

Service
Service
Service



Service Manual



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TECHNICAL SPECIFICATION

SYSTEM

Power supply 220-240V / 50Hz
 Rated working power consumption (1/8 rated
 output power) ≤ 40 W
 Output power 2×5 W + 10W RMS
 (L/R speakers + subwoofer)

DVD

Frequency response 20Hz-20kHz (± 3 dB)
 Video output 1 V_{p,p}
 Horizontal definition ≥ 500 (TV)
 Dimensions 215(W) \times 90 (H) \times 217(D) mm
 Weight 1.14 kg

L/R SPEAKER

System 1-way system
 Impedance 8 Ω
 Dimensions (w \times h \times d)
 115mm \times 120mm \times 198mm
 Weight
 0.78 kg (each)

SUBWOOFER

System bass reflex system
 Impedance 4 Ω
 Dimensions (w \times h \times d)
 289mm \times 167mm \times 198mm
 Weight 3.1 kg

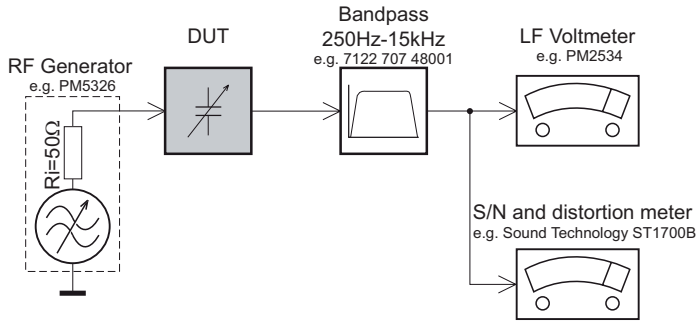
REMOTE

Distance 6m
 Angle $\pm 30^\circ$

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

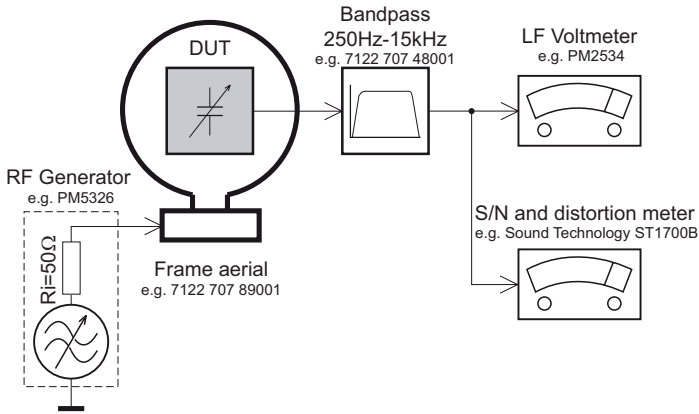
MEASUREMENT SETUP

Tuner FM



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

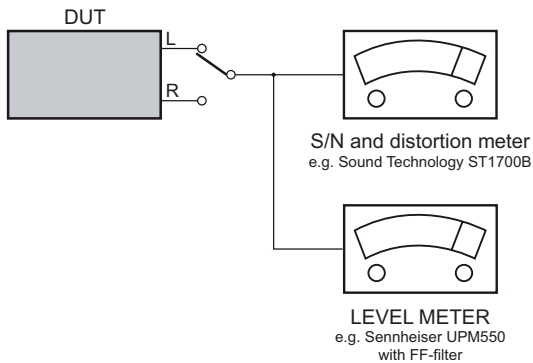
Tuner AM (MW,LW)



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).

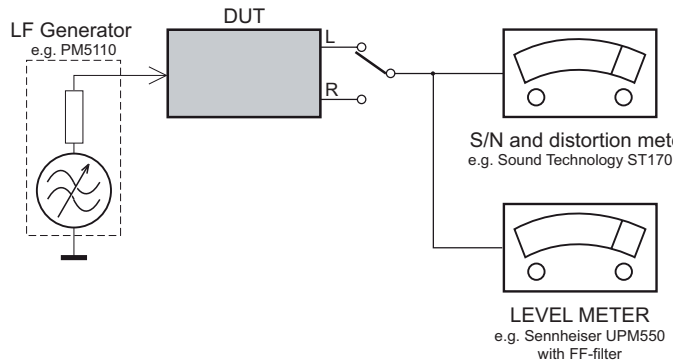
CD

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 Δ .

**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".

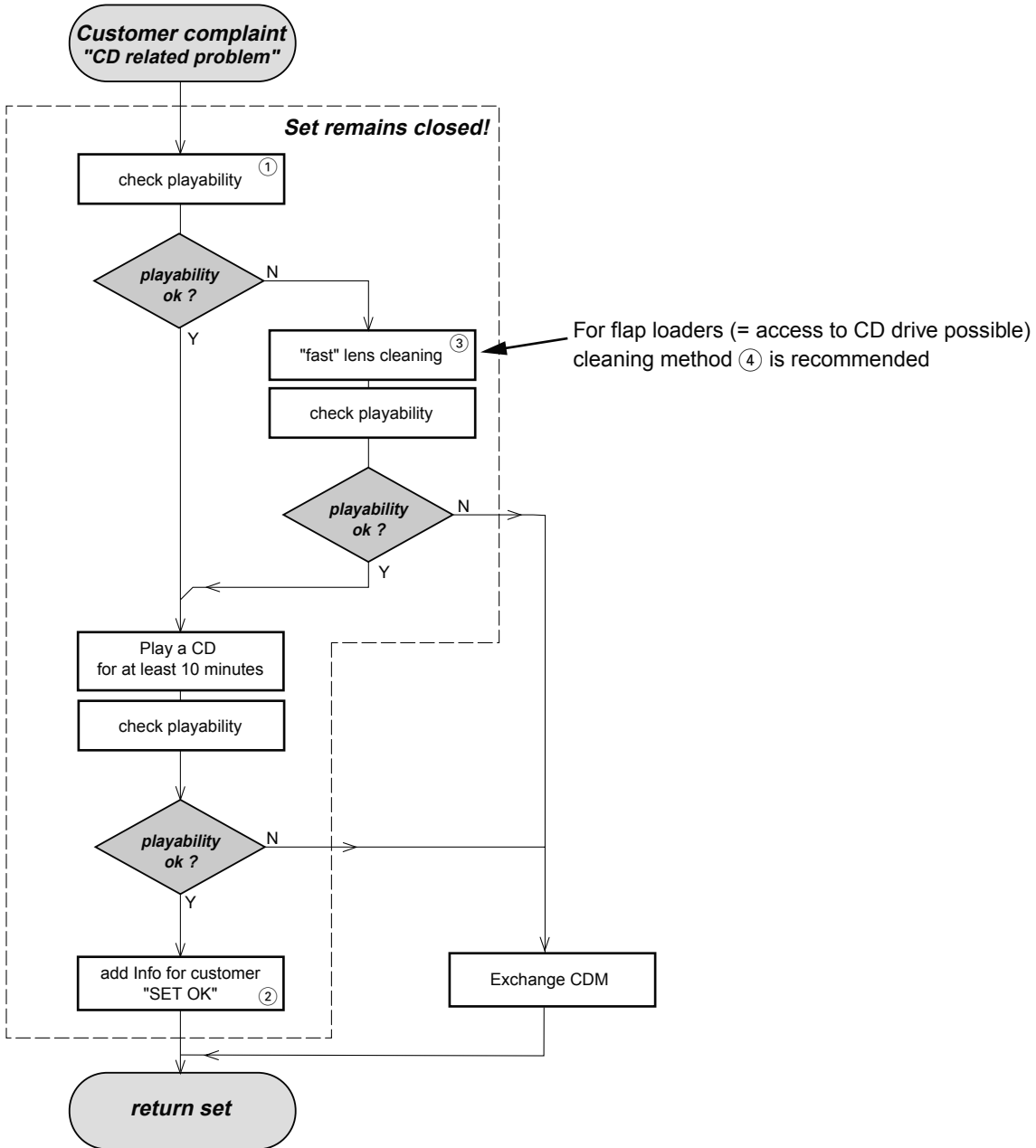
For additional questions please contact your local repair-helpdesk.

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 (600µ 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 (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 ≥ 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

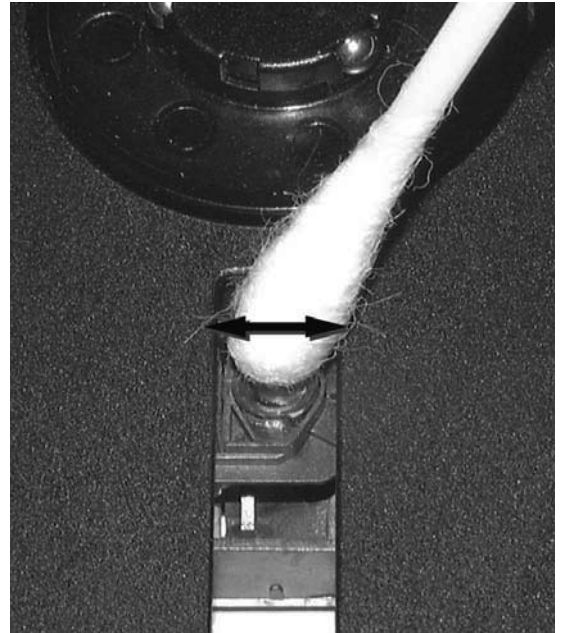
LIQUID LENS CLEANING

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.

