

Service  
Service  
**Service**



# Service Manual



TABLE OF CONTENTS

PCBs location & Version Variations.....1-1  
 Technical specification .....1-2  
 Service measurement setup .....1-3  
 Service aids .....1-4

Instructions on CD playability .....2-1...2-2  
 Software version check .....4-1

Block diagram.....5-1  
 Wiring diagram .....6-1

LCD & Key Board  
 circuit diagram .....7-1...7-2  
 layout diagram .....7-3

Cassette Board  
 circuit diagram .....7-4  
 layout diagram .....7-5

Rectifier Board  
 circuit diagram .....8-1  
 layout diagram .....8-2

Power AMP Board  
 circuit diagram .....8-3...8-4  
 layout diagram .....8-5

Main Board  
 circuit diagram .....9-1...9-5  
 layout diagram .....9-6...9-7

HP & AUX & USB Jack Board  
 circuit diagram .....9-8...9-9  
 layout diagram .....9-8...9-9

DVD MPEG Board  
 circuit diagram .....10-1...10-8  
 layout diagram .....10-9...10-10

Exploded view diagram .....11-1  
 Mechanical partslist .....11-2

Electrical partslist.....12-1...12-2  
 Revision list.....13-1



© Copyright 2011 Philips Consumer Electronics B.V. Eindhoven, The Netherlands  
 All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.





## TECHNICAL SPECIFICATIONS

### AMPLIFIER

Output power ..... 2 x 50 W RMS  
 Signal-to-noise ratio .....  $\geq 60$  dBA  
 Frequency response ..... 63 – 16000 Hz,  $\pm 3$  dB  
 Input sensitivity AUX ..... 0.5 V (max. 2 V)  
 Impedance loudspeakers ..... 4  $\Omega$   
 Impedance headphones ..... 32  $\Omega$  -1000  $\Omega$

### DVD PLAYER

Laser Type ..... Semiconductor  
 Disc Diameter ..... 12cm / 8cm  
 Video Decoding ..... MPEG-2 / MPEG-1  
 Video DAC ..... 10 Bits  
 Signal System ..... PAL / NTSC  
 Video Format ..... 4:3 / 16:9  
 Video S/N ..... 56 dB (minimum)  
 Composite Video Output ..... 1.0 V<sub>p-p</sub>, 75  $\Omega$   
 S-Video Output ..... Y - 1.0 V<sub>p-p</sub>, 75  $\Omega$   
 ..... C - 0.286 V<sub>p-p</sub>, 75  $\Omega$   
 Audio DAC ..... 24 Bits / 96 kHz  
 Frequency Response .... 4 Hz - 20 kHz (44.1kHz)  
 ..... 4 Hz - 22 kHz (48kHz)  
 ..... 4 Hz - 44 kHz (96kHz)  
 Digital Output .....  
 ..... SPDIF (Sony Philips digital interface) Coaxial  
 Number of programmable tracks ..... 16  
 Signal-to-noise ratio .....  $\geq 65$  dBA  
 Channel separation .....  $\geq 40$  dB (1 kHz)  
 Total harmonic distortion .....  $< 0.1\%$  (1 kHz)

### TUNER

FM wave range ..... 87.5 – 108 MHz  
 Sensitivity at 75  $\Omega$   
 – mono, 26 dB signal-to-noise ratio ..... 2.8  $\mu$ V  
 – stereo, 46 dB signal-to-noise ratio ..... 61.4  $\mu$ V  
 Selectivity .....  $\geq 28$  dB  
 Total harmonic distortion .....  $\leq 5\%$   
 Frequency response ..... 63 – 5500 Hz (-6 dB)  
 Signal-to-noise-ratio .....  $\geq 50$  dBA

### USB PLAYER

USB ..... V2.0/ V1.1  
 ..... support MP3/WMA/JPEG files  
 Number of albums/ folders ..... maximum 99  
 Number of tracks/titles ..... maximum 500

### TAPE DECK

Frequency response  
 Normal tape (type I) ..... 80 – 12500 Hz (8 dB)  
 Signal-to-noise ratio  
 Normal tape (type I) ..... 50 dBA  
 Wow and flutter .....  $\leq 0.4\%$  DIN

### SPEAKERS

2-way bass reflex system

### GENERAL INFORMATION

AC Power 110-127 V, 60 Hz/220 – 240 V, 50 Hz  
 Standby power consumption .....  $\leq 7$  W  
 Eco power Standby .....  $< 1$  W

#### Dimensions

Main Unit(w x h x d) ..... 152 x 228 x 285 (mm)  
 Speakers (w x h x d) .....  
 ..... 152 x 228 x 257 (mm)

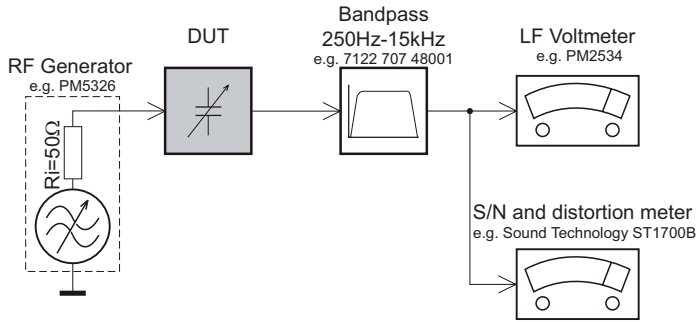
#### Weight

With Packing ..... 9.29 kg  
 Main Unit ..... 3.83 kg  
 Speaker box ..... 4.22 kg

**Specifications and external appearance are subject to change without notice.**

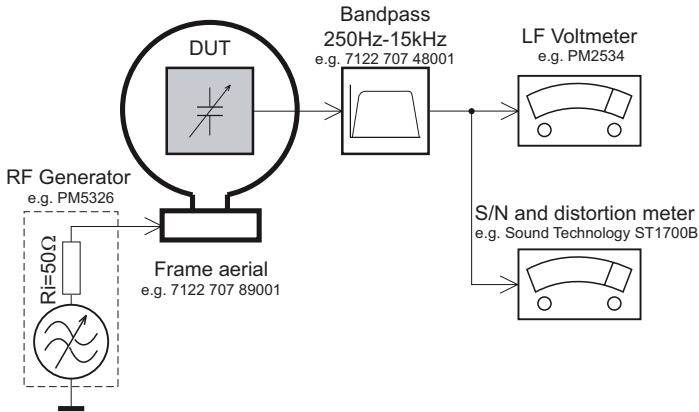
# MEASUREMENT SETUP

## Tuner FM



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

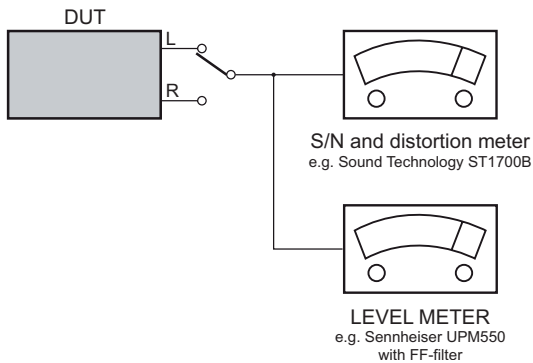
## Tuner AM (MW,LW)



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).

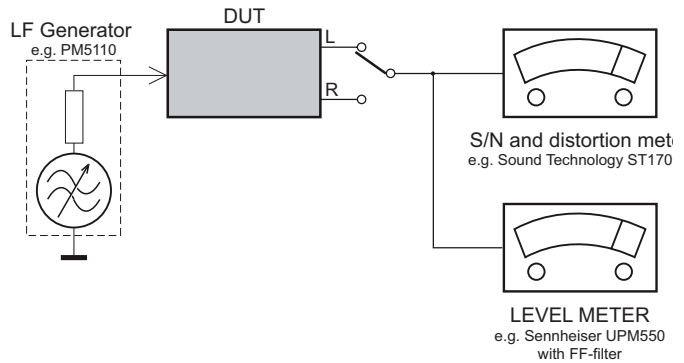
## CD

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](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".

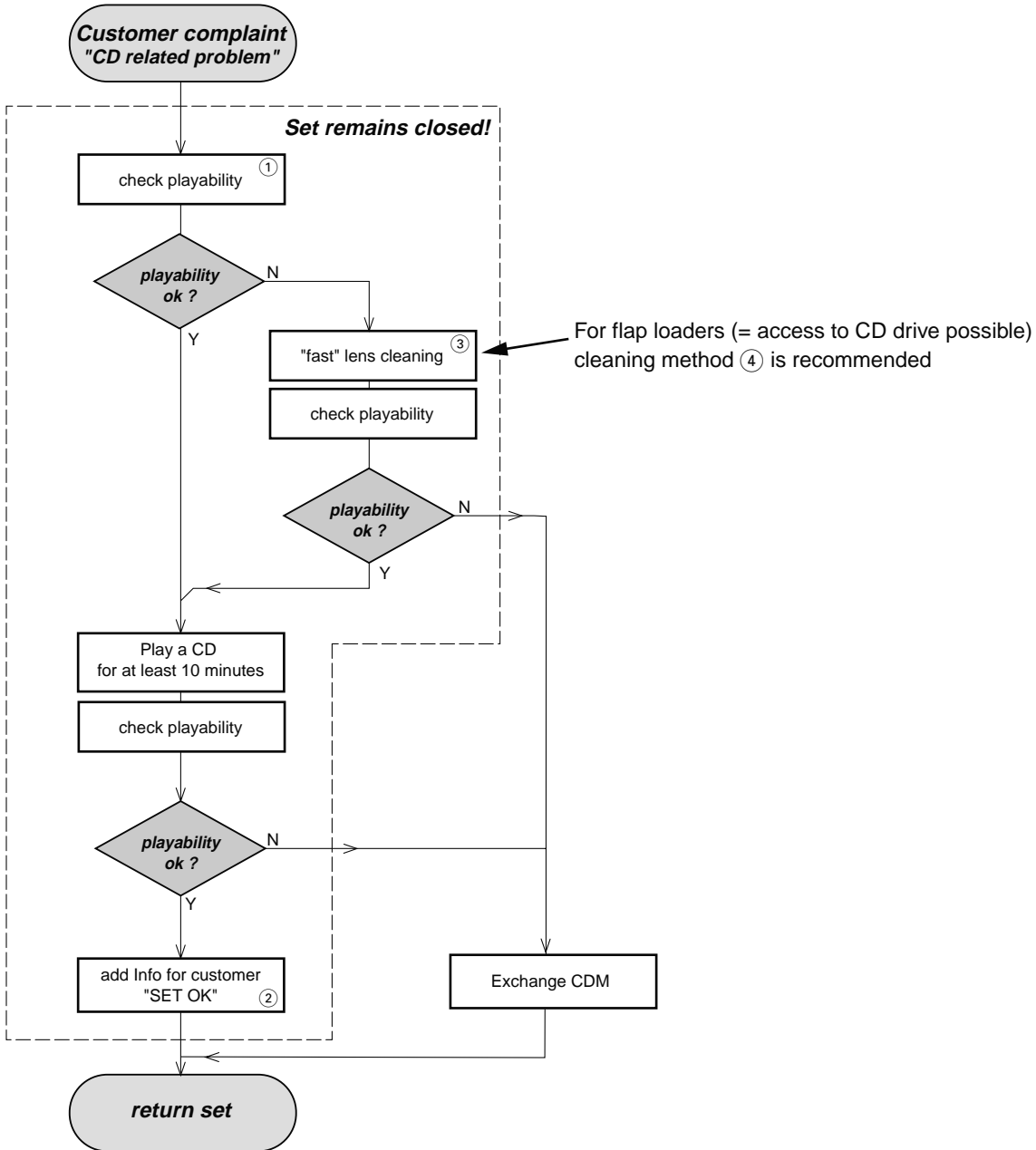
For additional questions please contact your local repair-helpdesk.

## 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.

# 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 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

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

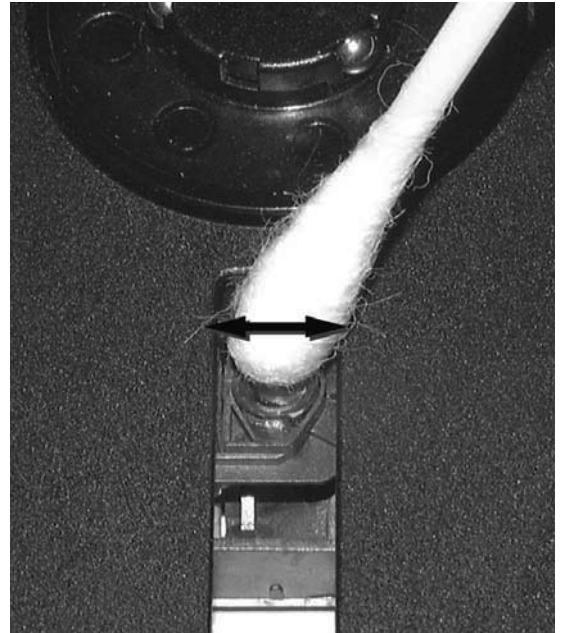
### LIQUID LENS CLEANING

**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 CHECKING AND REGION CODE RESET****How to set region code:**

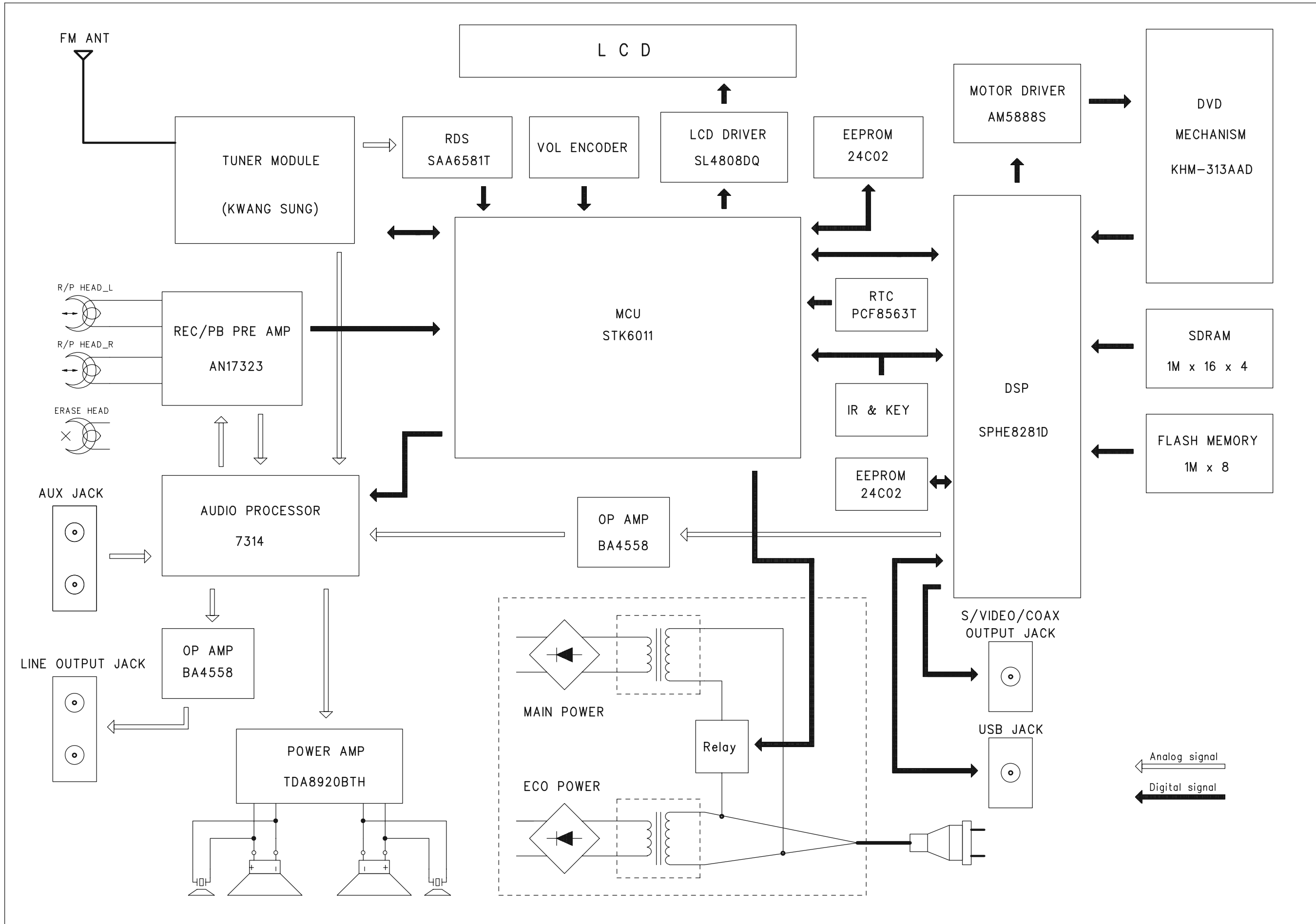
- 1) Press "SYSTEM MENU" on Remote Control ---->select "DEFAULT" and then select "RESTORE" .  
It can reset the region code.
- 2) To change the region code ----> open CD door at CD mode and press "5168" on RC ----> select "REGION" and select region code.

**Software checking:**

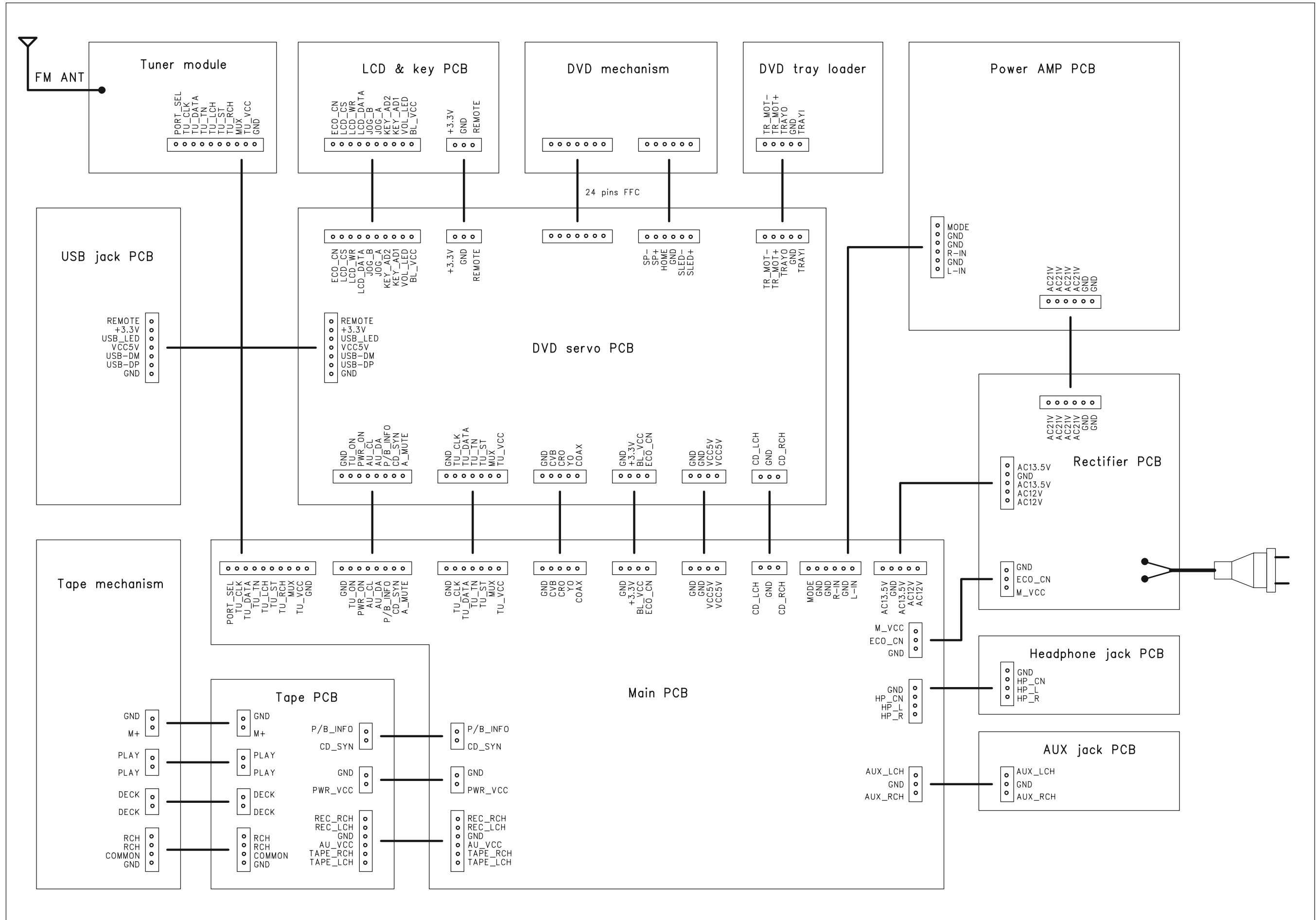
- 1) MCU version : at standby mode, press and hold "DBB" & "PLAY" buttons at the same time.  
Servo version : CD mode, open CD door and press "5168" on Remote Control.



