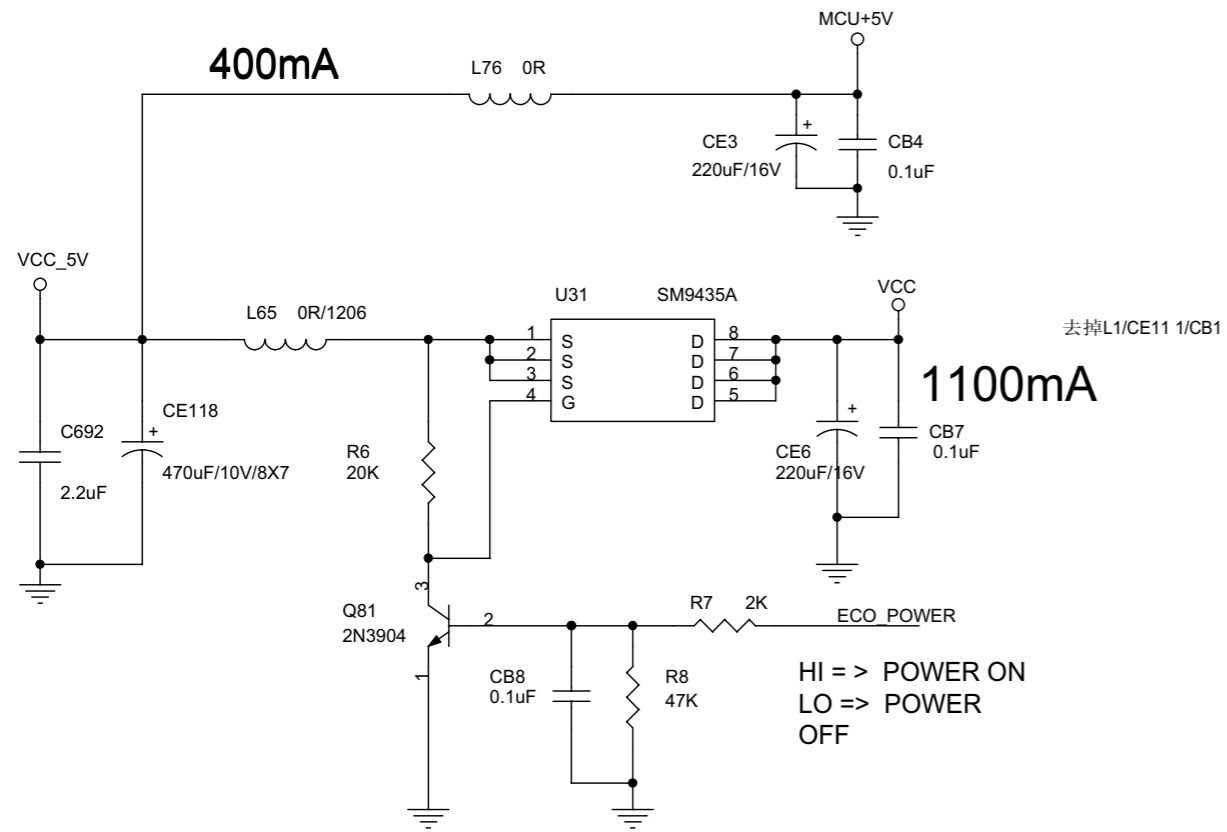
VFD Display Board -- Circuit Diagram



VFD Display Board -- Layout Diagram

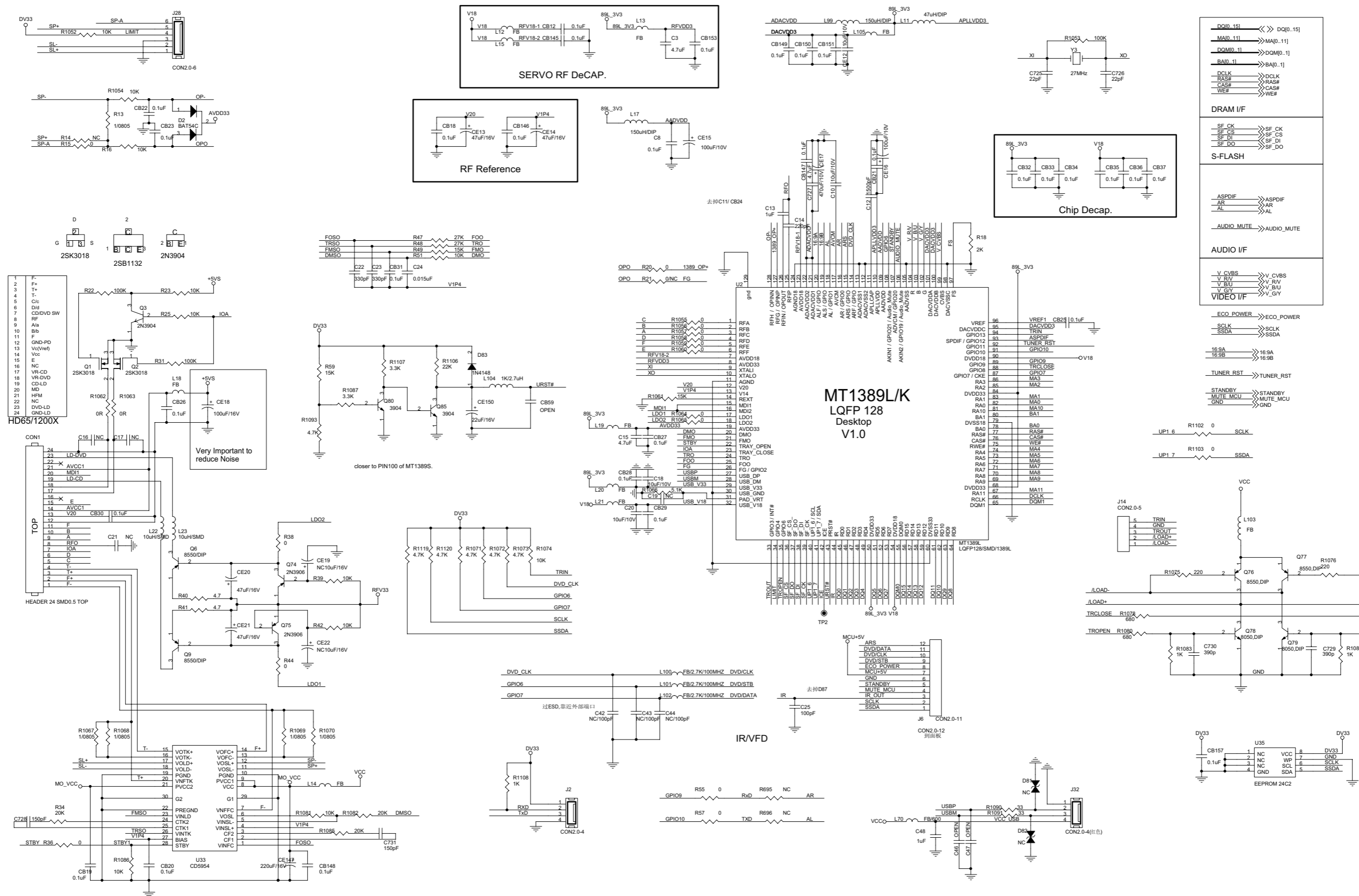


Decoder Board -- Circuit Diagram

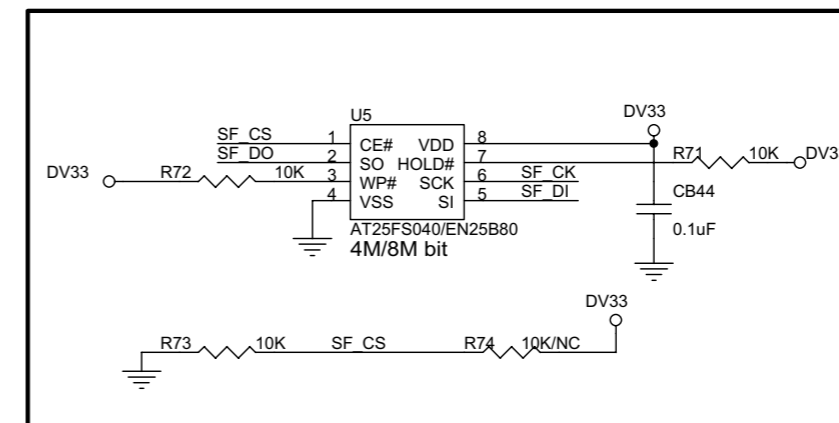
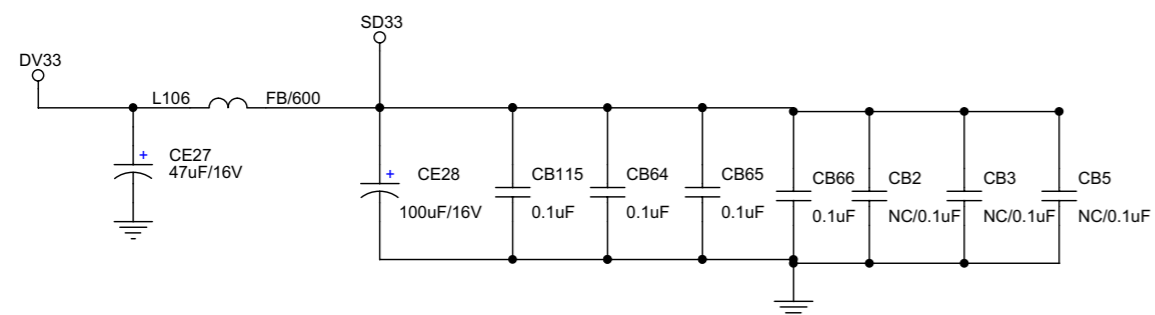
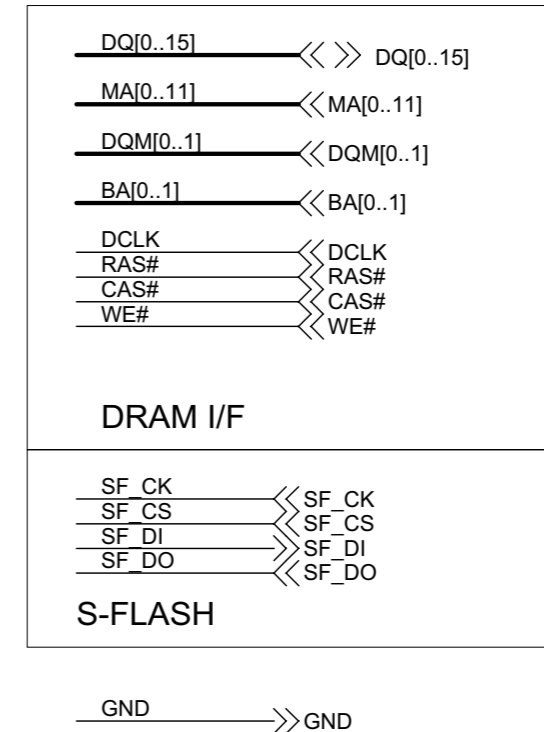
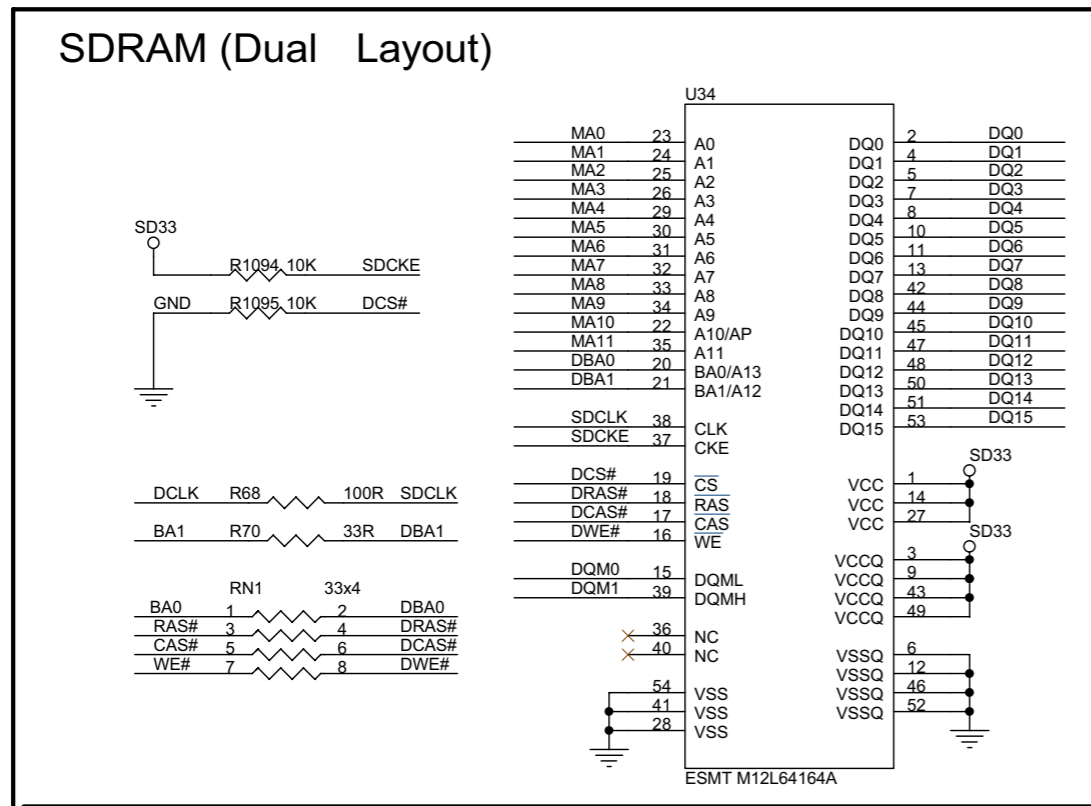