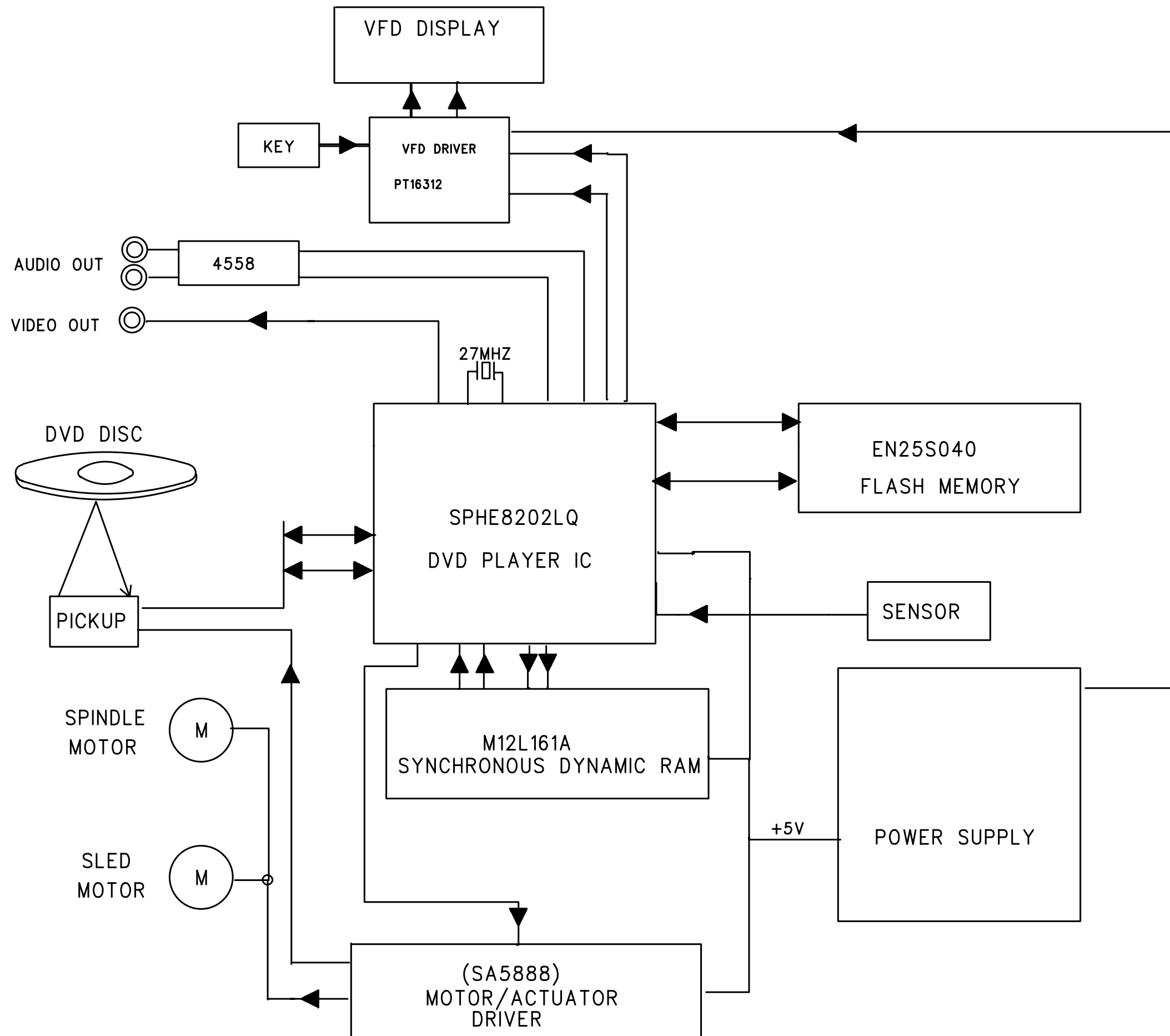
Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use "Cleaning Solvent"

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.

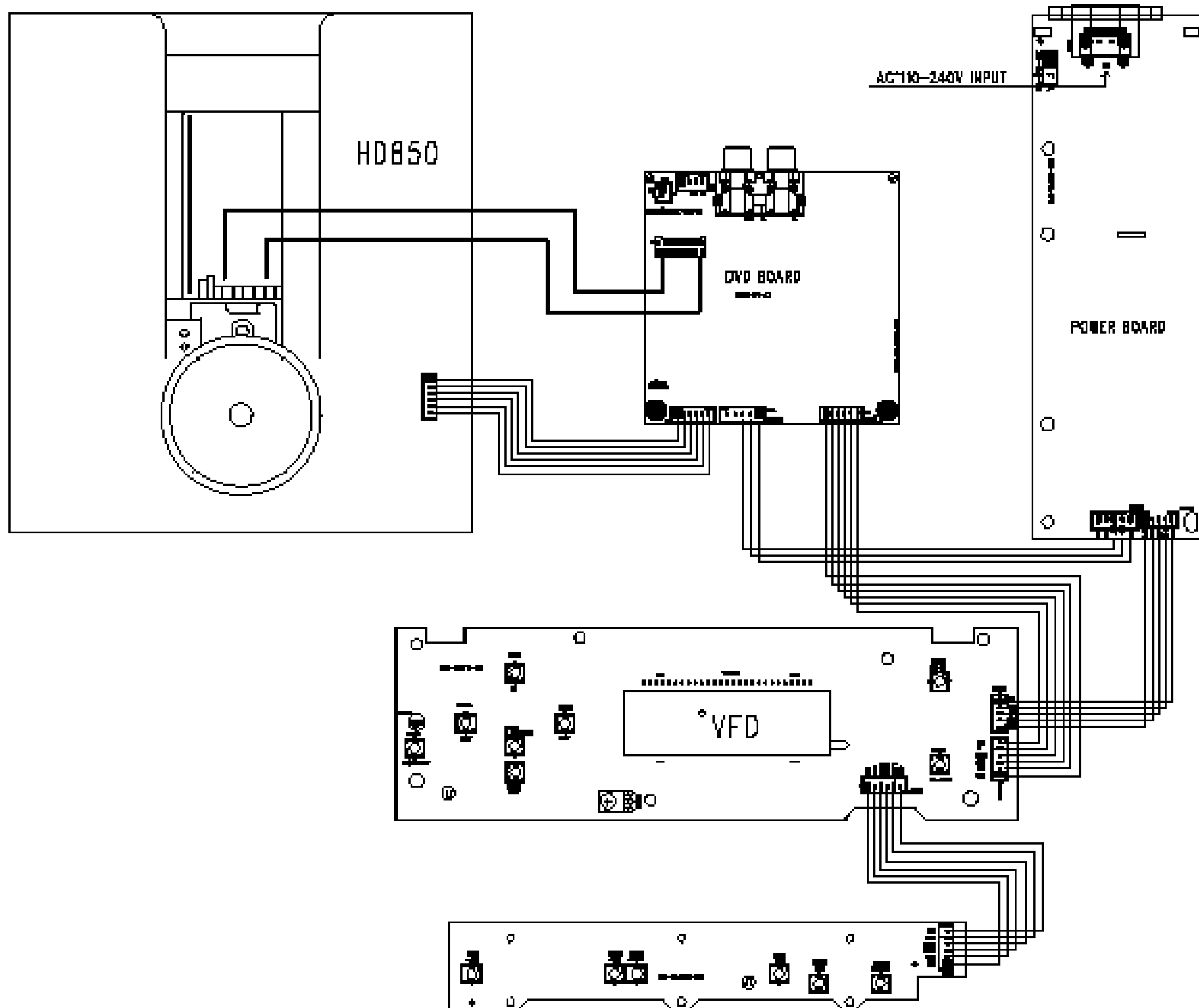
The direction of cleaning must be in the way as indicated in the picture below.



