DVD Home Theater System MCD712

Service
Service
Service

Service Manual

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CLASS 1 LASER PRODUCT

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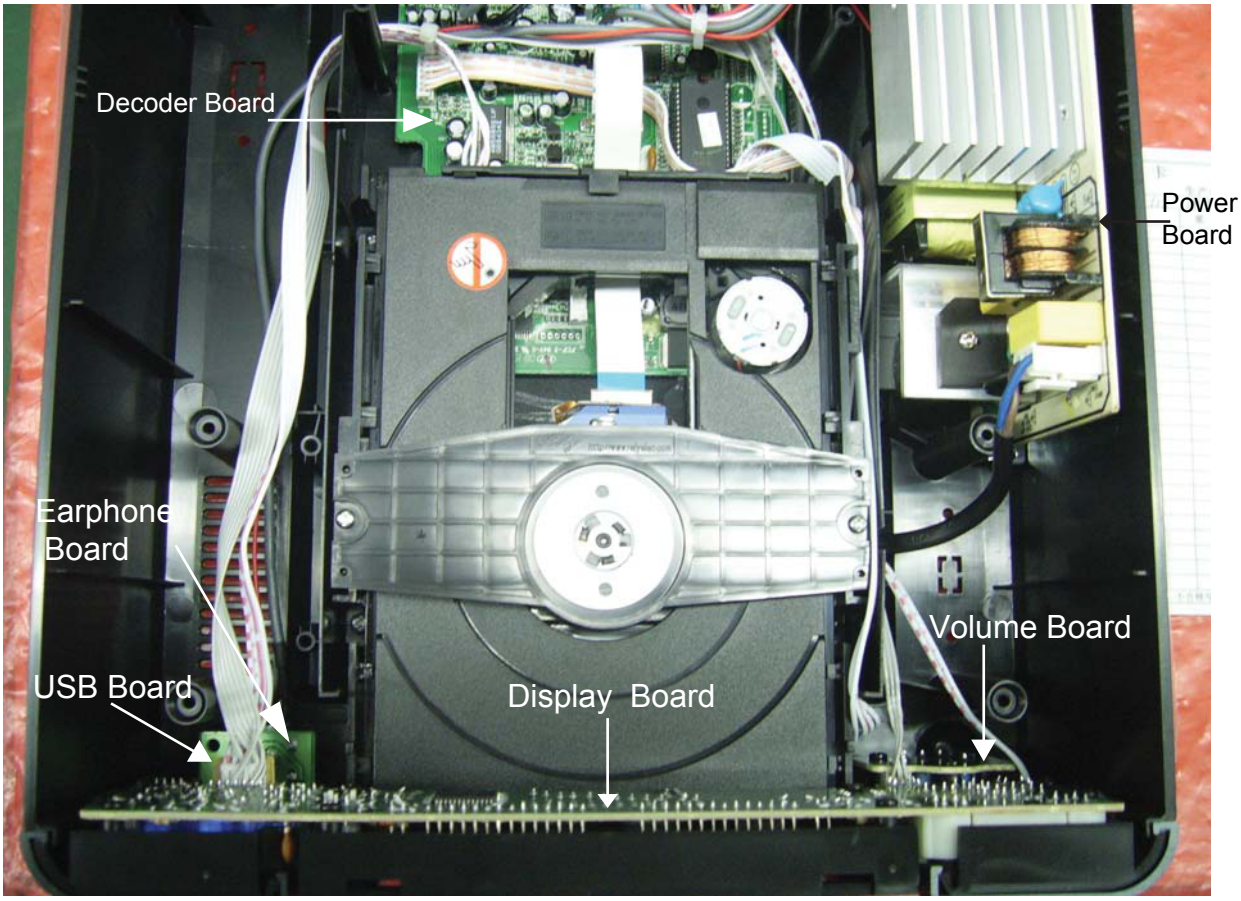
Version 1.0

PHILIPS

Location of PC Boards



VERSION VARIATIONS :

Type /Versions: / Service policy / Board in used:	MCD712										
	/05	/12	/37	/55	/58	/61	/79	/93	/94	/96	/98
VFD DISPLAY BOARD		C						M			
DECODER BOARD		M						M			
SCART BOARD		M						M			
EARPHONE BOARD		M						M			
LAMP BOARD		M						M			
USB BOARD		M						M			
VOLUME BOARD		M						M			
AUX BOARD		M						M			
POWER BOARD		M						M			

Type /Versions: / Feature diffrencd / Features	MCD712										
	/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 .....100W×2 + 200W RMS
Signal-to-noise ratio ..... ≥67dBA
Frequency response ..... 40Hz~20KHz +0.5/-2.0dB
Aux Input ..... 1.00V RMS 20k ohm

DISC

Laser Type ..... Semiconductor
Disc Diameter 12cm/8cm
Support Disc ..... CD-DA, CD-R,CD-R,CD-RW,MP2,DVD,DVD-RW,DVD+RW
Audio DAC 24Bits/96kHz
Total Harmonic Distortion .....＜0.1%(1kHz)
Frequency Response ..... 40Hz~20kHz
Signal to Noise Ratio .....≥67dBA

TUNER

FM Tuning Range .....87.5~108MHz
Tuning grid 100k/50kHz

Sensitivity

- Mono, 26db S/N Ratio 5uV
– Stereo, 50db SN Ratio 100uV
Selectivity ..... ＞33dB
Image Rejection ..... ＞25dB
Total Harmonic Distortion 3%
Signal to Noise Ration ..... ≥67dBA

SPEAKERS

Speaker Impedance 8ohm
Speaker Driver, base ..... 6.5”
Speaker Driver, tweeter .....3”
Frequency Response .....60Hz~20kHz ±3.0db

GENERAL INFORMATION

Total Output power ..... 400W RMS
AC Power 230V/50Hz
Operation Power Consumption 100W
Standby Power Consumption ..... ＜4W
Eco Standby Power Consumption .....＜1W
Headphone Output .....NA
USB Direct ..... Version 2.0

Dimensions

– Main unit (w x h x d) 360x190x65mm
– Speaker box (w x h x d) 135x330x135mm
– Subwoofer(w x h x d) 170x330x340mm

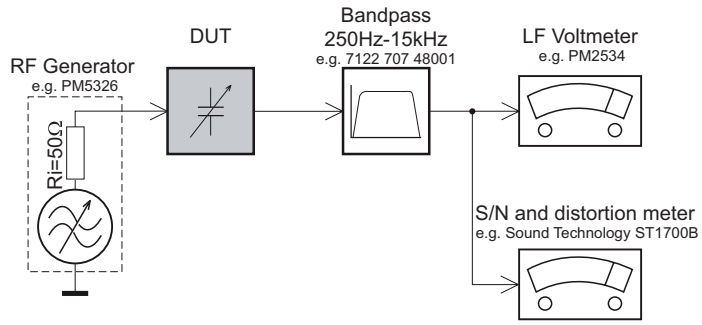
Weight

– With Packing 13KG
– Main unit 1.2KG
– Speaker box 2x1.1KG
– Subwoofer 5.4KG

Specifications and external appearance are subject to change without notice.

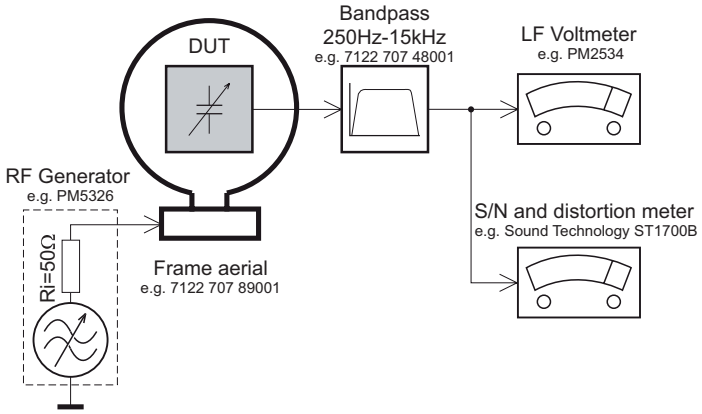
Measurement Setup

Tuner FM



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

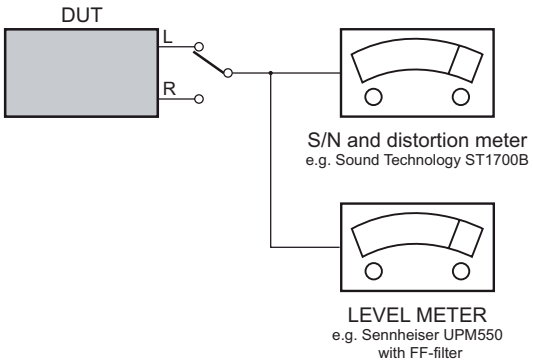
Tuner AM (MW,LW)



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).

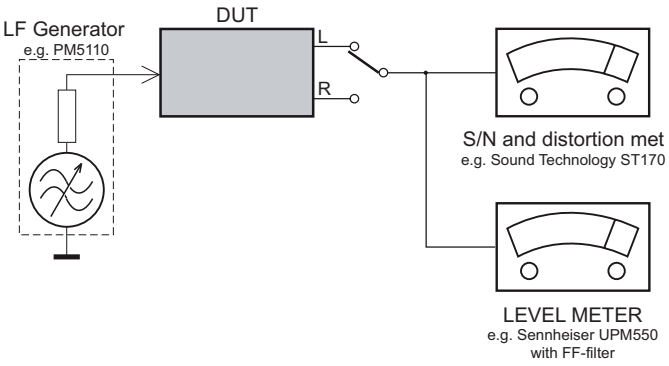
CD

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** 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 Safty Attention> carefully. If there are unexpected conflicts between safefy 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.

① 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.

② 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.

③ Only use anti-static charges grounded soldering irons to unsolder the parts or solder ES parts.

④ Some soldering tin called “Anti-static charges” can also generate charges to damage ES parts.

⑤ Do not use poisonous and caustic agent which these kinds of chemicals can generate static charges to damage the ES parts.

⑥ 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).

⑦ After taking replaceable ES parts from Anti-static charges cone, please insert the ES parts in the correctly location soon as possible.

⑧ 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.

Items of Safety Attention

Unsolder/replace diode

① After unsoldering the unusable diode, nip its body and take it out.
② Bend the two pins and the diode is vertical to circuit board.
③ Check the polarity of the diode, then place its pins to the correct location.
④ Pin the joint and solder it.
⑤ Check the weld carefully. If the surface of the weld is not smooth, please solder it again.

Repair electro-plating copper

① Repair the warpage copper as following:
② Use a sharp knife to scrape the unusable copper and the unwanted solder off.
③ Make one side of the lead bent like a small “U”, then put the “U” to IC pins and solder. Another side of the lead is extended until overlap with the well copper then solder. Cut the unwand lead.