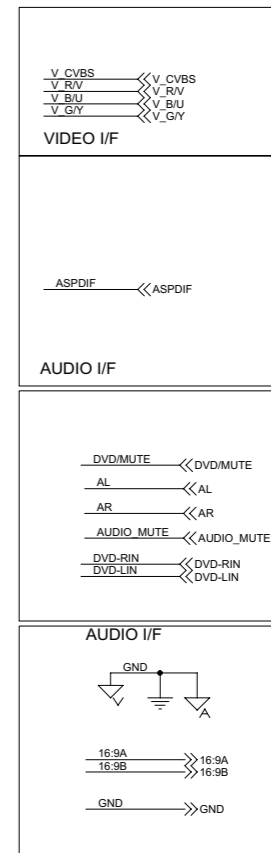
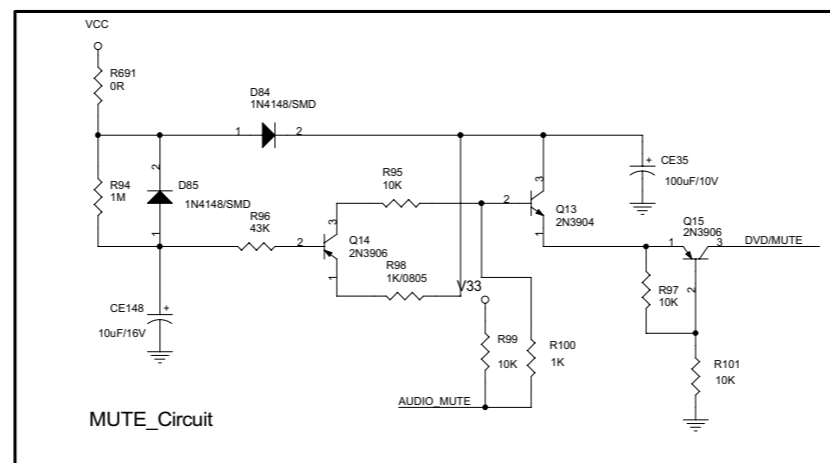
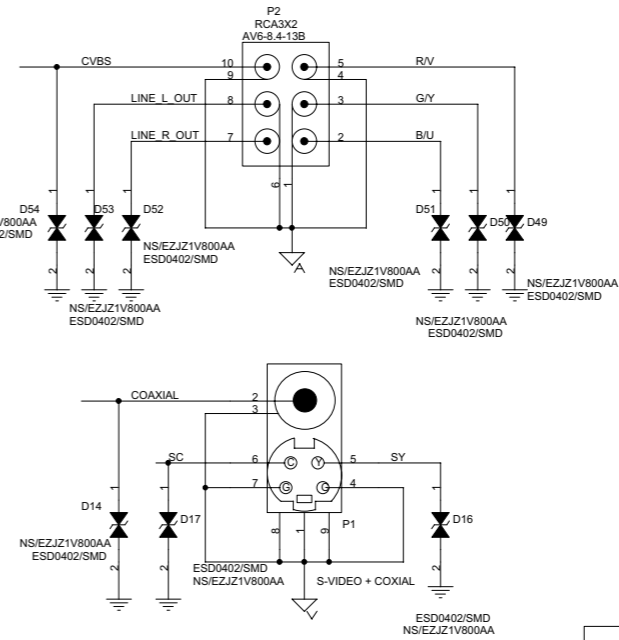
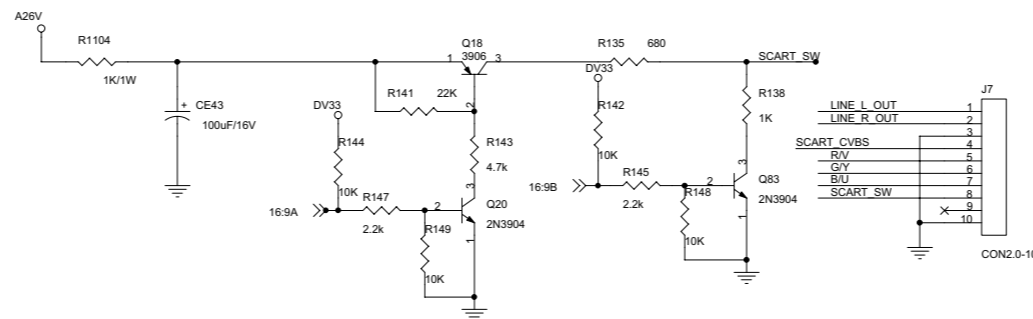
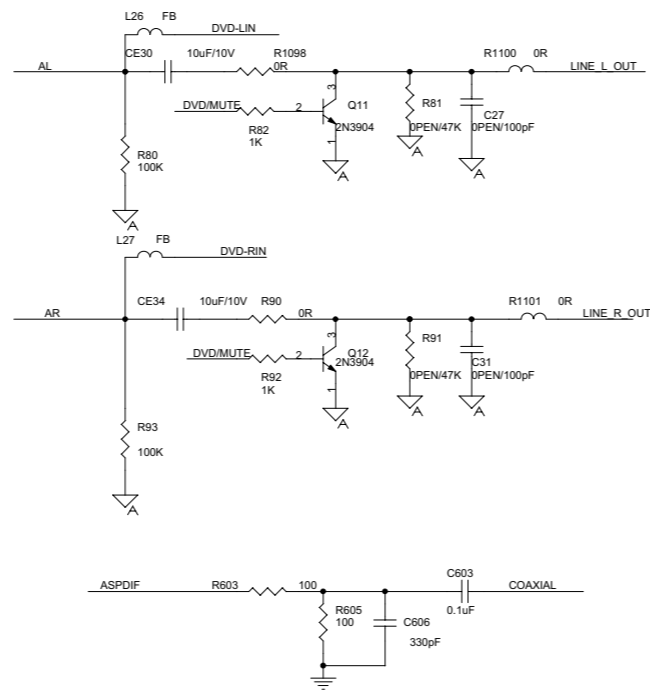
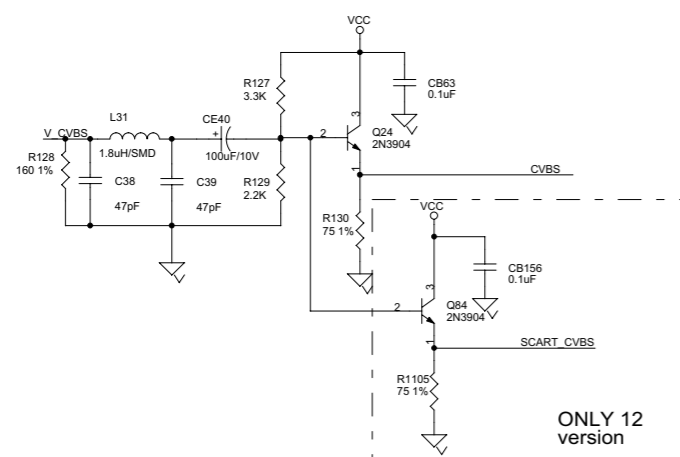
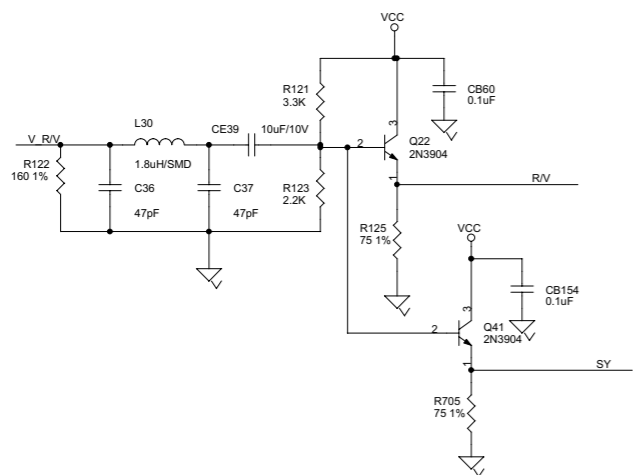
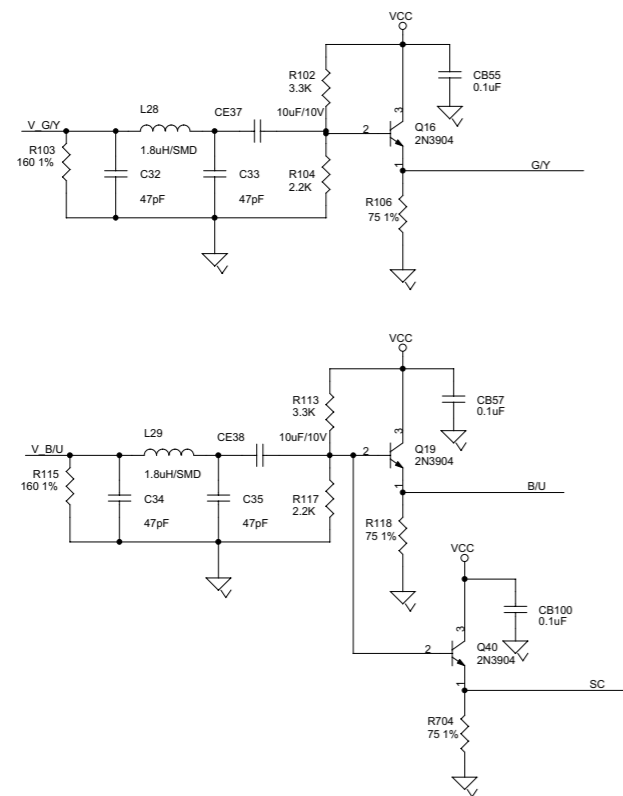
# Decoder Board -- Circuit Diagram