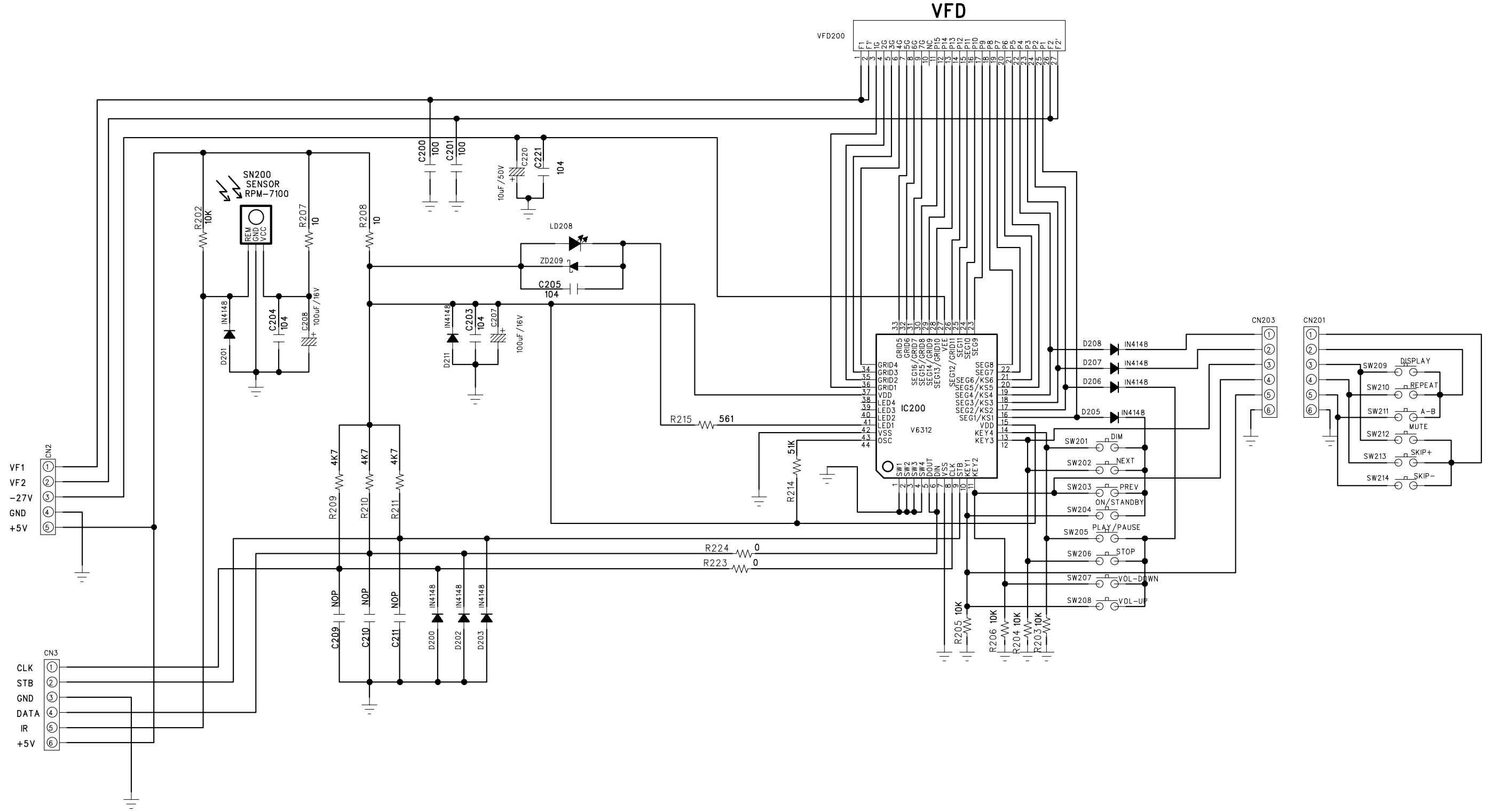
SET BLOCK DIAGRAM



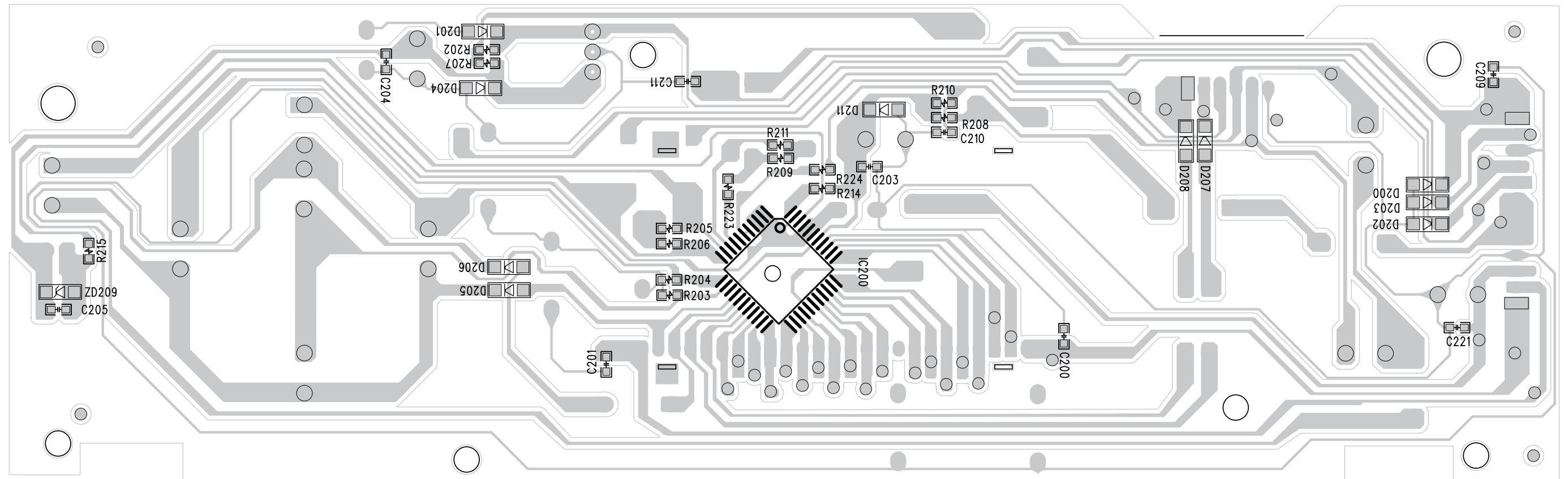
SET WIRING DIAGRAM



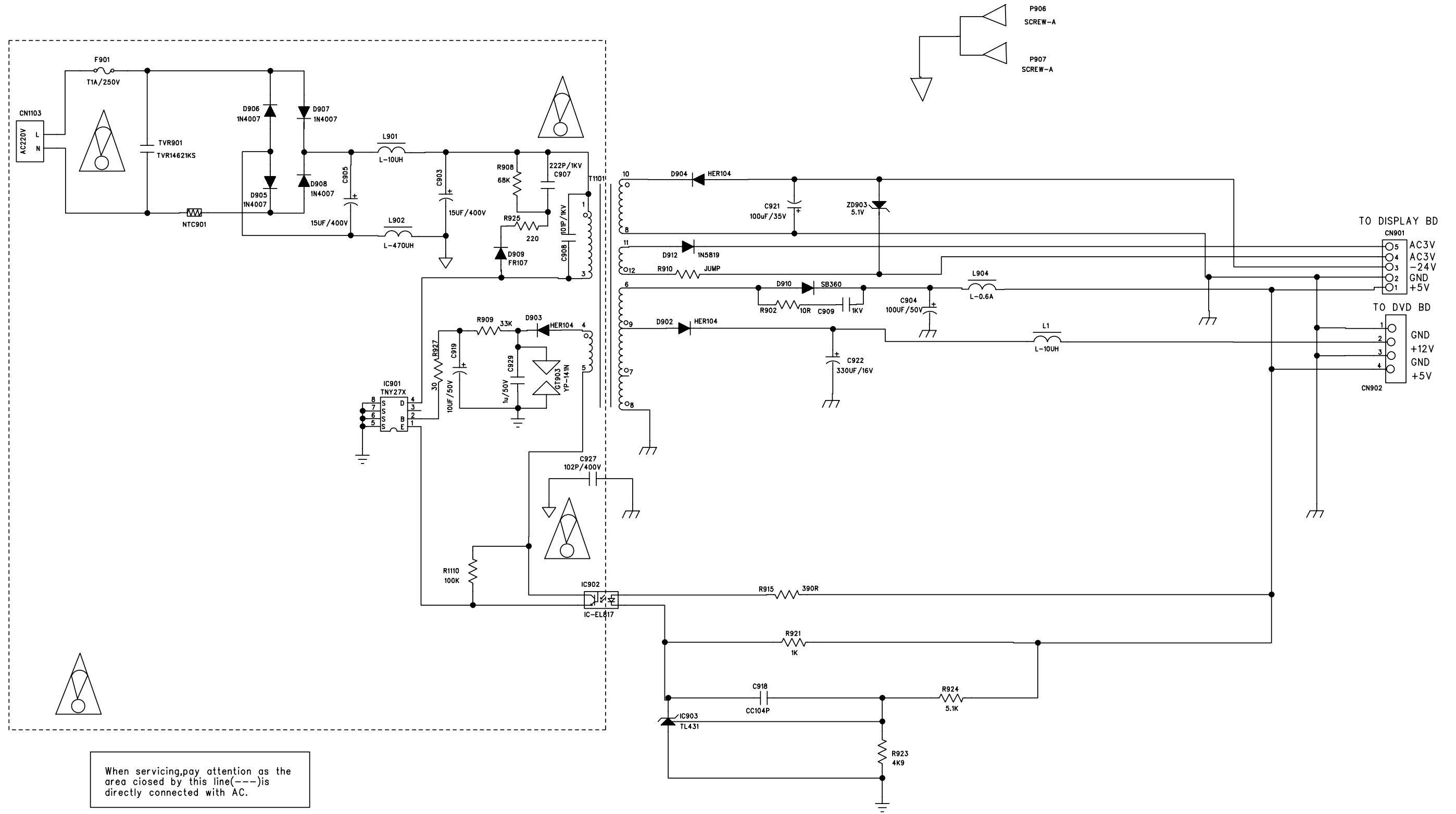
CIRCUIT DIAGRAM - DISPLAY BOARD



LAYOUT DIAGARM - DISPLAY BOARD

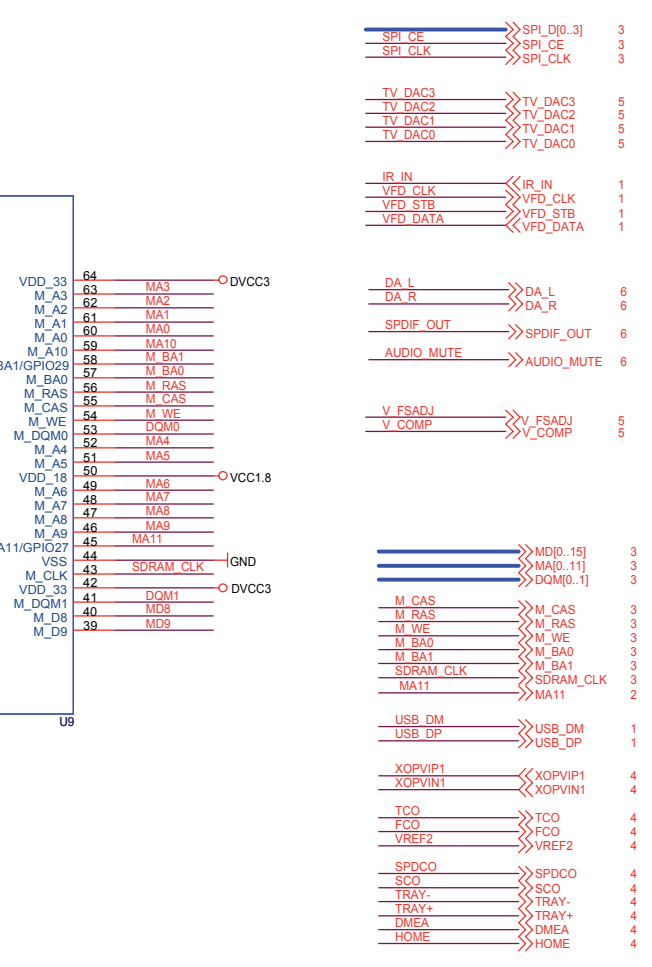
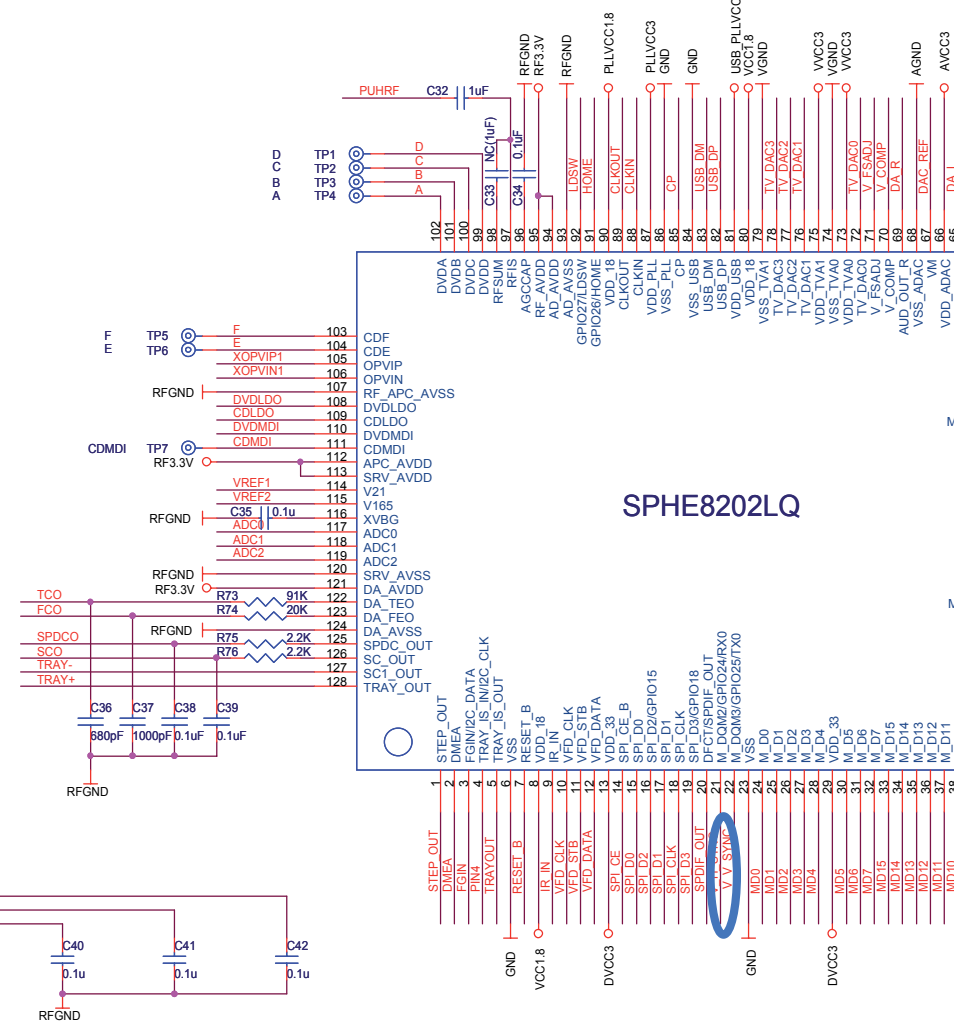