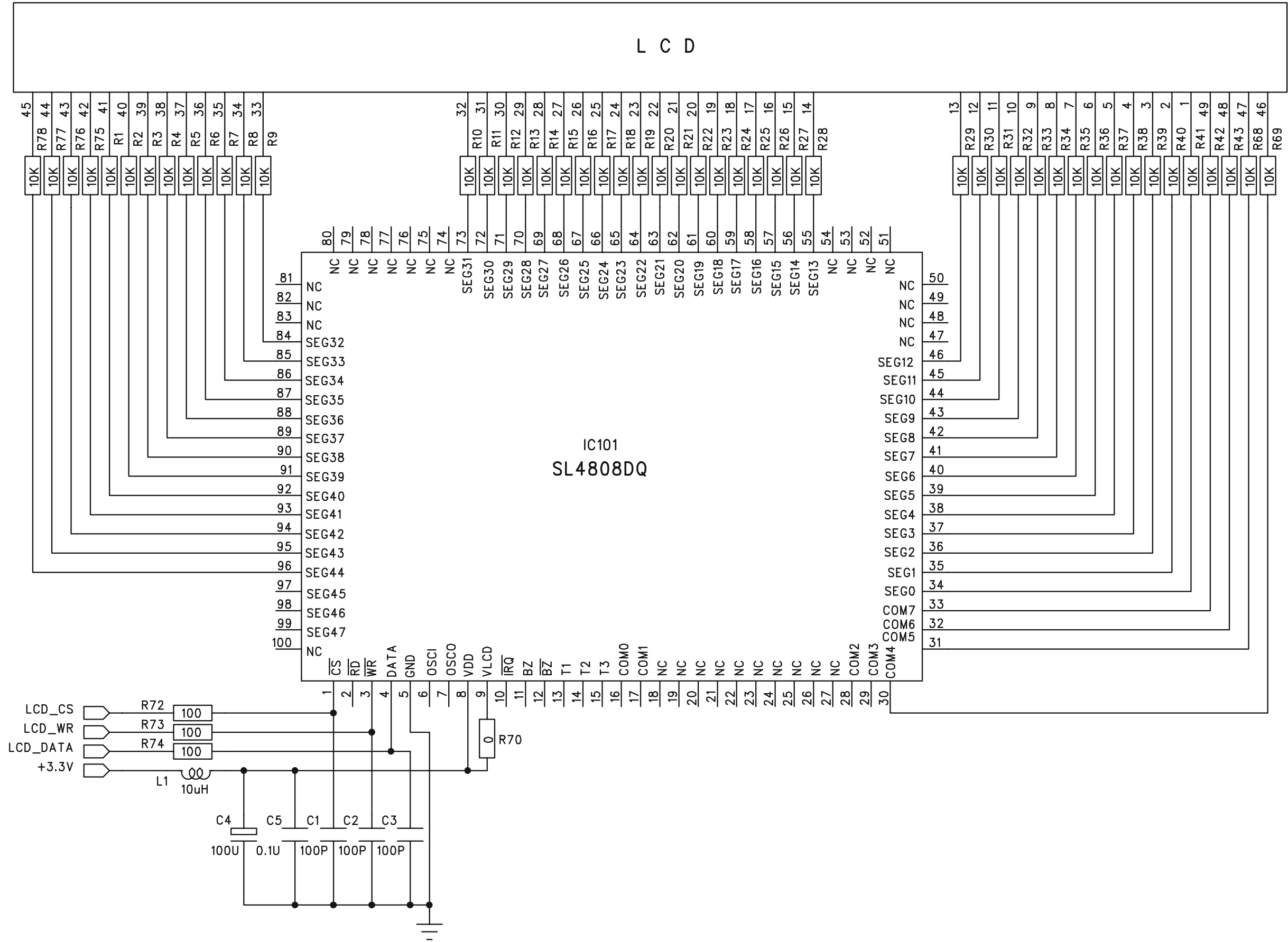
SET BLOCK DIAGRAM



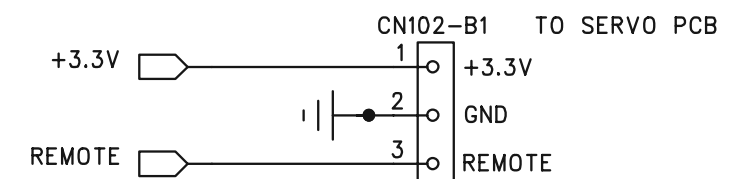
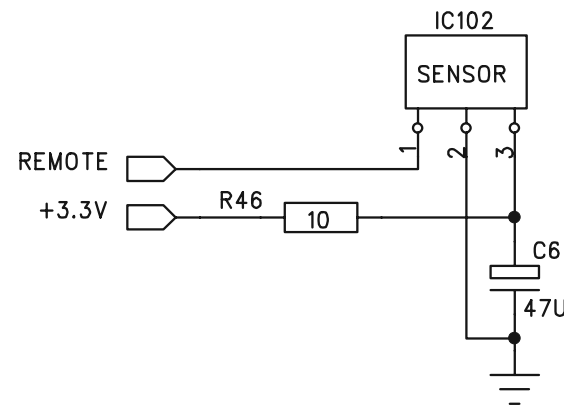
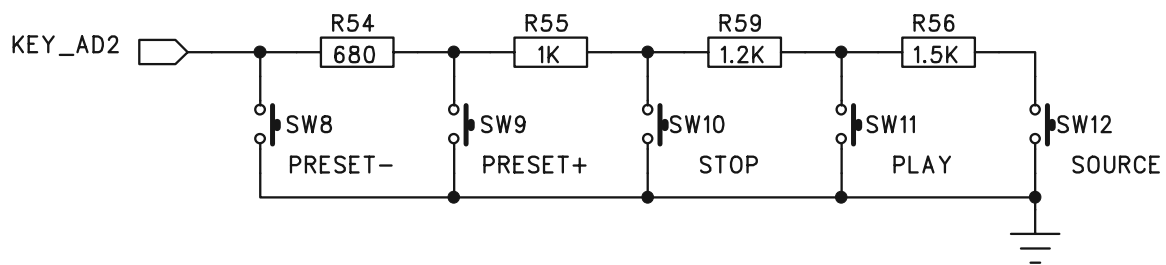
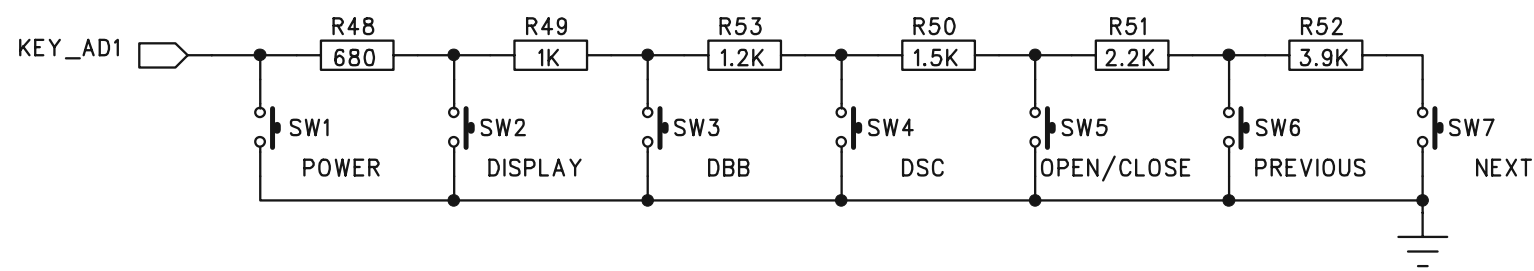
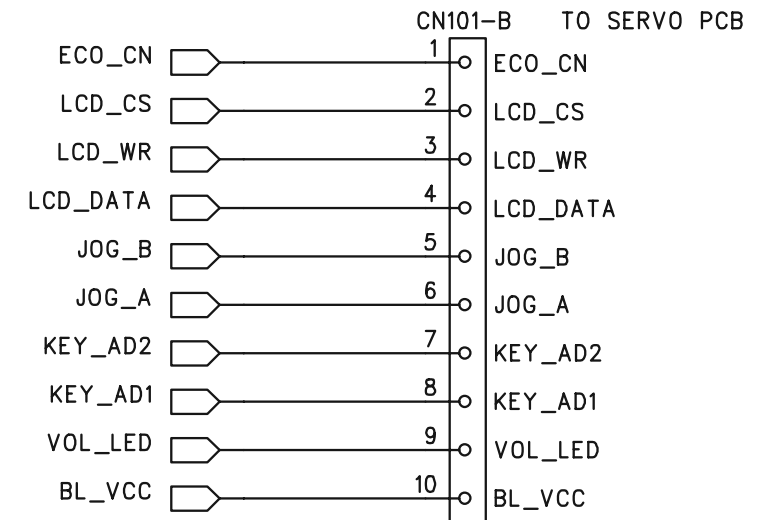
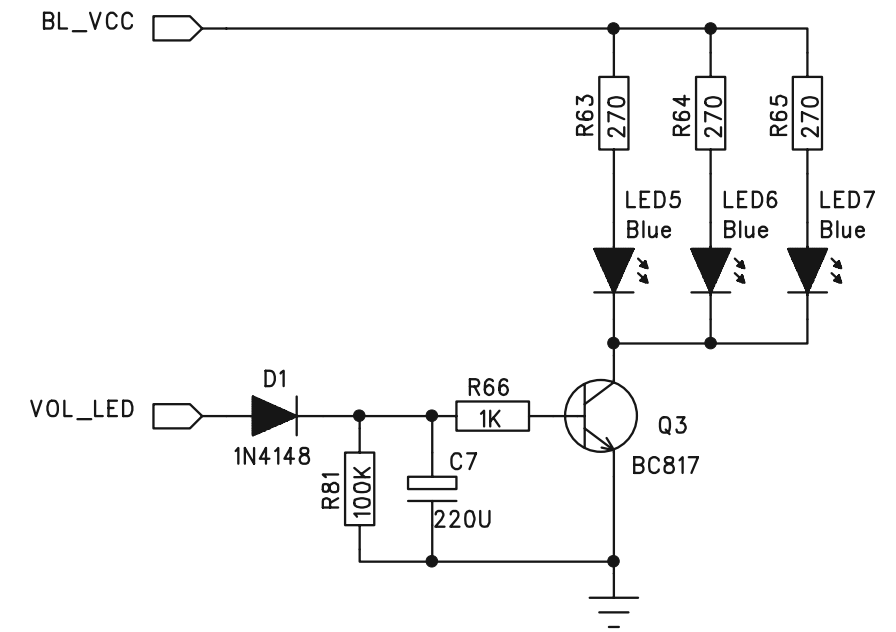
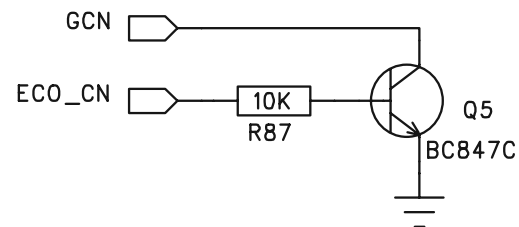
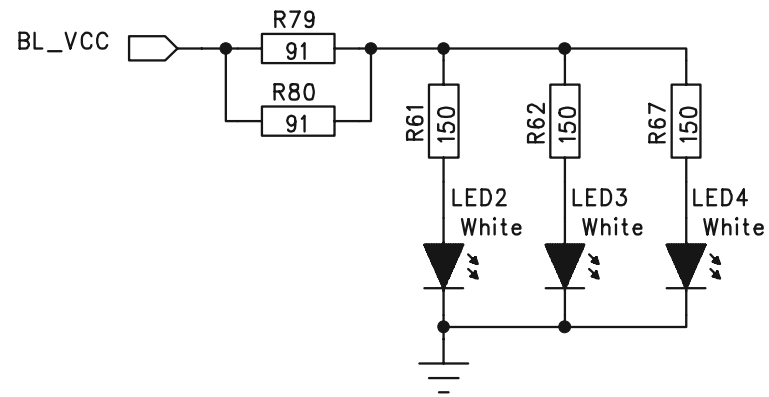
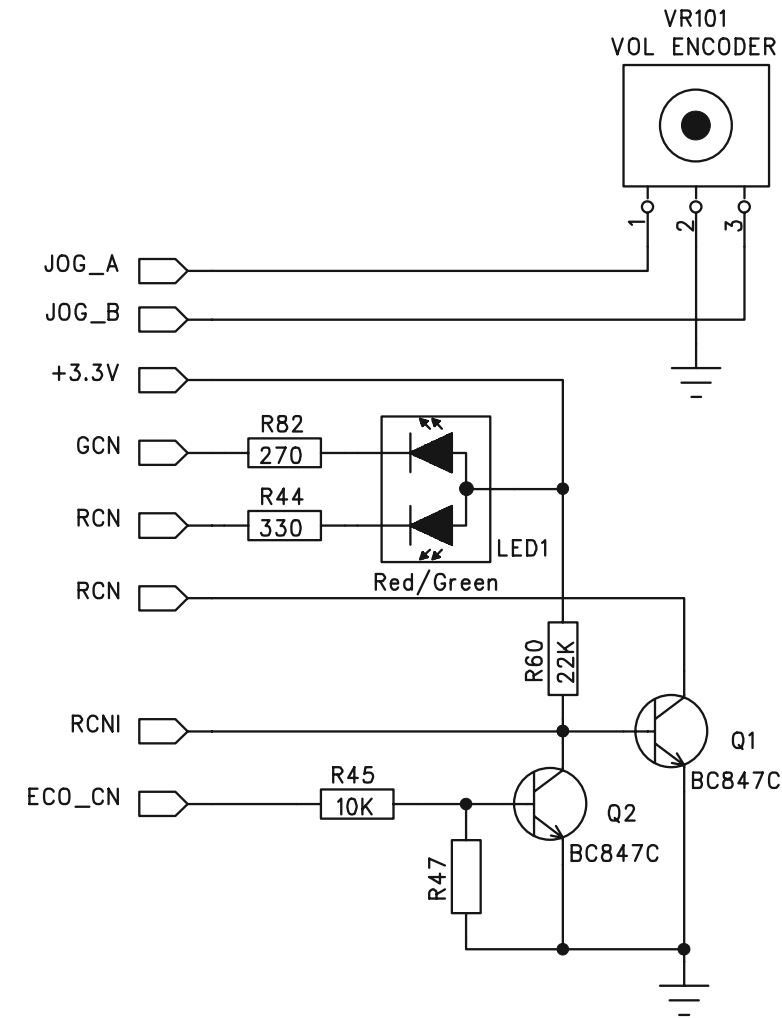
# SET WIRING DIAGRAM



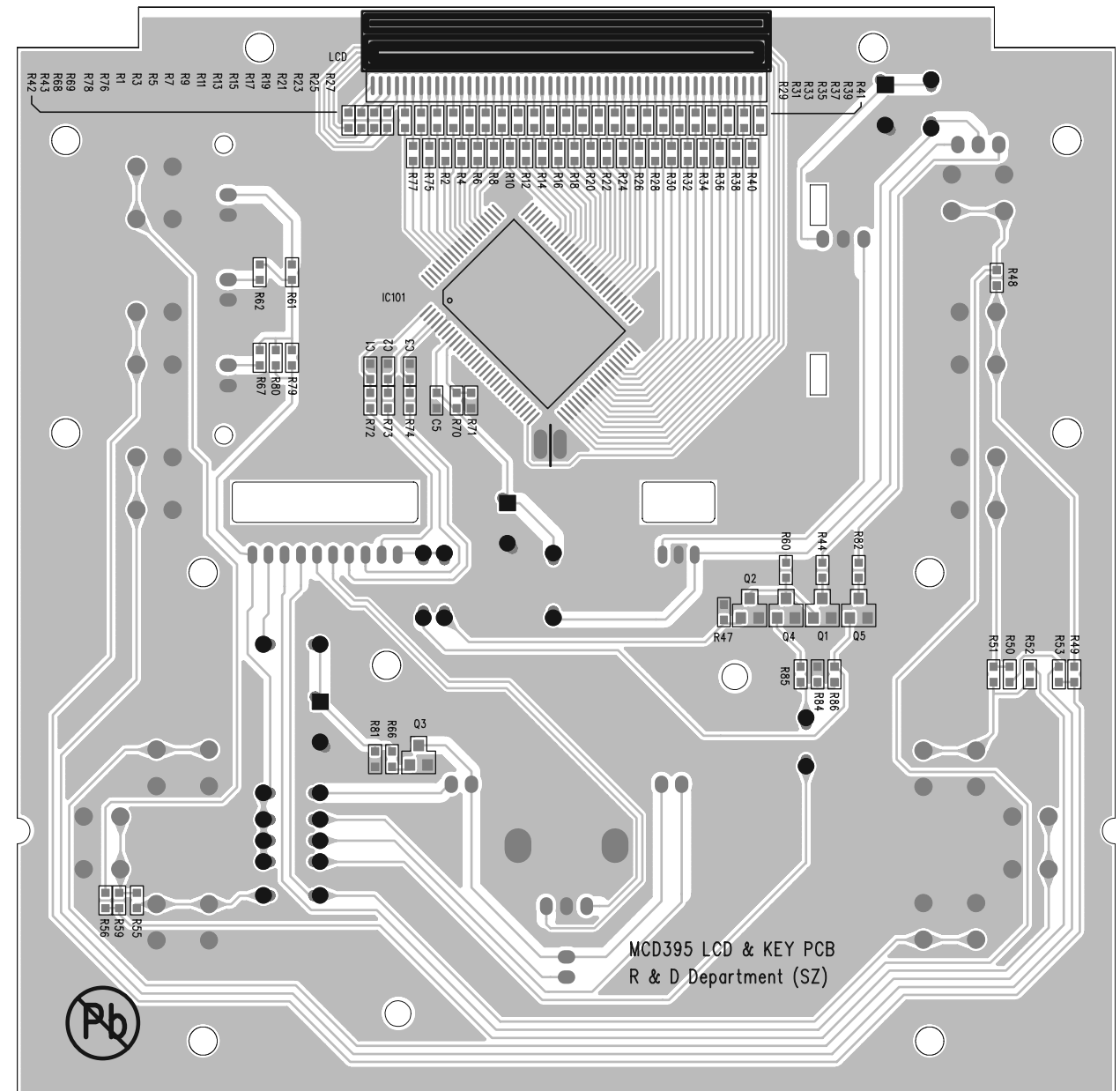
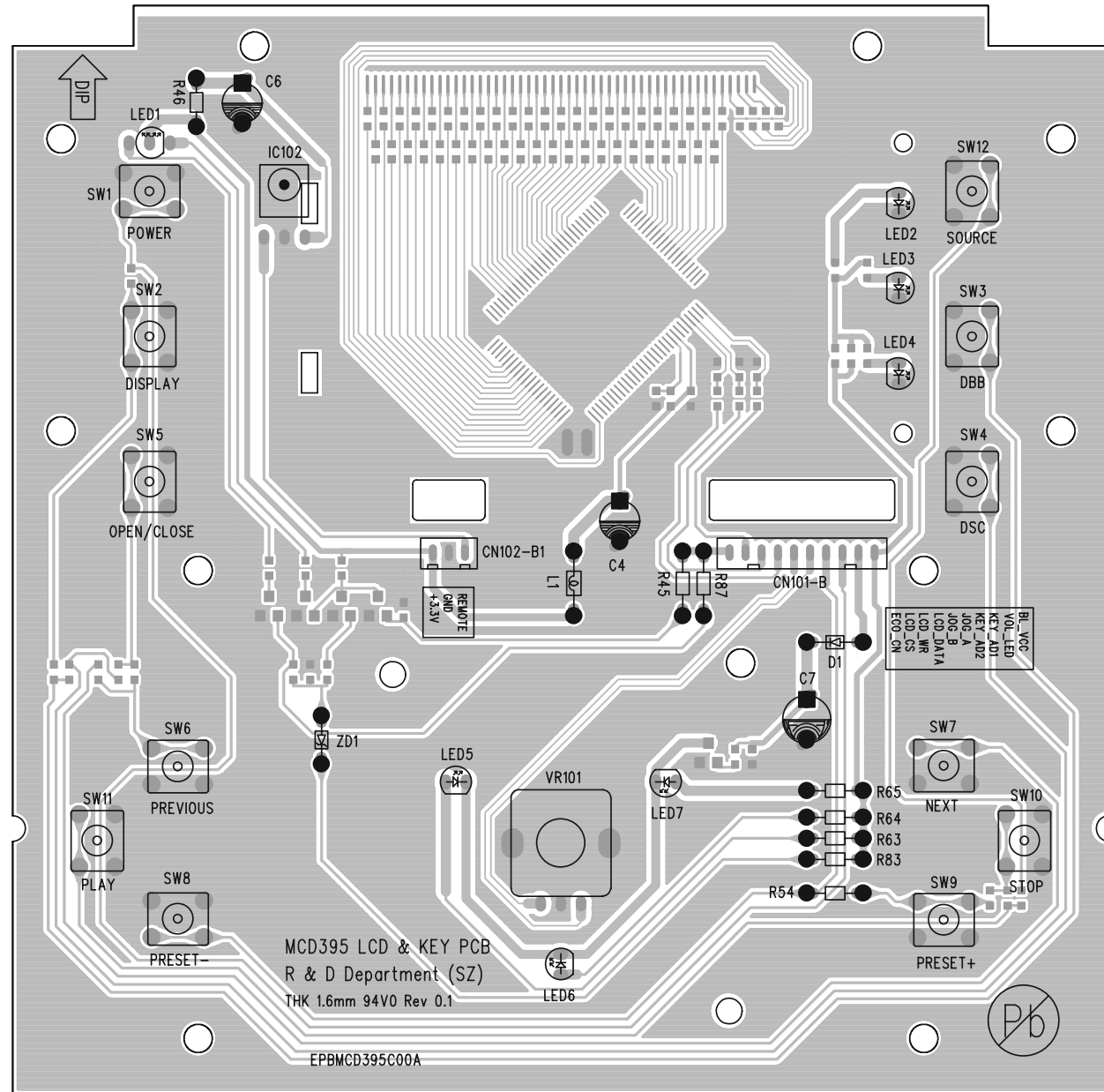
# CIRCUIT DIAGRAM - LCD & KEY BOARD Part 1



**CIRCUIT DIAGRAM - LCD & KEY BOARD**  
Part 2

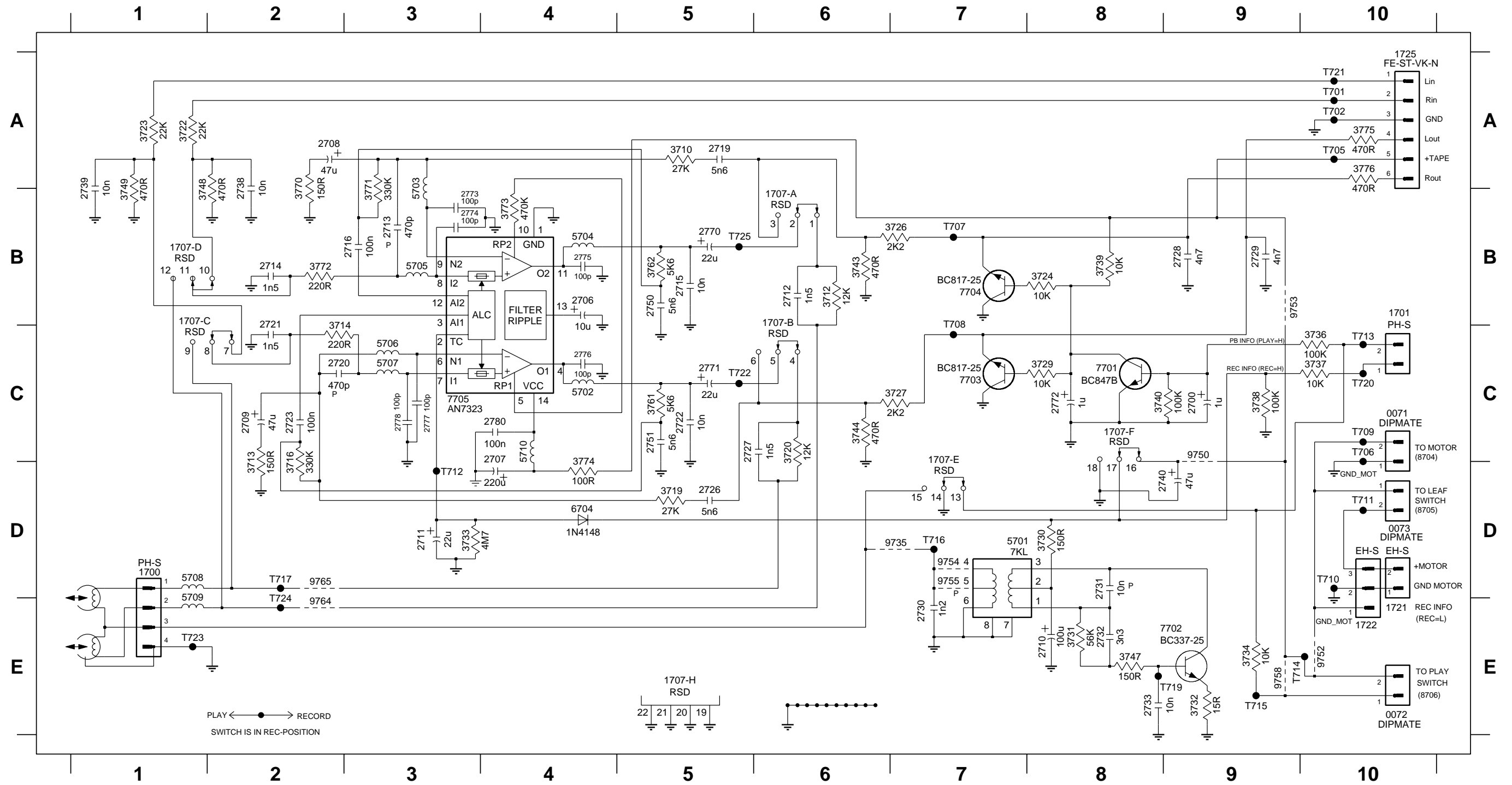


LAYOUT DIAGRAM - LCD & KEY BOARD

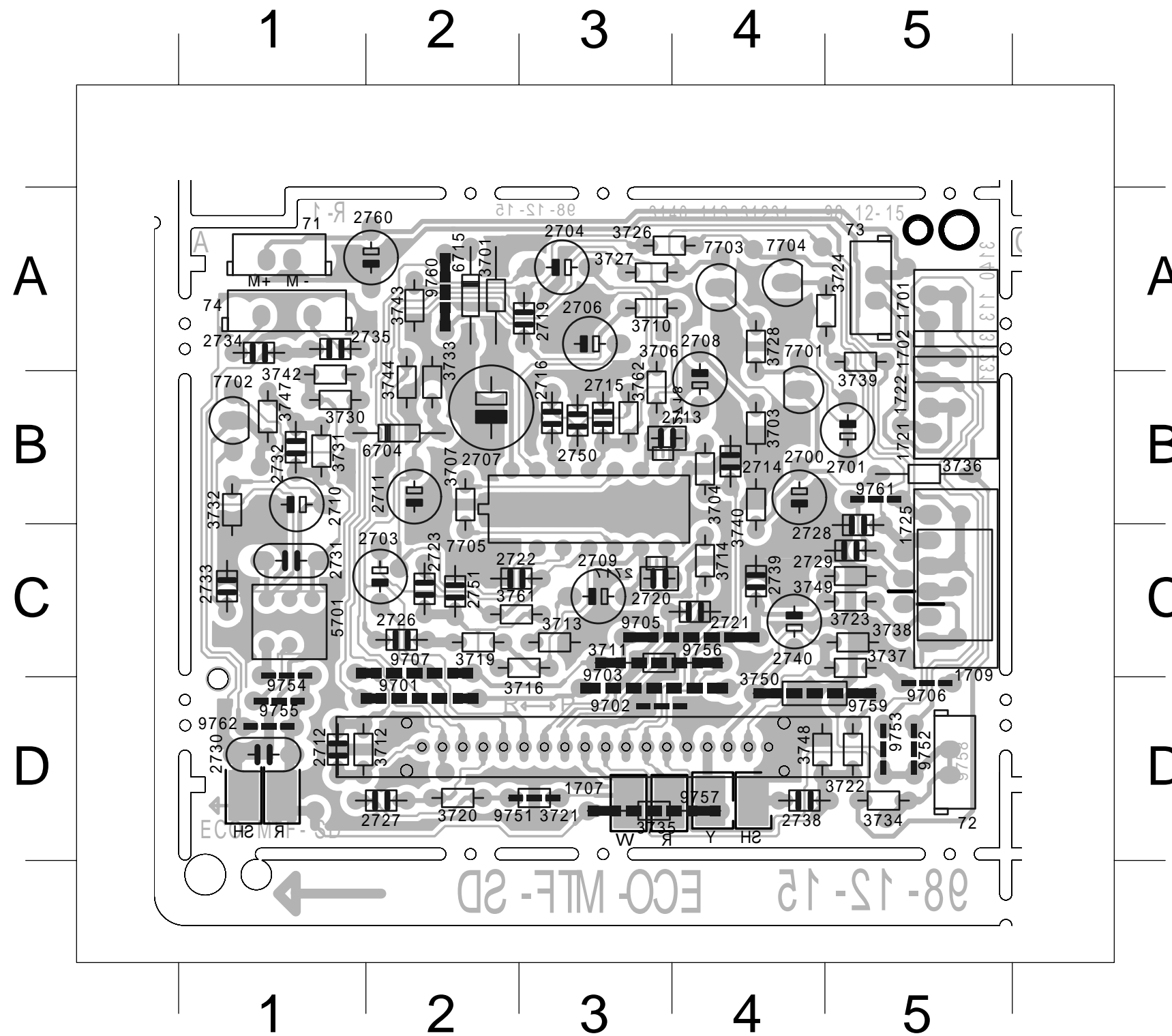


# CIRCUIT DIAGRAM - CASSETTE BOARD

0071 C10	1707-C B1	1725 A10	2711 D3	2720 C2	2729 B9	2740 D9	2774 B3	3712 B6	3723 A1	3732 E9	3740 C8	3762 B5	3776 A10	5707 C3	7703 C7	9754 D7	T705 A10	T712 D3	T720 C10
0072 E10	1707-D B1	2700 C9	2712 B6	2721 C2	2730 E7	2750 B5	2775 B4	3713 D2	3724 B8	3733 D3	3743 B6	3770 A2	5701 D8	5708 D1	7704 B7	9755 D7	T706 C10	T713 C10	T721 A10
0073 D10	1707-E D7	2706 B4	2713 B3	2722 C5	2731 D8	2751 C5	2776 C4	3714 C2	3726 B7	3734 E9	3744 C6	3771 B3	5702 C4	5709 E1	7705 C3	9758 E9	T707 B7	T714 E9	T722 C5
1700 D1	1707-F C8	2707 C4	2714 B2	2723 C2	2732 E8	2770 B5	2777 C3	3716 D2	3727 C7	3736 C10	3747 E8	3772 B2	5703 A3	5710 C4	9735 D7	9764 E2	T708 C7	T715 E9	T723 E1
1701 B10	1707-H E5	2708 A2	2715 B5	2726 D5	2733 E8	2771 C5	2778 C3	3719 D5	3729 C8	3737 C10	3748 B1	3773 B4	5704 B4	6704 D4	9750 C9	9765 D2	T709 C10	T716 D7	T724 E2
1707-A B6	1721 E10	2709 C2	2716 B3	2727 C5	2738 A2	2772 C8	2780 C4	3720 C6	3730 D8	3738 C9	3749 B1	3774 D4	5705 B3	7701 C8	9752 E10	T701 A10	T710 D10	T717 D2	T725 B5
1707-B C6	1722 E10	2710 E8	2719 A5	2728 B9	2739 A1	2773 B3	3710 A5	3722 A1	3731 E8	3739 B8	3761 C5	3775 A10	5706 C3	7702 E8	9753 B9	T702 A10	T711 D10	T719 E9	