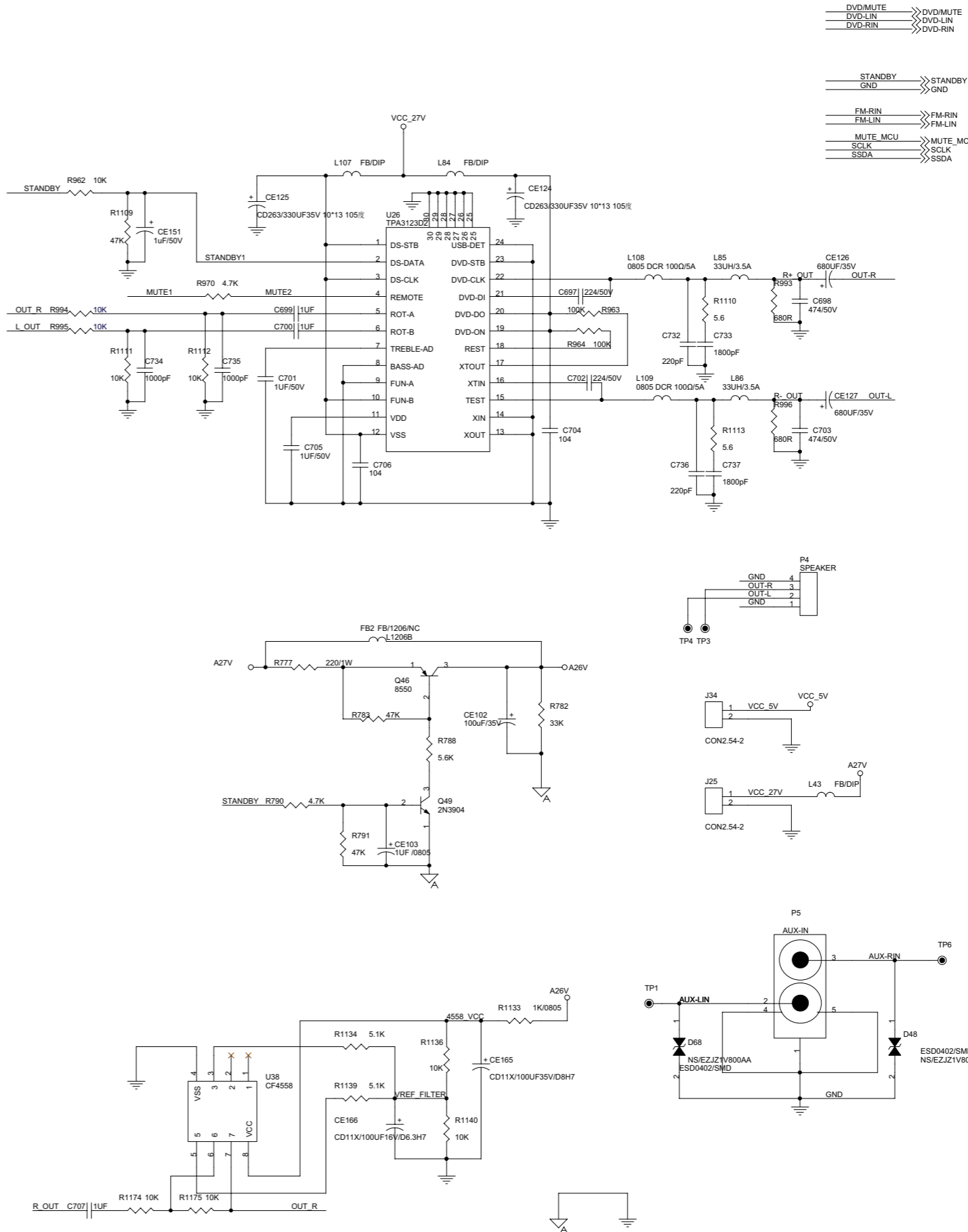
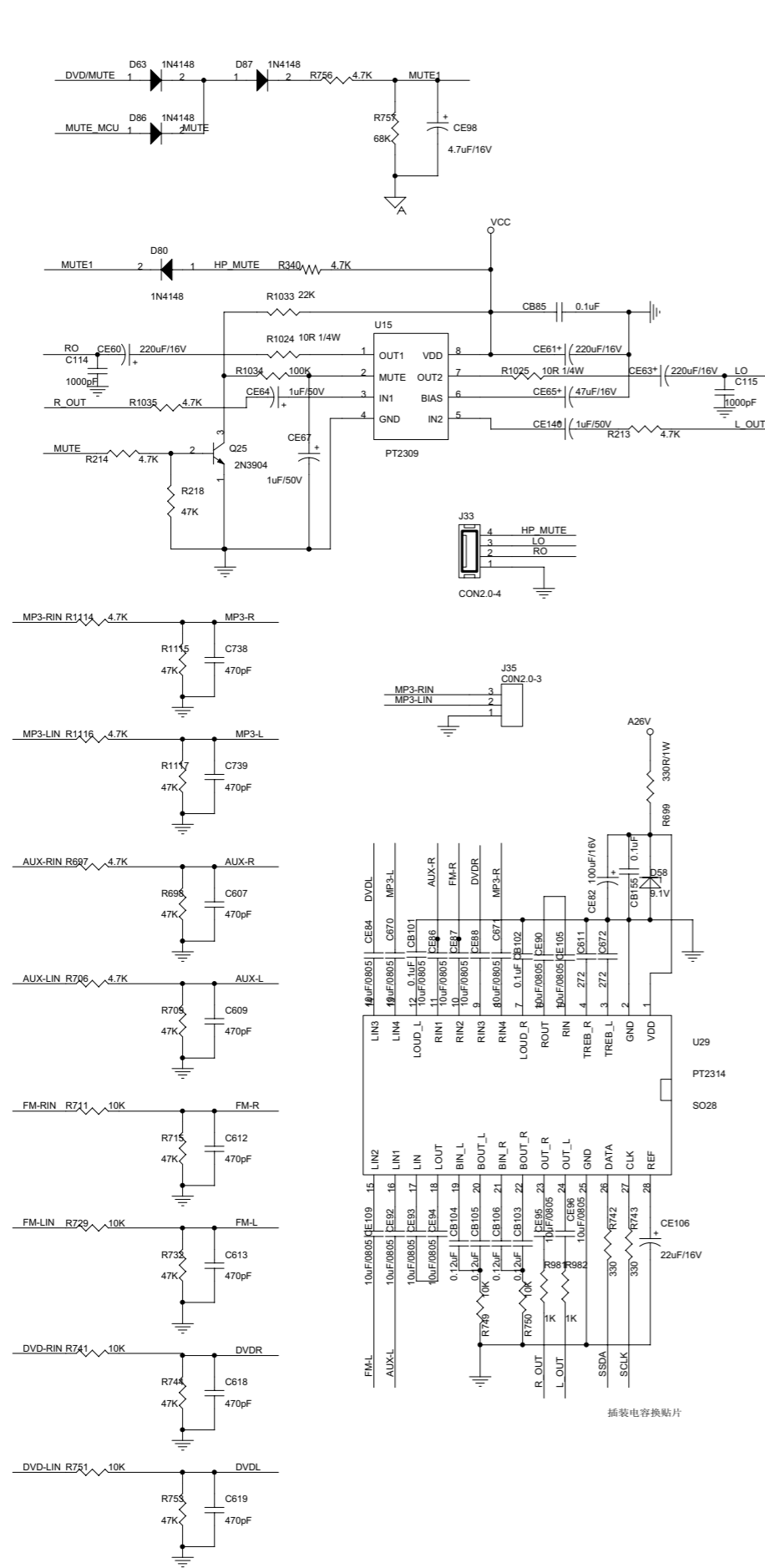
Decoder Board -- Circuit Diagram