The flow of repairing DVD part

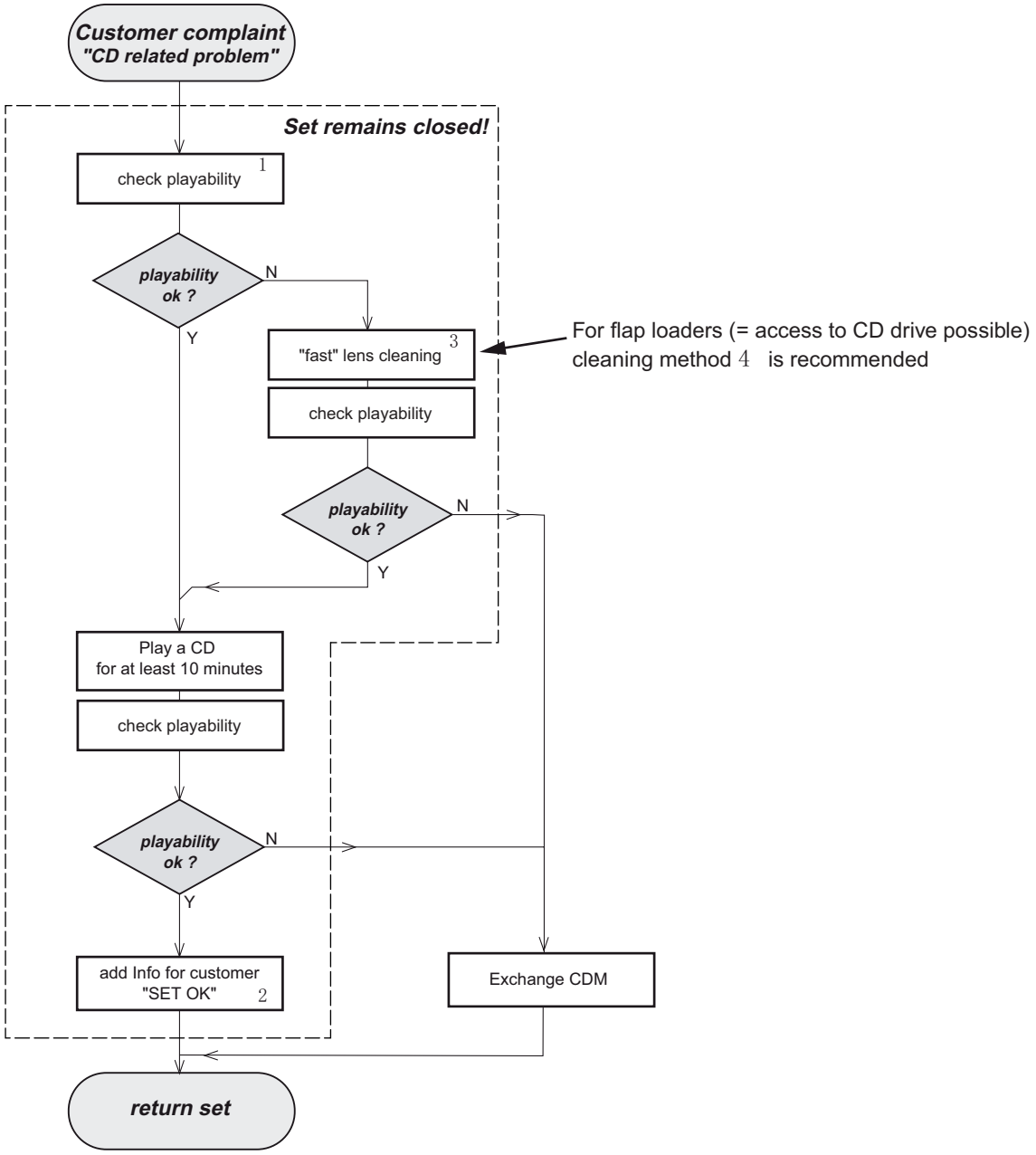
No sound or sound distorted when playing, please check the DVD part.

Notes for taking down the laser head

Before operating, read these notes as following to prevent the static charges damageing the laser head when reading the laser led.

① Lay an electric rug on the working table and the replaced parts are packed in black package.
② The electric rug is grounding by put on the electric base. Then put your hand on the electric rug and connect the static handle with the electric rug. Make sure the electric rug and the working table are grounding.
③ During the operating, do something such as operating on the electric rug to avoid the static charges touching the laser parts. After that, you can begin to take the laser parts down.
④ When replace the laser parts, please do something to make a short circuit and remenber to cut the short circuit off after replacing.

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 ≥10seconds
  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 ≥10seconds
  Fingerprint ≥10seconds
  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.

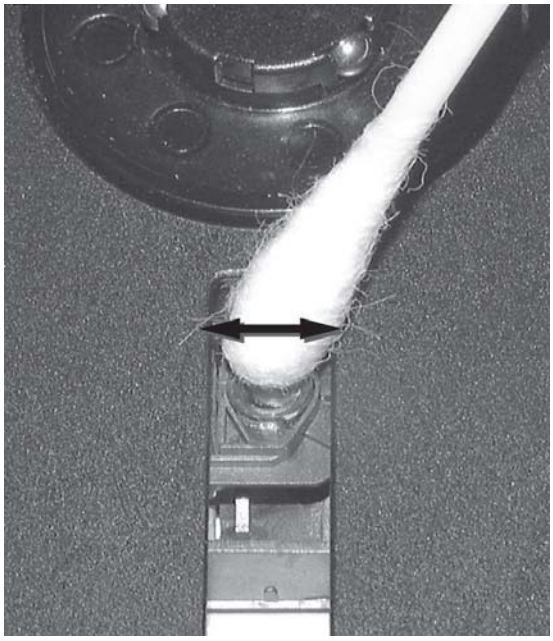
LIQUID LENS CLEANING

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.

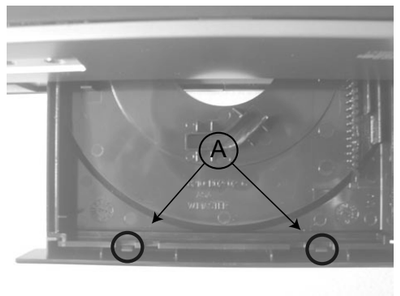
The direction of cleaning must be in the way as indicated in the picture below.



3-1

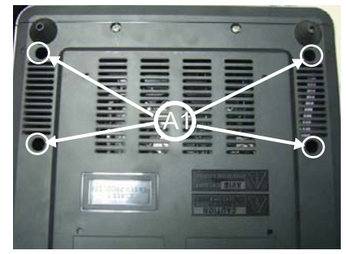
Disassembly Diagram

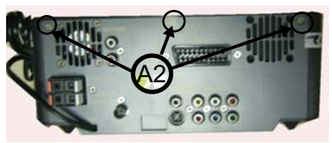
1.Open the DVD Door and loose 2 clipps to remove the door



2, Open the Top Cabinet

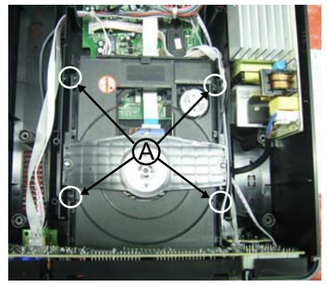
A1. Loose 4pcs screws(3x15PA)
A1. Loose 3pcs screws(3x10FA)





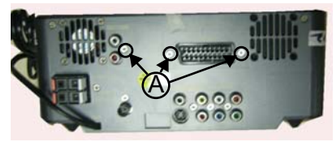
3, Remove the DVD Loader Mechanism

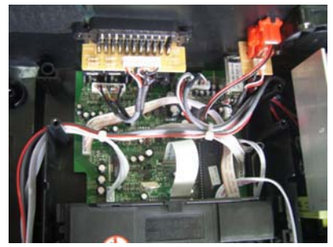
A. Loose 4pcs screws(3x15BA)



4, Remove the SCART & AUX Board

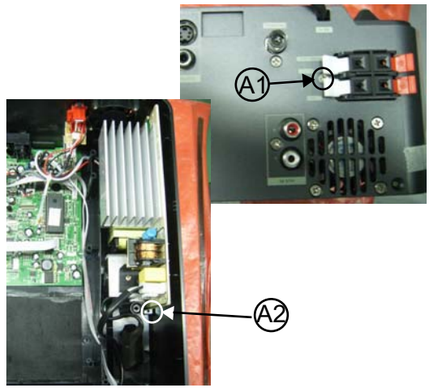
A. Loose 3pcs screws(3x12FA)





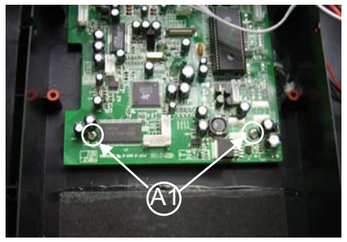
5.Remove the Power Board

A1. Loose 1pc screw(3x10FA)
A2. Loose 1pc screw(3x10PA)



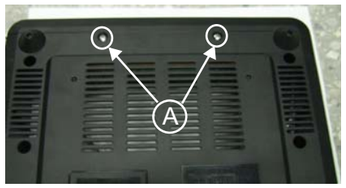
6.Remove the Decoder Board

A1. Loose 2pcs screws(3x6PT)
A2. Loose 3pcs screws(3x12FA)
A3. Loose 1pc screw(3x6FMTT)



7, Remove Front Cabinet

A. Loose 2pcs screws(3x12BA)

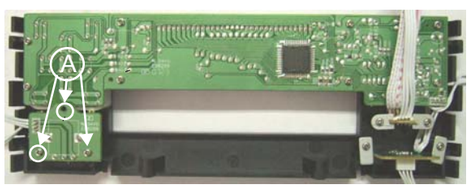


8, Remove the Display Board

A. Loose 8pcs screws(2.6x8BA)

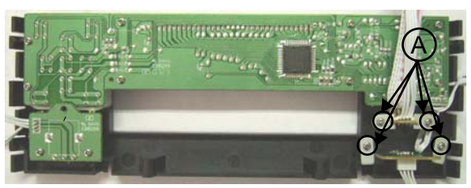
9, Remove the Volume Board

A. Loose 3pcs screws(2.6x8BA)



10, Remove the USB & Earphone Board

A. Loose 4pcs screws(2.6x8PWT)



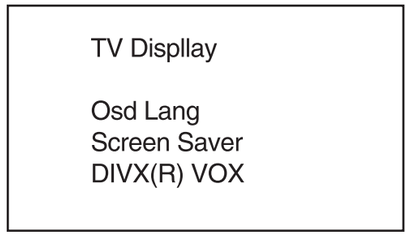
3-1

Software Version Check & Upgrading

A.MPEG SOFTWARE VERSION CHECK

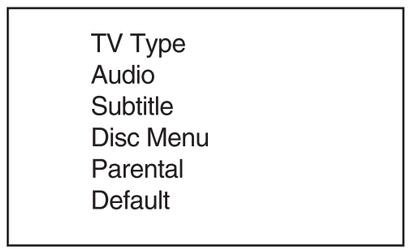
1.Press SYSTEM key (on the remote control) to open setup page,

TV Screen shows:



2.Press REMOVAL key (on the remote control) to the original setup page,

TV Screen shows:



3.Enter the password "811502" (on the remote control)

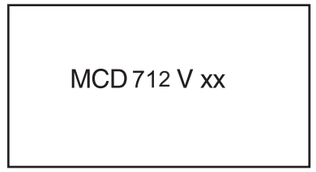
TV Screen shows:

4. Press ▲ or ▼ button (on the remote control) to change region.
Press OK to confirm.

B.CPU VERSION CHECK

Keep PLAY/PAUSE and STOP buttons (on the set) depressed while pressing POWER on.