LAYOUT DIAGRAM - CASSETTE BOARD



71 A 1	2729 C 5	3733 B 2	9756 C 3
72 D 5	2730 D 1	3734 D 5	9757 D 3
73 A 5	2731 C 1	3735 D 3	9759 D 4
74 A 1	2732 B 1	3736 B 5	9760 A 2
1701 A 5	2733 C 1	3737 C 5	9761 B 5
1702 B 5	2734 A 1	3738 C 5	9762 D 1
1707 D 3	2735 A 1	3739 A 5	T701 C 5
1709 C 5	2738 D 4	3740 B 4	T702 C 5
1721 B 5	2739 C 4	3742 B 1	T705 B 5
1722 B 5	2740 C 4	3743 A 2	T706 B 5
1725 C 5	2750 B 3	3744 B 2	T709 A 5
2700 B 4	2751 C 2	3747 B 1	T710 C 1
2701 B 5	2760 A 2	3748 D 4	T711 B 5
2703 C 2	3701 A 2	3749 C 5	T712 C 2
2704 A 3	3703 B 4	3750 D 4	T713 A 5
2706 A 3	3704 B 4	3761 C 2	T714 D 5
2707 B 2	3706 B 3	3762 B 3	T715 D 5
2708 B 4	3707 B 2	5701 C 1	T716 D 1
2709 C 3	3710 A 3	6704 B 2	T719 B 1
2710 B 1	3711 C 3	6715 A 2	T720 A 5
2711 B 2	3712 D 1	7701 B 4	T721 C 5
2712 D 1	3713 C 3	7702 B 1	T722 C 2
2713 B 3	3714 C 4	7703 A 4	T725 D 2
2714 B 4	3716 C 3	7704 A 4	T7707 A 4
2715 B 3	3719 C 2	7705 B 3	T7708 A 4
2716 B 3	3720 D 2	9701 D 2	
2717 C 3	3721 D 3	9702 D 3	
2718 B 3	3722 D 5	9703 D 3	
2719 A 3	3723 C 5	9705 C 4	
2720 C 3	3724 A 5	9706 D 5	
2721 C 4	3726 A 3	9707 C 2	
2722 C 2	3727 A 3	9751 D 3	
2723 C 2	3728 A 4	9752 D 5	
2726 C 2	3730 B 1	9753 D 5	
2727 D 2	3731 B 1	9754 C 1	
2728 C 5	3732 B 1	9755 D 1	

CASSETTE ADJUSTMENT

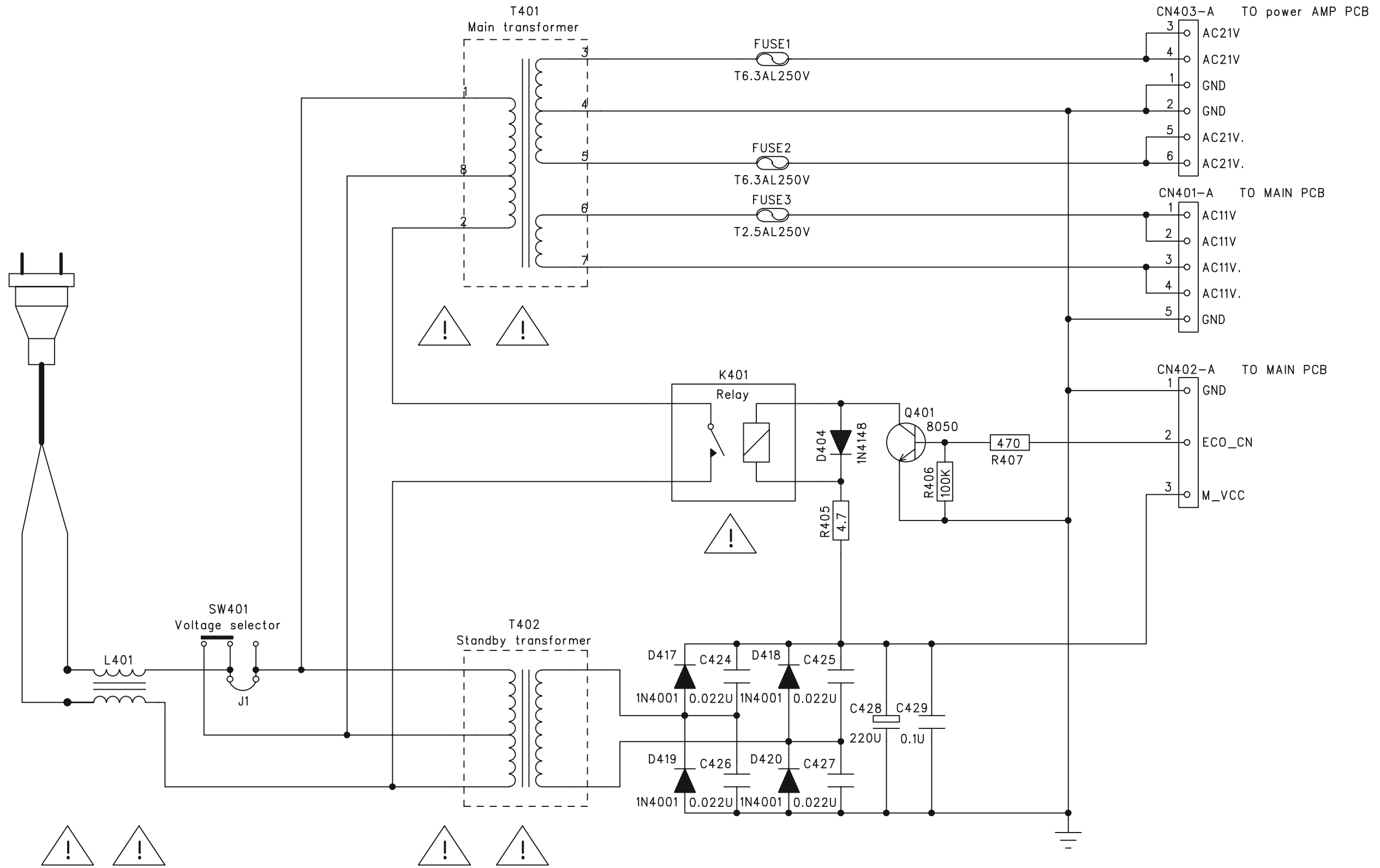
Adjustment	Cassette	SK ....	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

\* SBC420 : 4822 397 30071

\*\*a The maximum permissible speed deviation is - 3%.  
Moreover, the wow and flutter value can be read.

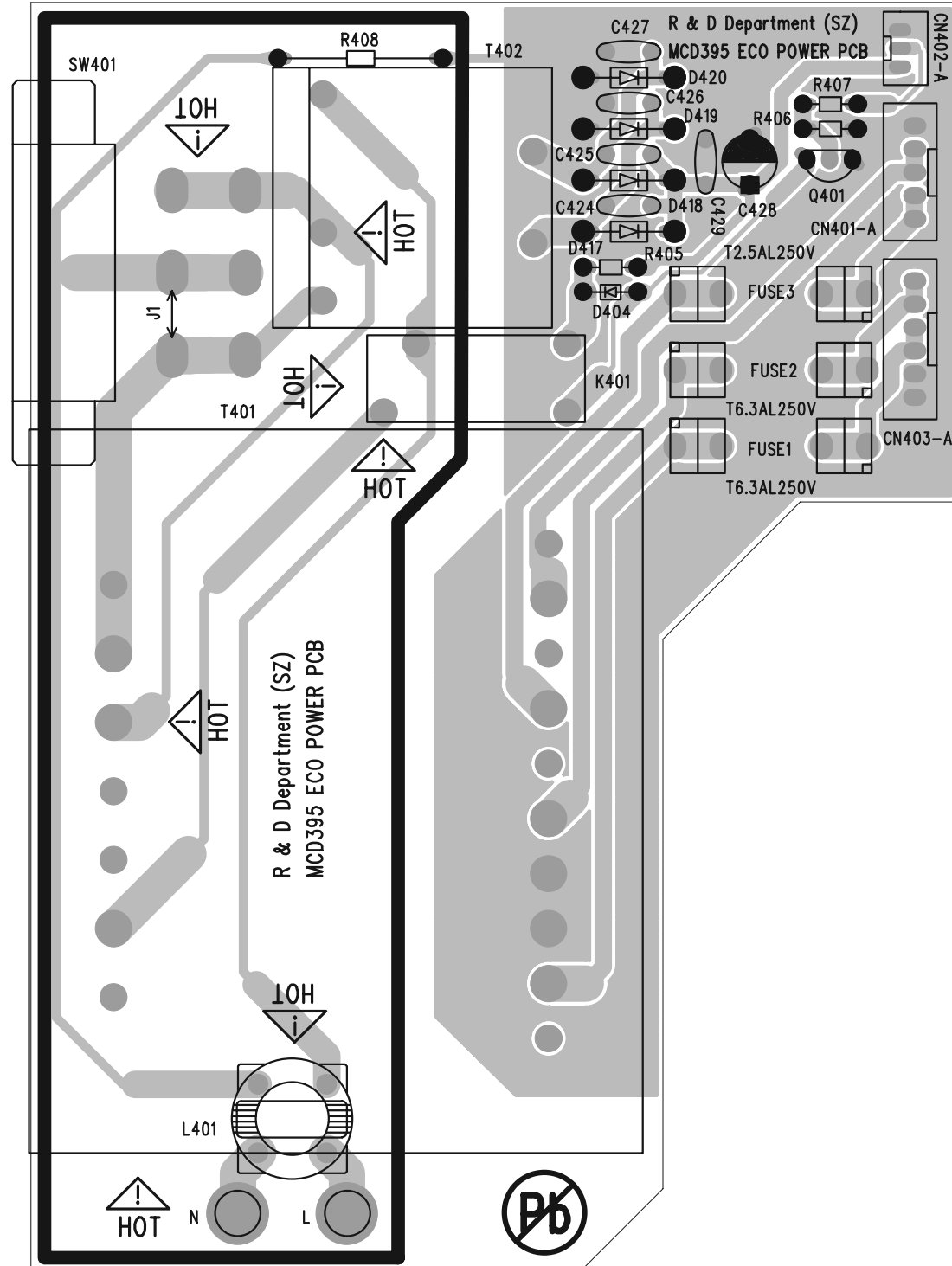
CIRCUIT DIAGARM - RECTIFIER BOARD

CIRCUIT DIAGARM - RECTIFIER BOARD

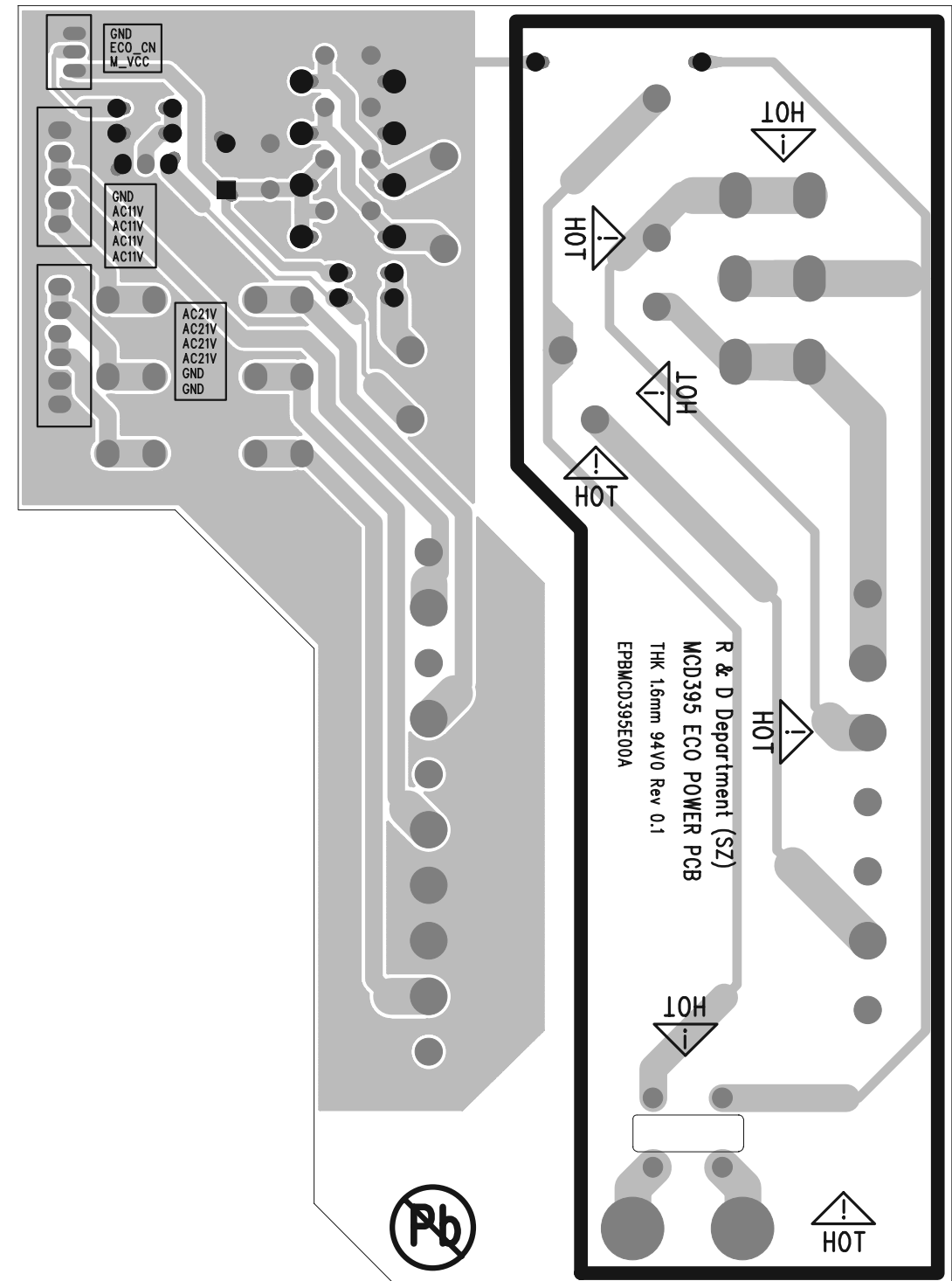




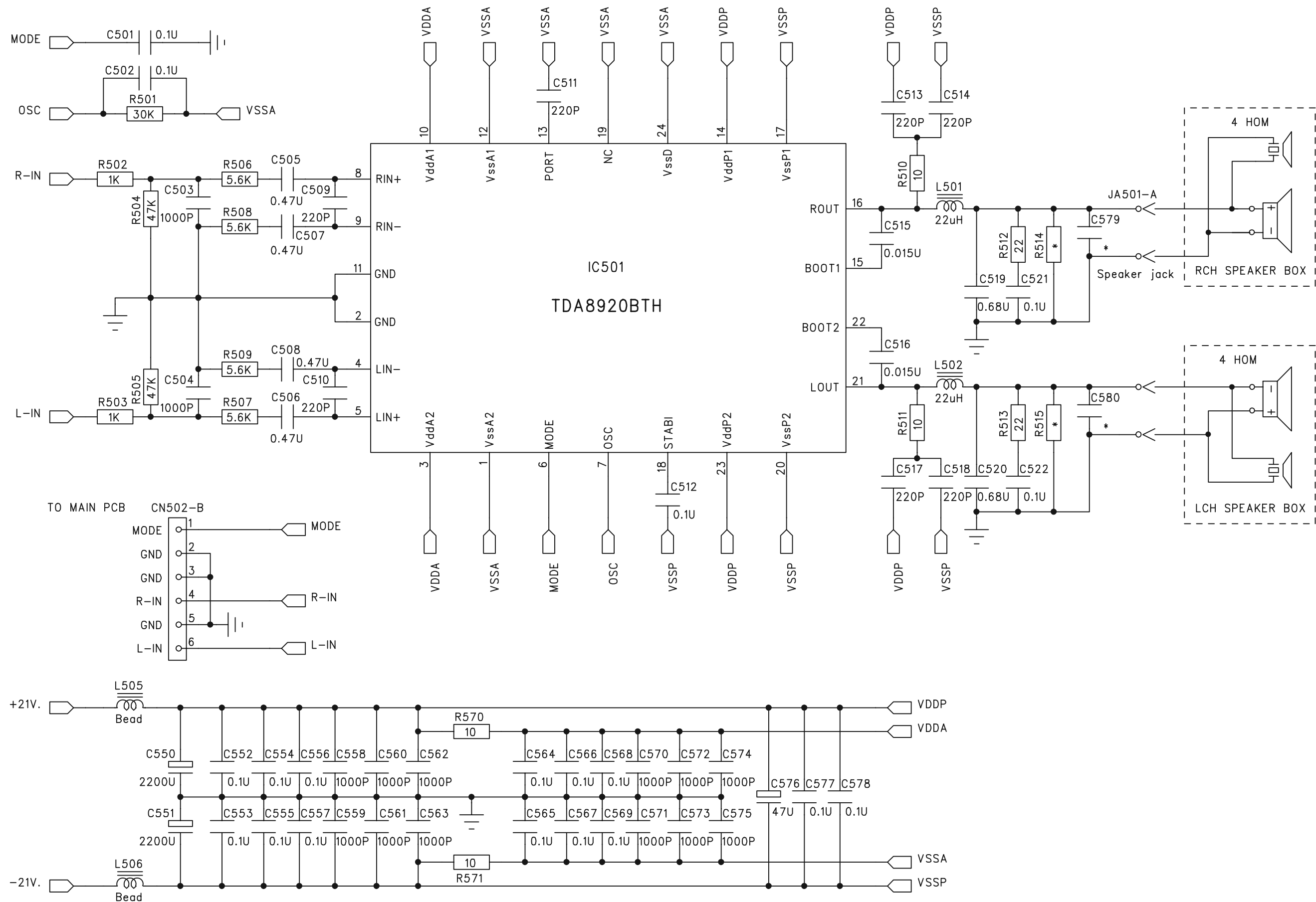
### LAYOUT DIAGARM - RECTIFIER BOARD TOP VIEW



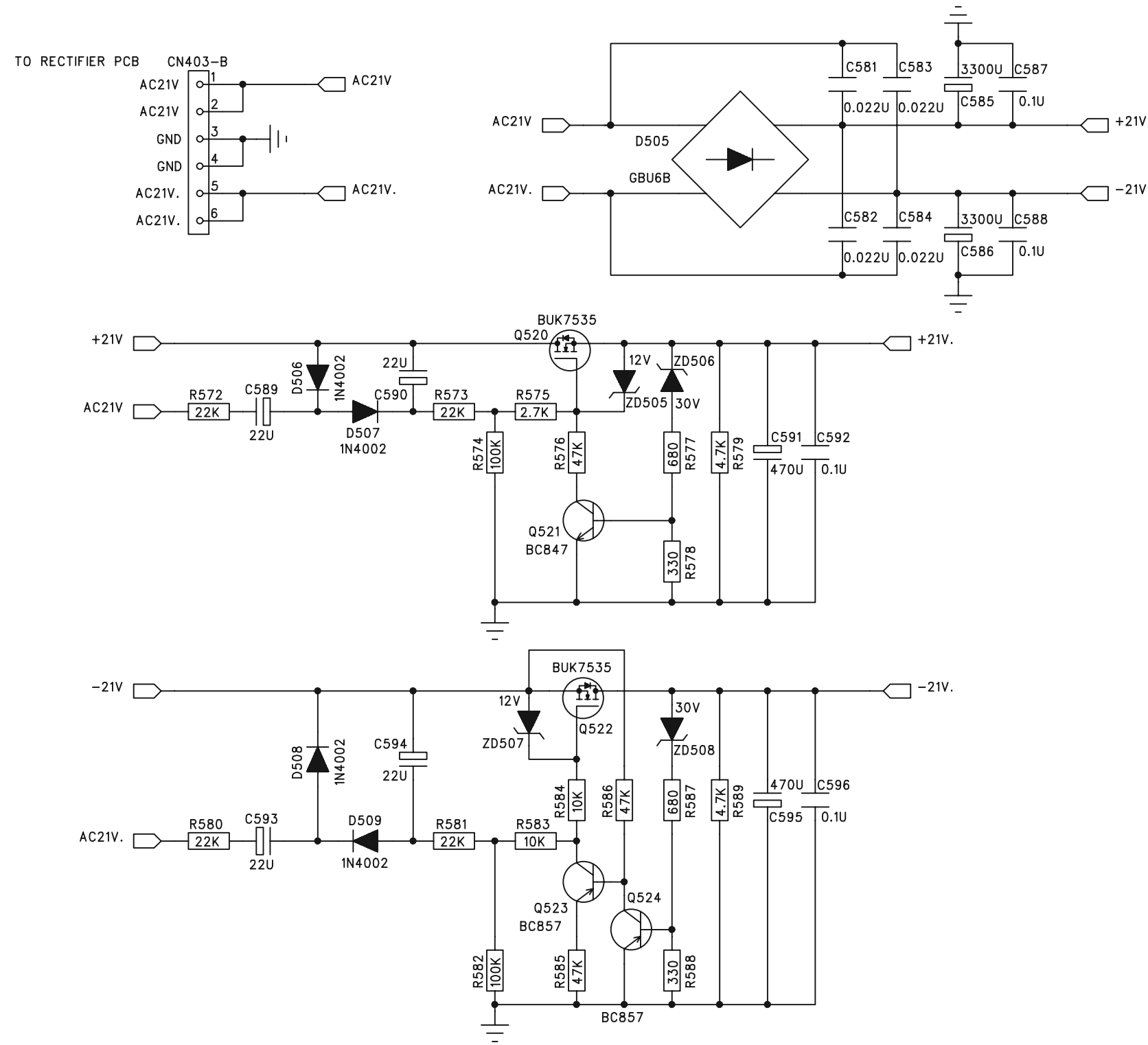
### LAYOUT DIAGARM - RECTIFIER BOARD BOTTOM VIEW



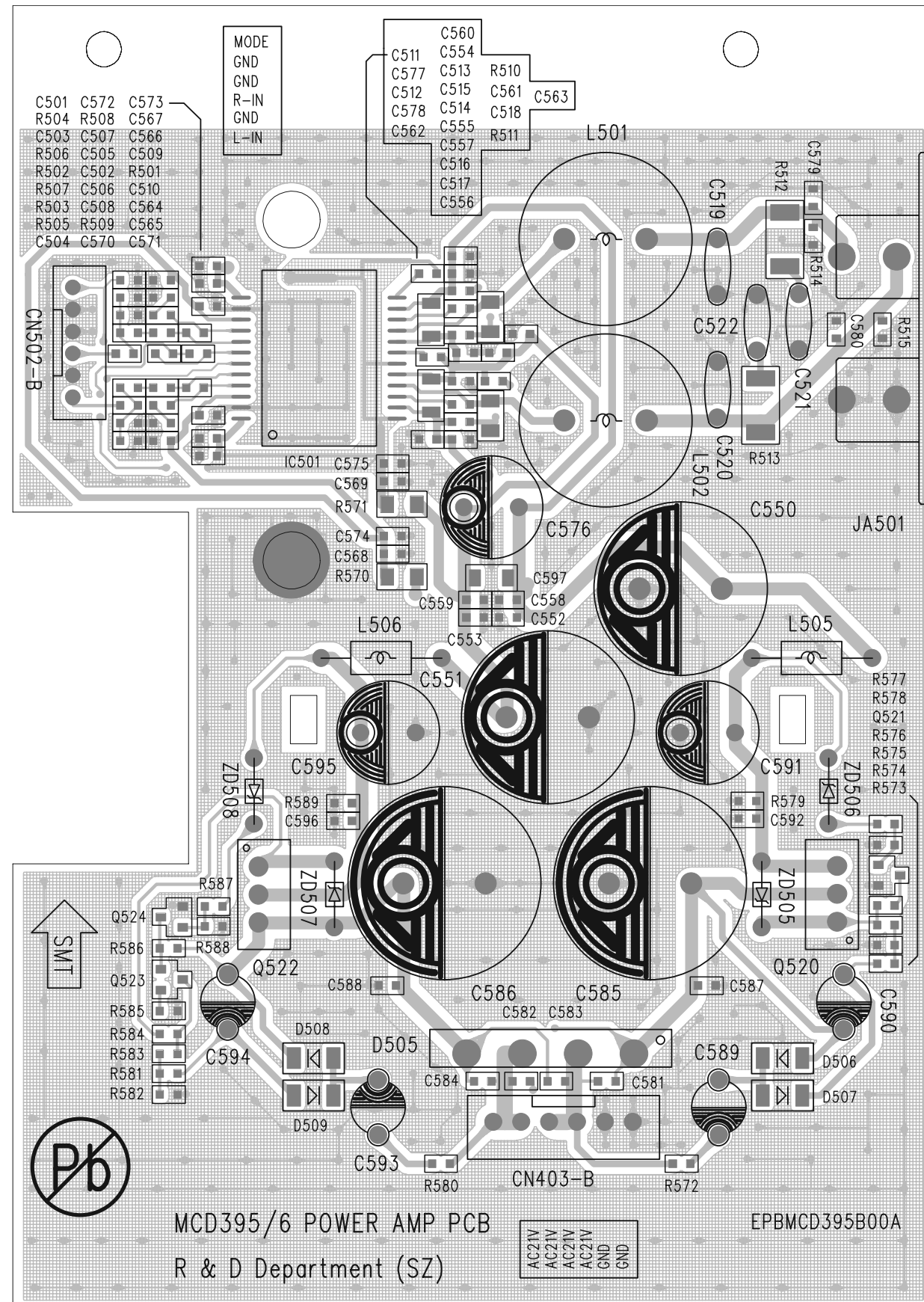
# CIRCUIT DIAGARM - POWER AMP BOARD PART1