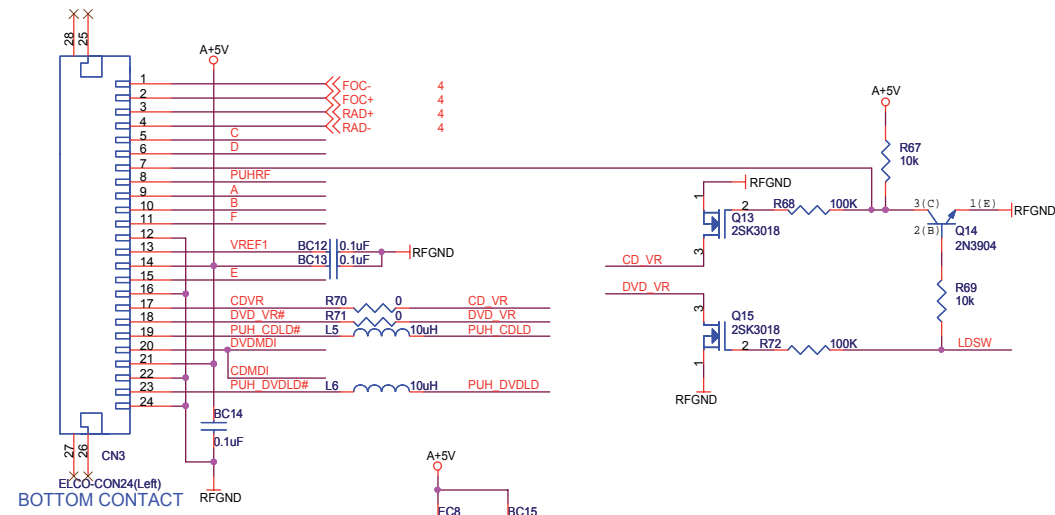


CIRCUIT DIAGRAM - RECTIFIER BOARD

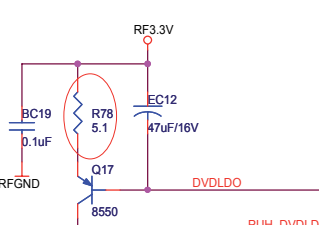
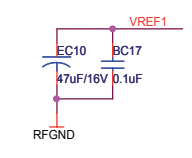
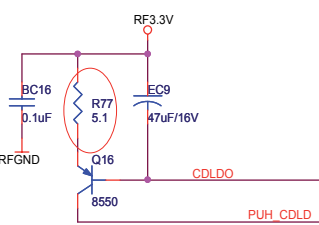


When servicing, pay attention as the area closed by this line(---) is directly connected with AC.