TV screen shows



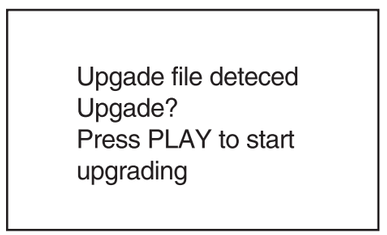
C. MPEG SOFTWARE UPGRADING

1. download the firmware from Philips support website
http://www.philips.com/support

2. Prepare a uploading CD

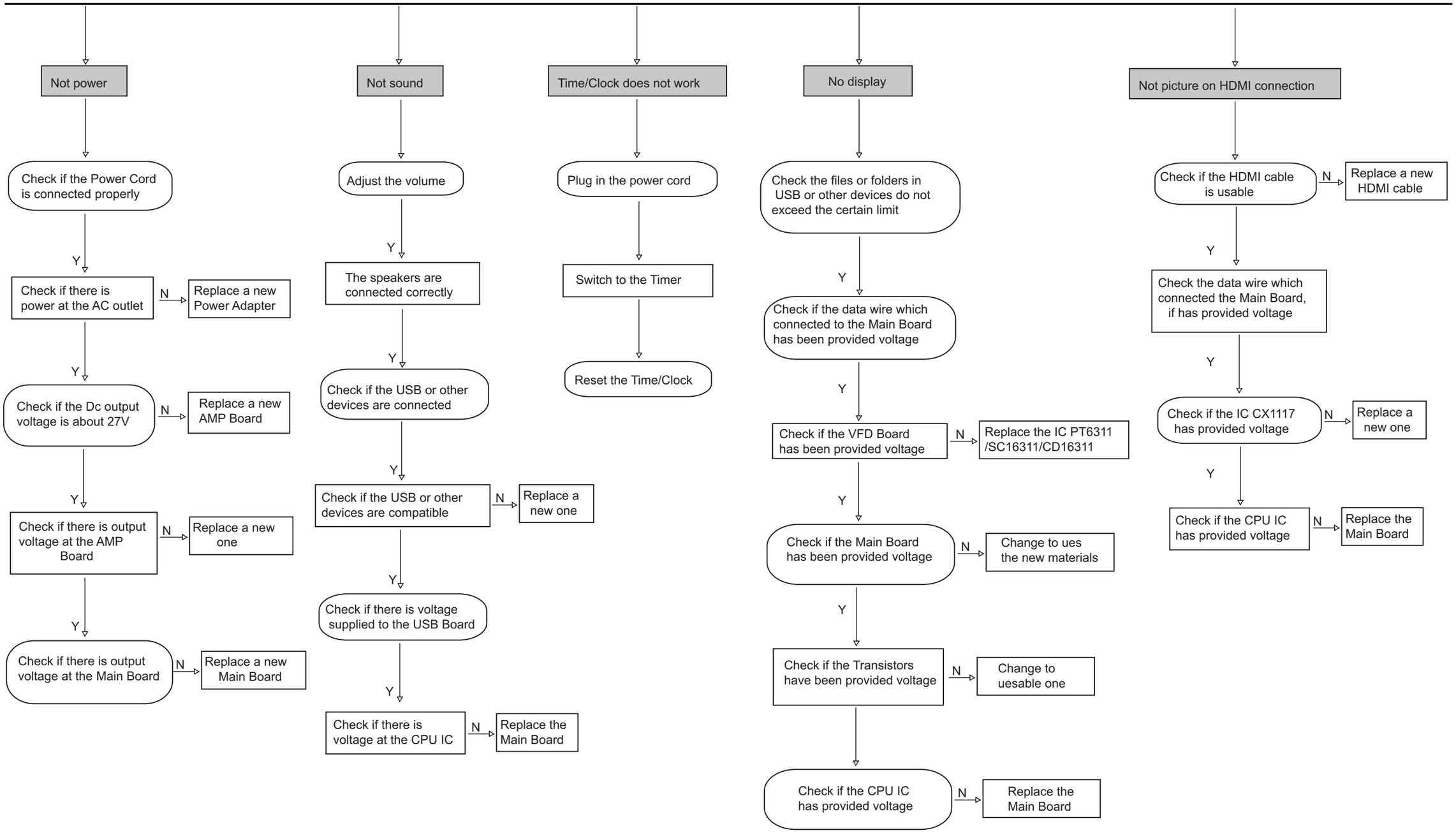
3. Put the CD in the CD tray

4. TV Screen shows



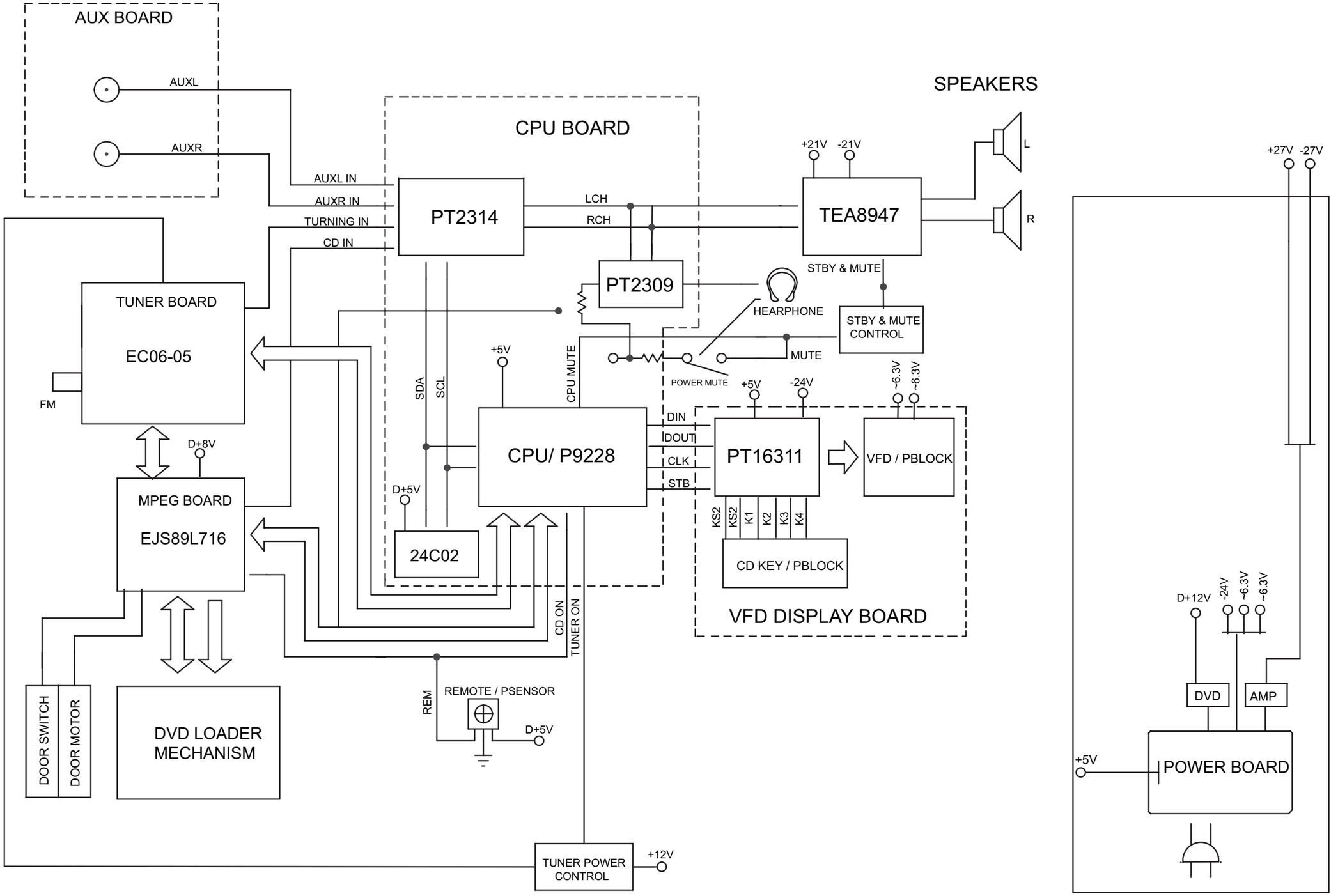