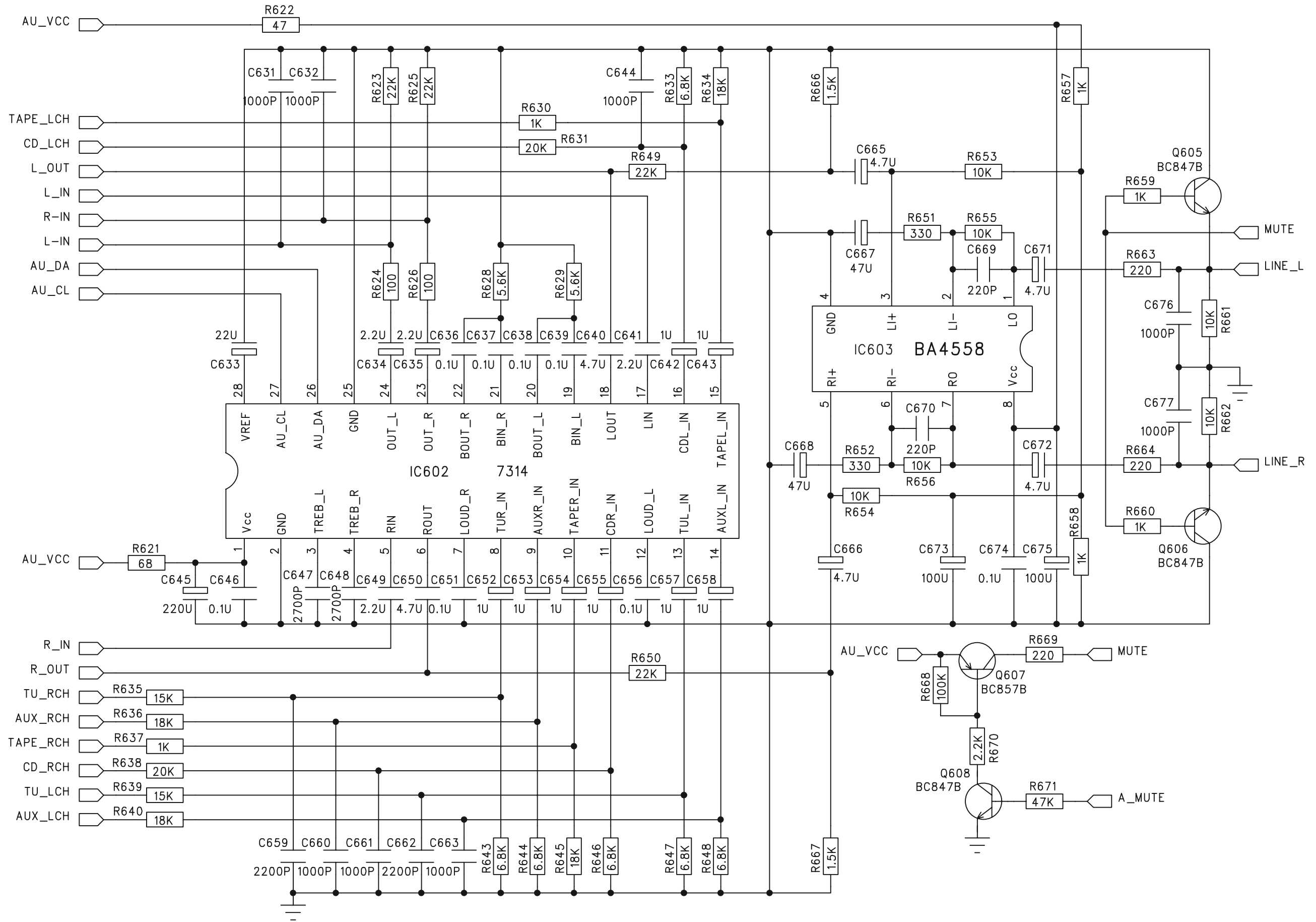
# CIRCUIT DIAGARM - POWER AMP BOARD PART2



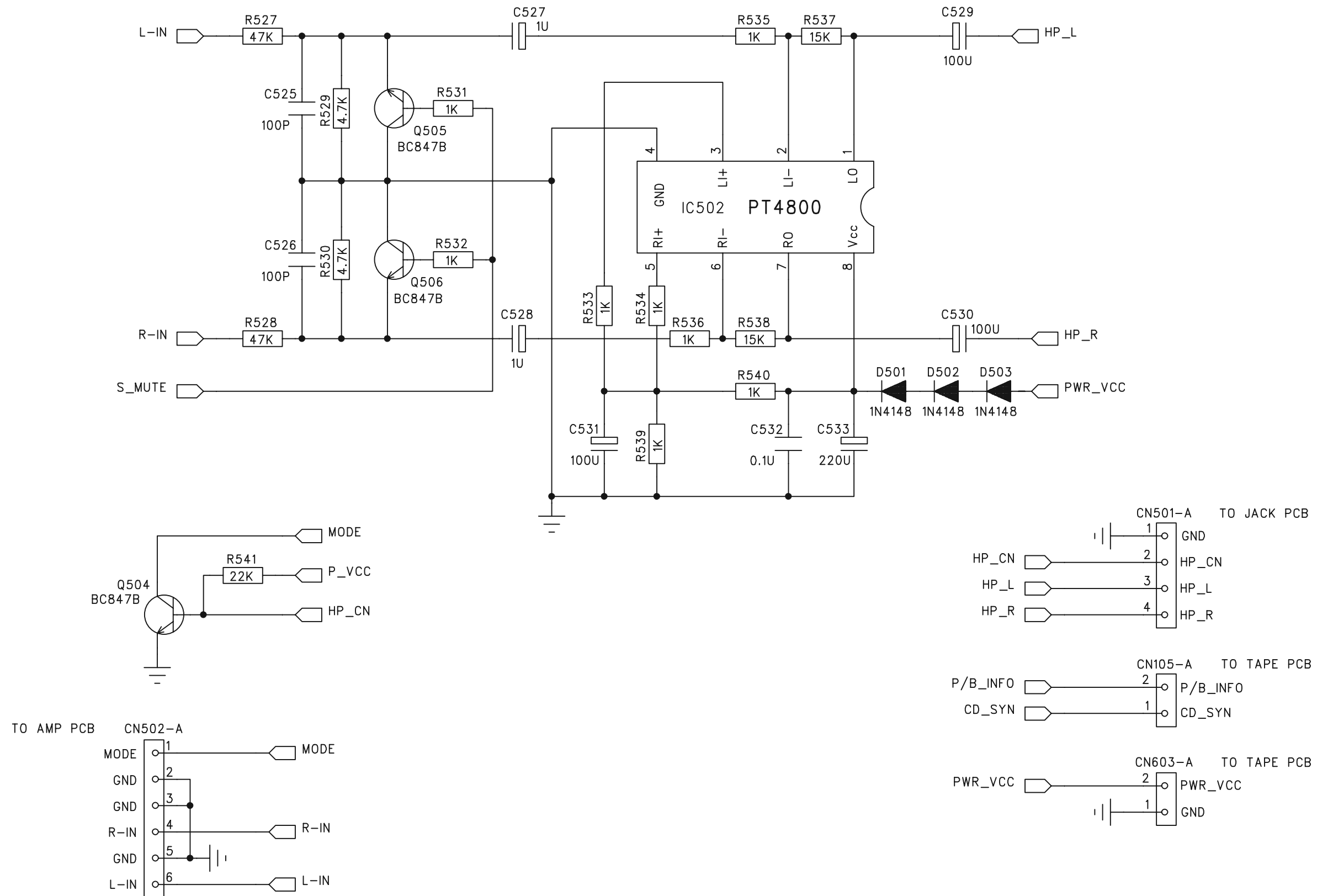
# LAYOUT DIAGARM - POWER AMP BOARD



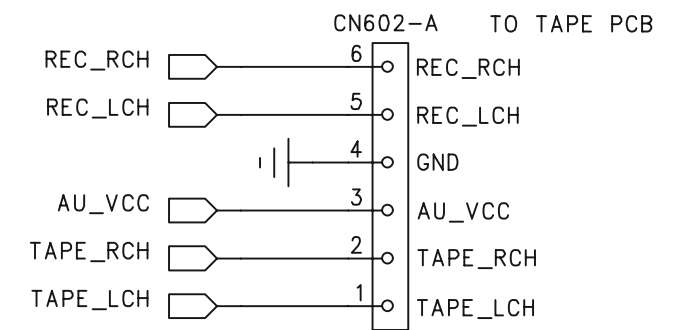
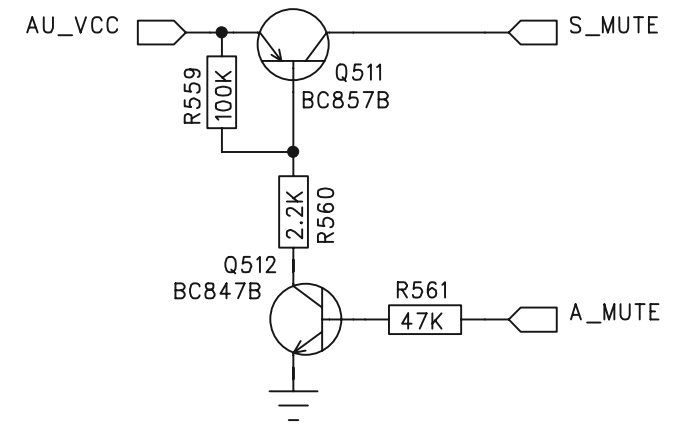
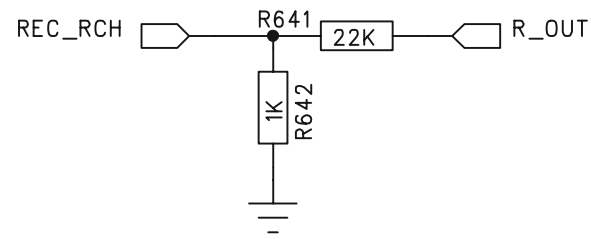
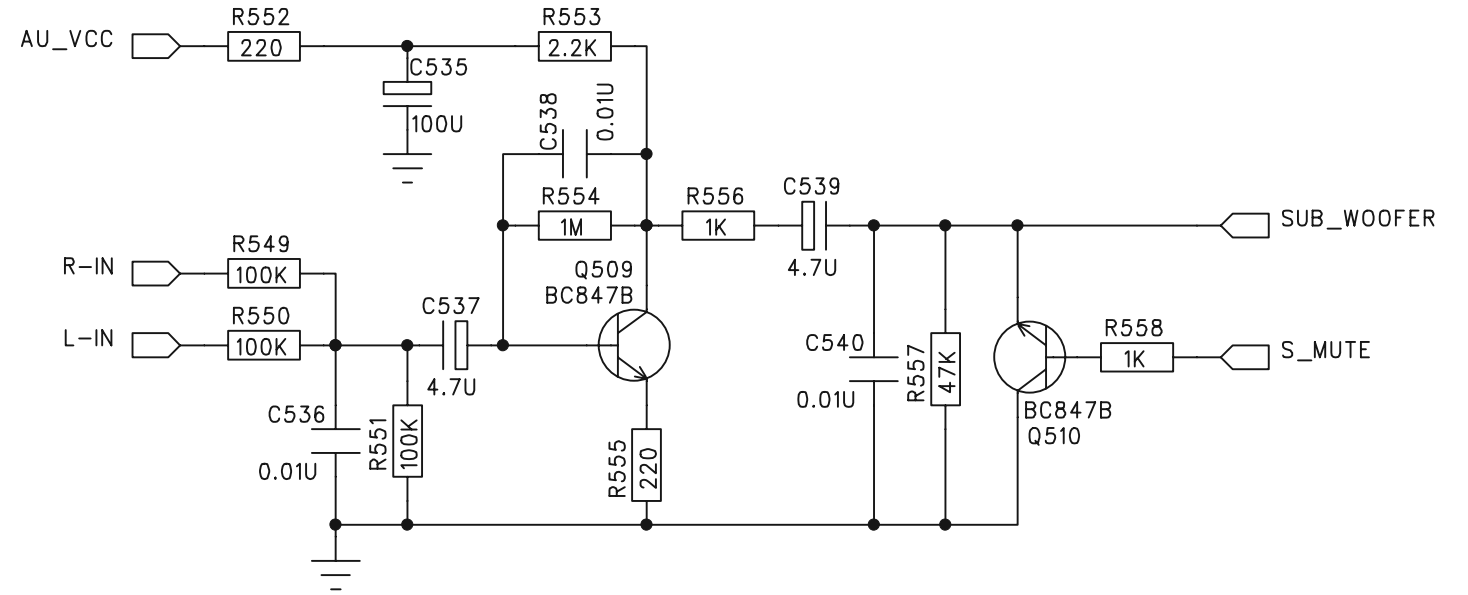
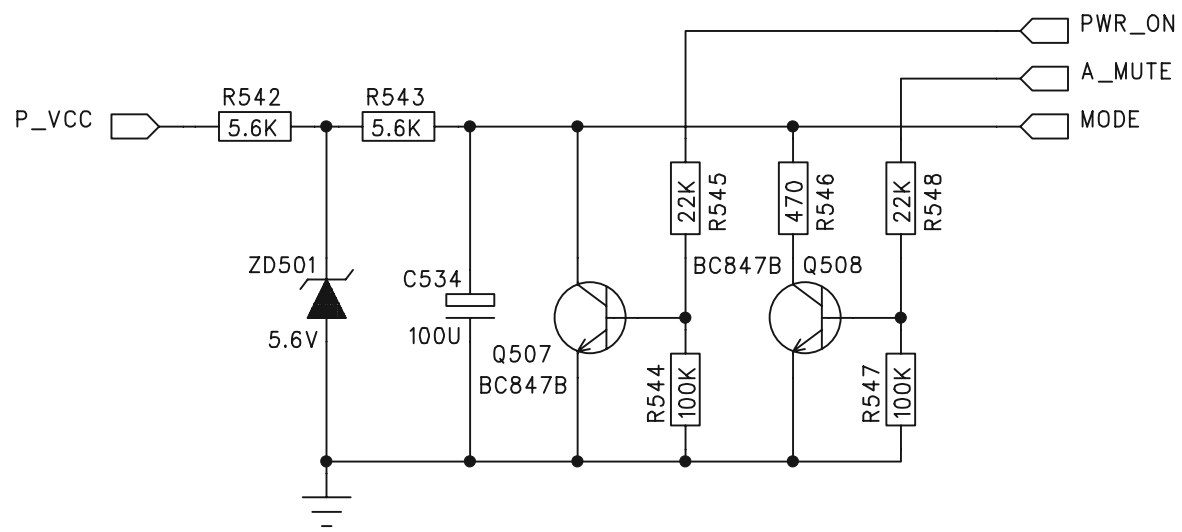
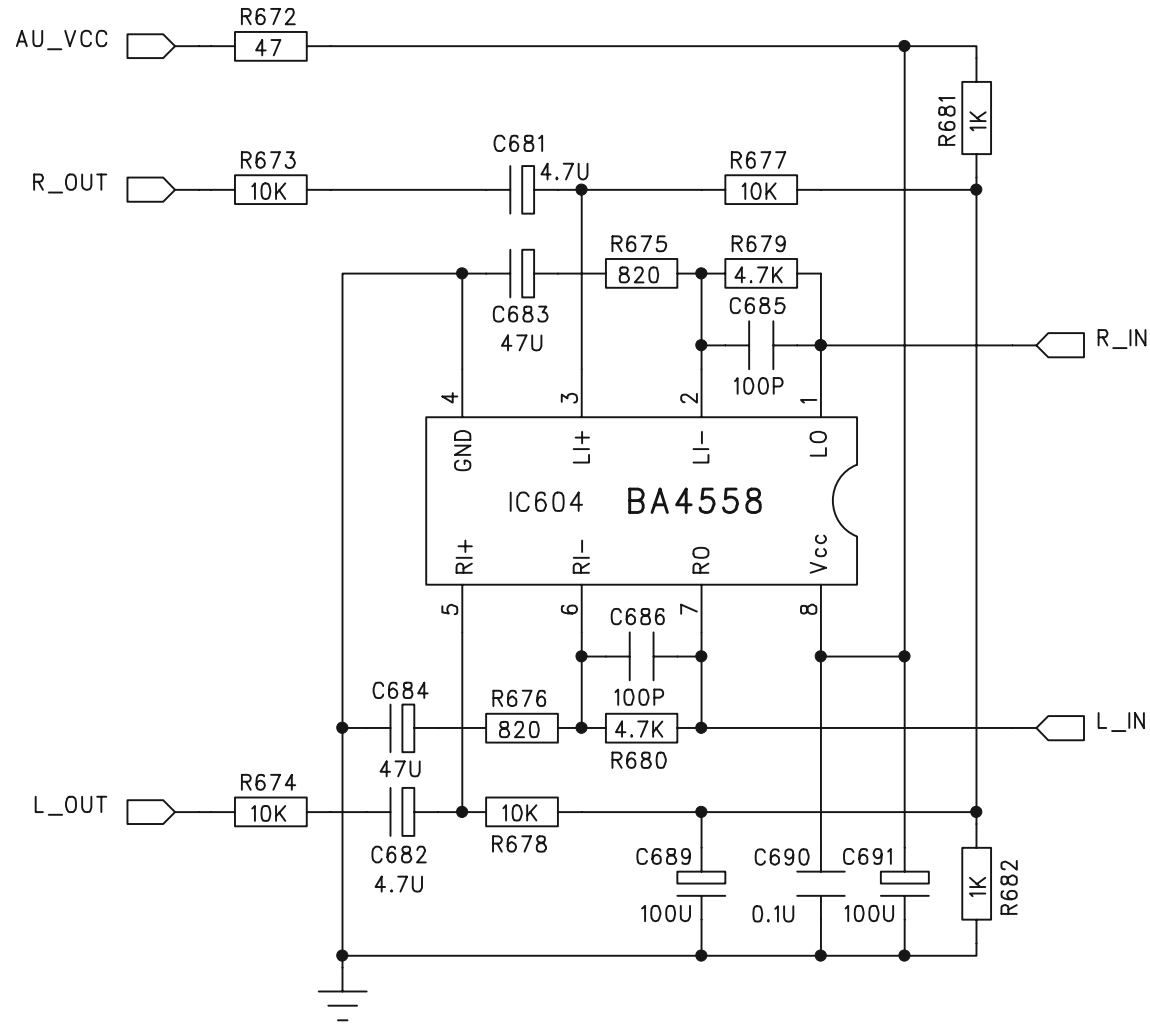
# CIRCUIT DIAGRAM - MAIN BOARD



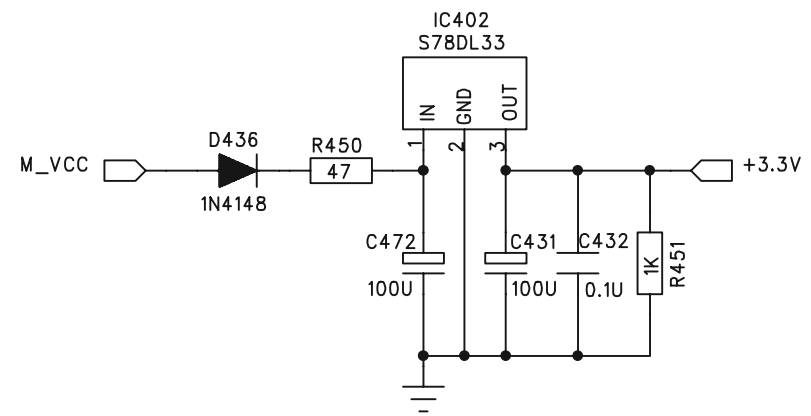
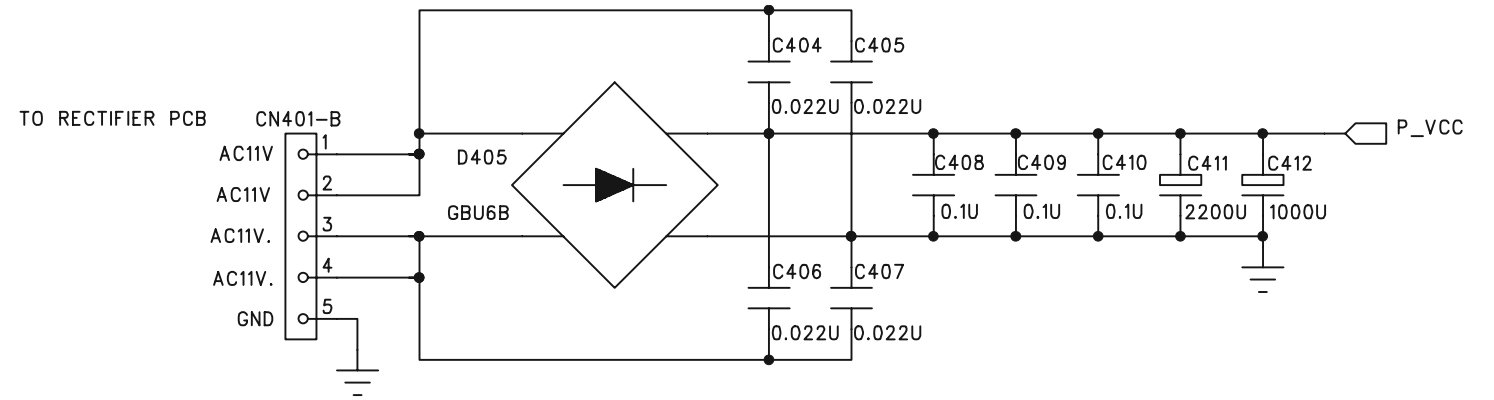
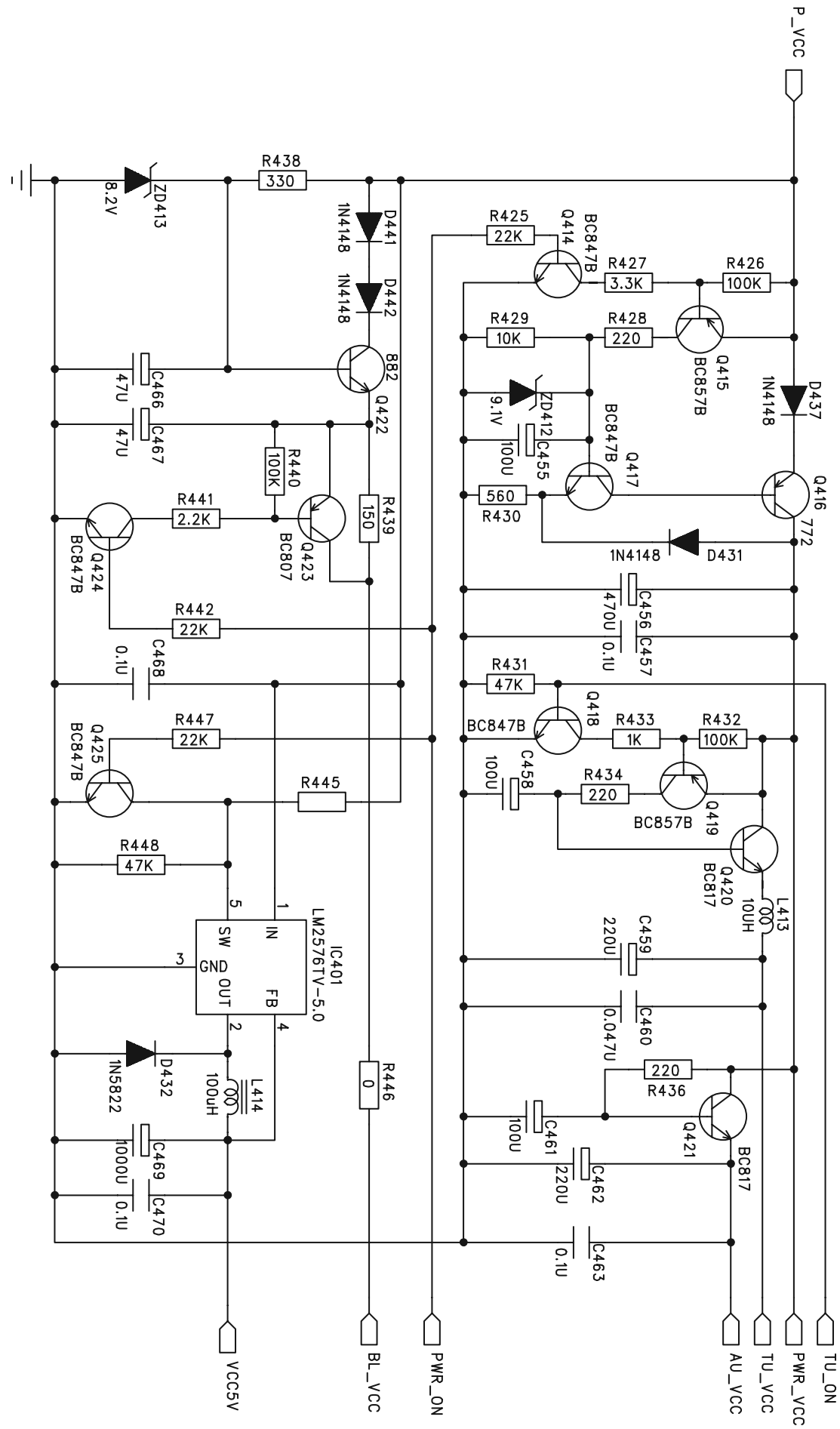
### CIRCUIT DIAGRAM - MAIN BOARD