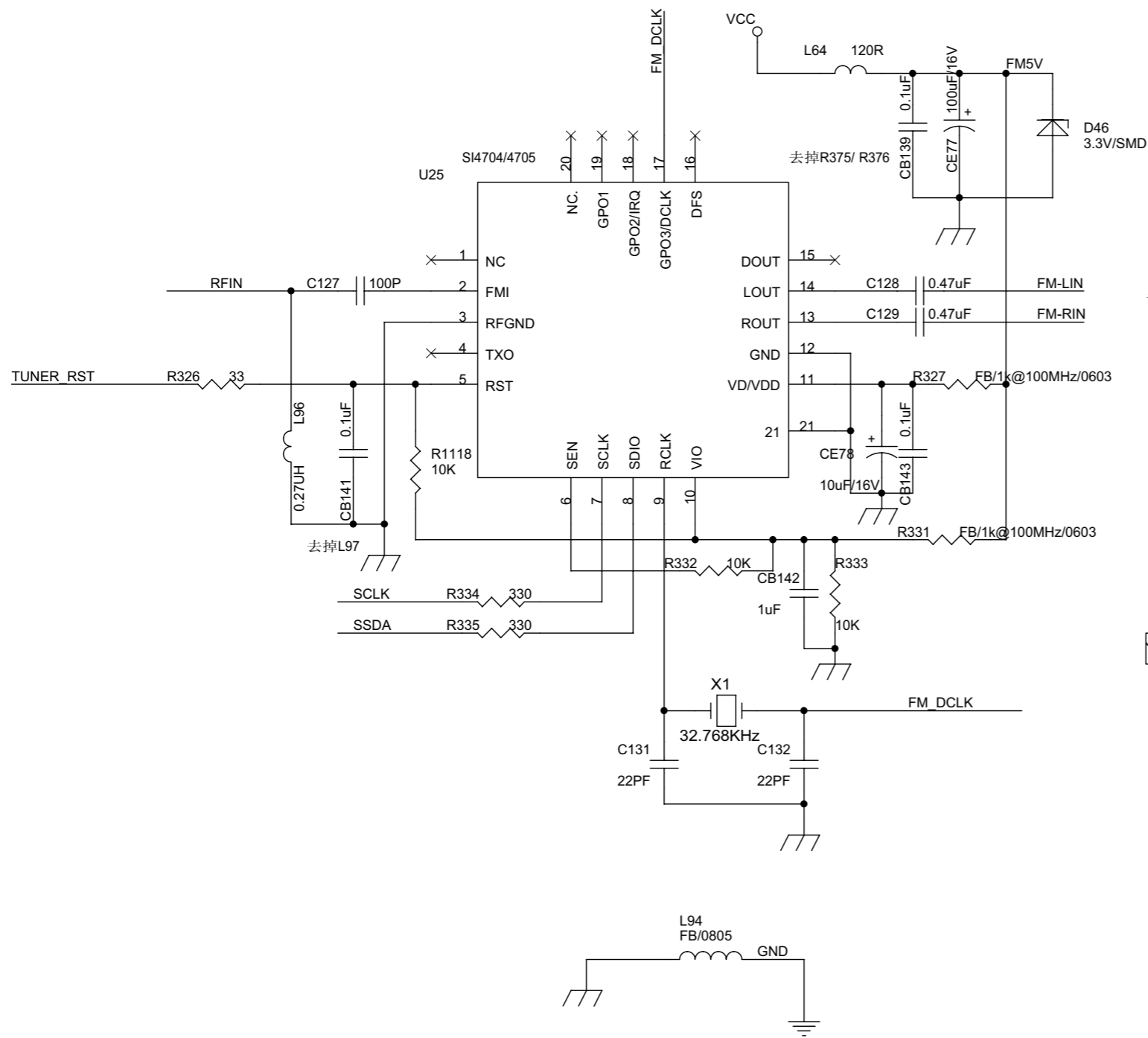
Decoder Board -- Circuit Diagram



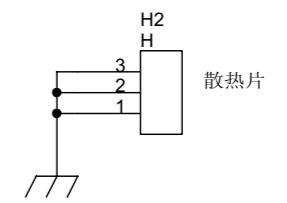
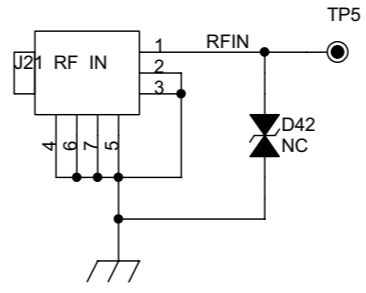
Decoder Board -- Circuit Diagram