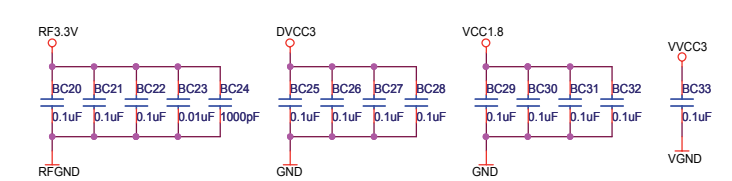
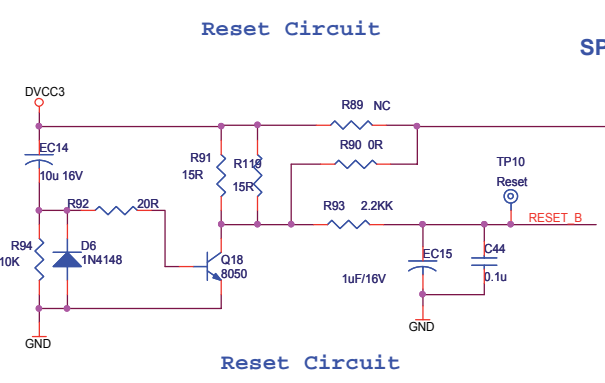
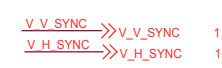
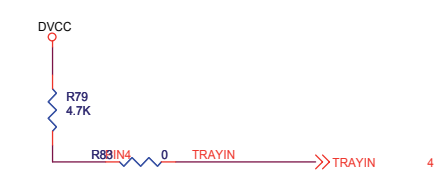
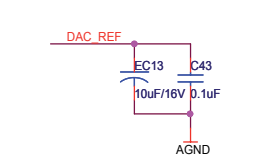
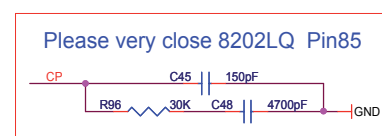
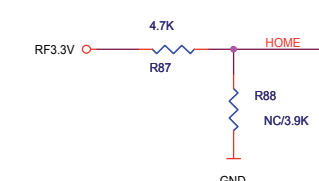
CIRCUIT DIAGRAM - DVD BOARD PART 1



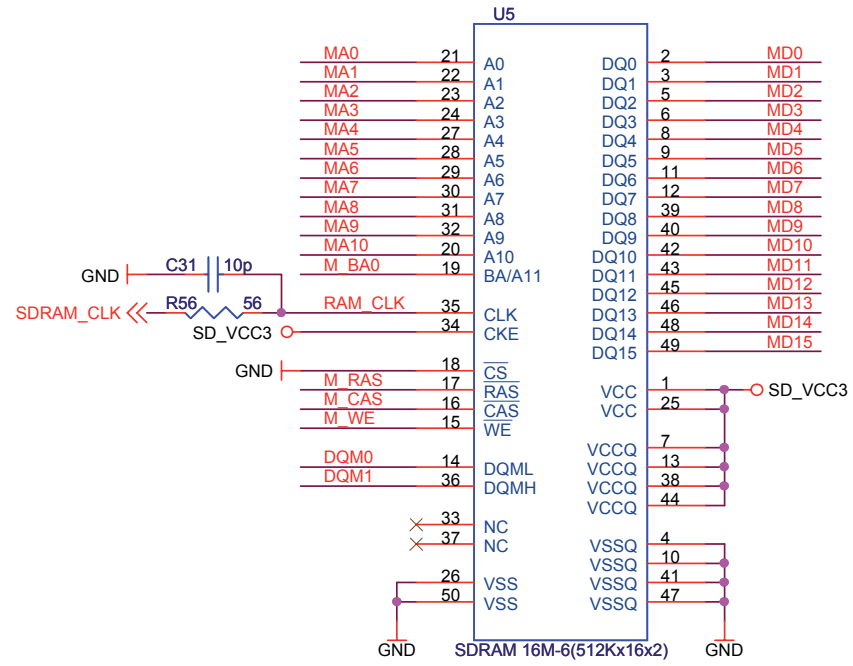
close to connector



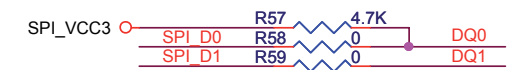
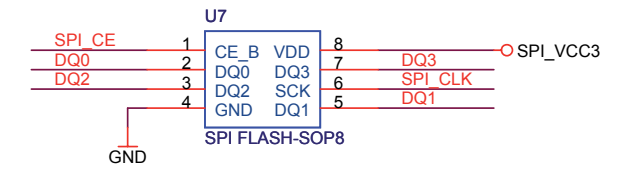
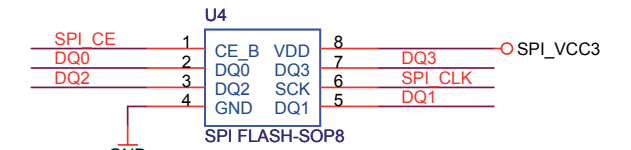
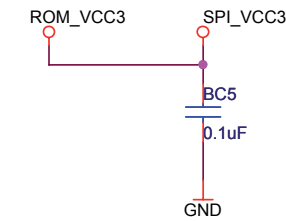
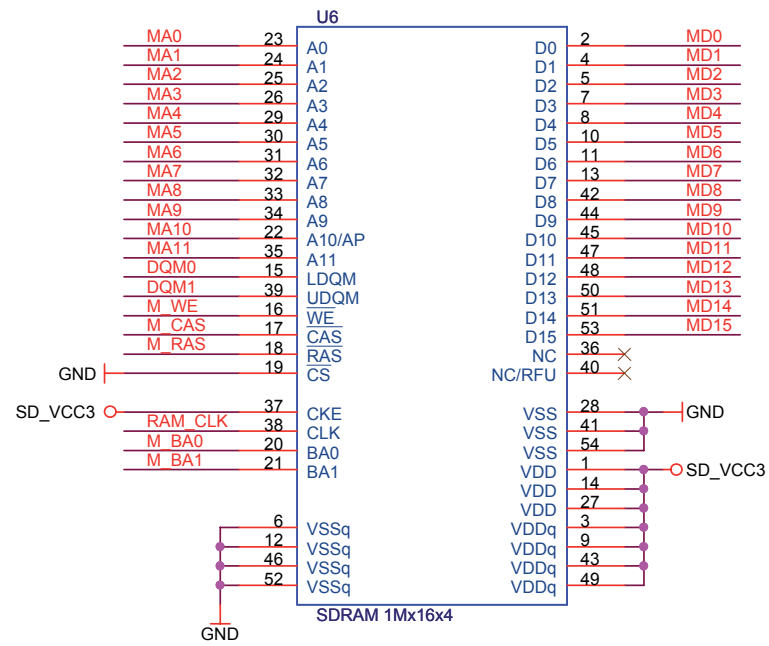
Pickup head parameter
Only for SANYO HD850



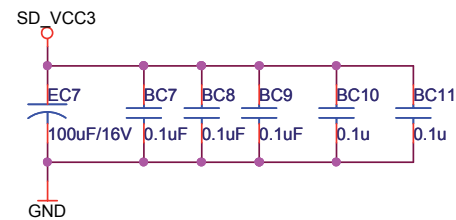
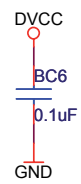
CIRCUIT DIAGRAM - DVD BOARD
PART 2