CIRCUIT DIAGRAM - MAIN BOARD

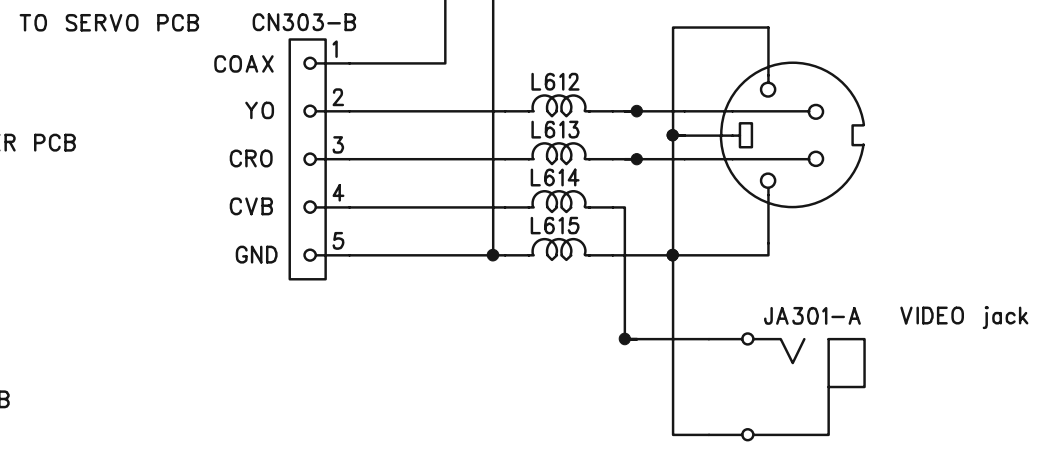
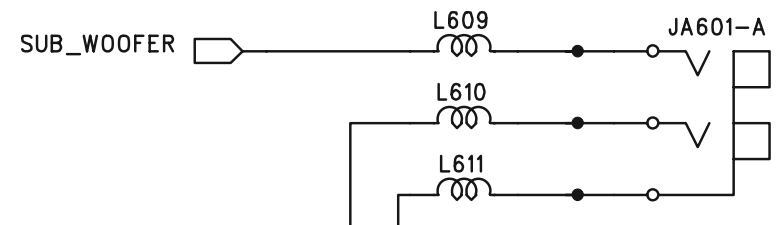
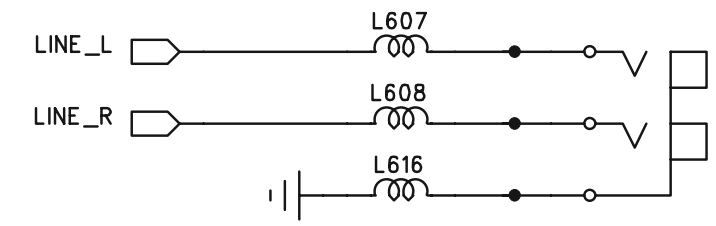
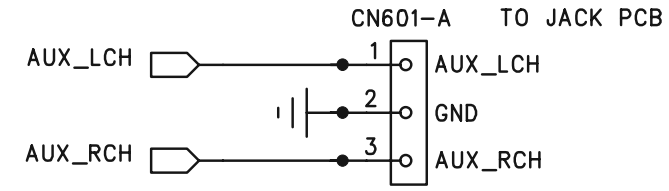
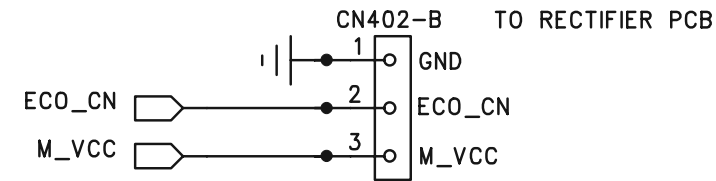
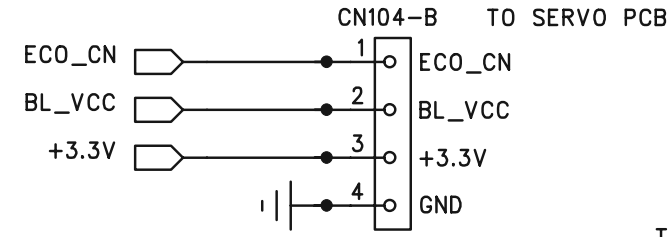
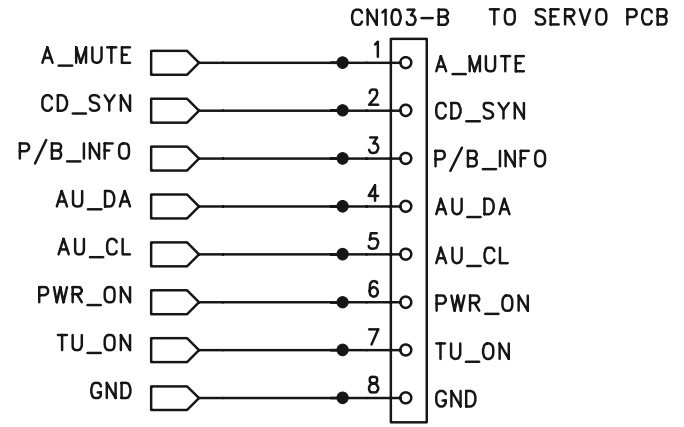
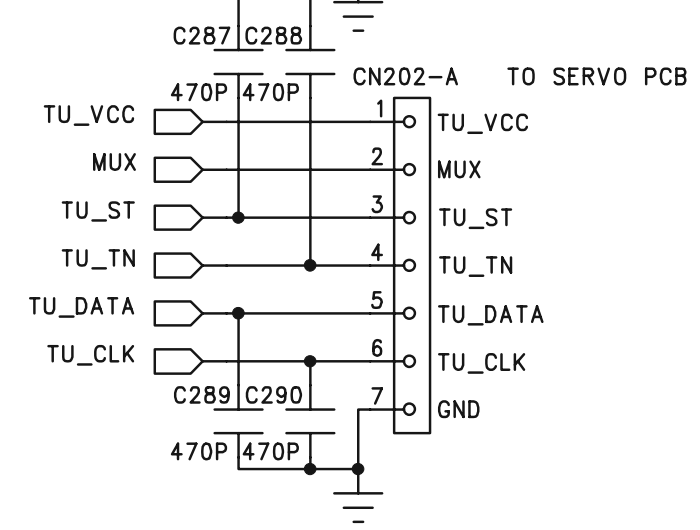
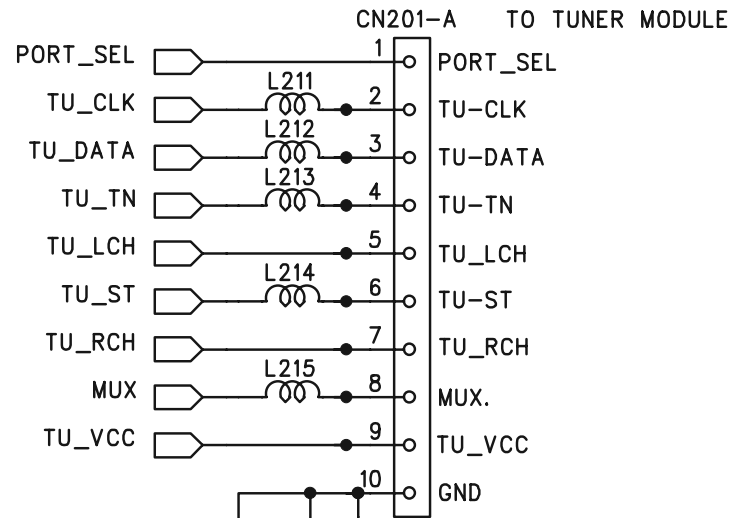
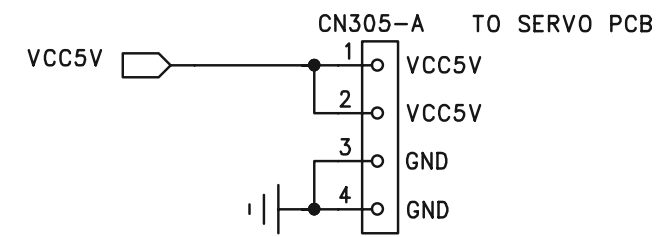
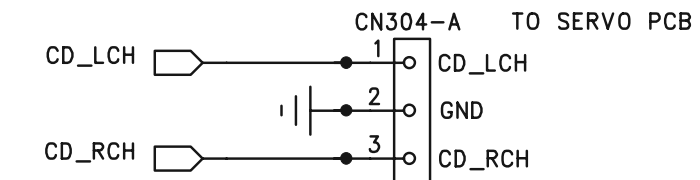


# CIRCUIT DIAGRAM - MAIN BOARD

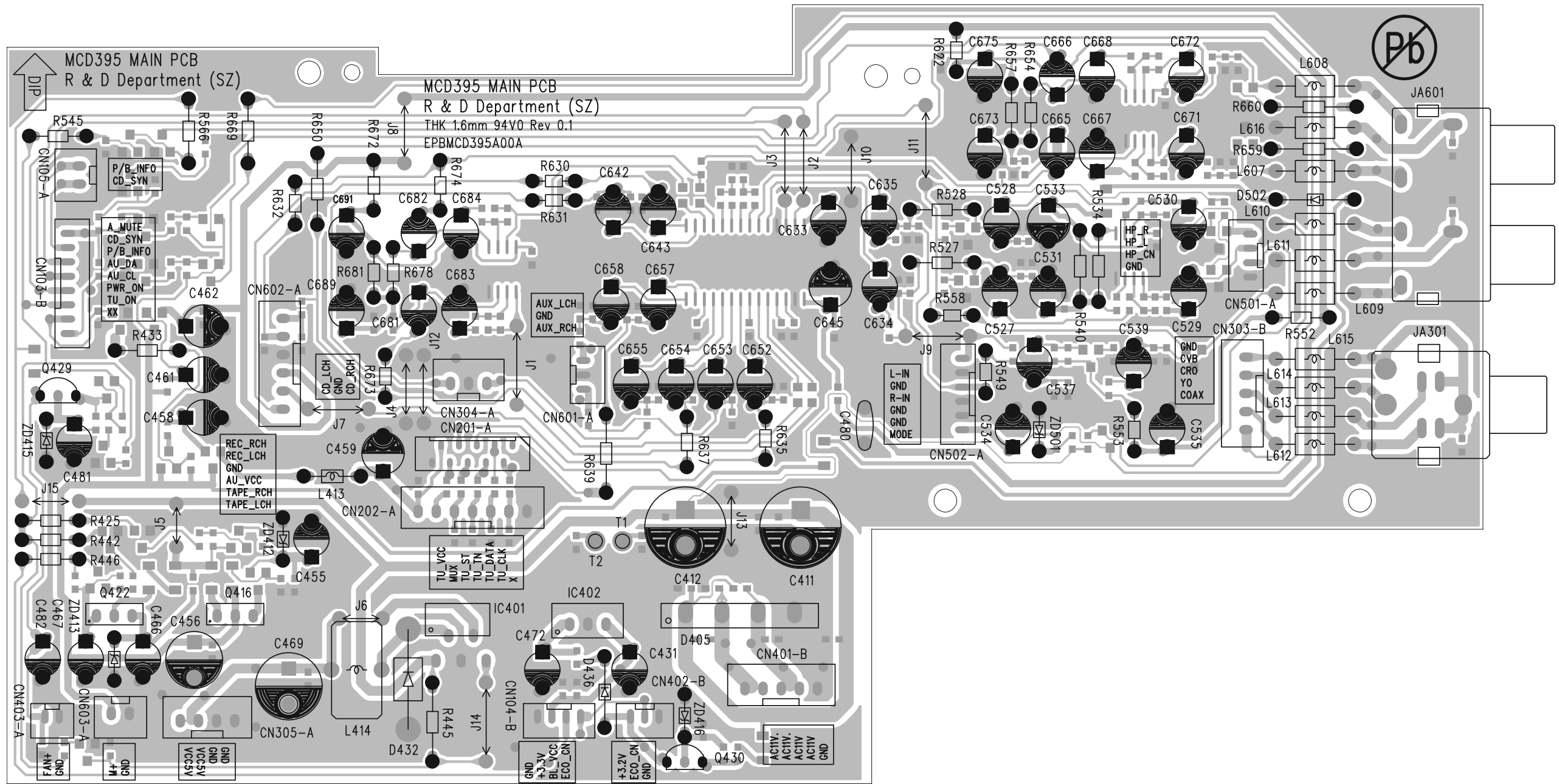




CIRCUIT DIAGRAM - MAIN BOARD

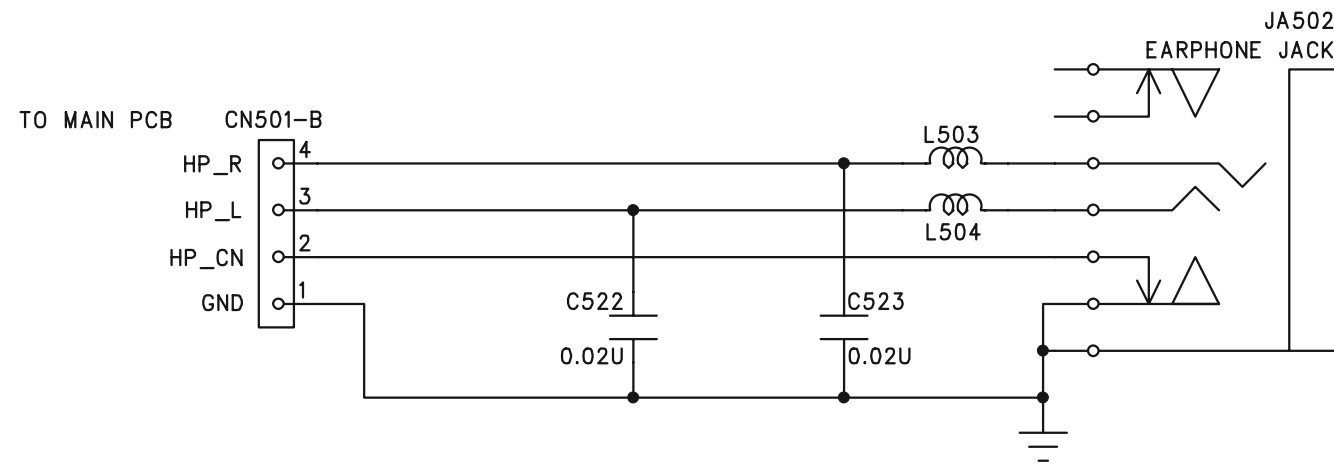


LAYOUT DIAGRAM - MAIN BOARD

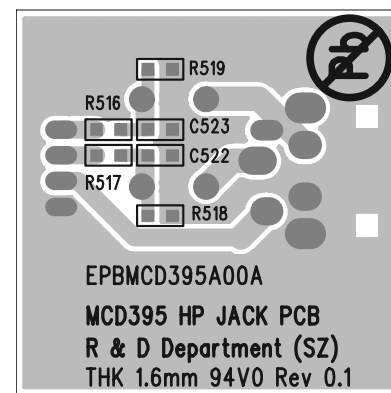
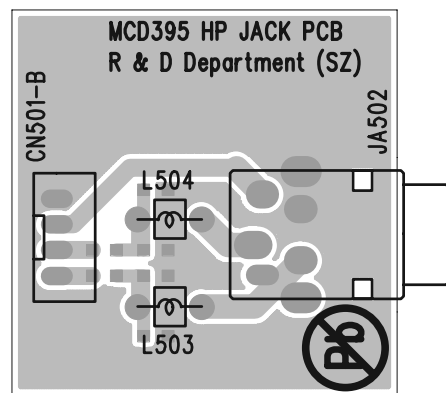




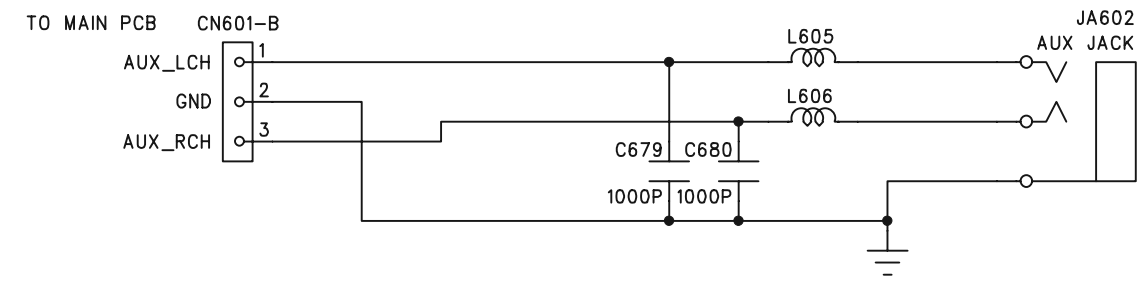
CIRCUIT DIAGRAM - HEADPHONE BOARD



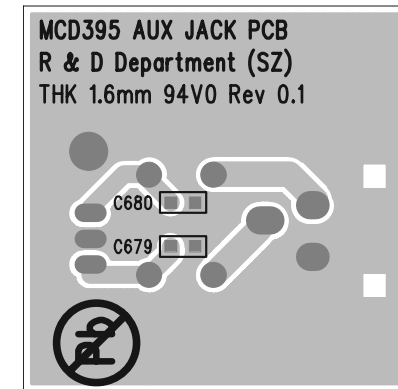
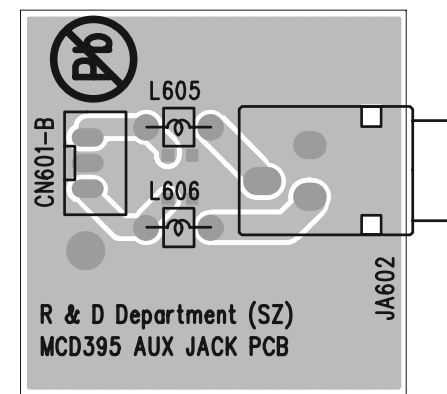
LAYOUT DIAGRAM - HEADPHONE BOARD



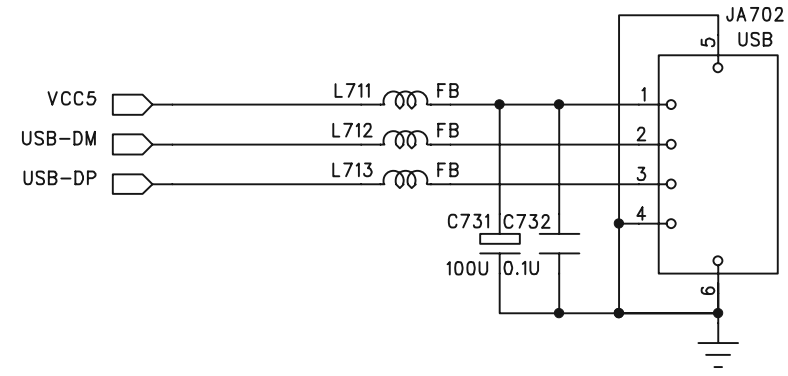
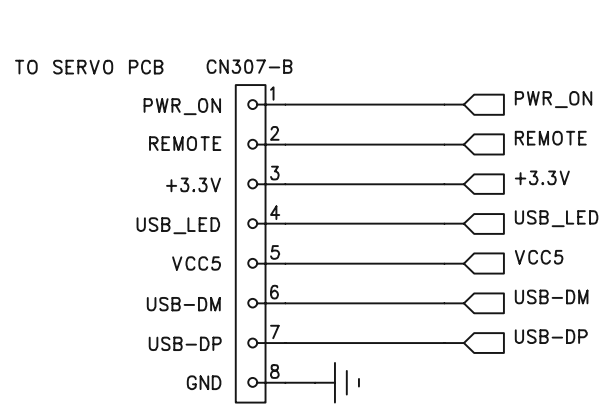
CIRCUIT DIAGRAM - AUX JACK BOARD



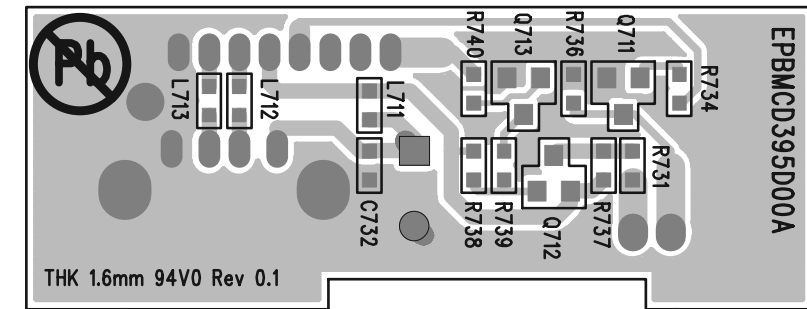
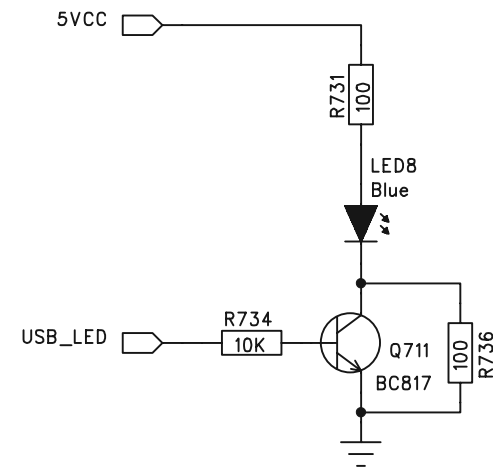
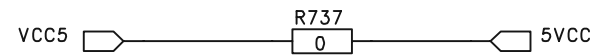
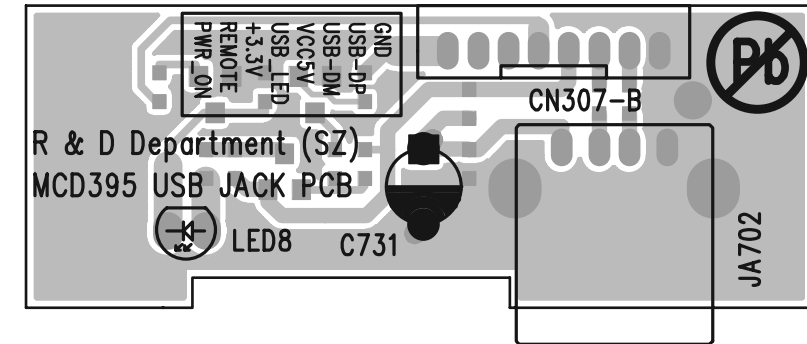
LAYOUT DIAGRAM - AUX JACK BOARD