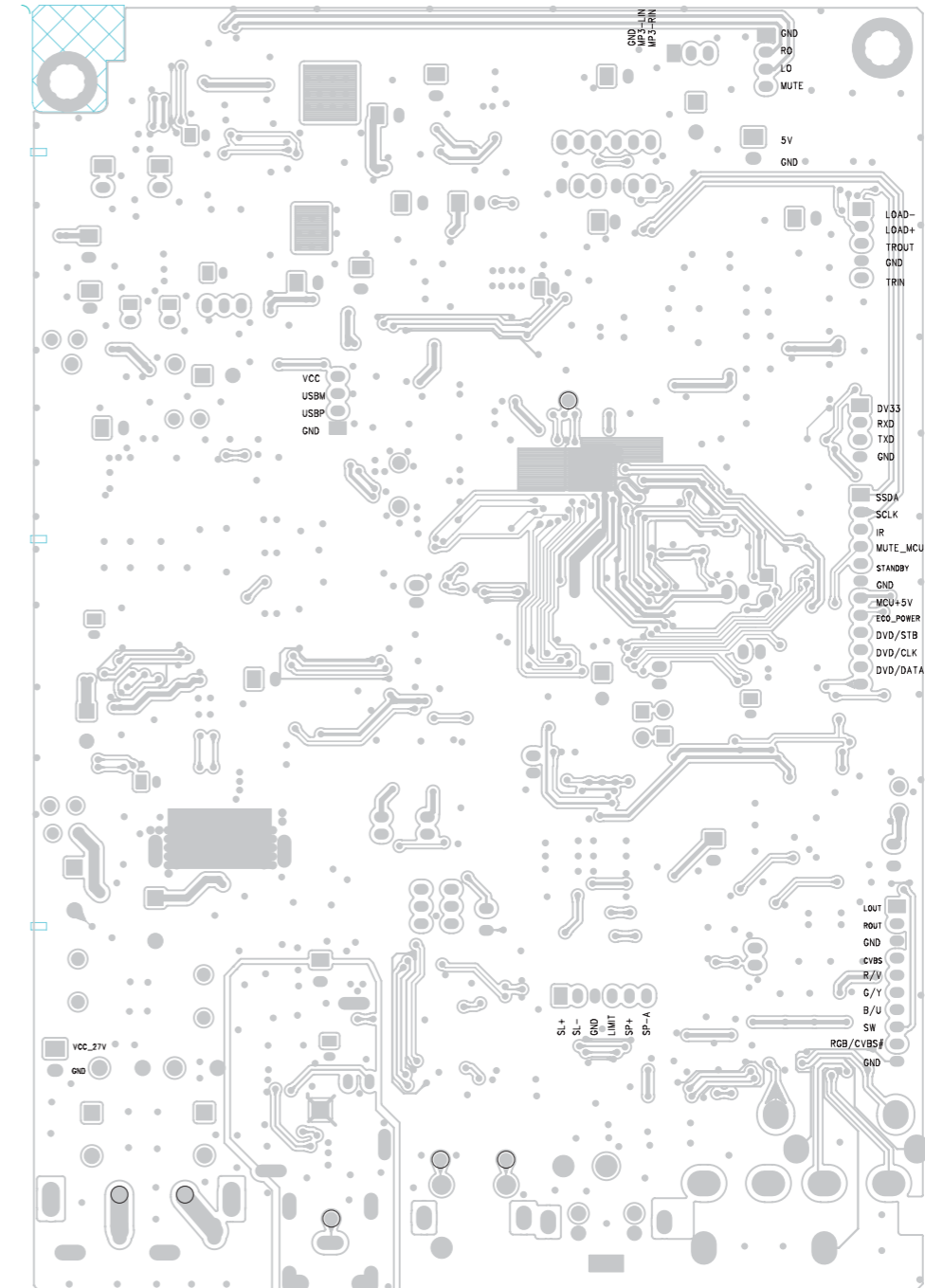
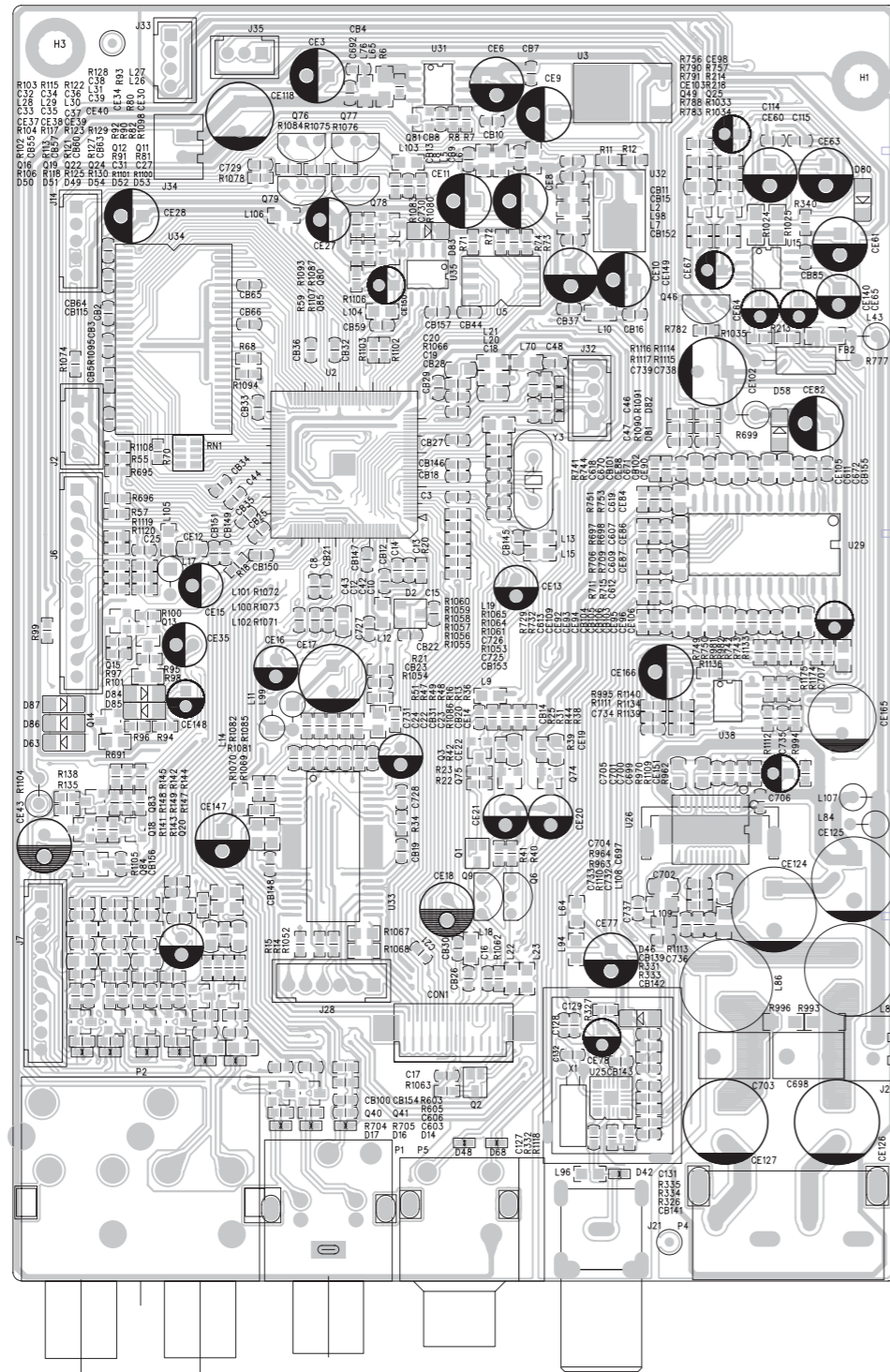
Decoder Board -- Circuit Diagram



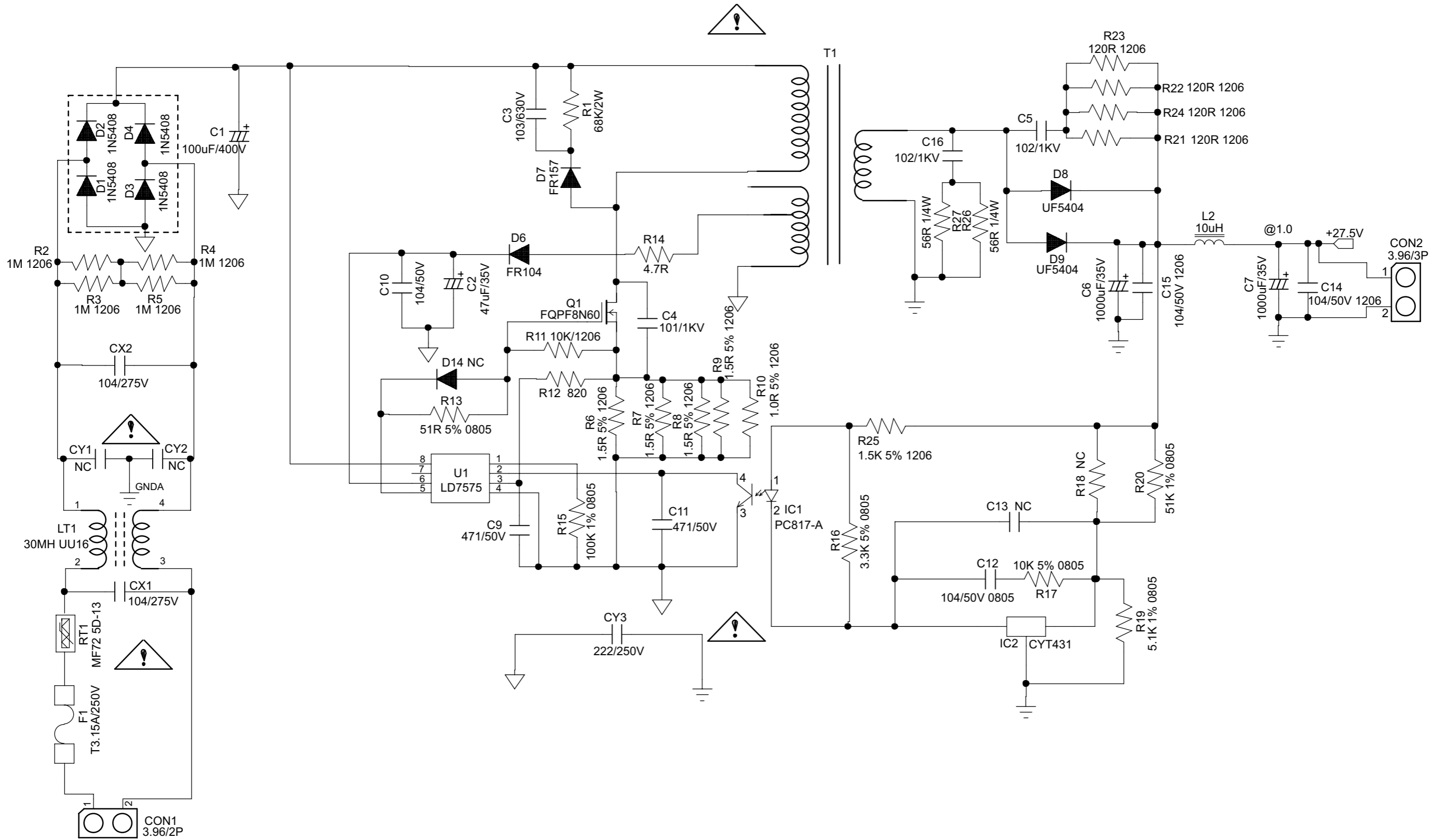
去掉C126/C130/R316/R329/R330/R319/R320/R321/R323/Q34/Q36