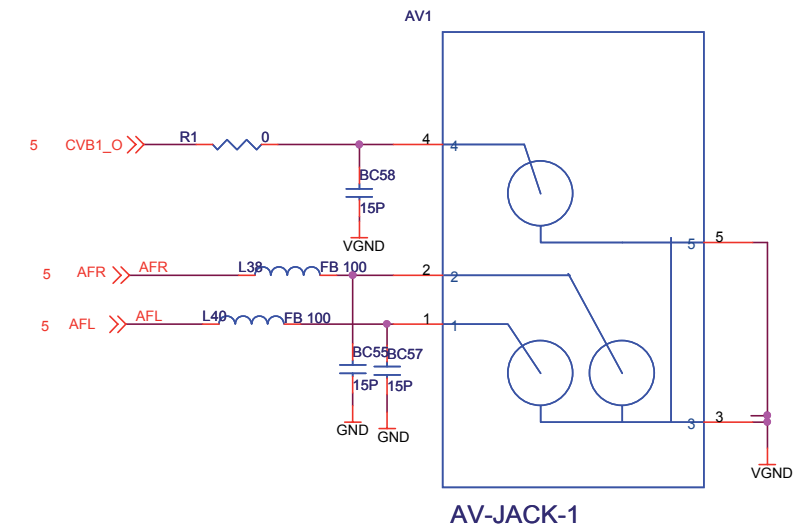
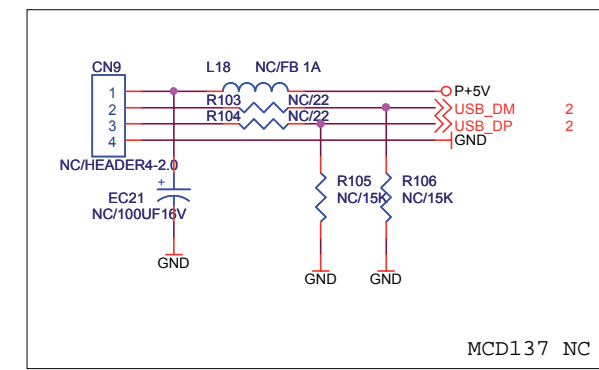
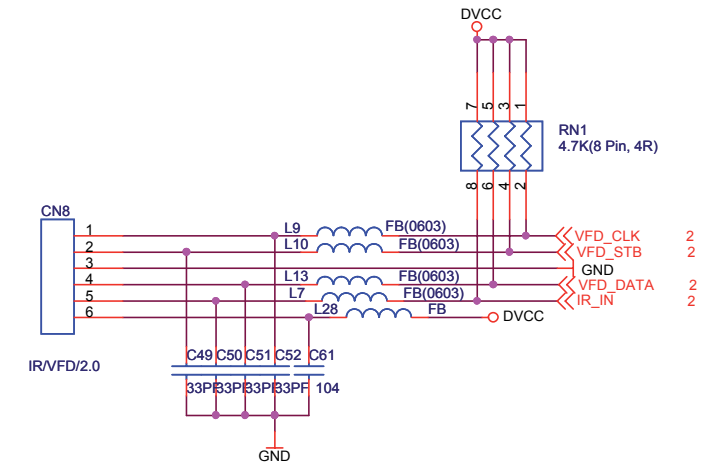
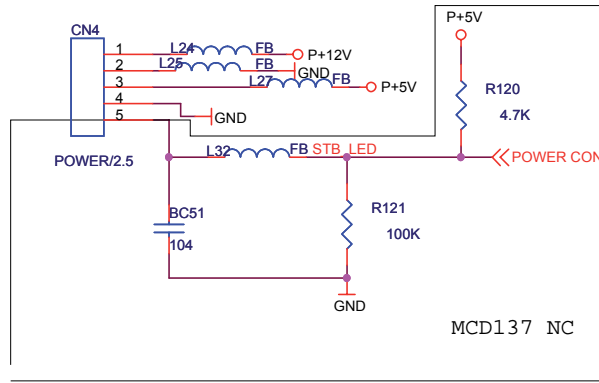
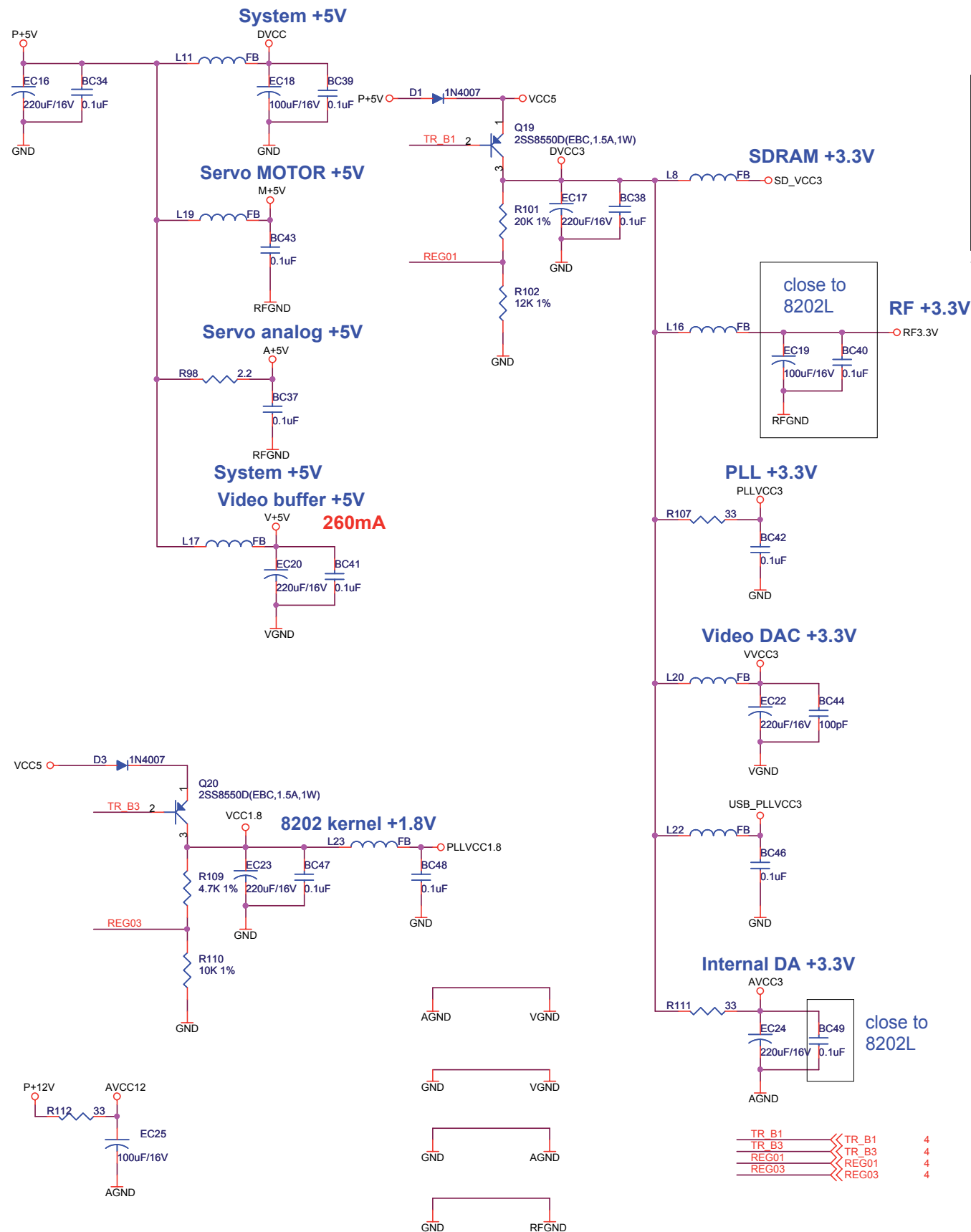
Option