### CIRCUIT DIAGRAM - USB JACK BOARD

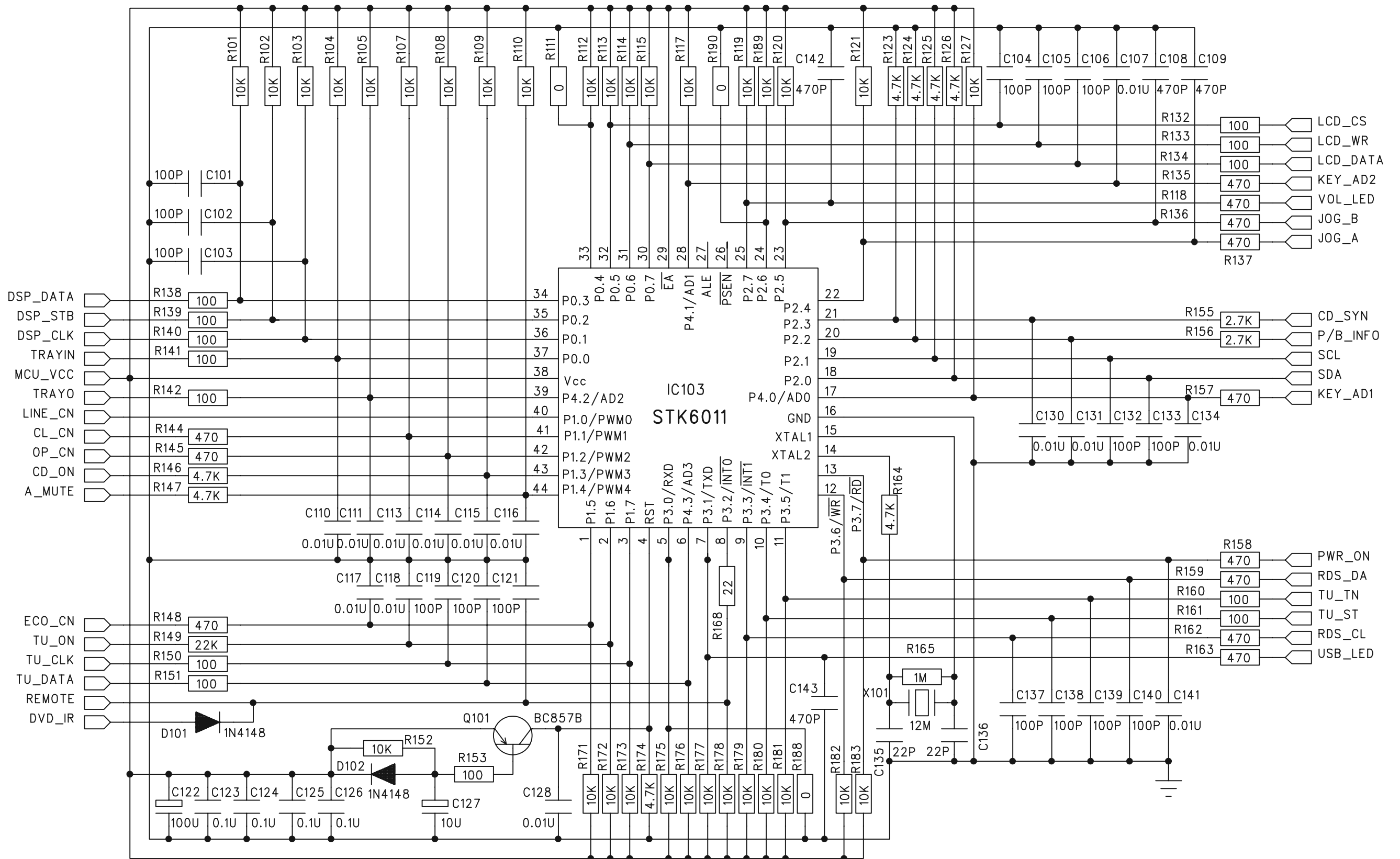


### LAYOUT DIAGRAM - USB JACK BOARD

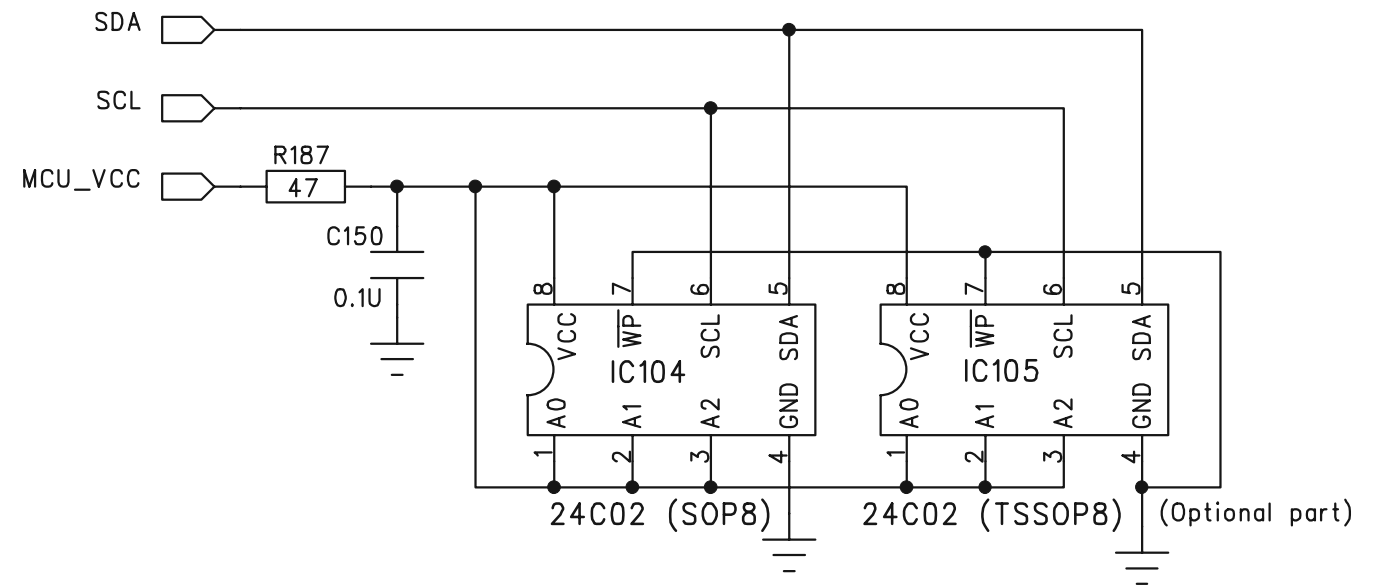
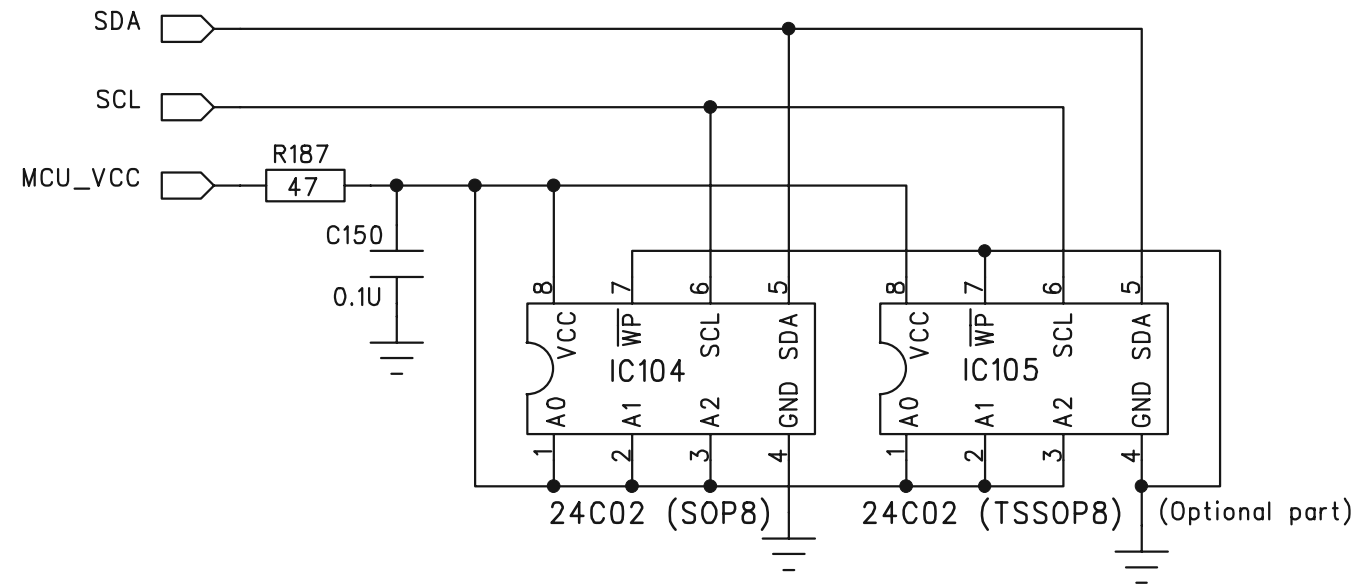
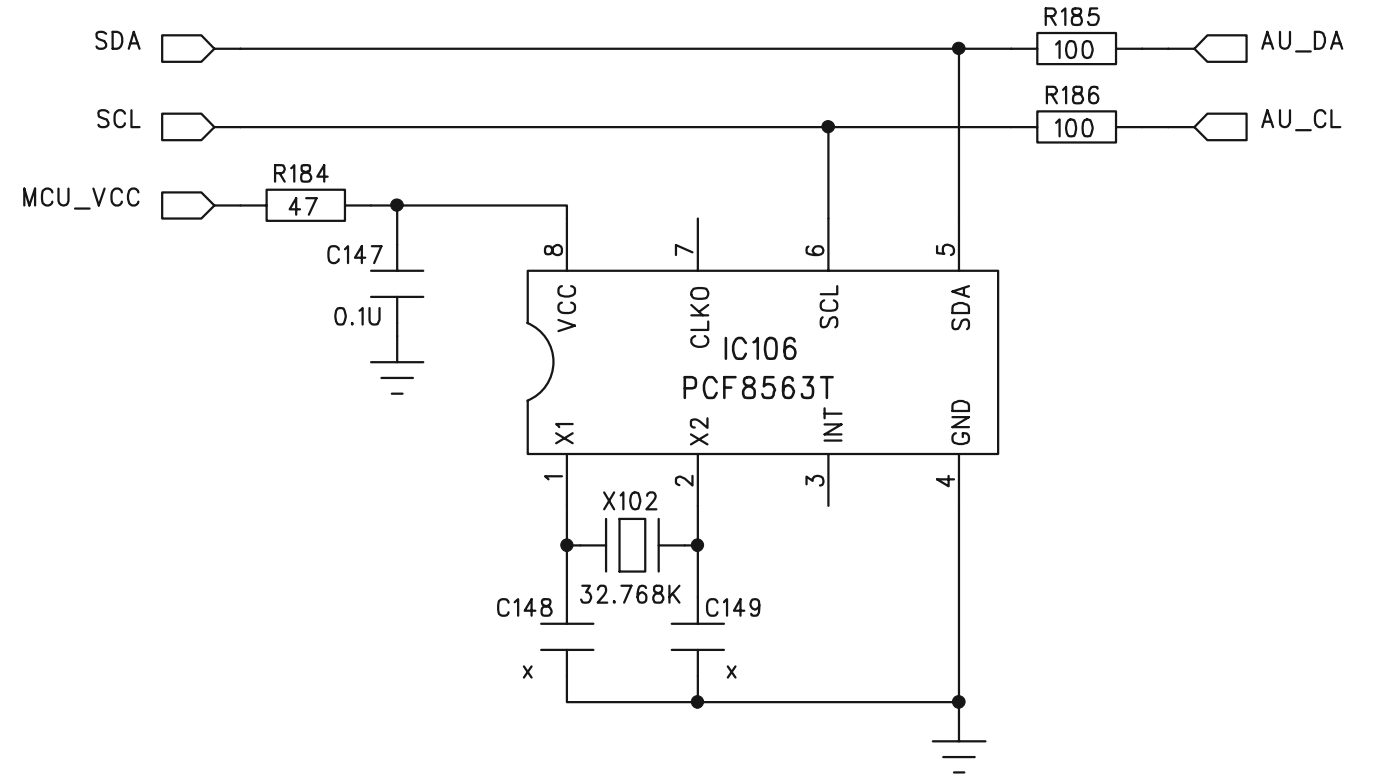
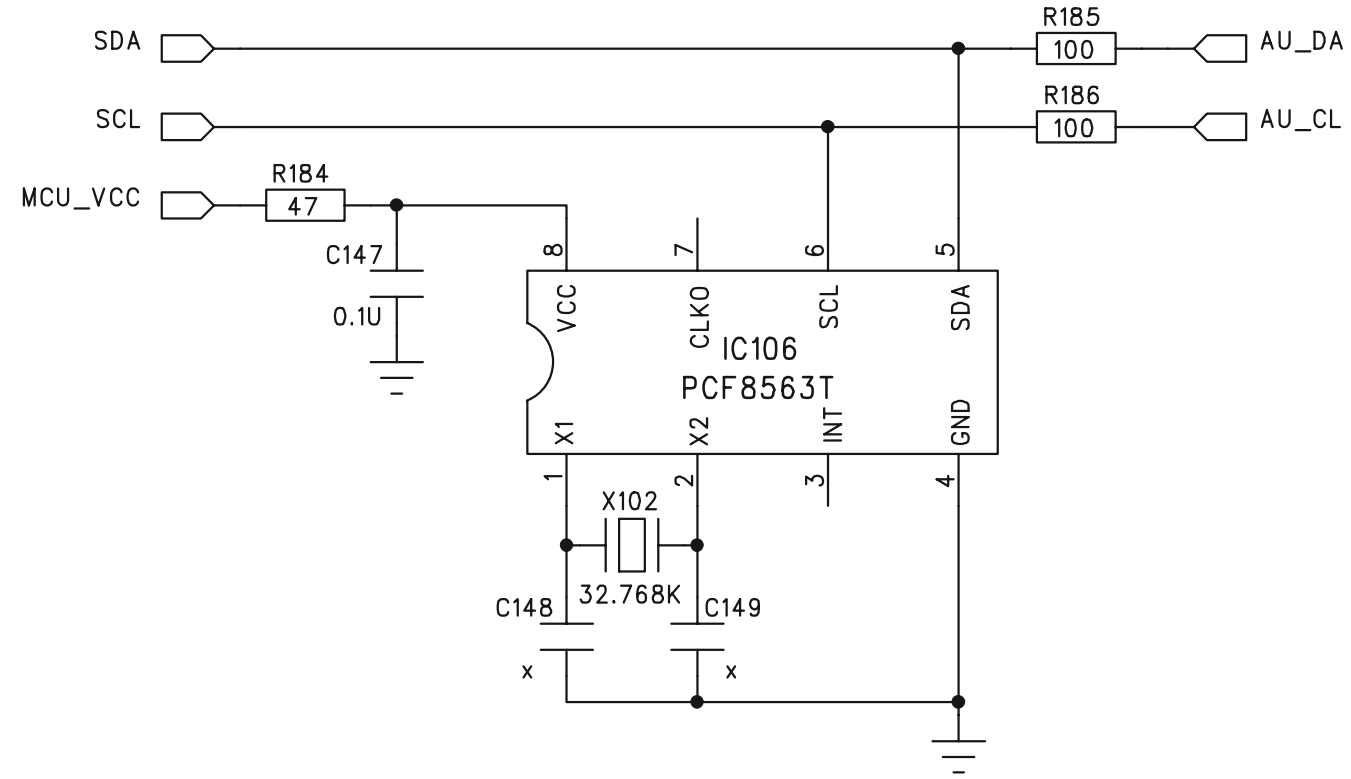


### CIRCUIT DIAGRAM - DVD MPEG BOARD

MPEG is not repaired, diagram for reference only.

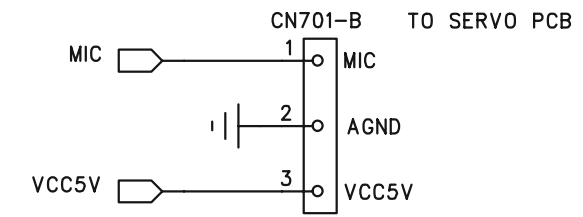
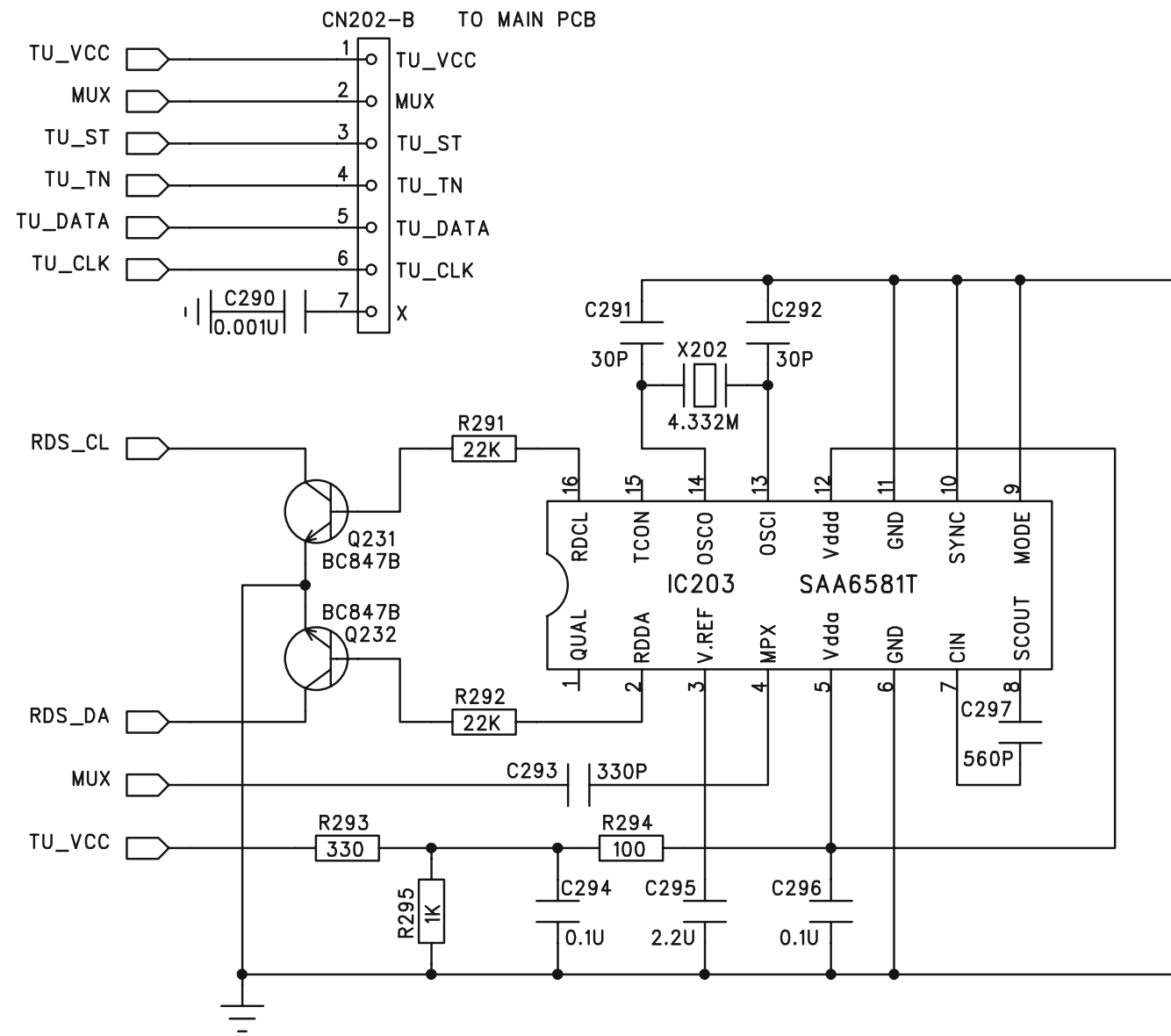


**CIRCUIT DIAGRAM - DVD MPEG BOARD**  
MPEG is not repaired, diagram for reference only.



**CIRCUIT DIAGRAM - DVD MPEG BOARD**

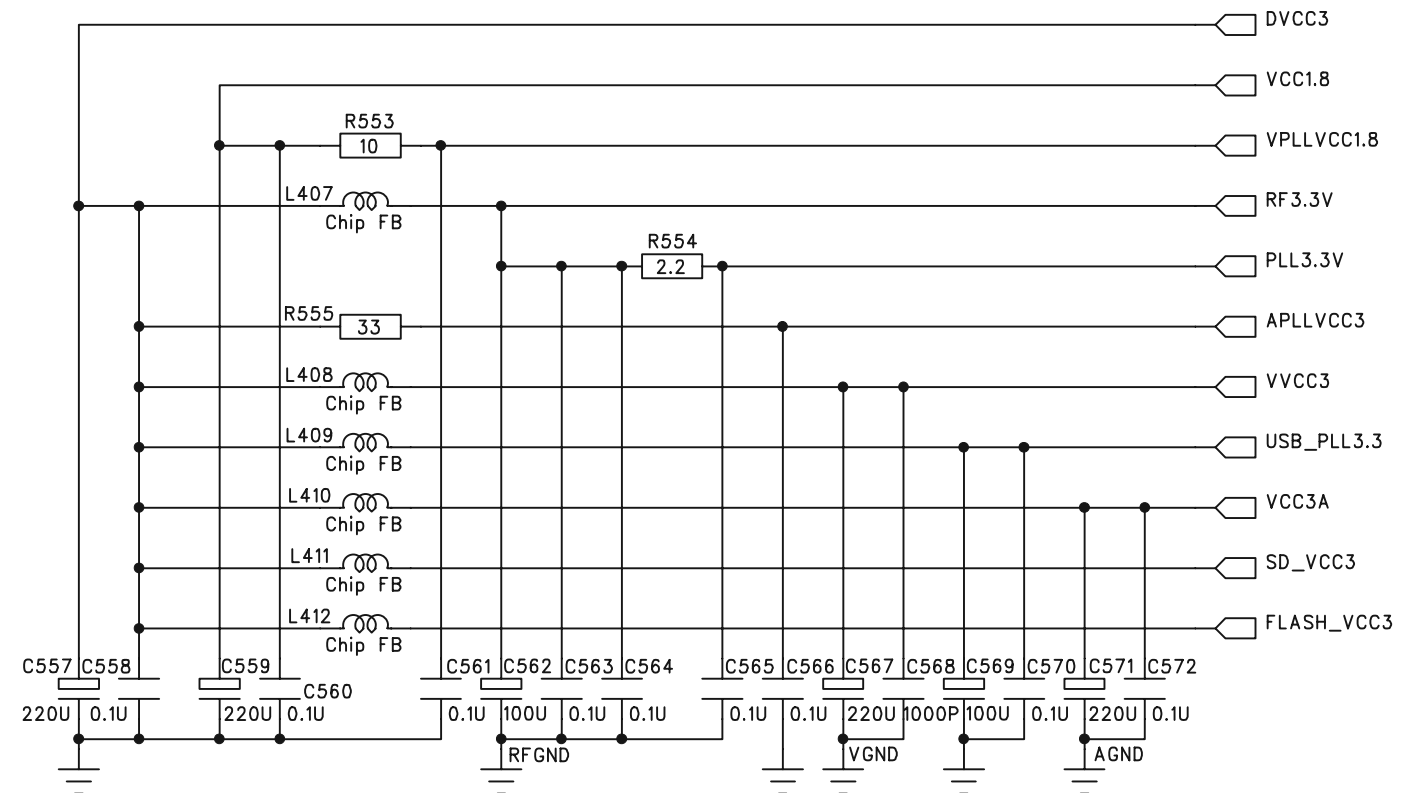
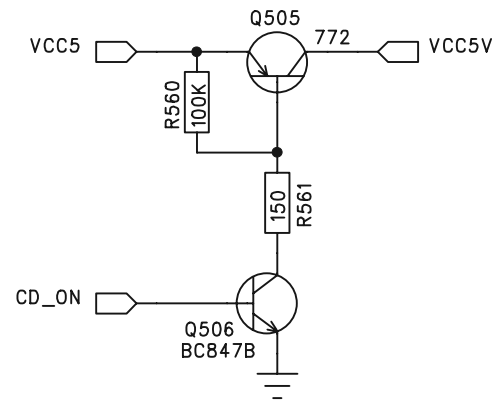
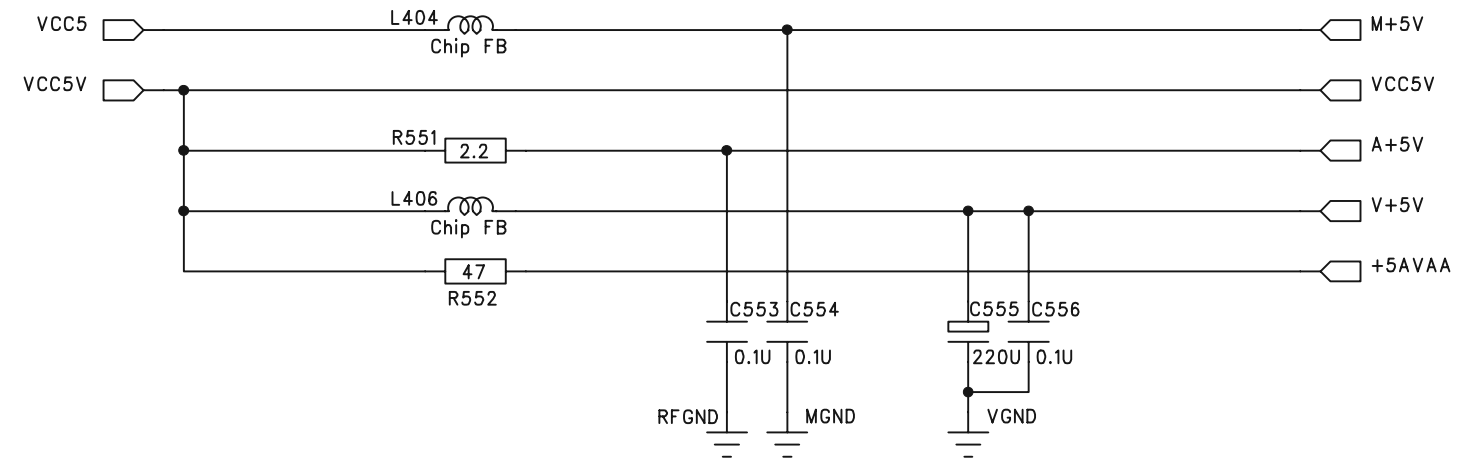
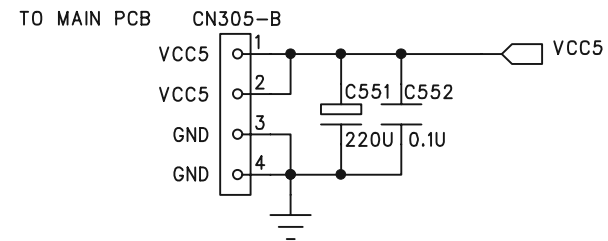
MPEG is not repaired, diagram for reference only.