Decoder Board -- Layout Diagram

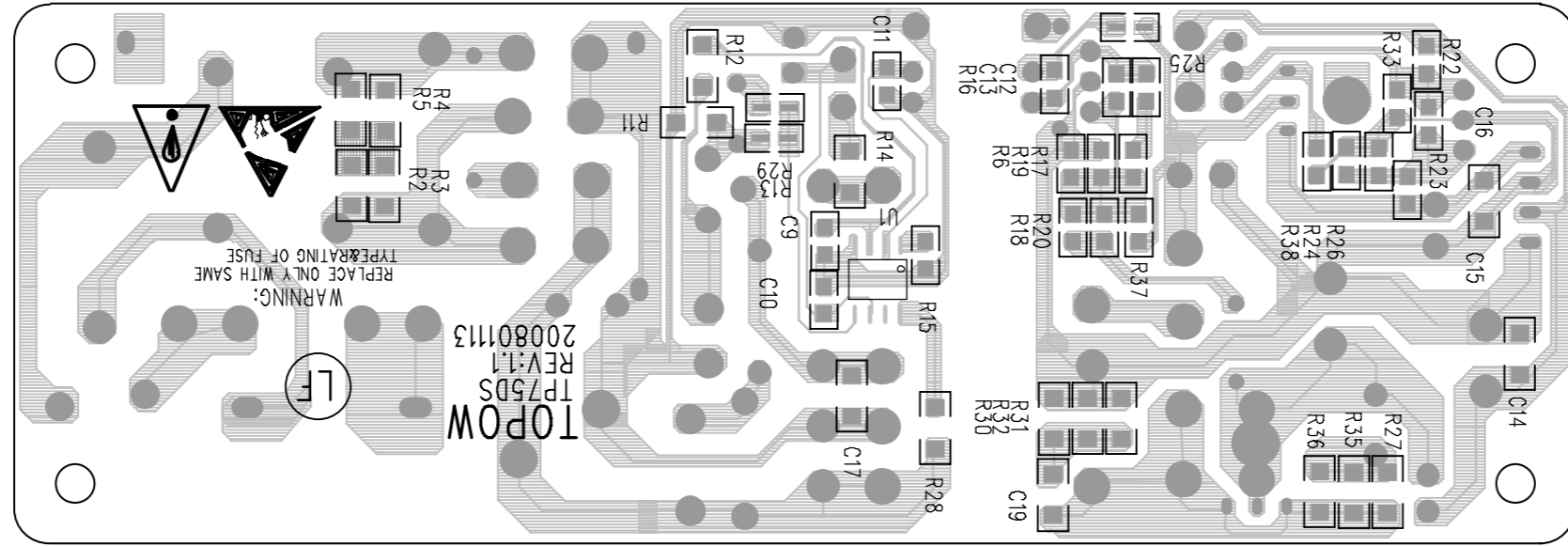
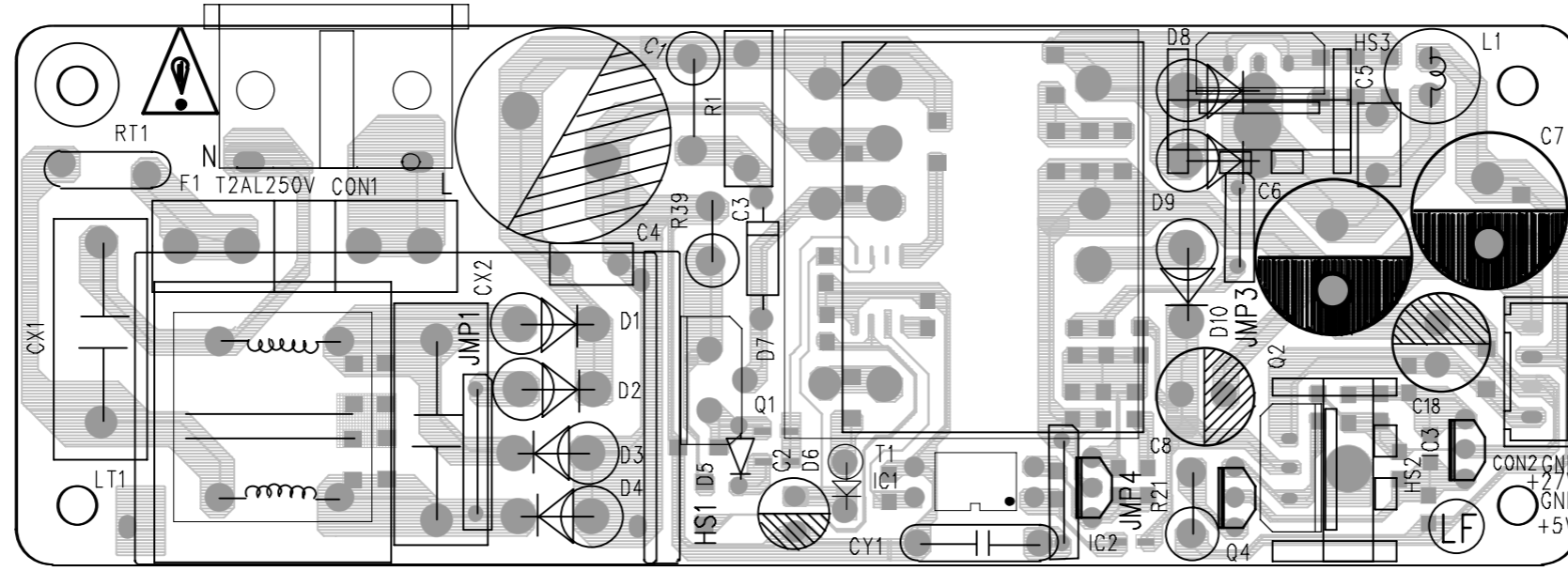