3-2

Malfunction Follow Check Chart



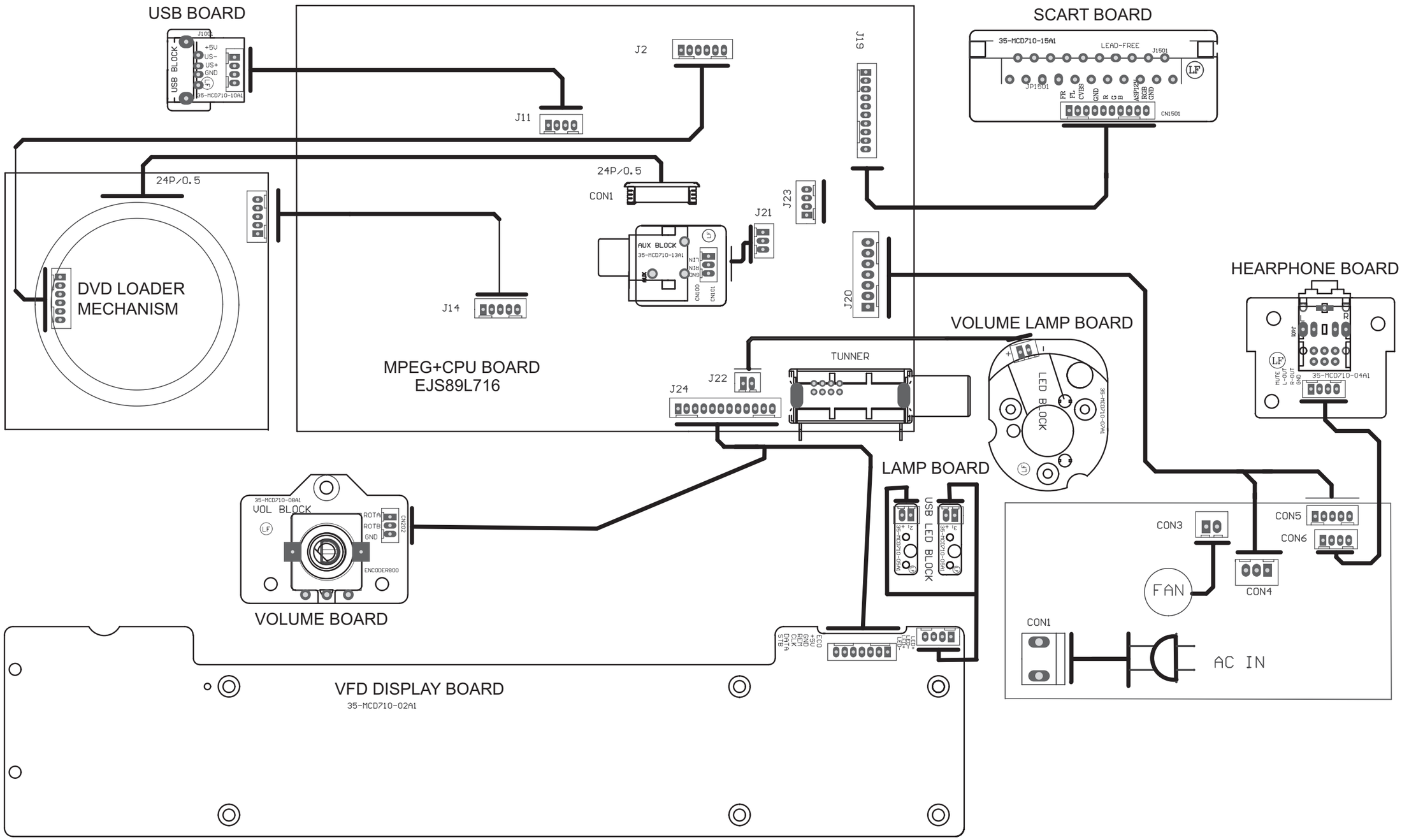
5-1

Block Diagram



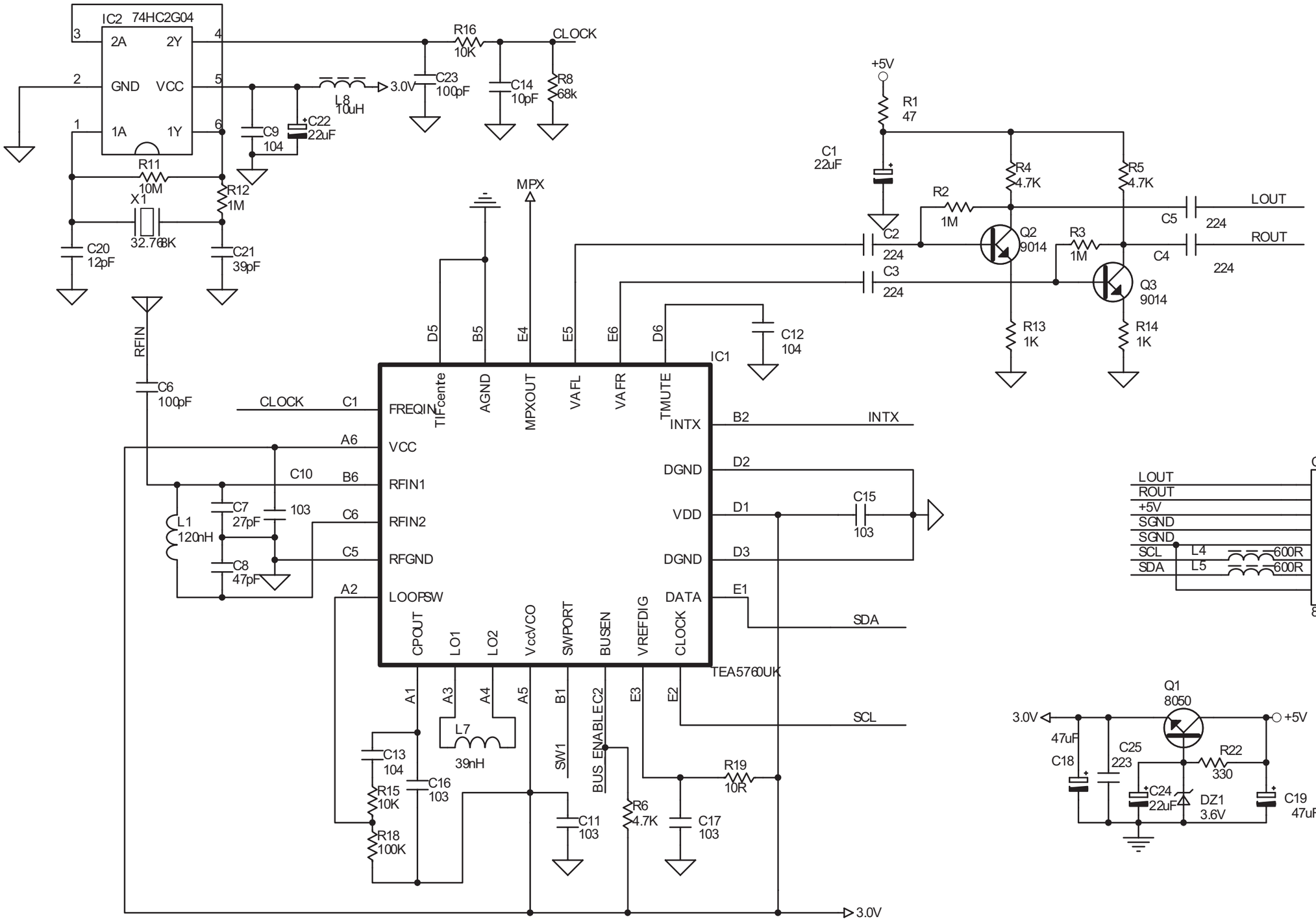
6-1

Wring Diagram



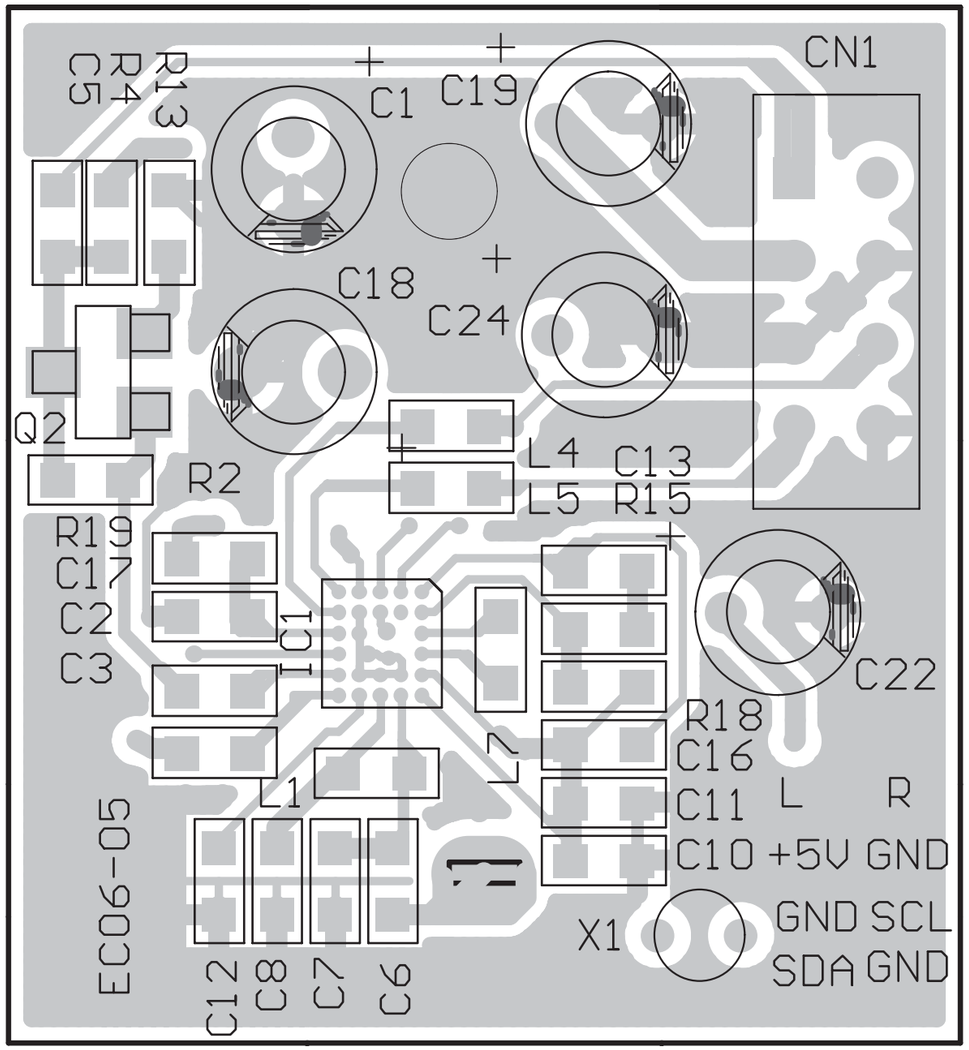
7-1

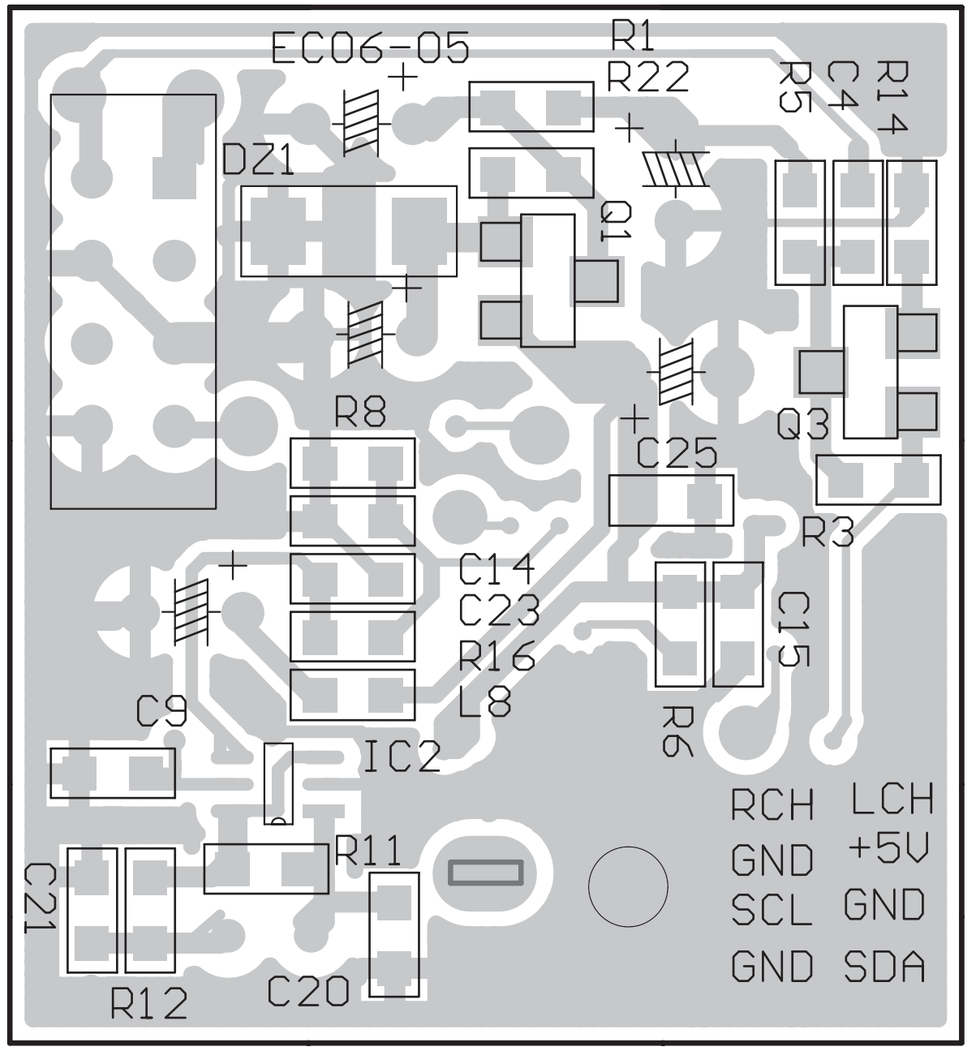
Tuner Board -- Circuit Diagram



7-2

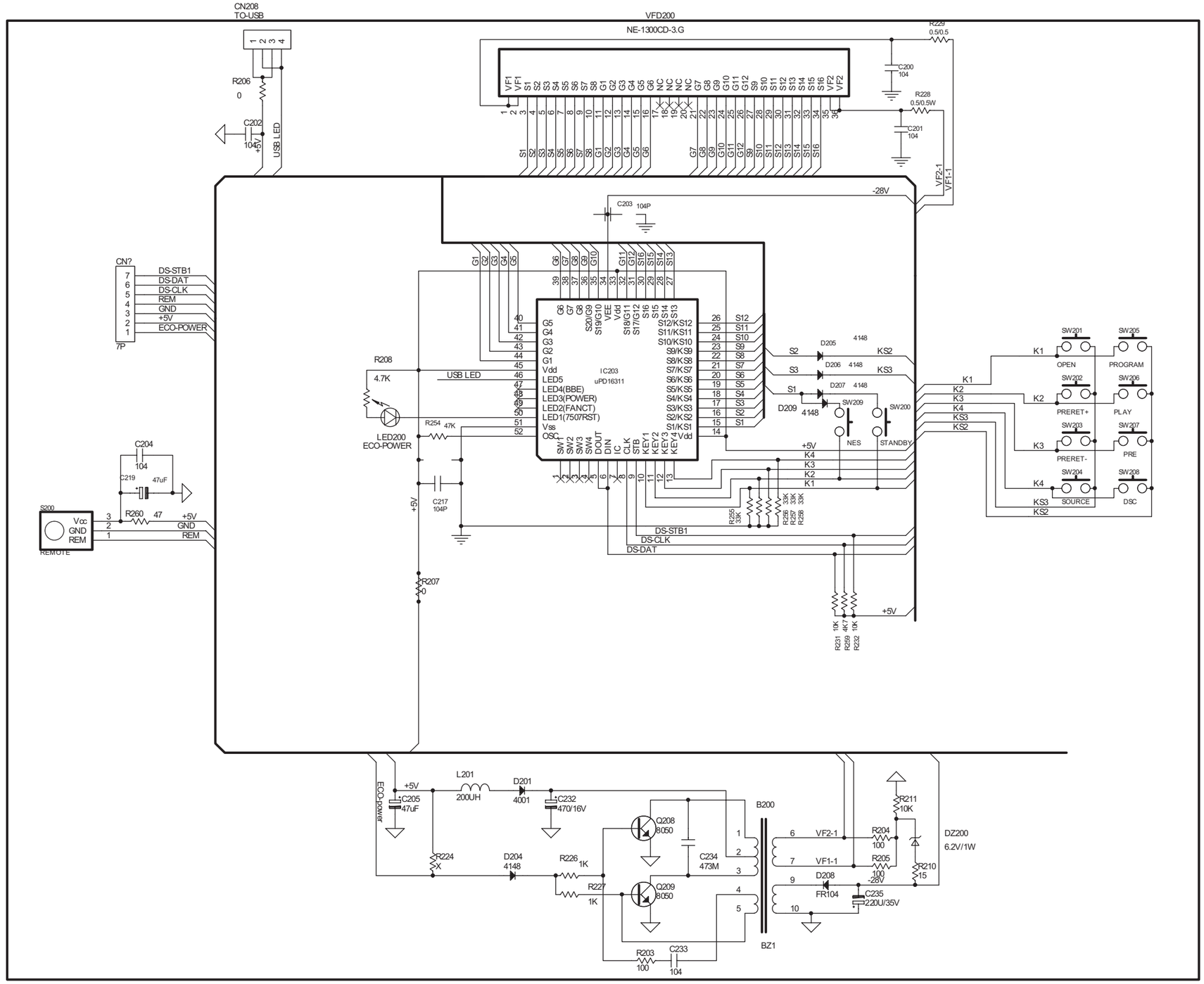