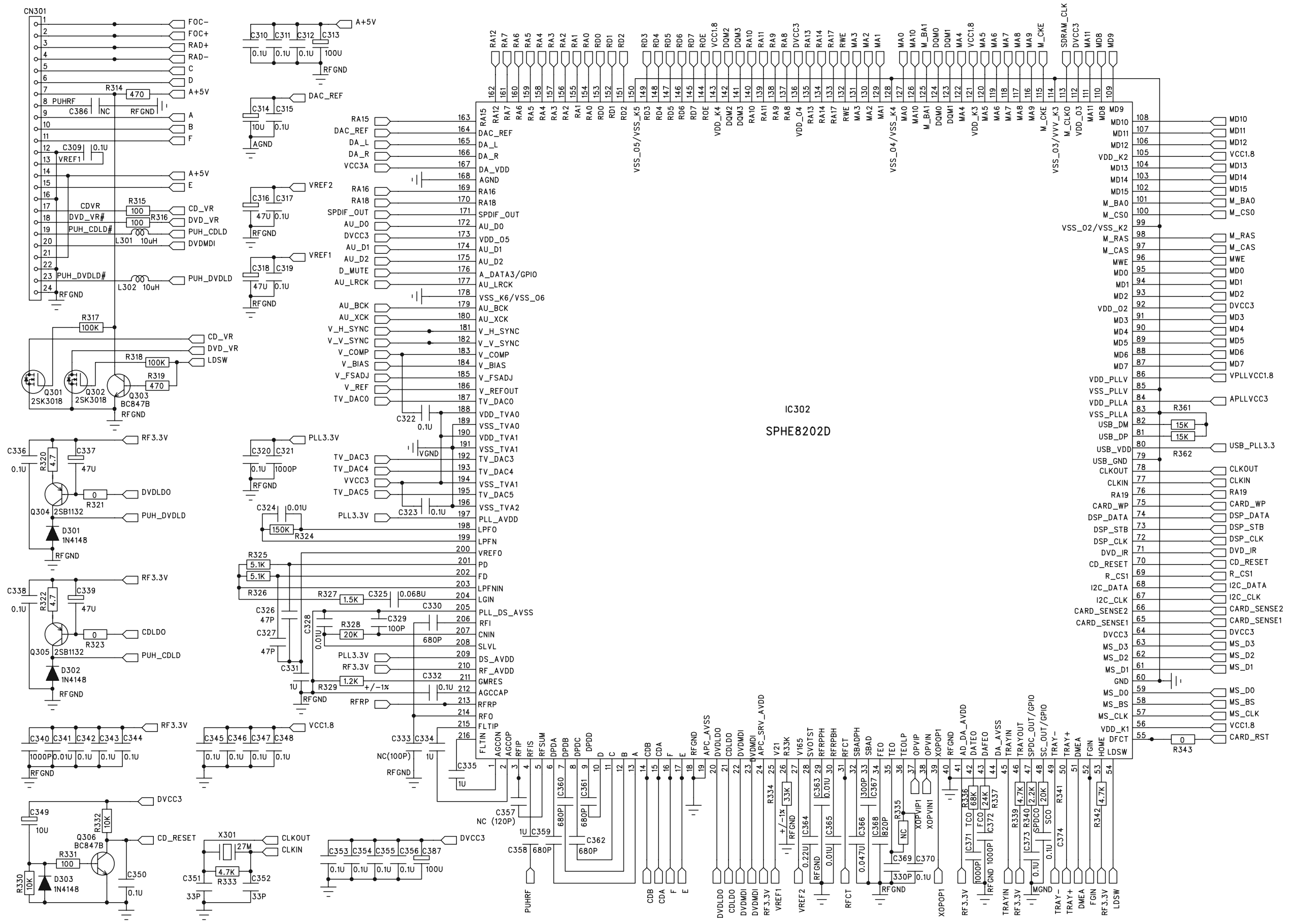


### CIRCUIT DIAGRAM - DVD MPEG BOARD

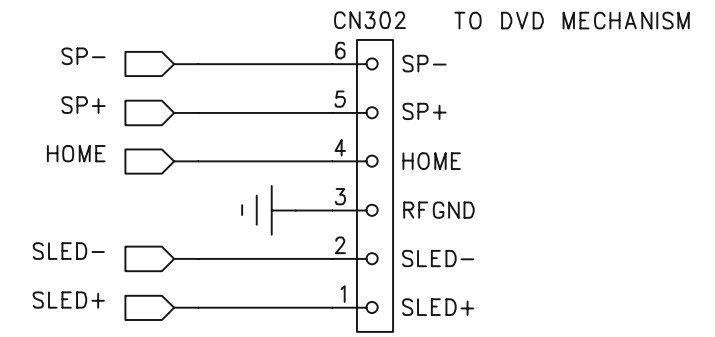
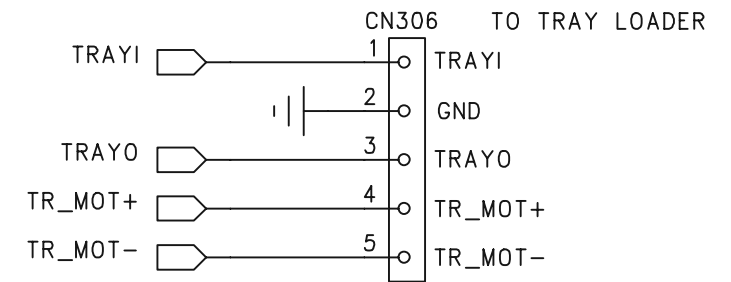
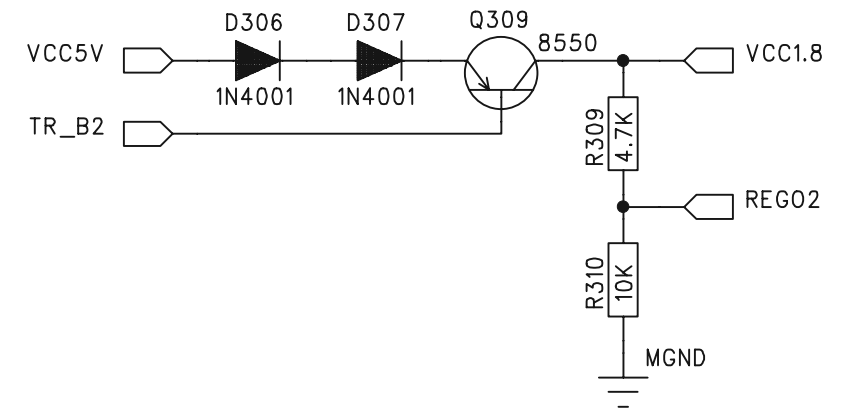
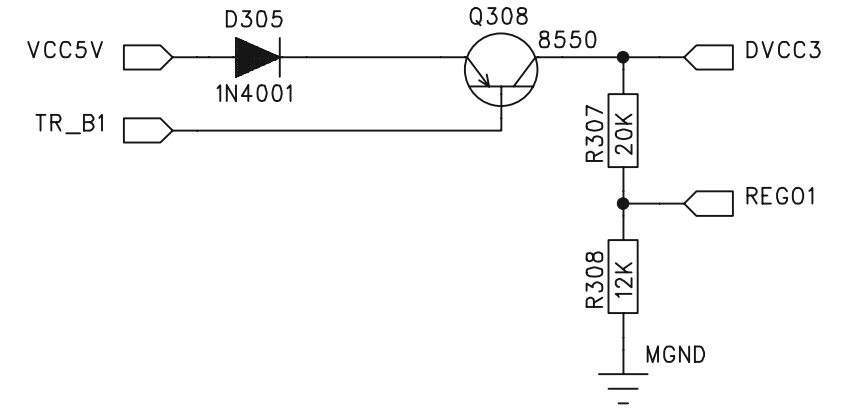
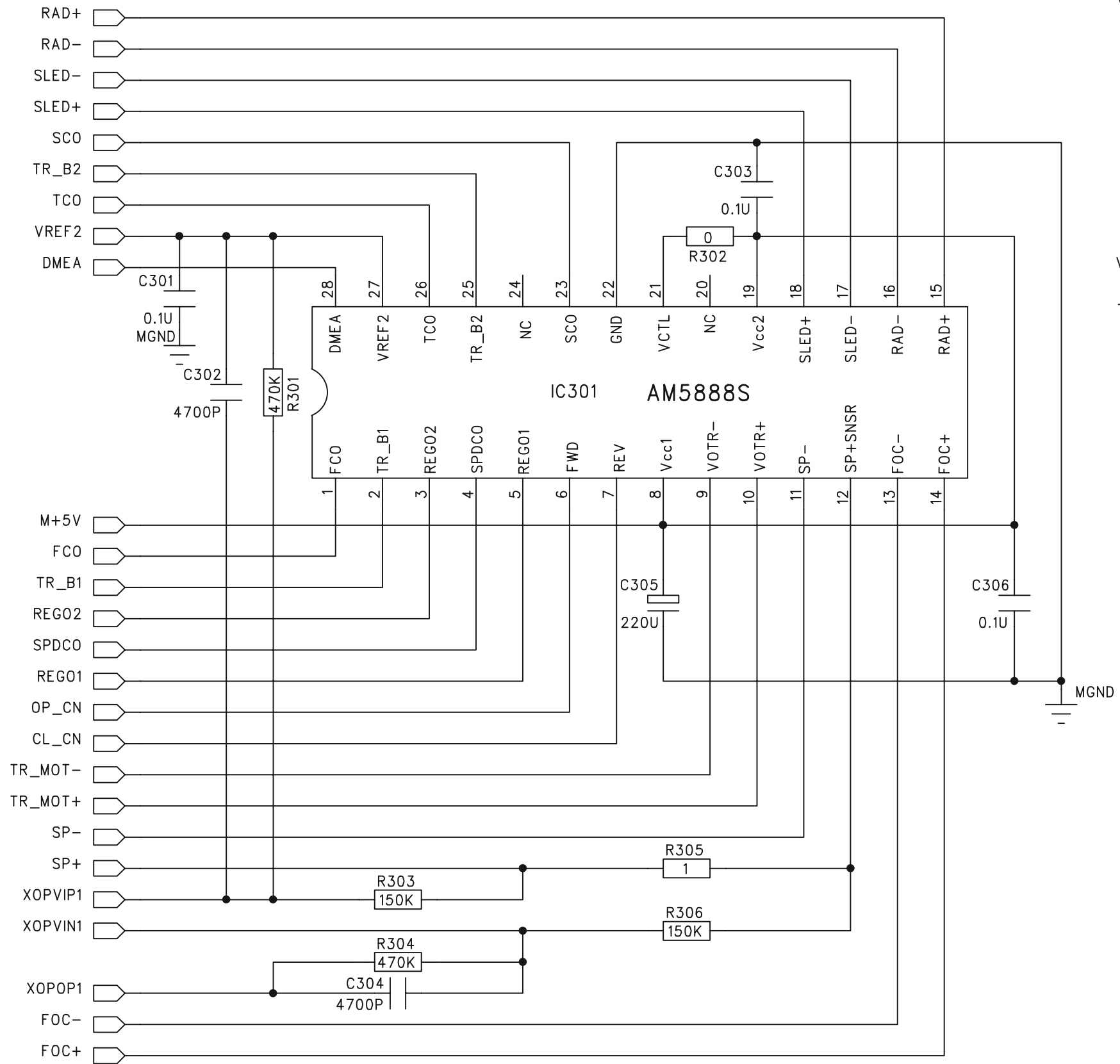
MPEG is not repaired, diagram for reference only.



CIRCUIT DIAGRAM - DVD MPEG BOARD  
MPEG is not repaired, diagram for reference only.

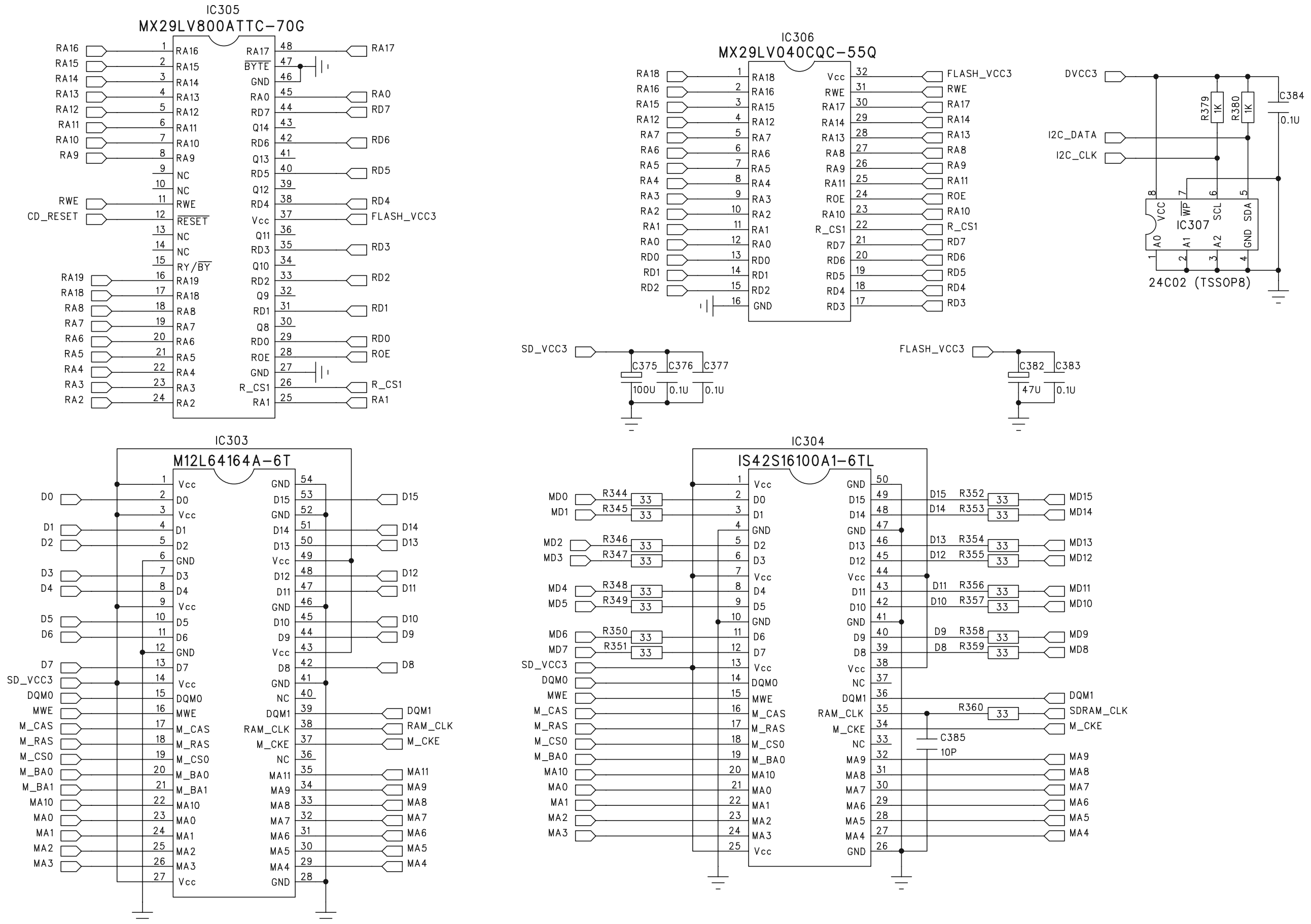


**CIRCUIT DIAGRAM - DVD MPEG BOARD**  
 MPEG is not repaired, diagram for reference only.



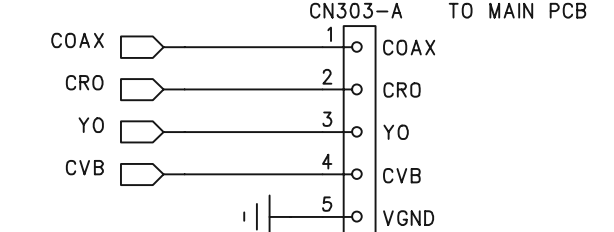
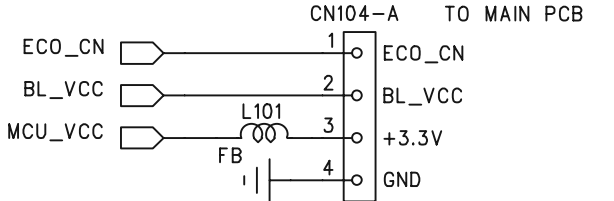
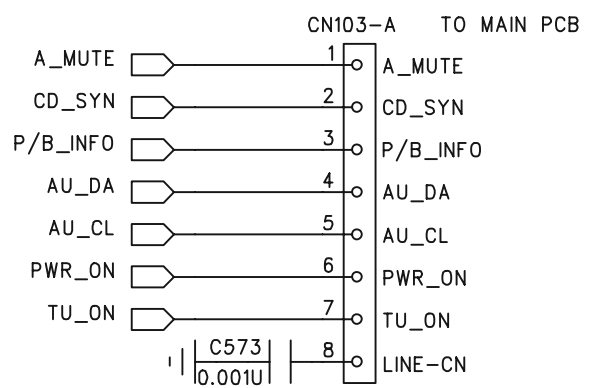
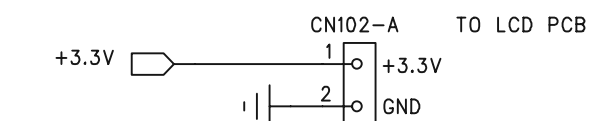
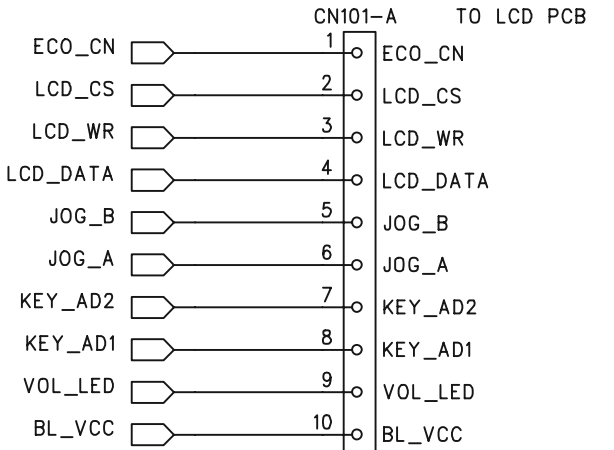
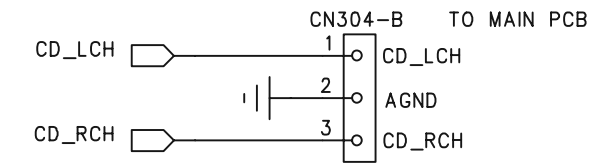
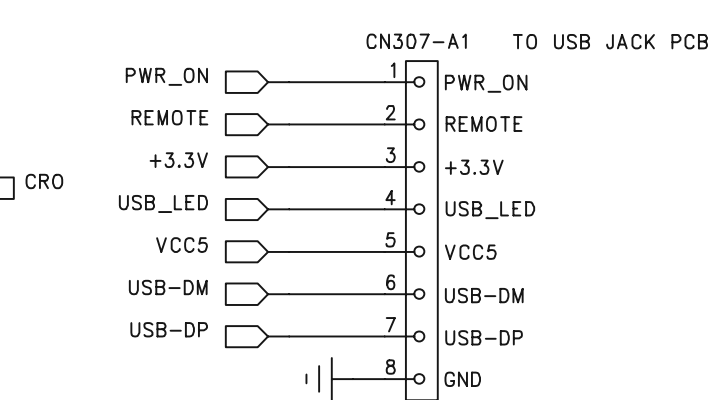
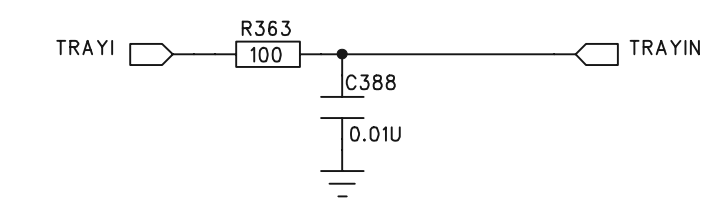
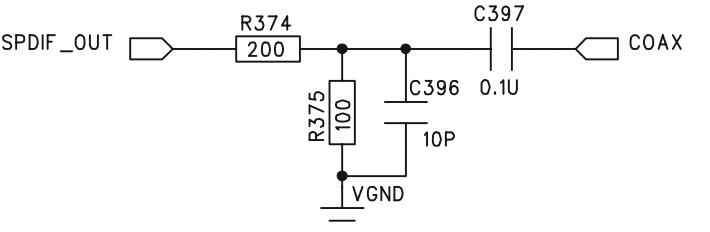
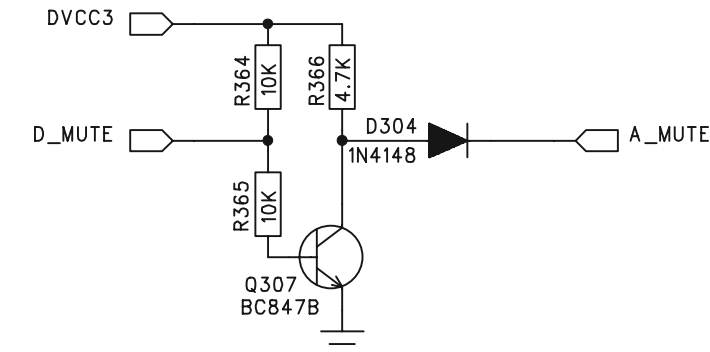
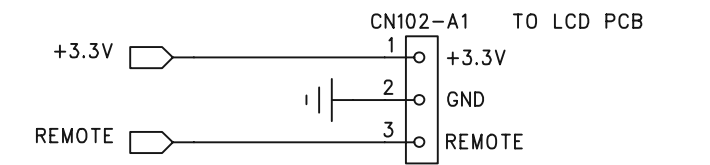
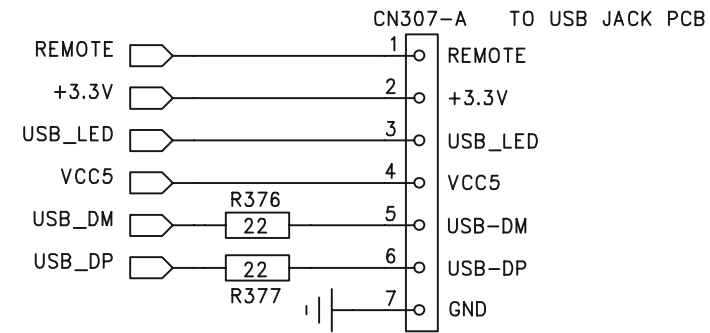
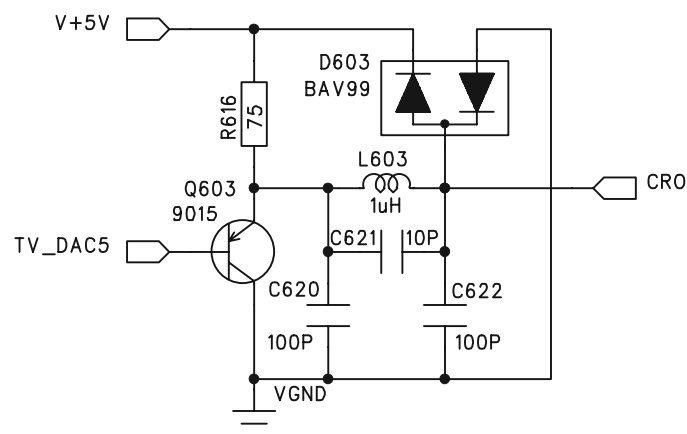
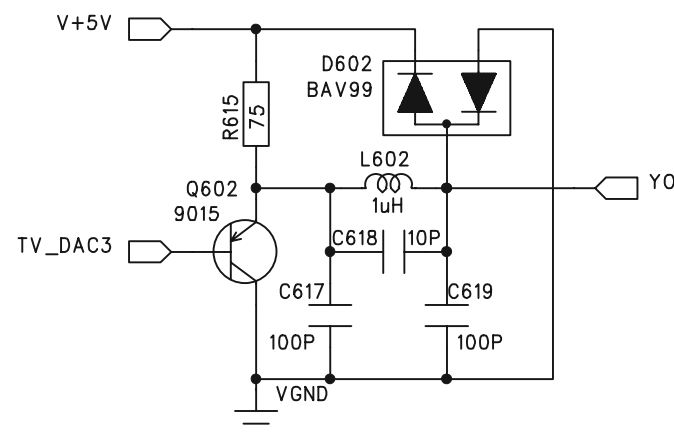
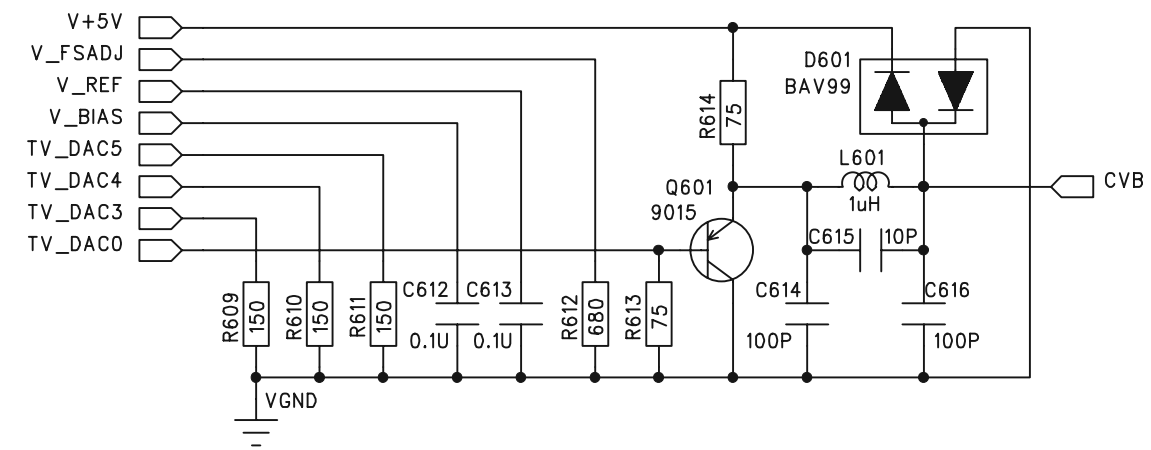
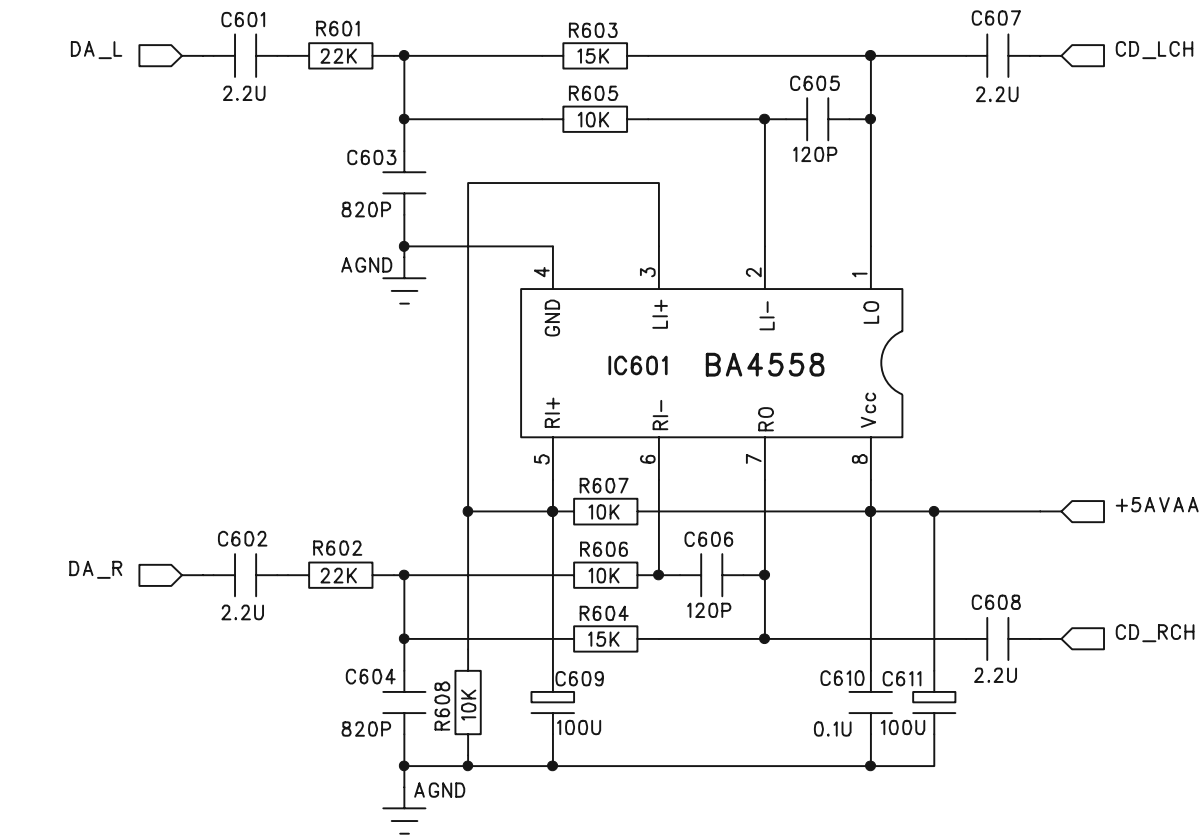
### CIRCUIT DIAGRAM - DVD MPEG BOARD

MPEG is not repaired, diagram for reference only.