Power Board -- Circuit Diagram



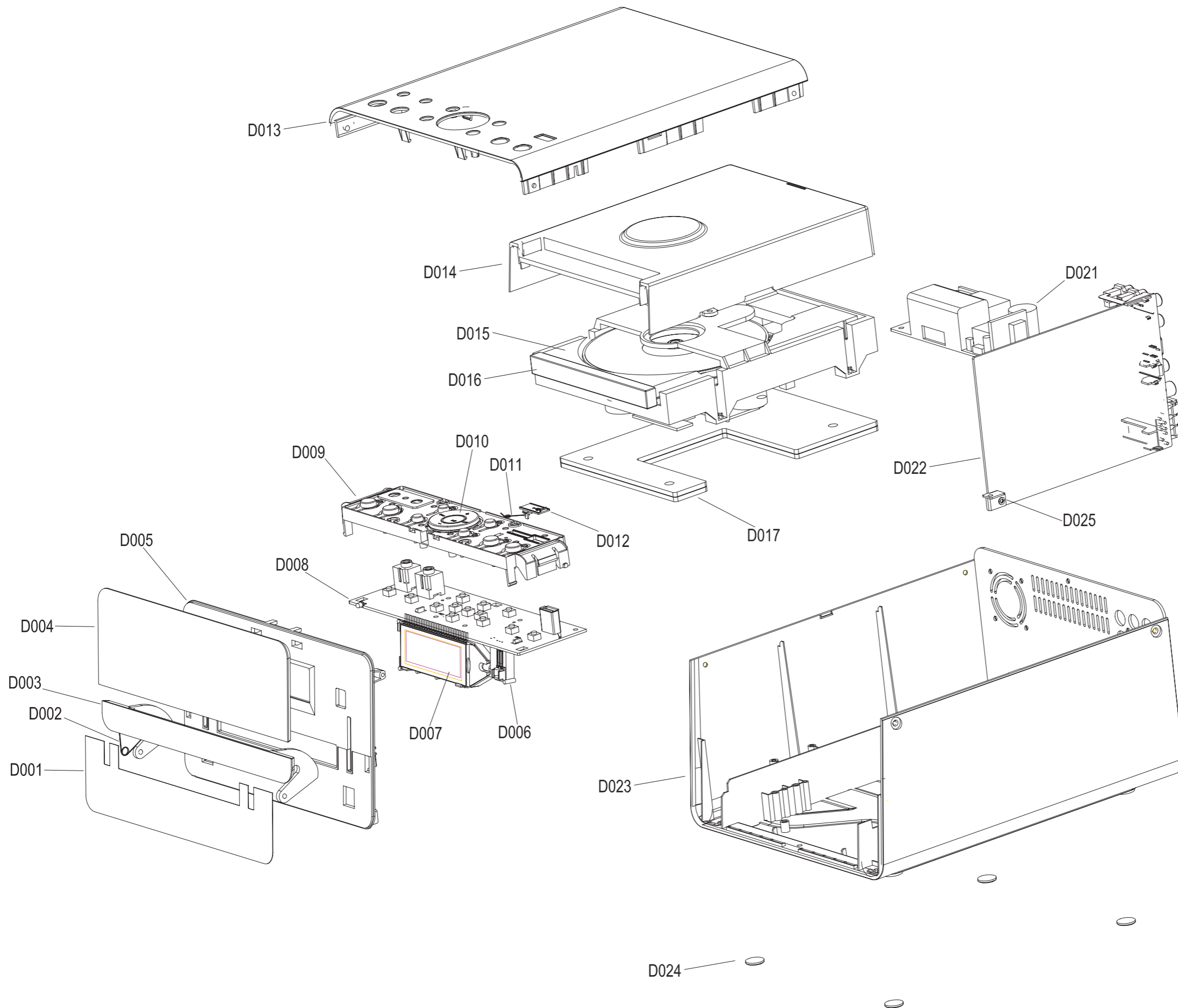
AC100-240V INPUT

Power Board -- Layout Diagram





Exploded View



## Service Parts List

**ACCESSORIES PARTS LIST**

SPK	9965 1003 0037	SINGLE SPEAKER BOX L/R
RC	9965 1002 4048	PRC500-56 REMOTE CONTROL MCD113/93
ACC1	9965 0004 1018	FM SINGLE WIRE 1.5m/HIGH FREQUENCY JACK
ACC2	9940 0000 5166	POWER CORD 1.8m CCC APPROVAL
ACC3	9940 0000 5078	COAXIAL CABLE 1.5m/RCA JACK(YELLOW)
ACC4	9965 1002 2666	DC3.5+DC3.5 AUDIO FREQUENCY WIRE L=500
ACC5	9965 1002 9967	MCD302/93 DISPLAY BOX

**MECHANISM & MISCELLANCOUS PARTS LIST**

D002	9965 1002 1113	MCD302 DVD DOOR SPRING
D004	9965 1002 3838	MCD302 DISPLAY LENS/PMMA
D005	9965 1002 9971	MCD302 FRONT CABINET(VFD)/HIPS
D003	9965 1002 3844	MCD302 DVD DOOR(ABS BLACK)
D023	9965 1003 0038	MCD302 BOTTOM CHASSIS/HIPS
D016	9965 1002 1108	MCD302 DVD TRAY DOOR/ABS
D013	9965 1003 0035	MCD302 TOP COVER/HIPS
D024	9965 2003 3990	MCD770 RUBBER FOOT(Φ12X1.5 BLACK)
CASING1	9965 1000 0069	FLAT FLEXIBLE CABLE 24PX230X0.5XA

**MECHANISM PARTS LIST -- MODUL REPAIR**

<b>D015</b>	<b>9965 1002 9974</b>	<b>SONY313AAD/WXD-8213 LOADER MECHANISM</b>
D015A		SONY KHM-313AAD LOADER DRIVER
D015B		WXD8213 DVD TRAY MECHANISM BRACKET
<b>D009</b>	<b>9965 1002 1094</b>	<b>MCM302/12 CD CENTER BUTTON/BLACK</b>
D011		MCD302 USB DOOR SPRING
D009		MCD302 FUNCTION BUTTON BRACKET/ABS
D010		MCD302 DIRECTION BUTTON/ABS BLACK
D012		MCD302 USB DOOR ABS

**ELECTRICAL PARTS LIST -- COMPONENT REPAIR**

<b>D008</b>	<b>9965 1002 8719</b>	<b>MCD302 DISPLAY BOARD VFD/USB</b>
B1001	9965 1000 4185	TRANSFORMER EPC13 5V 14X11X7
U1001	9965 1000 2918	IC PCF8563/AMI8563 SOP8
U1003	9965 1002 3846	IC TM58PC10A
LED1000	9940 0000 4947	LED Φ3 3B4SCB01 (HIGH-BLUE)
DZ1005	9965 1000 0496	ZENER DIODE 3.3V 1/2W-52
DZ1004	9965 1000 0496	ZENER DIODE 3.3V 1/2W-52
DZ1003	9965 1000 6505	ZENER DIODE 6.2V 1W
D1001	9965 1000 2976	FASTER DIODE FR104 -52
U1002	9965 1000 0500	IC PT6311/SC16311/CD16311
S1001	9965 1002 9969	IR SENSOR(1MA81P14D1TD0001/38K)
SW1000	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1001	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1002	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1003	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1004	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1005	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1006	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1007	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1008	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G

## Service Parts List

*ELECTRICAL PARTS LIST -- COMPONENT REPAIR***D008**

		<b>MCD302 DISPLAY BOARD VFD/USB</b>
SW1009	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1010	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1011	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G
SW1012	9965 2003 3923	TACT SWITCH TC103 6X6X5 170G

*ELECTRICAL PARTS LIST -- MODUL REPAIR*

<b>D022</b>	<b>9965 1002 9976</b>	<b>DVD DECODER EJS89LA302-93(EJS89L302)</b>
<b>D021</b>	<b>9965 1002 9972</b>	<b>POWER BOARD TP75DS-93(TP75DS)/5V</b>

## Factory Parts List

DVD	MCD302/93 DVD NUIT PARTS
D008	MCD302 DISPLAY BOARD VFD/USB
B1001	TRANSFORMER/EPC13/5V/14X11X7
U1001	IC PCF8563/AMI8563 SOP8
U1003	IC TM58PC10A
Q1001	CHIP TRANSISTOR 8550C(SOT-23)
R1031	CARBON FILM RESISTOR 100 1/8W J-52
R1000	CARBON FILM RESISTOR 2.2 1/2W J-52
R1008	CARBON FILM RESISTOR 2.2 1/2W J-52
R1043	CHIP RESISTOR 330 1/16W J (0805)
R1044	CHIP RESISTOR 330 1/16W J (0805)
R1039	CHIP RESISTOR 33K 1/16W J (0805)
R1040	CHIP RESISTOR 33K 1/16W J (0805)
R1041	CHIP RESISTOR 33K 1/16W J (0805)
R1042	CHIP RESISTOR 33K 1/16W J (0805)
R1033	CHIP RESISTOR 4.7K 1/16W J (0805)
R1036	CHIP RESISTOR 4.7K 1/16W J (0805)
R1037	CHIP RESISTOR 4.7K 1/16W J (0805)
R1049	CHIP RESISTOR 470 1/16W J (0805)
R1050	CHIP RESISTOR 470 1/16W J (0805)
R1051	CHIP RESISTOR 470 1/16W J (0805)
R1052	CHIP RESISTOR 470 1/16W J (0805)
R1053	CHIP RESISTOR 470 1/16W J (0805)
R1054	CHIP RESISTOR 470 1/16W J (0805)
R1026	CHIP RESISTOR 47K 1/16W J (0805)
C1012	CHIP CAP.473p 50V M (0805) Y5V
D1008	CHIP DIODE 4148(LL-34)
D1009	CHIP DIODE 4148(LL-34)
D1010	CHIP DIODE 4148(LL-34)
D1013	CHIP DIODE 4148(LL-34)
D1014	CHIP DIODE 4148(LL-34)
R1027	CHIP RESISTOR 10K 1/16W J (0805)
R1028	CHIP RESISTOR 10K 1/16W J (0805)
R1029	CHIP RESISTOR 10K 1/16W J (0805)
R1034	CHIP RESISTOR 10K 1/16W J (0805)
R1035	CHIP RESISTOR 10K 1/16W J (0805)
R1045	CHIP RESISTOR 10K 1/16W J (0805)
R1047	CHIP RESISTOR 10K 1/16W J (0805)
R1048	CHIP RESISTOR 10K 1/16W J (0805)
R1055	CHIP RESISTOR 10K 1/16W J (0805)
R1057	CHIP RESISTOR 10K 1/16W J (0805)
R1058	CHIP RESISTOR 10K 1/16W J (0805)
R1025	CHIP RESISTOR 22K 1/16W J (0805)
R1015	CHIP RESISTOR 1K 1/16W J (0805)
R1018	CHIP RESISTOR 1K 1/16W J (0805)
R1009	CHIP RESISTOR 100 1/16W J (0805)
R1013	CHIP RESISTOR 100 1/16W J (0805)
R1014	CHIP RESISTOR 100 1/16W J (0805)
R1030	CHIP RESISTOR 100 1/16W J (0805)
R1046	CHIP RESISTOR 100 1/16W J (0805)
R1032	CHIP RESISTOR 10 1/16W J (0805)
C1023	CHIP CAP.100p 50V K (0805) X7R
C1024	CHIP CAP.100p 50V K (0805) X7R
C1025	CHIP CAP.100p 50V K (0805) X7R
C1026	CHIP CAP.100p 50V K (0805) X7R
C1027	CHIP CAP.100p 50V K (0805) X7R