Tuner Board -- Layout Diagram





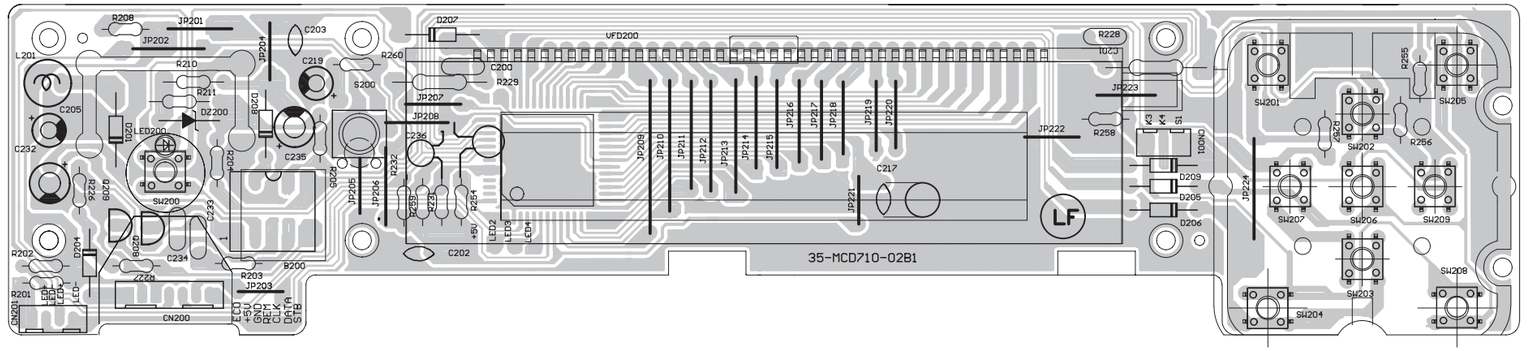
8-1

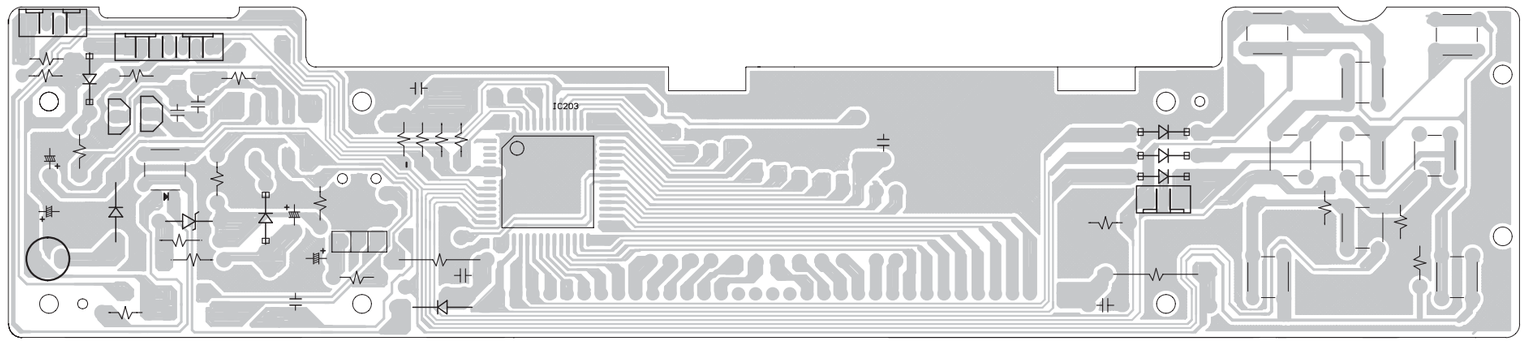
VFD Display Board -- Circuit Diagram



8-2

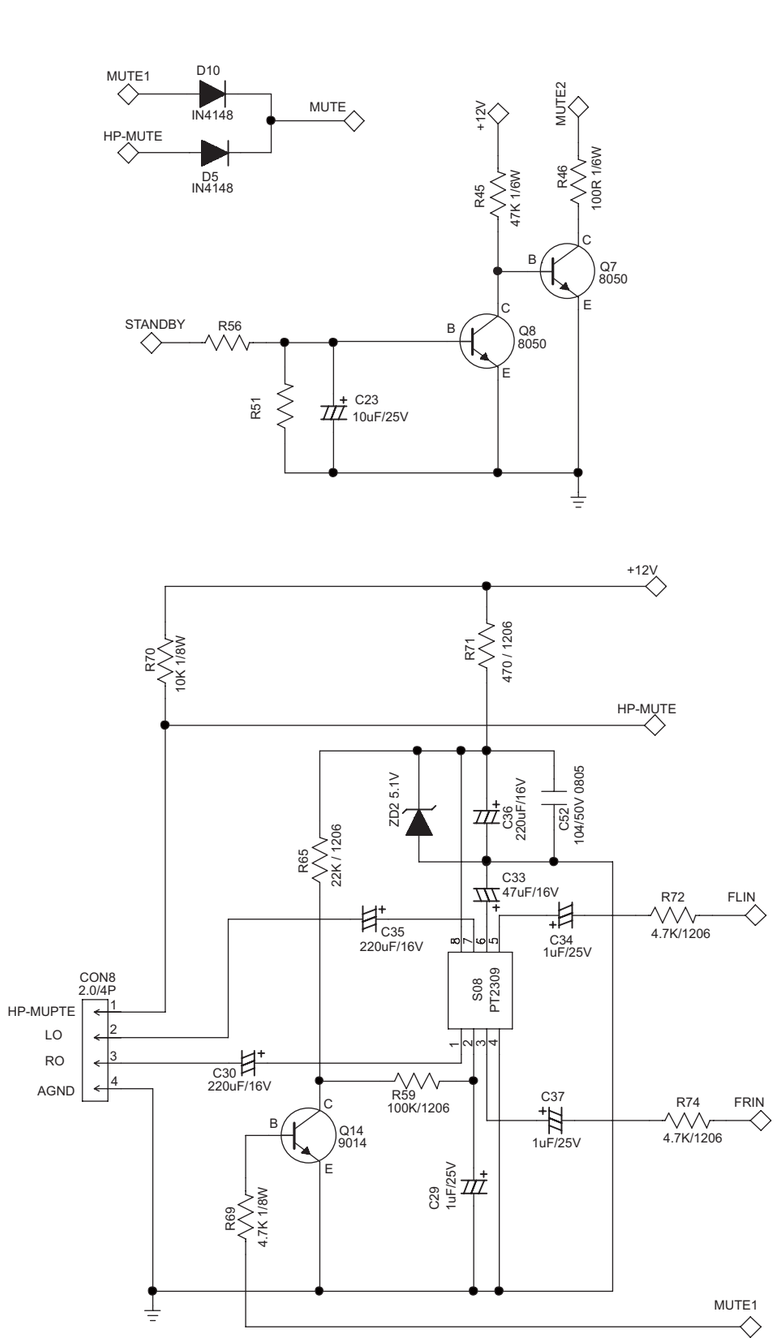
VFD Display Board -- Layout Diagram

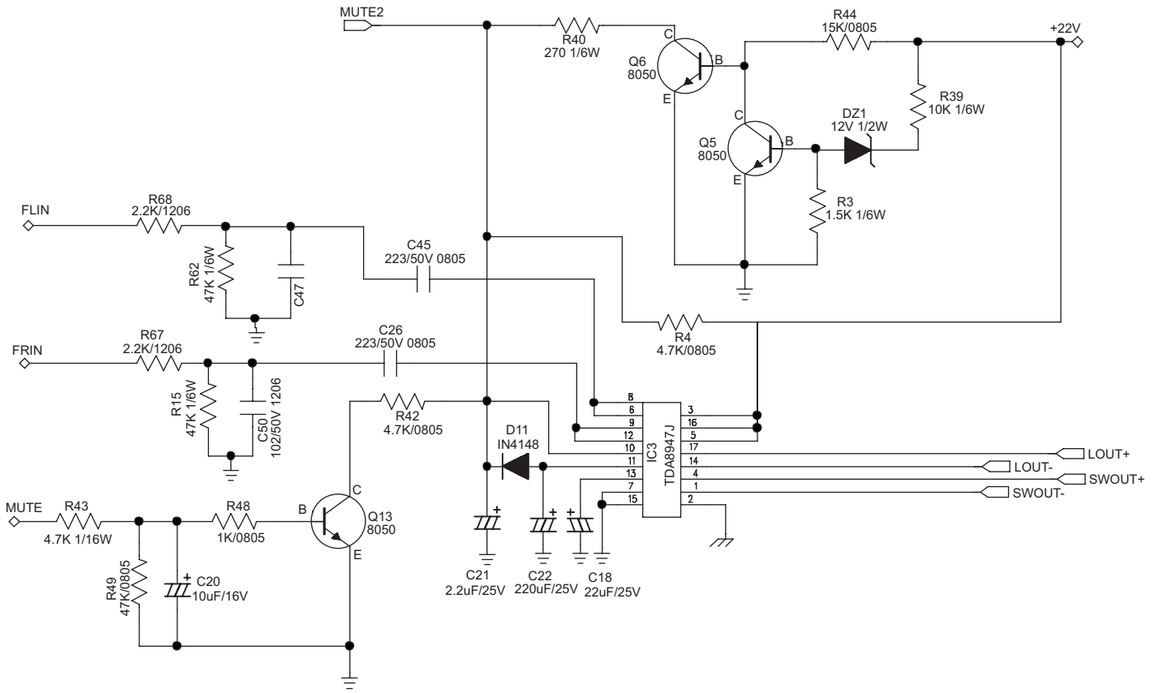


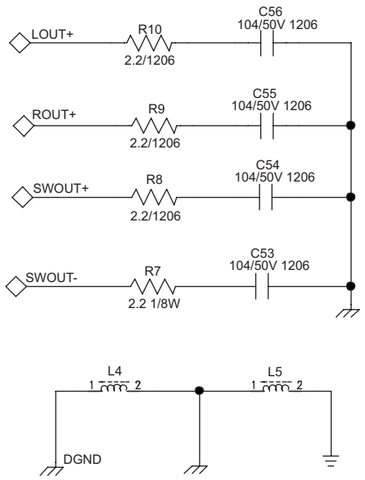