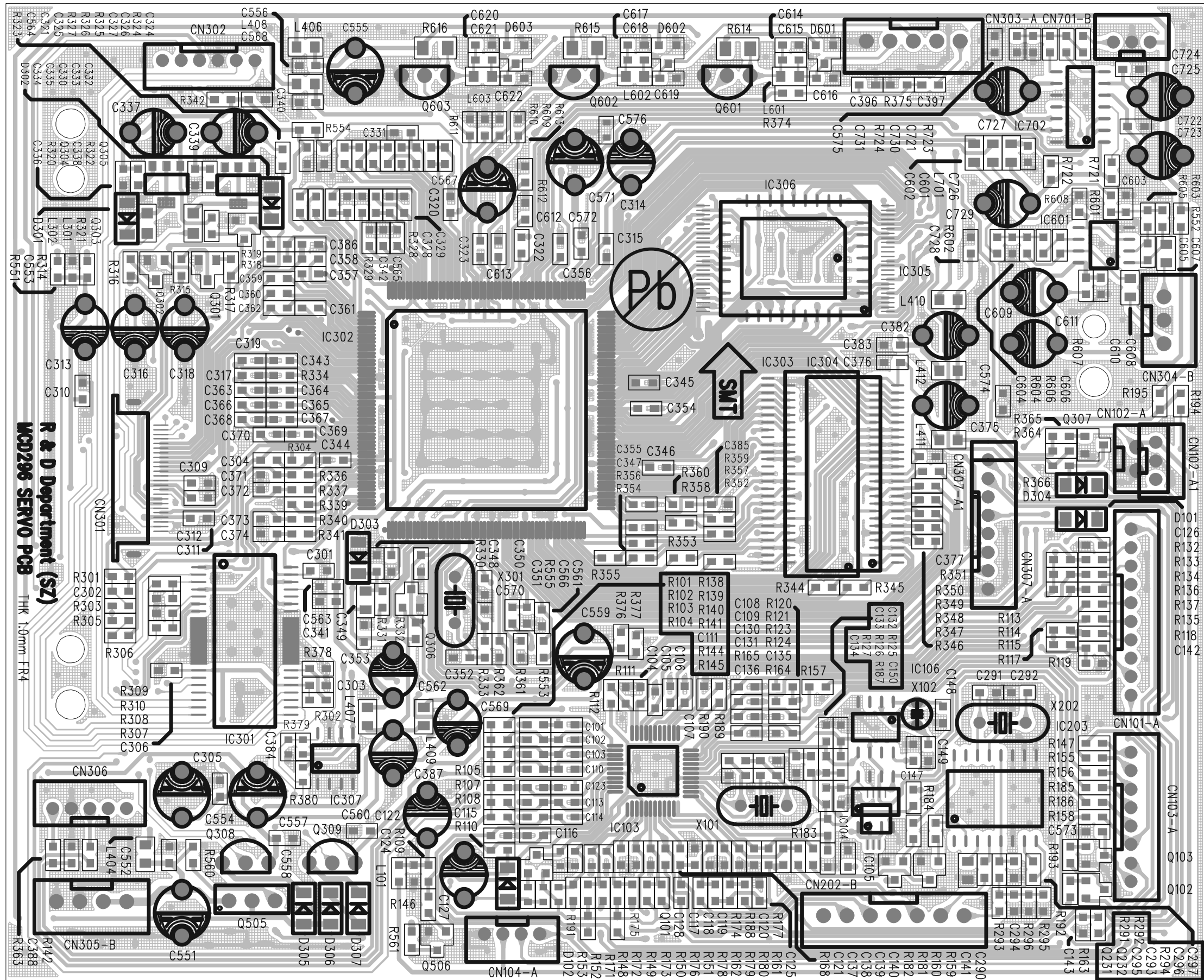


### CIRCUIT DIAGRAM - DVD MPEG BOARD

MPEG is not repaired, diagram for reference only.

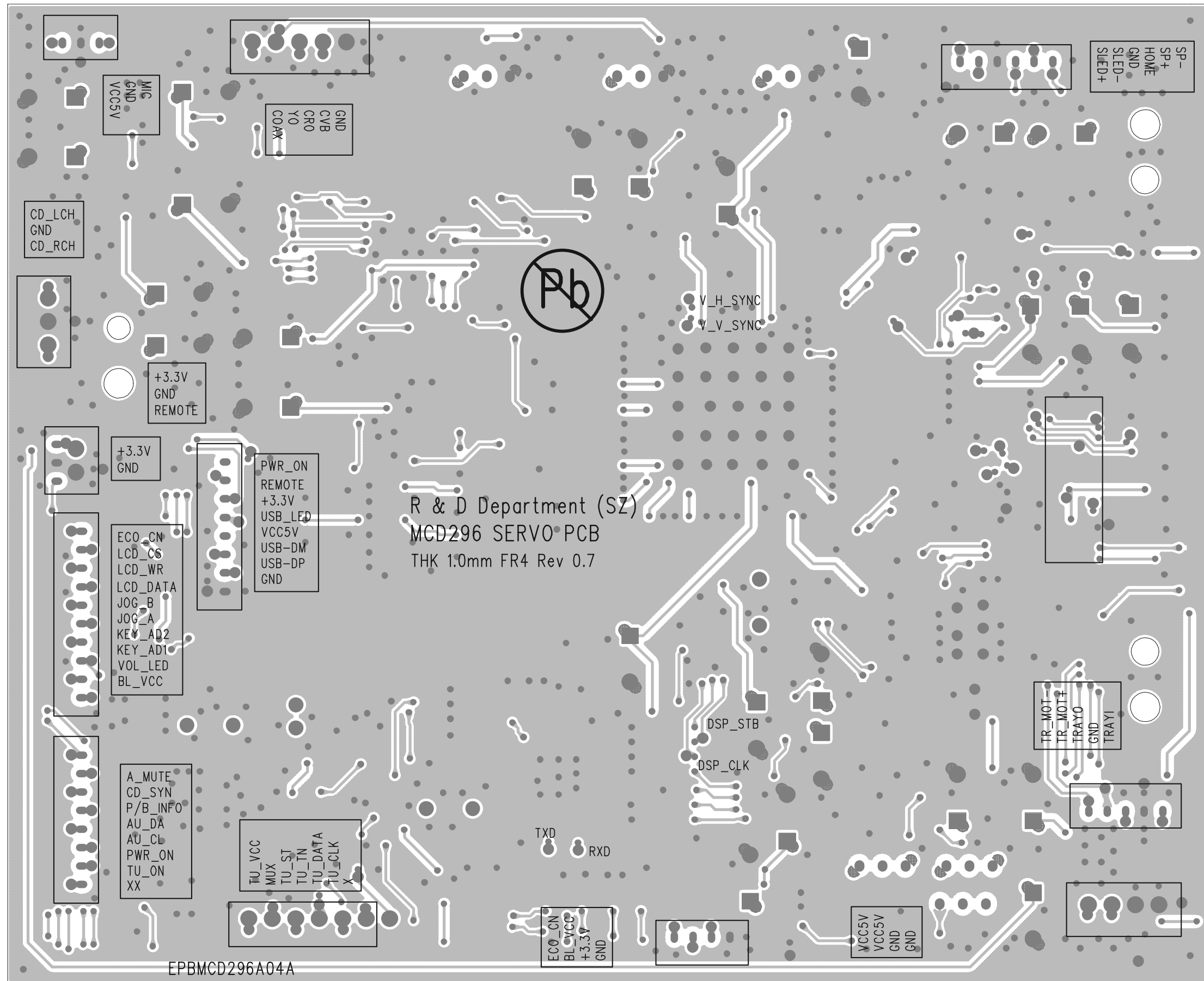


LAYOUT DIAGRAM - DVD MPEG BOARD  
MPEG is not repaired, diagram for reference only.

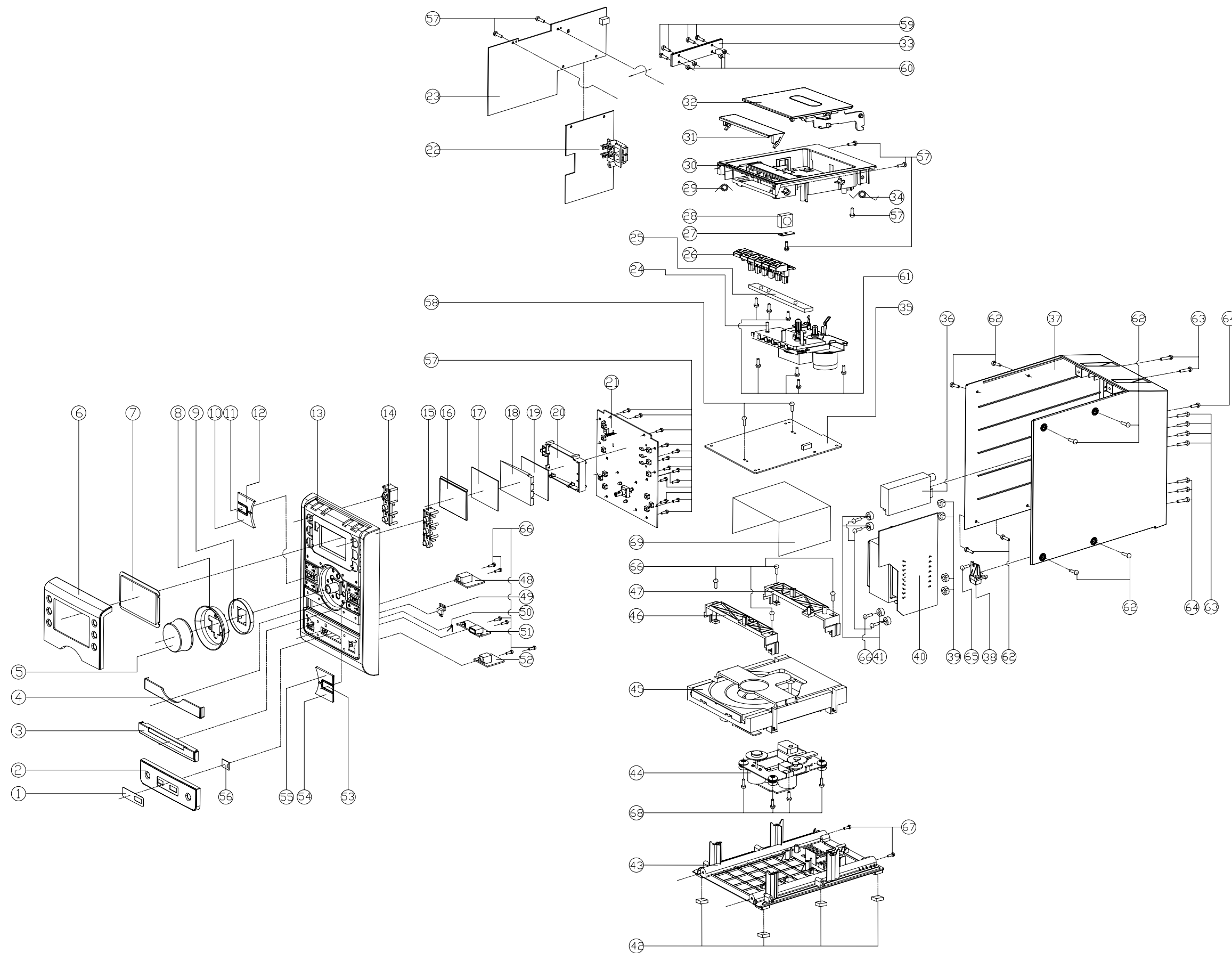


### LAYOUT DIAGRAM - DVD MPEG BOARD

MPEG is not repaired, diagram for reference only.



### SET MECHANICAL EXPLODED VIEW





**MECHANICAL & ACCESSORIES PARTS LIST**

2	996510012826	DECORATION LENS BOTT PANEL SPK	996510015697	SPEAKER BOX(LEFT+RIGHT)
3	996510012848	CD DOOR		
4	996510012821	DECORATION LENS MID PANEL		
5	996510012851	VOLUME KNOB		
6	996510016240	DECORATION LENS TOP		
7	996510012819	DISPLAY LENS		
8	996510012828	VOLUME KNOB LIGHT GUIDE		
9	996510012825	DECORATION RING		
10	996510012817	CONTROL KNOB - PRESETS(LEFT)		
11	996510012822	CONTROL KNOB - PLAY/PAUSE		
12	996510012815	CONTROL KNOB - FB	<b>Note:</b>	<b>Only these parts mentioned in the list are</b>
13	996510012814	FRONT CABINET		<b>normal service parts.</b>
14	996510012852	CONTROL KNOB-TOP-LEFT		
15	996510012853	CONTROL KNOB-TOP-RIGHT		
25	996510016239	CASS KEY - BRACKET		
29	996510001429	CASS KEY DOOR SPRING PLATE		
30	996510016230	TOP CABINET		
31	996510016237	CASSETTE KEY DOOR		
32	996510016238	CASS DOOR W/SPRAY		
34	996510001428	CASS DOOR SPRING		
35	996510027924	SERVO(MPEG) BOARD ASSY		
36	996510012855	FM TUNER MODULE FOR DC199A/12		
37	996510016229	REAR CABINET		
43	996510012850	BOTTOM CABINET		
44	996510010779	DVD MECHANISM SONY KHM-313AAD		
45	996510001452	DVD TRAY LOADER WXD-8213		
49	996510012827	USB LIGHT GUIDE		
50	996510012846	USB DOOR SPRING		
53	996510012823	CONTROL KNOB - STOP		
54	996510012818	CONTROL KNOB - PRESETS(RIGHT)		
55	996510012816	CONTROL KNOB - FF		
56	996510012824	USB DOOR		
26A	996510016235	CASS KEY -REC		
26B	996510016232	CASS KEY - PLAY		
26C	996510016234	CASS KEY - FB		
26D	996510016233	CASS KEY - FF		
26E	996510016236	CASS KEY - STOP		
26F	996510016231	CASS KEY - PAUSE		
ACC	996510001450	VDE AC CORD 1.72M		
ANT	996510005595	PIG TAIL ANTENNA WIRE BLACK		
CASS	996510001449	CASS DECK MECHANISM		
CN201A	996510010781	FFC CABLE 10P L=330MM		
CN301	996510001453	FFC CABLE 24P		
DAM	996510001430	CD DAMPER		
RCA	996510001456	RCA WIRE 1500MM BLACK WIRE		
REM	996510021029	REMOTE CONTROL		

**ELECTRICAL PARTS LIST**

1707	994000002397	REC SWITCH 6P2T	IC301	996510010762	IC AM5888S HSOP28
2719	996510015693	CER. CAP 5600PF 50V D5MM K%	IC302	996510010761	IC MPEG SPHE8281D
2726	996510015693	CER. CAP 5600PF 50V D5MM K%	IC303	996510010760	IC SDRAM 64M M12L64164A-7TG
2728	996510015692	CER. CAP 4700PF 50V D5MM K%	IC305	996510015691	IC EN29LV800AB-70 PROGRAMMED
2729	996510015692	CER. CAP 4700PF 50V D5MM K%	IC307	996510010763	IC AT24C02BN-SH-T
2750	996510015693	CER. CAP 5600PF 50V D5MM K%	IC401	996510001412	IC LM2576TV-5.0 TO-220V
2751	996510015693	CER. CAP 5600PF 50V D5MM K%	IC402	994000005724	IC LD1117AL-3.3V-D
5701	996510001408	AM OSC BLACK	IC501	996510012838	I.C TDA8920BTH SOT566-3
7701	996510011345	TRANSISTOR BC547B	IC502	996500039259	I.C. PT4800(L) DIP-8 PIN
7702	996510015694	TRANSISTOR BC337-25	IC602	996510010771	IC 7314(ANGUS)
7703	996510015694	TRANSISTOR BC337-25	IC603	996510001055	IC BA4558 SOP8
7704	996510015694	TRANSISTOR BC337-25	IC604	996510001055	IC BA4558 SOP8
7705	996510015695	IC AN7323 12NC:9322 129	JA301	996510001410	RCA JACK 8.3MM (RCA-124-012
C412	996510015686	AL.E.CAP 3300UF 25V 16X27MM M'	JA501	996510000380	PUSH TERMINAL JACK PST-418
C519	996510012837	CBB CAP HMFS-5 0.68UF 63V	JA502	994000001456	STEREO HEADPHONE JACK
C520	996510012837	CBB CAP HMFS-5 0.68UF 63V	JA601	996510001409	RCA JACK 8.3MM 4HOLES
C550	996510012836	E.CAP. 3300UF 35V	JA602	996510001073	EARPHONE CKX3.5-19S (3PIN)
C551	996510012836	E.CAP. 3300UF 35V	JA702	996510001071	USB JACK 4P ANGLE TYPE
C585	996510015689	E.CAP. 3300UF 50V 18X35MM M%	LCD	996510010775	LCD DISPLAY GS-34296+HSC-B/R
C586	996510015689	E.CAP. 3300UF 50V 18X35MM M%	LED1	996510012841	LED 3MM SUPER RD/GN
D1	996510011332	DIODE 1N4148	LED2	996510001423	LED INDICATOR 3mm WHITE
D405	994000003223	DIODE BRIDGE RECTIFIER GBU6B	LED3	996510001423	LED INDICATOR 3mm WHITE
D431	996510010774	DIODE 1N4148 FDLL4148	LED4	996510001423	LED INDICATOR 3mm WHITE
D432	996510010770	RECTIFIER DIODE 1N5822	LED5	996510001422	LED INDICATOR BLUE
D435	996510010774	DIODE 1N4148 FDLL4148	LED6	996510001422	LED INDICATOR BLUE
D436	996510010774	DIODE 1N4148 FDLL4148	LED7	996510001422	LED INDICATOR BLUE
D437	996510010756	RECTIFIER DIODE SM4001S SM-2	Q1	996510010777	TRANSISTOR BC847C FREE
D501	996510010774	DIODE 1N4148 FDLL4148	Q2	996510010777	TRANSISTOR BC847C FREE
D502	996510010774	DIODE 1N4148 FDLL4148	Q3	996510010776	TRANSISTOR BC817-25 SOT23
D503	996510010774	DIODE 1N4148 FDLL4148	Q301	996510010766	TRANSISTOR (MOSFET) 2SK3018
D506	996510015688	DIODE 1N4002	Q302	996510010766	TRANSISTOR (MOSFET) 2SK3018
D507	996510015688	DIODE 1N4002	Q304	996510010765	TRANSISTOR 2SB1132R
D508	996510015688	DIODE 1N4002	Q305	996510010765	TRANSISTOR 2SB1132R
D509	996510015688	DIODE 1N4002	Q308	994000003206	TRANSISTOR 8550D
D601	996510010757	SWITCHING DIODE BAV99L	Q309	994000003206	TRANSISTOR 8550D
D602	996510010757	SWITCHING DIODE BAV99L	Q416	996510001414	TRANSISTOR KTB772
D603	996510010757	SWITCHING DIODE BAV99L	Q423	996510015685	TRANSISTOR BC807-25 SOT23
FUSE $\Delta$	994000003224	FUSE 6.3A 250V	Q430	996510005008	TRANSISTOR SS8050D TO-92
FUSE $\Delta$	994000003224	FUSE 6.3A 250V	Q5	996510010777	TRANSISTOR BC847C FREE
FUSE $\Delta$	996510000389	FUSE 2.5A 250V	Q520	996510015690	TRANSISTOR FET BUK7535-55A
IC101	996510001424	IC SL4808DQ QFP100	Q522	996510015690	TRANSISTOR FET BUK7535-55A
IC102	996510011311	INFRA RECEIVER	Q601	994000003206	TRANSISTOR 8550D
IC103	996510012844	IC STK6011P9-3V PROGRAMMED	Q602	994000003206	TRANSISTOR 8550D
IC104	996510010763	IC AT24C02BN-SH-T	Q603	994000003206	TRANSISTOR 8550D
IC106	996510010764	IC PCF8563T SO8	Q712	996510012833	TRANSISTOR BC857B

**ELECTRICAL PARTS LIST**

Q713	996510012793	TRANSISTOR BC847B
Q713	996510012833	TRANSISTOR BC857B
SW1	996500039269	TACT SWITCH
SW10	996500039269	TACT SWITCH
SW11	996500039269	TACT SWITCH
SW12	996500039269	TACT SWITCH
SW2	996500039269	TACT SWITCH
SW3	996500039269	TACT SWITCH
SW4	996500039269	TACT SWITCH
SW5	996500039269	TACT SWITCH
SW6	996500039269	TACT SWITCH
SW7	996500039269	TACT SWITCH
SW8	996500039269	TACT SWITCH
SW9	996500039269	TACT SWITCH
SW401	996510016228	VOLTAGE SELECTOR VSC-22-1
T401	△ 996510015696	TRASFO. EI-76 120V/230V
VR101	996510001059	ENCODER EC121102X2B-HA1-082
X101	996510005000	X'TAL 12MHZ 49S 20PF+/-20PPM
X102	996510012842	X'TAL 32.768KHZ 12.5PF
X301	996510010755	X'TAL 27MHz 20PF +/-20PPM
ZD412	996500039258	ZENER DIODE 9V1 1/2W
ZD416	996510011344	ZENER DIODE 15V 1/2W DO-35
ZD501	996510012835	ZENER DIODE 5V6 1/2W (TC5V6)
ZD505	996510015687	ZENER DIODE 12V 1/2W TC12V
ZD506	994000003219	ZENER DIODE TC27V 1/2W
ZD507	996510015687	ZENER DIODE 12V 1/2W TC12V

**Note: Only these parts mentioned in the list are normal service parts.**

## REVISION LIST

### **1.0 Manual 3141 785 32690**

Initial Service Manual released.

### **1.1 Manual 3141 785 32691**

In this version,

1) Page 11-2 Mechanical & Accessories Parts List is updated.

### **1.2 Manual 3141 785 32692**

In this version,

1) Page 11-2 Mechanical & Accessories Parts List is updated.

Add:

35 996510027924 SERVO(MPEG) BOARD ASS'Y

### **1.3 Manual 3141 785 32693**

In this version,

1) Page 11-2 Mechanical & Accessories Parts List is updated.

Change:

REM 996510021029 REMOTE CONTROL (WAS 996510010783)