## Factory Parts List

C1030	CHIP CAP.100p 50V K (0805) X7R
C1030	ELECTROLYTIC CAP.100u 16V L-5 8X5
C1016	CHIP CAP.104p 50V M (0805) Y5V
C1018	CHIP CAP.104p 50V M (0805) Y5V
C1019	CHIP CAP.104p 50V M (0805) Y5V
C1021	CHIP CAP.104p 50V M (0805) Y5V
C1017	CHIP CAP.15p 50V J(0805) NPO
C1028	CHIP CAP.100p 50V J (0805) NPO
C1029	CHIP CAP.100p 50V J (0805) NPO
C1014	ELECTROLYTIC CAP.10u 35V L 4X7
C1015	E.CAP.100u 16V L-5 105°C 6.3X7
C1013	ELECTROLYTIC CAP.220u 10V L-5 5-6.3X11
C1020	ELECTROLYTIC CAP.47u 16V L-5 5X7
LED1000	LED $\Phi$ 3 3B4SCB01 (HIGH-BLUE)
DZ1005	ZENER DIODE 3.3V 1/2W-52
DZ1004	ZENER DIODE 27V 1/2W-52
DZ1003	ZENER DIODE 6.2V 1W
D1001	FASTER DIODE FR104 -52
D1011	DIODE IN60-52 SILICON
D1012	DIODE IN60-52 SILICON
Q1002	TRANSISTOR D965-R -5
Q1003	TRANSISTOR D965-R -5
U1002	IC PT6311/SC16311/CD16311 (H=1.4)
S1001	IR SENSOR LF0038K/36KHz
SW1000	TACT SWITCH TS-1307-01 6X6X5 170G
SW1001	TACT SWITCH TS-1307-01 6X6X5 170G
SW1002	TACT SWITCH TS-1307-01 6X6X5 170G
SW1003	TACT SWITCH TS-1307-01 6X6X5 170G
SW1004	TACT SWITCH TS-1307-01 6X6X5 170G
SW1005	TACT SWITCH TS-1307-01 6X6X5 170G
SW1006	TACT SWITCH TS-1307-01 6X6X5 170G
SW1007	TACT SWITCH TS-1307-01 6X6X5 170G
SW1008	TACT SWITCH TS-1307-01 6X6X5 170G
SW1009	TACT SWITCH TS-1307-01 6X6X5 170G
SW1010	TACT SWITCH TS-1307-01 6X6X5 170G
SW1011	TACT SWITCH TS-1307-01 6X6X5 170G
SW1012	TACT SWITCH TS-1307-01 6X6X5 170G
J1004	HEADPHONE JACK $\Phi$ 3.5 CKX-3.5-28A
J1005	HEADPHONE JACK $\Phi$ 3.5 CKX-3.5-28A
J1003	USB JACK A-TYPE 4P/VERTICAL
CN1001	PINS CONNECTOR 2.0/4P
X1002	PLASTIC COATING FILTER 455KHZ/2p
X1001	CRYSTAL OSCILLATOR 32.768KHz $\Phi$ 3XH8 $\pm$ 10PPM
D007	HL-D1337WB VFD DISPLAY DISPLAY PCB 35-MCD302-01A1 MCD302 VFD IRON BRACKET BLACK SPONGE 25X10X1 40°
D006	IR RECEIVER BRACKET/HIPS/BLACK
D015	<b>KHM-313AAD-T DVD LOADER MECHANISM</b> DVD MECHANISM SONY KHM-313AAD-T WXD8213 DVD TRAY MECHANISM BRACKET <b>MCD302/93 SOFTWARE</b> MCD302/93 MCU SOFTWARE MCD302/93 DVD MPEG SOFTWARE <b>MCM302/12 CD CENTER BUTTON/BLACK</b>
D011	MCD302 USB DOOR SPRING

## Factory Parts List

D009	MCD302 FUNCTION BUTTON /ABS BLACK
D010	MCD302 DIRECTION BUTTON/ABS BLACK
D012	MCD302 USB DOOR/ABS BLACK
	<b>MCD302/93 DVD UNIT CASING PARTS</b>
D022	DVD DECODER EJS89LA302-93(EJS89L302)
D021	POWER BOARD TP75DS-93(TP75DS)/5V
D025	MCD710 PCB IRON BRACKET
D002	MCD302 DVD DOOR SPRING
D001	MCD302 FUNCTION AL. SHEET
D017	MCM302 IRON BLOCK 168X120X3
D013	MCD302 TOP COVER/HIPS
D004	MCD302 DISPLAY LENS/PMMA
D005	MCD302 FRONT CABINET(VFD)/HIPS
D003	MCD302 DVD DOOR(ABS BLACK)
D023	MCD302 BOTTOM CHASSIS/HIPS
D016	MCD302 DVD TRAY DOOR/ABS
D014	MCD302 DUSTPROOF COVER/HIPS
	FIBRE WASHER $\phi 3 \times 8 \times 0.5$
D024	MCD770 RUBBER FOOT( $\phi 12 \times 1.5$ BLACK)
	WHITE SPONGE 47X10X2 40°
	SCREW 3 X 10 FA(BLACK)
	SCREW 3 X 10 BA (PLATING)
	SCREW 3 X 5 BMTT (PLATING)
	SCREW 3 X 8 BA (PLATING)
	SCREW 3 X 8 BA (PLATING)
	SCREW 3 X 10 PWA (PLATING)
	SCREW 2.6 X 8 PA (PLATING)
	SCREW 2.6 X 10 PA (PLATING)
	SCREW 3 X 8 KA(BLACK)
	SCREW 3 X 10 FA(BLACK)
	SCREW 3 X 6 PWTT $\phi 8$ W (PLATING)
	28WIRE 150 2.0/12PX1 2.0/12PX1
	26SHIELDING 220 2.0/4PX1 2.0/4PX1
	26SHIELDING 180 2.0/4PX1 2.0/4PX1
	26SHIELDING 220 2.0/3PX1 2.0/3PX1
	28WIRE 200 2.0/6PX2
	28WIRE 220 2.0/5PX2
	FLAT FLEXIBLE CABLE 24PX230X0.5XA
	22 MONGLINE 80+150 2.5/4PX1 2.5/2PX2
SPK	<b>MCD302/93 MAIN SPEAKER BOX</b>
	MCD302 GRID BRACKET/BLACK CLOTH
	MCD302 FRONT PANEL/ABS757
	MCD302 WOODEN BOX 150X250X148/PVC
	ANTIMAGNETIC WOOFER 4"4 $\Omega$ 25W
	RUBBER FOOT( $\phi 12 \times \phi 8 \times 7$ BLACK)
	SCREW 4 X 16 BA BLACK
	SPEAKER WIRE 3m/17/0.16/ $\phi 1.5 \times 3$
	MCD302/93 SPEAKER BACK LABEL 40X27
	PLASTIC BAG(PE) 44X38cm PHILIPS
	PAPERBOARD 250X163X0.3
RC	<b>PRC500-56 REMOTE CONTROL MCD113/93</b>
	<b>PRC500-56 REMOTE CONTROL BOARD</b>
R1	CHIP RESISTOR 0 1/16W J (0805)
R2	CHIP RESISTOR 680 1/16W J (0805)
C1	ELECTROLYTIC CAP.47 $\mu$ 10V L 4X7
D1	INFRARED-EMITTING DIODE $\phi 3$

## Factory Parts List

Q1	CHIP TRANSISTOR BC817-25(SOT23)
U1	IC TM58PR11S18C
	REMOTE CONTROL PCB PRC500-A 139X40X1.6
	PRC500-56 SOFTWARE
	<b>PRC500-56 REMOTE CONTROL CASING/93</b>
	BUTTON BATTERIES 3V CR2025
	PRC500-56 CONDUCTIVE RUBBER
	PRC500 RC SPRING PLATE
	PCR500 RC SPRING $\Phi$ 0.6
	PRC500 RC TOP COVER/ABS/MCD183
	PRC500 RC BOTTOM CABINET(ABS80141)
	PRC500 RC BATTERY COVER(ABS80141)
	PRC500 REMOTE CONTROL LENS/PC
	INSULATION PAPER 32X24X0.15
	PRC500-56 REMOTE CONTROL LABEL
	ADD-ONS INSTRUCTION LABEL PH 38X18
	PLASTIC BAG(PE) 20X6cm PHILIPS
ACC	<b>MCD302/93 ACCESSORY PARTS</b>
	WARRANTY CARD(PH 9965 100 15858 )
	MCD302/93 INSTRUCTION MANUAL/A5
	MCD302/93 QUICK START GUIDE PH
	WARRANTY CARD V93/120g/2P/3C/V1.1
	PLASTIC BAG(PE) 29X18cm PHILIPS
ACC1	MONGLINE 1.5m/HIGH FREQUENCY JACK
ACC2	? POWER CORD 1.8m CCC APPROVAL
ACC3	COAXIAL CABLE 1.5m/RCA JACK(YELLOW)
ACC4	DC3.5+DC3.5 AUDIO FREQUENCY WIRE L=500
	PLASTIC BAG(PE) 25X10cm PHILIPS
	<b>MCD302/93 PACKING PARTS</b>
	MCD302 PAPER PULP
	PASSED LABEL $\Phi$ 13
	LASER WARNING LABEL PH $\Phi$ 15 BLACK
	REGION CODE LABEL V93
ACC5	MCD302/93 DISPLAY BOX
ACC6	MCD302/93 CARTON BOX
	ELIGIBILITY CERTIFICATE(V93 35X46)
	CARTON SERIAL NO. LABEL PHILIPS/93 82X32
	CCC Ra PREVENTION LABEL(V93)
	WARRANTY CRAD MODEL LABEL MCD302/93
	MCD302/93 DISPLAY BOX LABEL 91X111
	MCD302/93 MAIN UNIT LABEL
	MCD302/93 POS BILLBOARD
	MCD302/93 SPECIAL LABEL 59.5X39.5
	PLASTIC BAG(PE) 44X38cm PHILIPS
	SERIAL NO. LABEL TEAC/PHILIPS 30X6