9-1

Power Board -- Circuit Diagram

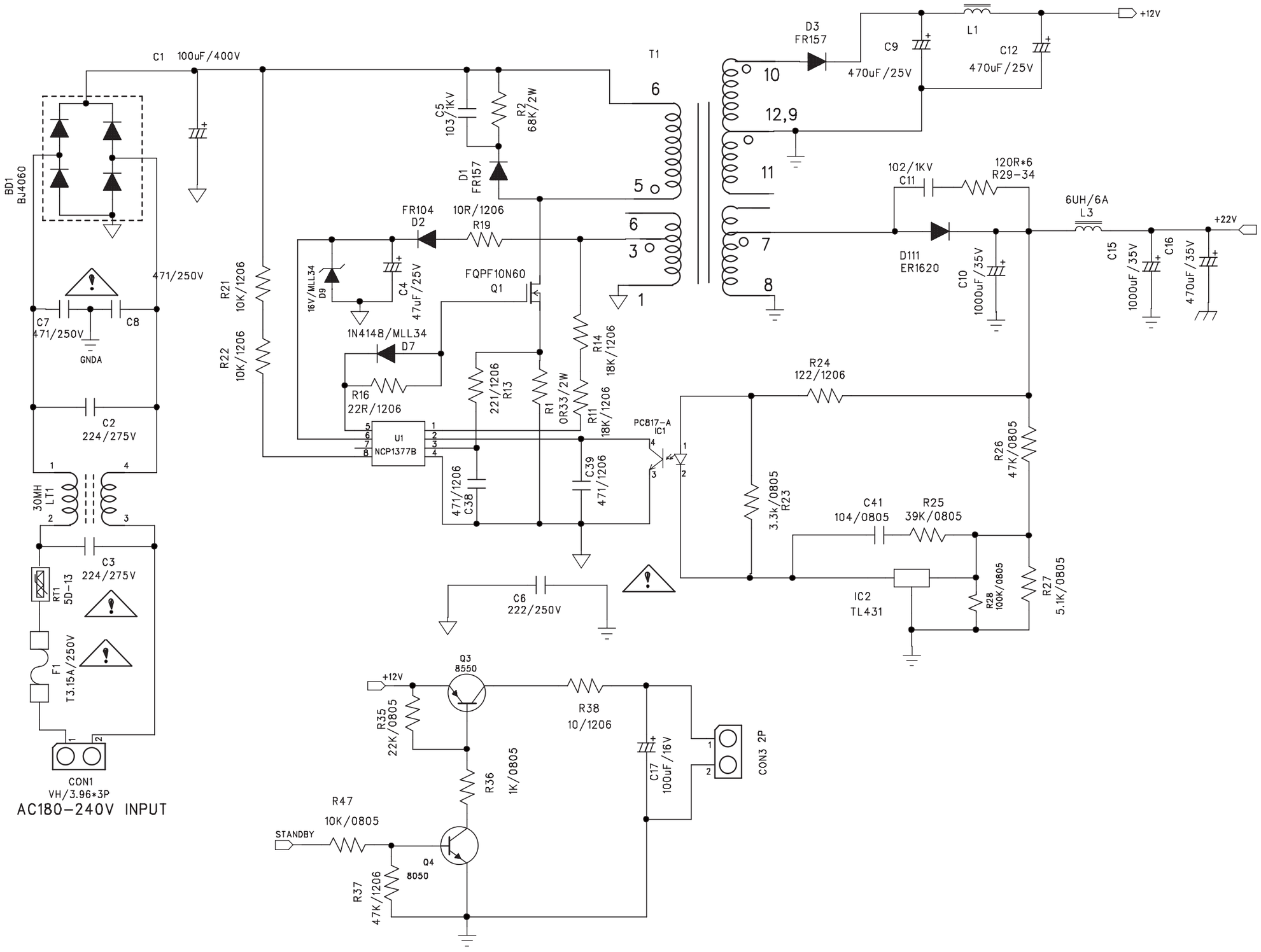






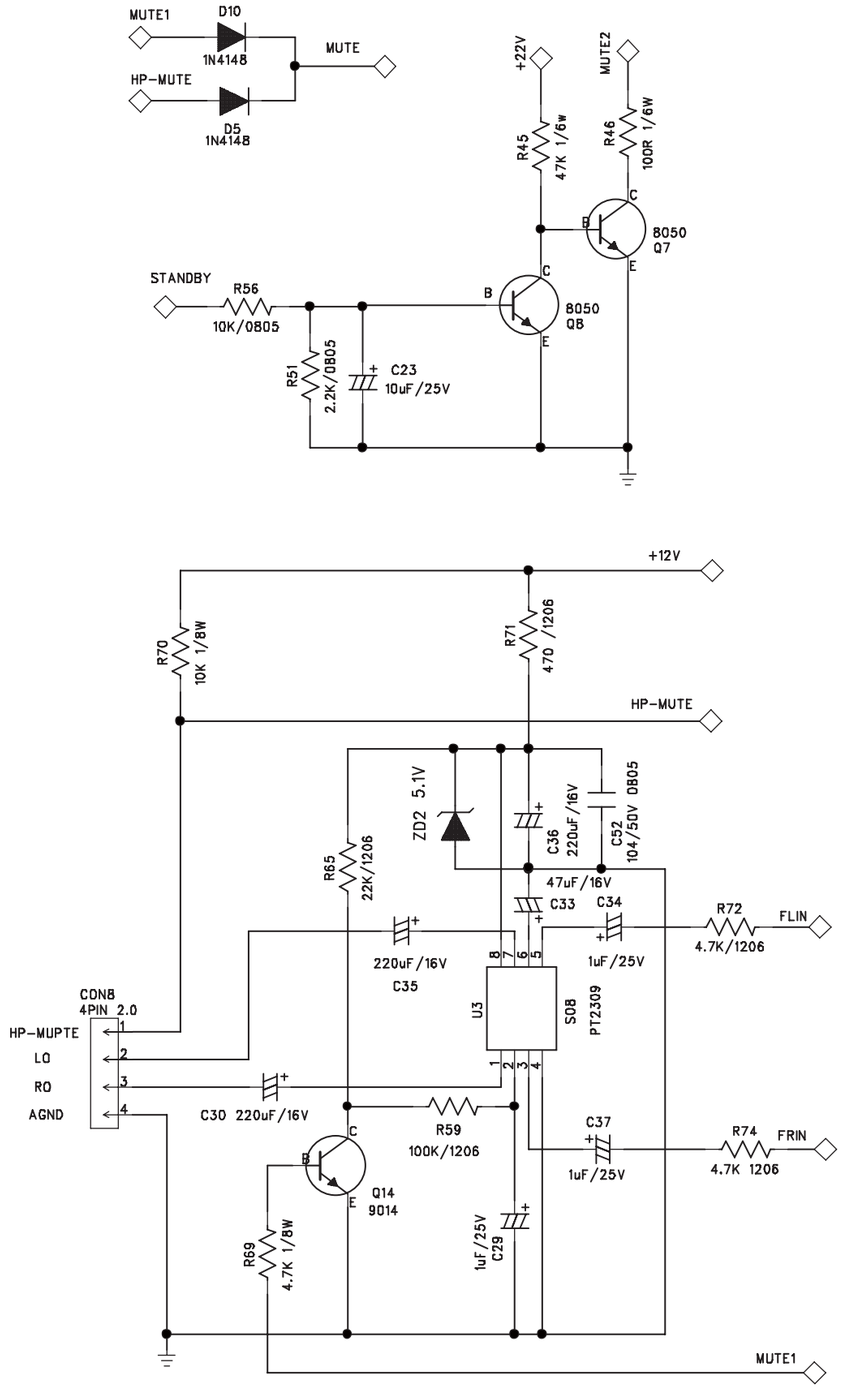
9-2

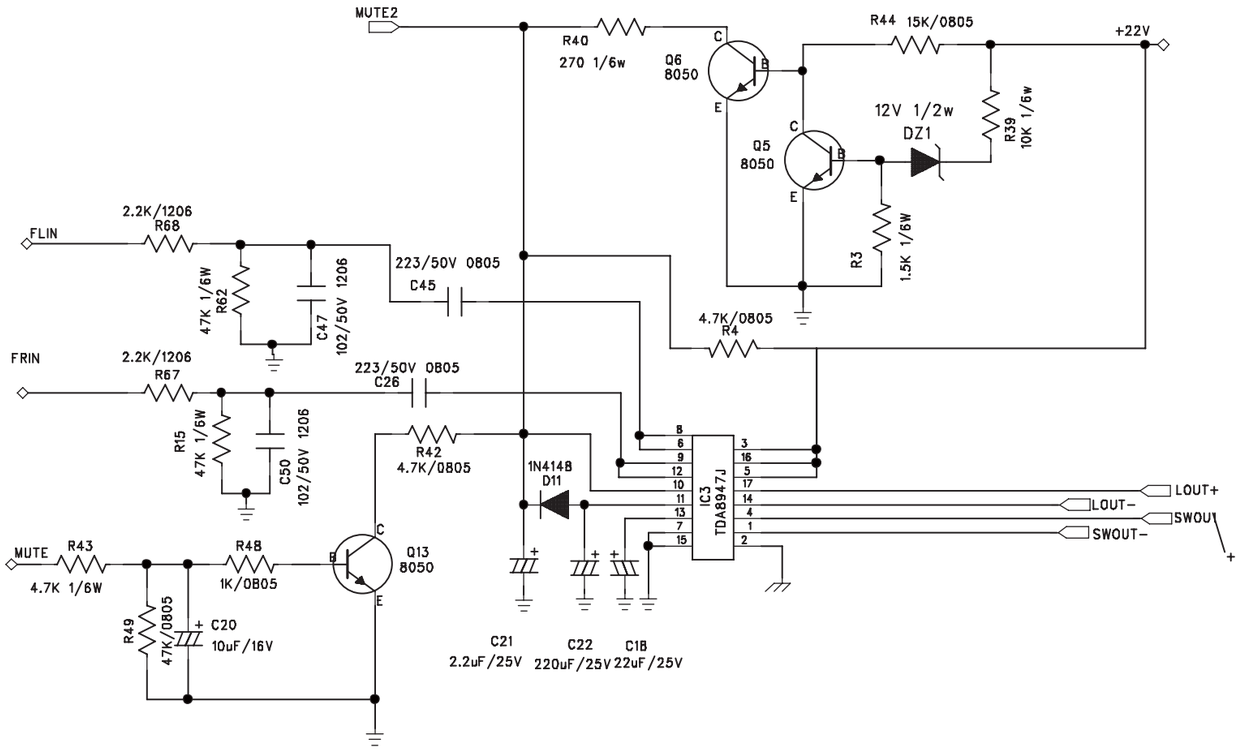
Power Board -- Circuit Diagram

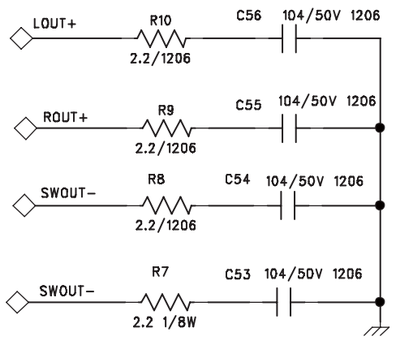


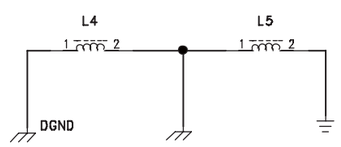
9-3

Power Board -- Circuit Diagram