For SPI Flash Option



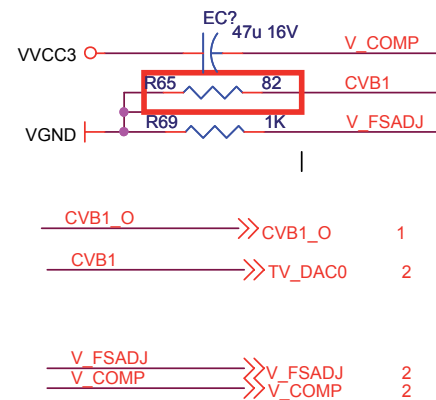
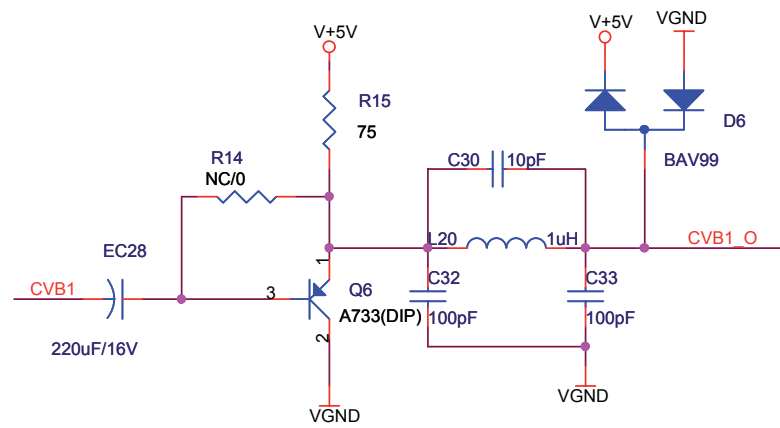
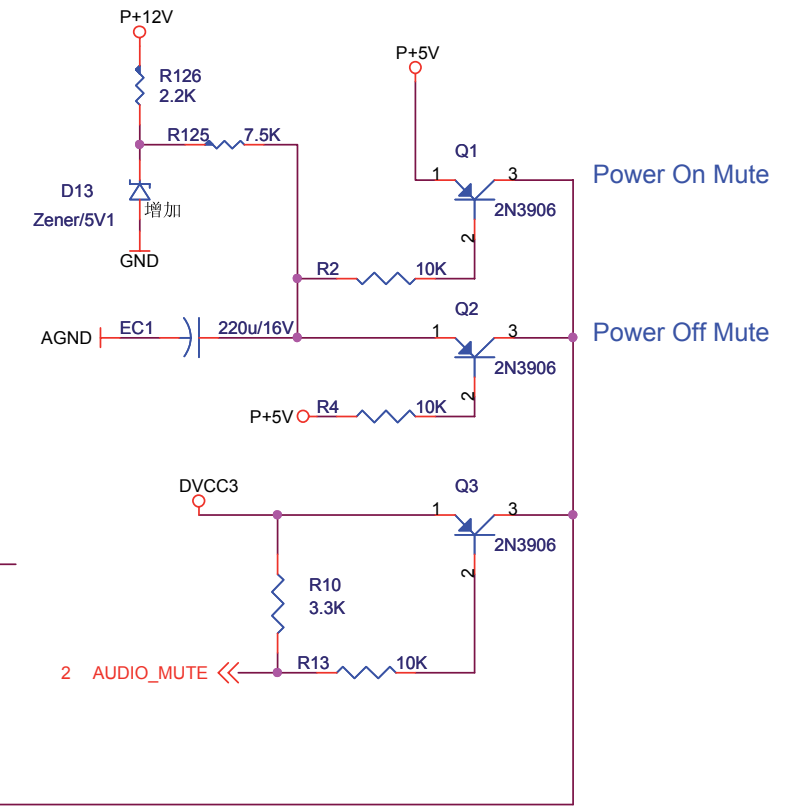
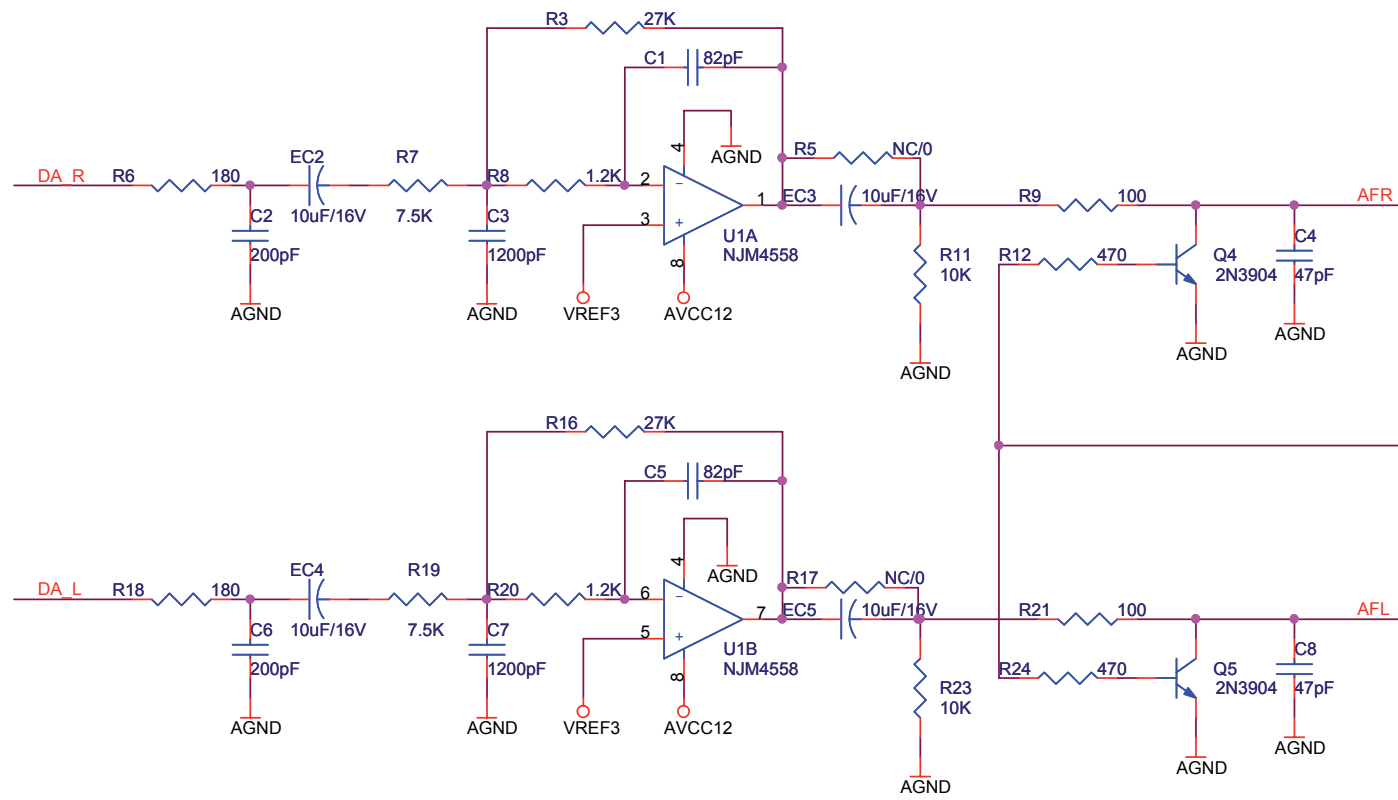
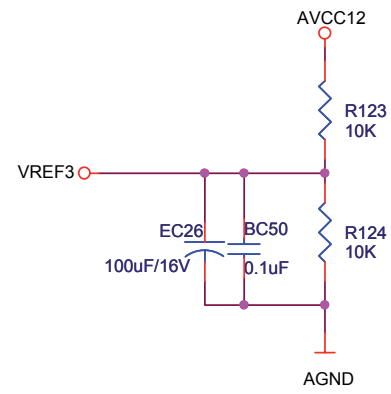
CIRCUIT DIAGRAM - DVD BOARD
PART 3



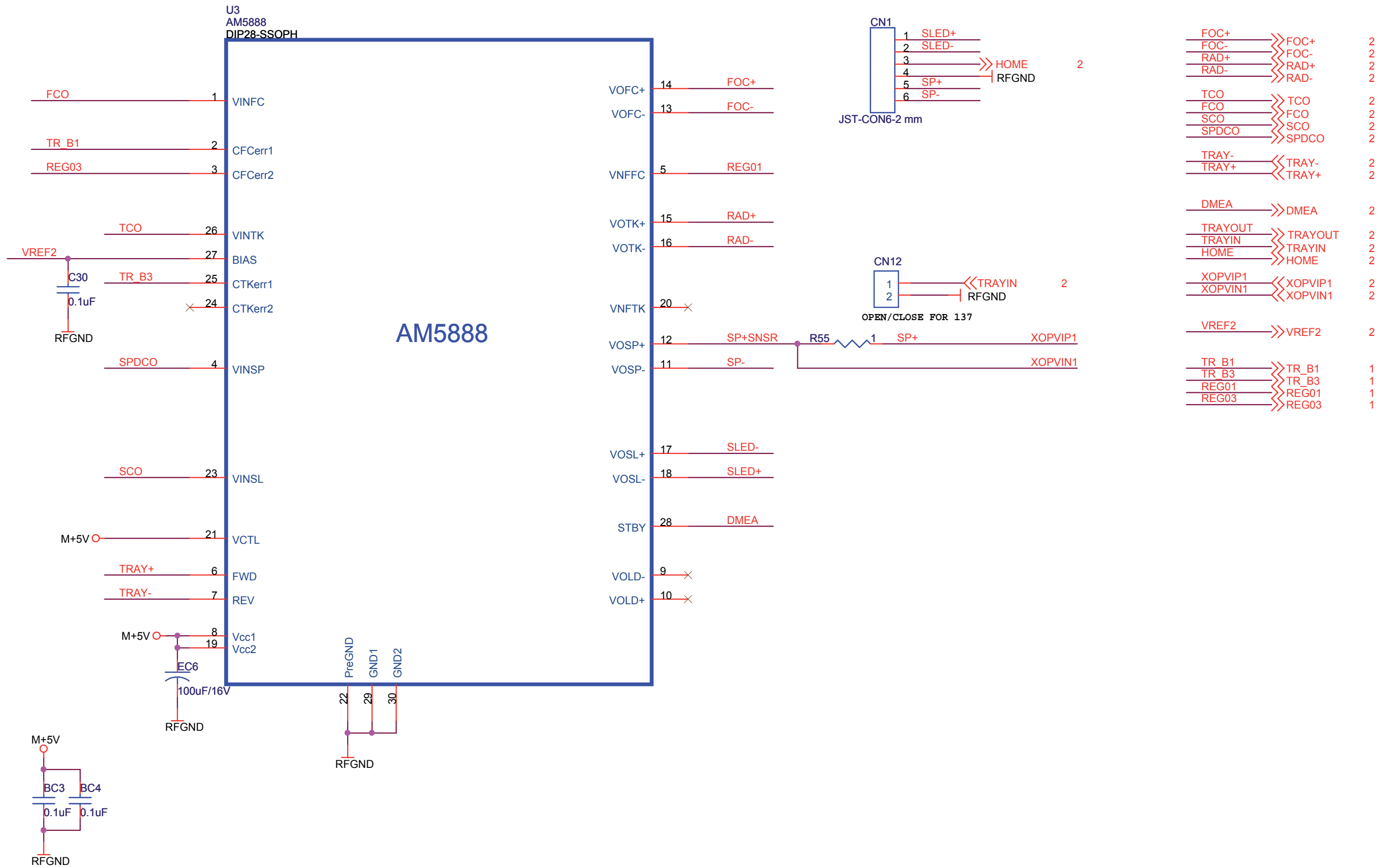
- TR_B1 <> TR_B1 4
- TR_B3 <> TR_B3 4
- REG01 <> REG01 4
- REG03 <> REG03 4