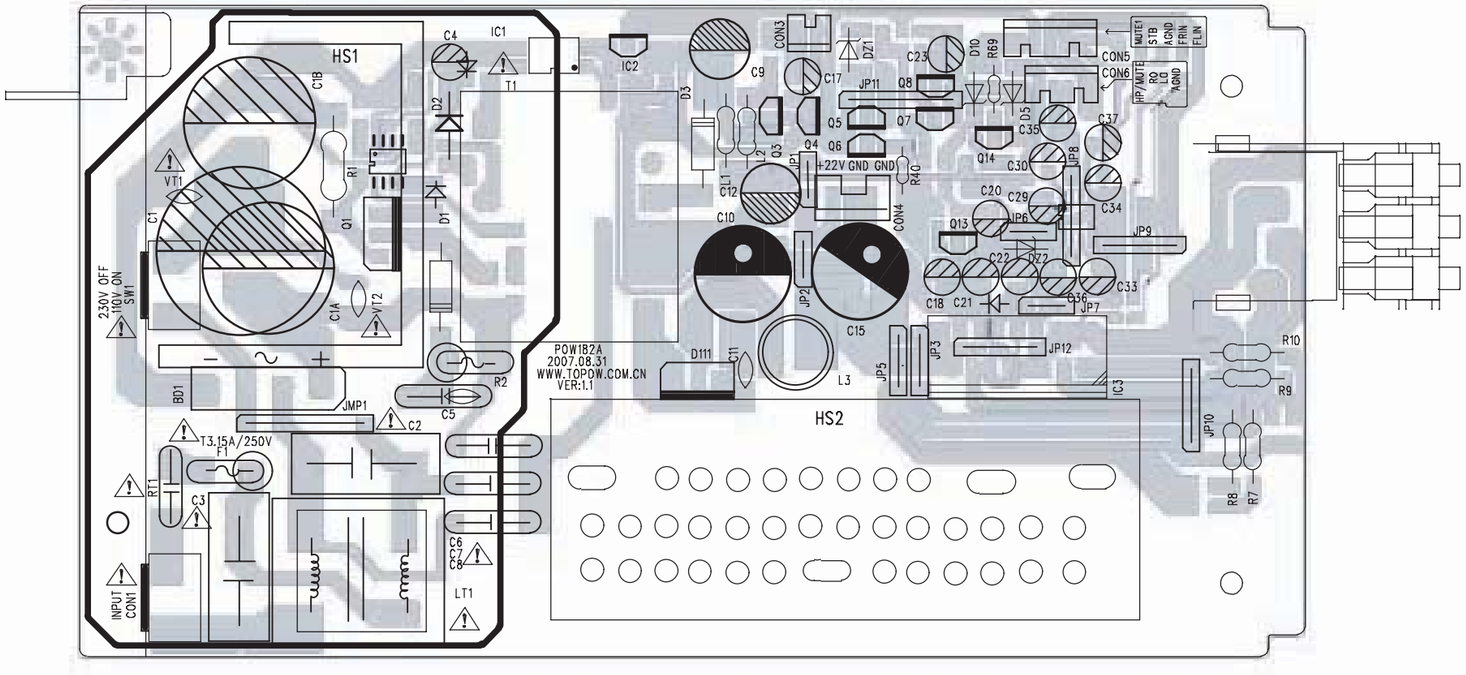






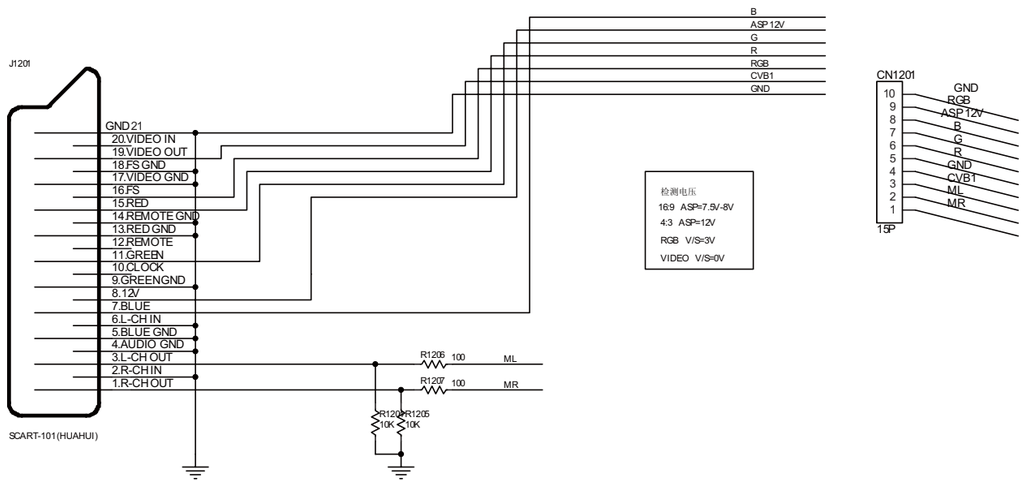
9-4

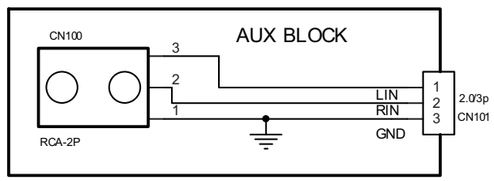
Power Board -- Layout Diagram

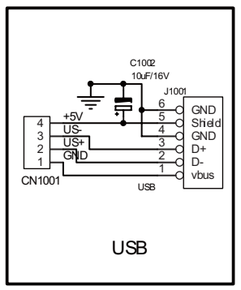


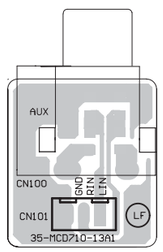
10-1

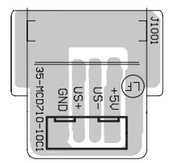
Small Boards -- Circuit & Layout Diagram