Power Bead > 2A, RAC@100 MHz
= 70 ohm, RDC(max)= 0.4 ohm

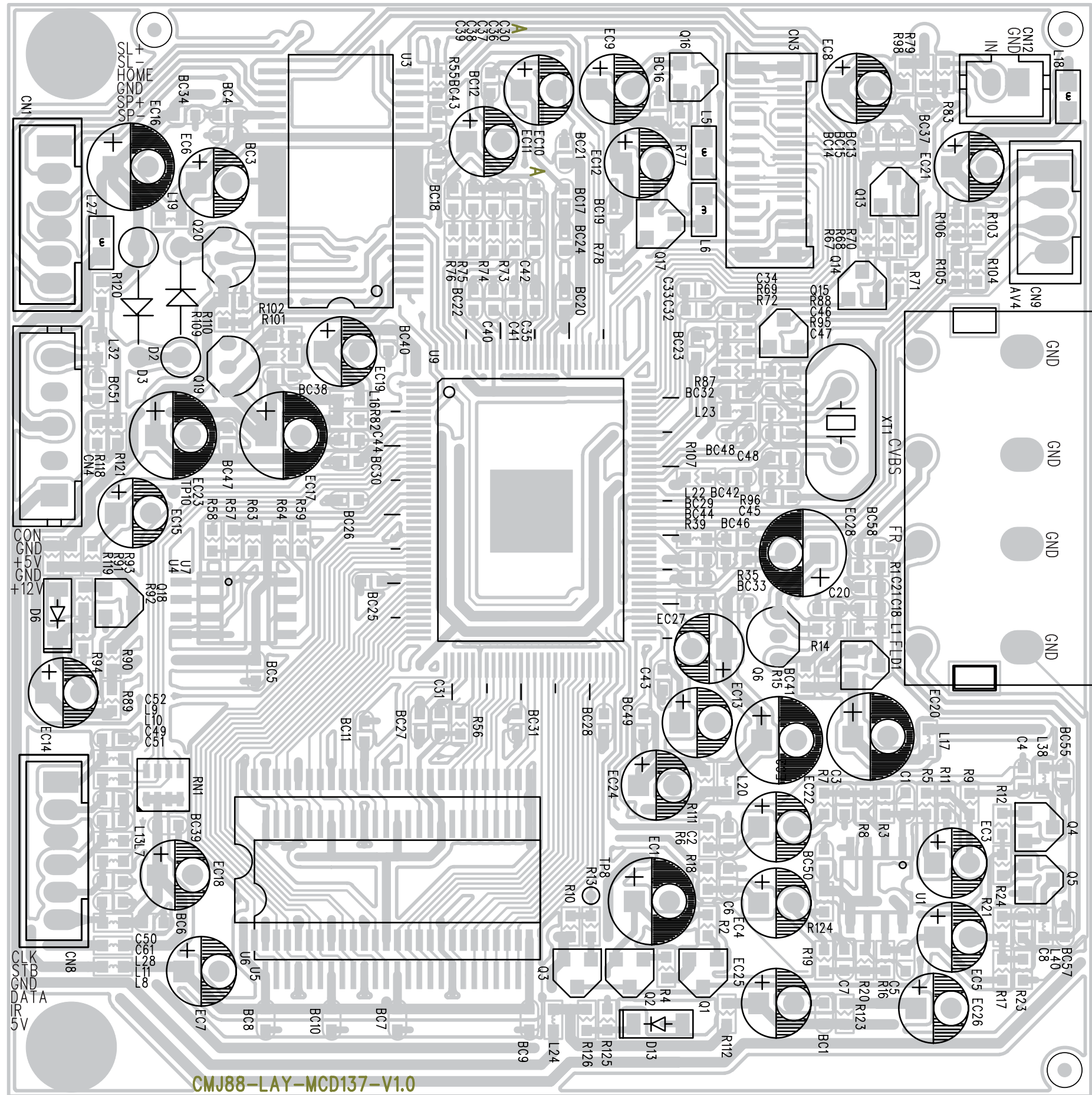
CIRCUIT DIAGRAM - DVD BOARD
PART 4



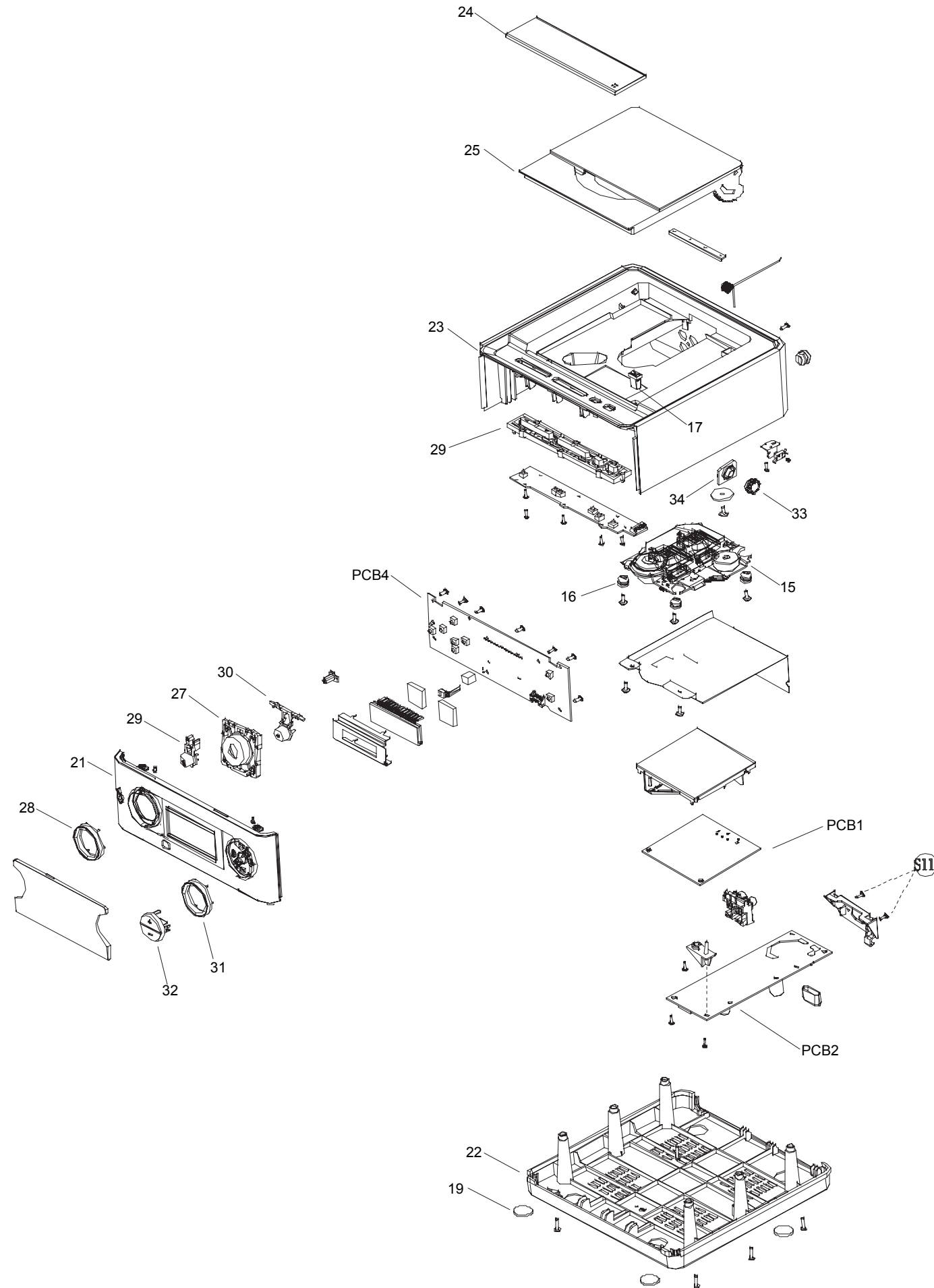
CIRCUIT DIAGRAM - DVD BOARD
PART 5



LAYOUT DIAGRAM - DVD BOARD



EXPLODED VIEW DIAGRAM



SERVICE PARTS LIST

PCB1	996510015933	P.C.B MCD-137 DVD BD.
PCB2	996510015934	P.C.B MCD-137 RECTIFIER BD (for-/93)
PCB2	996510018931	P.C.B MCD-137 RECTIFIER BD (for-/98)
PCB4	996510015936	P.C.B MCD-137 DISPLAY BD
14	996510017617	POWER TF.XKG-19-032
15	996510017618	DVD DECK SM-D203 (SANYO850)
16	996510017620	CD DECK SPRING
17	994000001744	CD DOOR LOCK
18	994000001745	POWER SUPPLY CORD VDE(for-/98)
18	996510017621	POWER SUPPLY CORD WITH AP-61(for-/93)
19	996510017622	RUBBER FOOT BLACK
19	996510018933	RUBBER FOOT BLACK 10X1MM
21	996510017624	FRONT CABINET
22	996510017625	BOTTOM CHASSIS
23	996510017626	TOP PANEL
24	996510017627	CD DOOR LENS
25	996510017628	CD DOOR COVER
26	996510017629	LENS BACK LIGHT
27	996510017630	VOLUME KNOB
28	996510017631	LEFT DISPLAY LOOP
29	996510017632	FUNCTION KNOB
30	996510017633	POWER KNOB
31	996510017634	PLAY STOP KONB
32	996510017635	TUING KNOB
33	996510008078	CD DOOR GEAR HOLDER
34	996510008079	CD DOOR GEAR
35	996510018932	RIGHT DISPLAY LOOP
11	996510017619	REMOTE CONTROL
12	996510017615	AV CABLE 1500mm
13	996510017616	AV WIRE 1500mm
20	996510025377	SINGLE SPEAKER BOX L/R
CB	996510018297	CARTON BOX (for -/93)
GB	996510018296	GIFT BOX (for -/93)
36	996510018935	SUBWOOFER BOX (for -/98)
36	996510025378	SUBWOOFER BOX (for -/93)

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