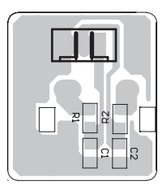


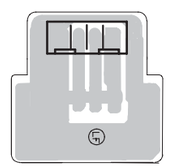


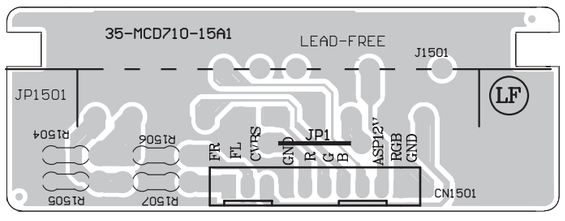


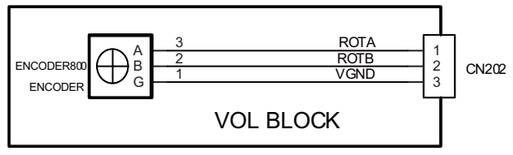


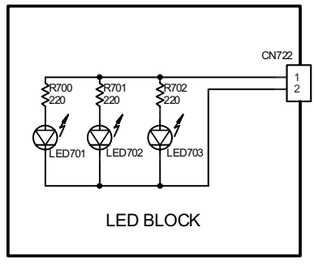


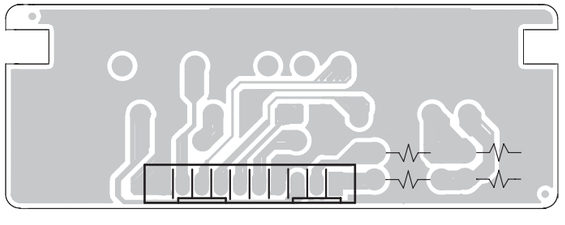


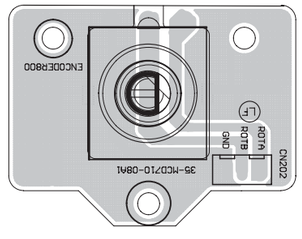


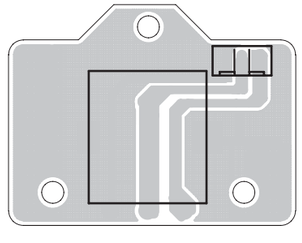


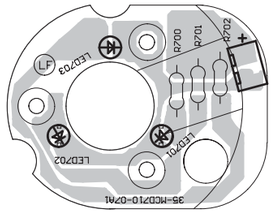


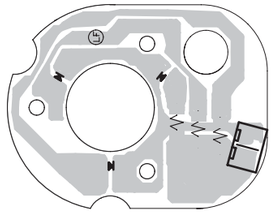






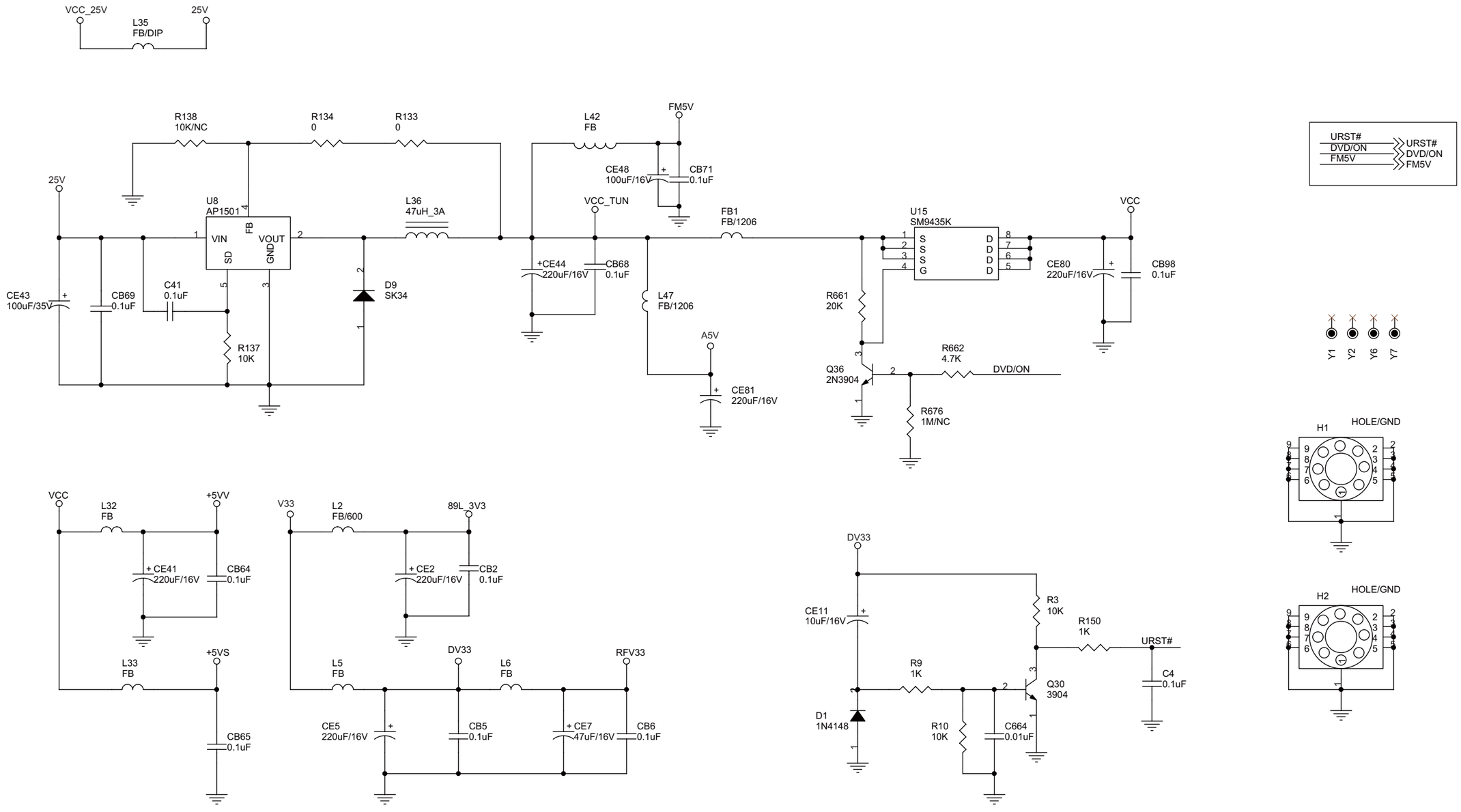






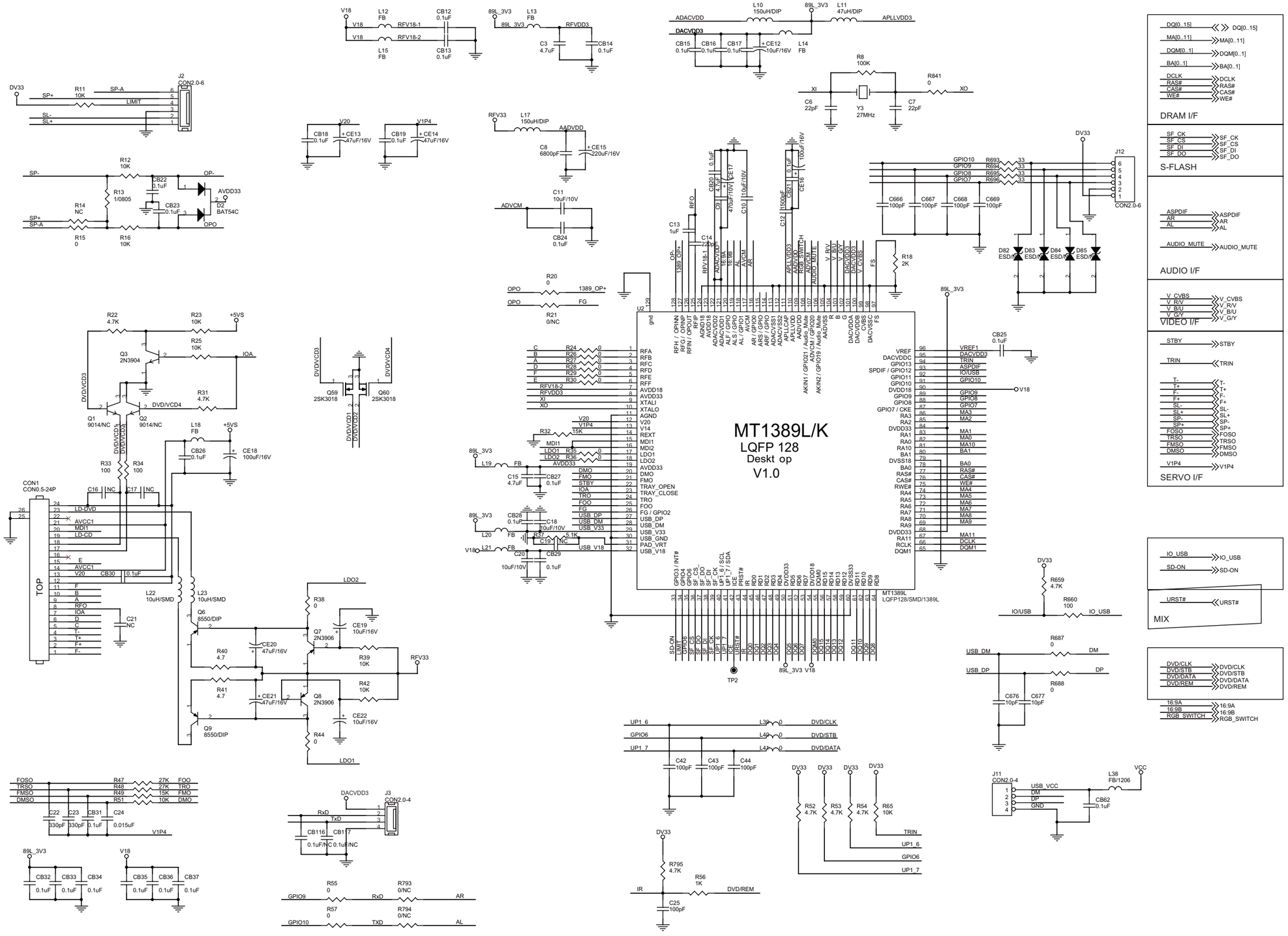
11-1

Decoder Board -- Circuit Diagram



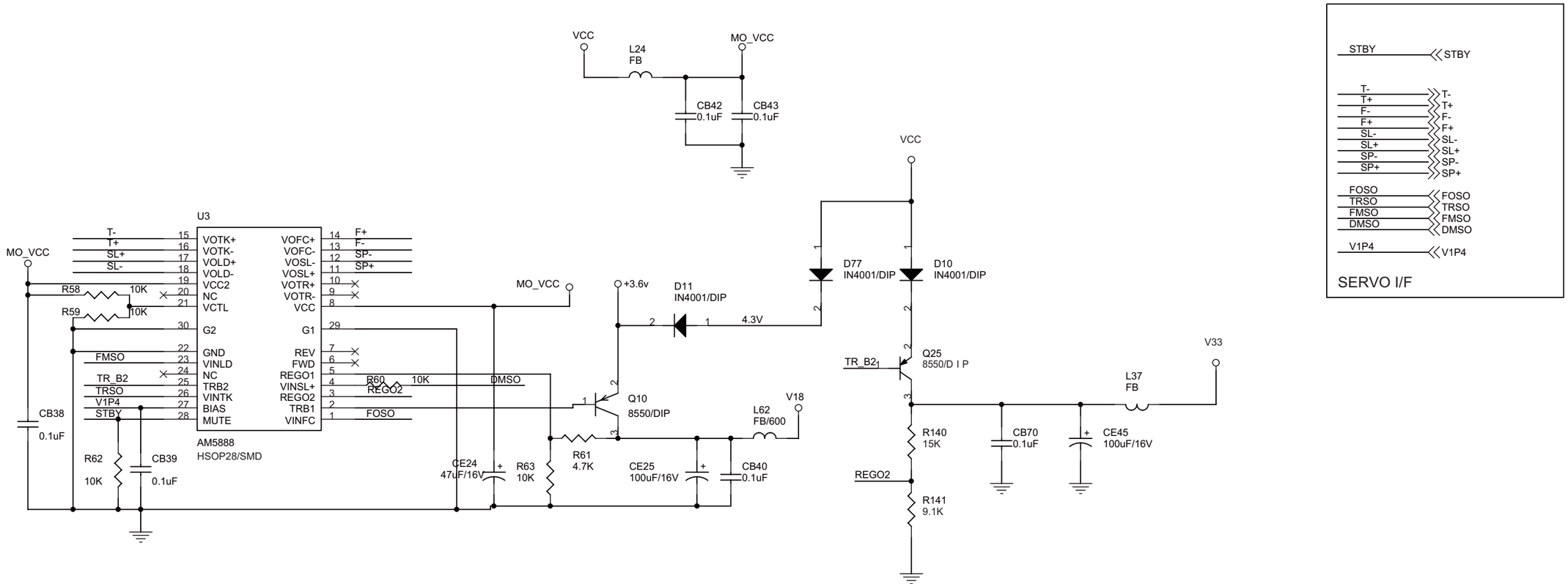
11-2

Decoder Board -- Circuit Diagram



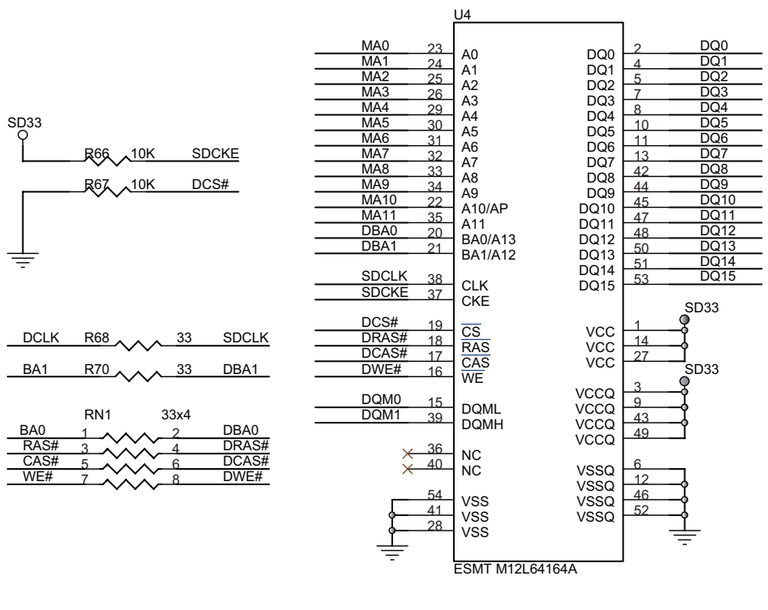
11-3

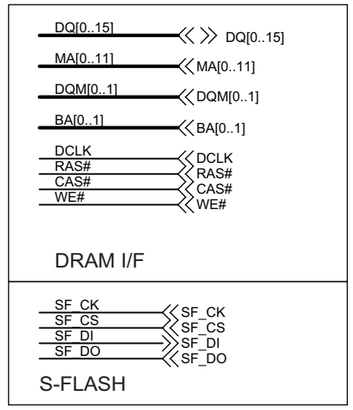
Decoder Board -- Circuit Diagram

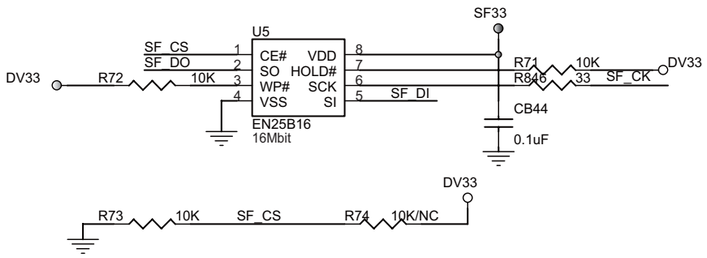


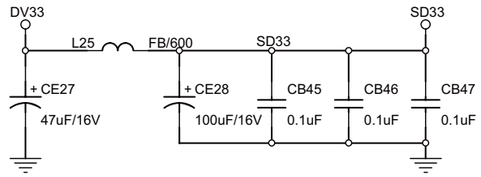
11-4

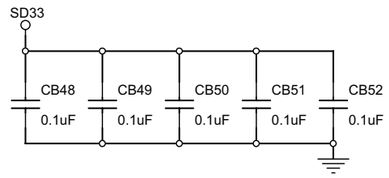
Decoder Board -- Circuit Diagram

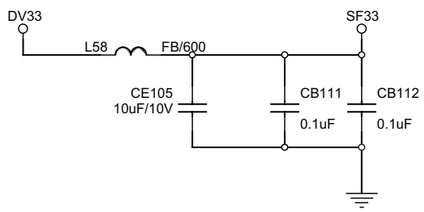








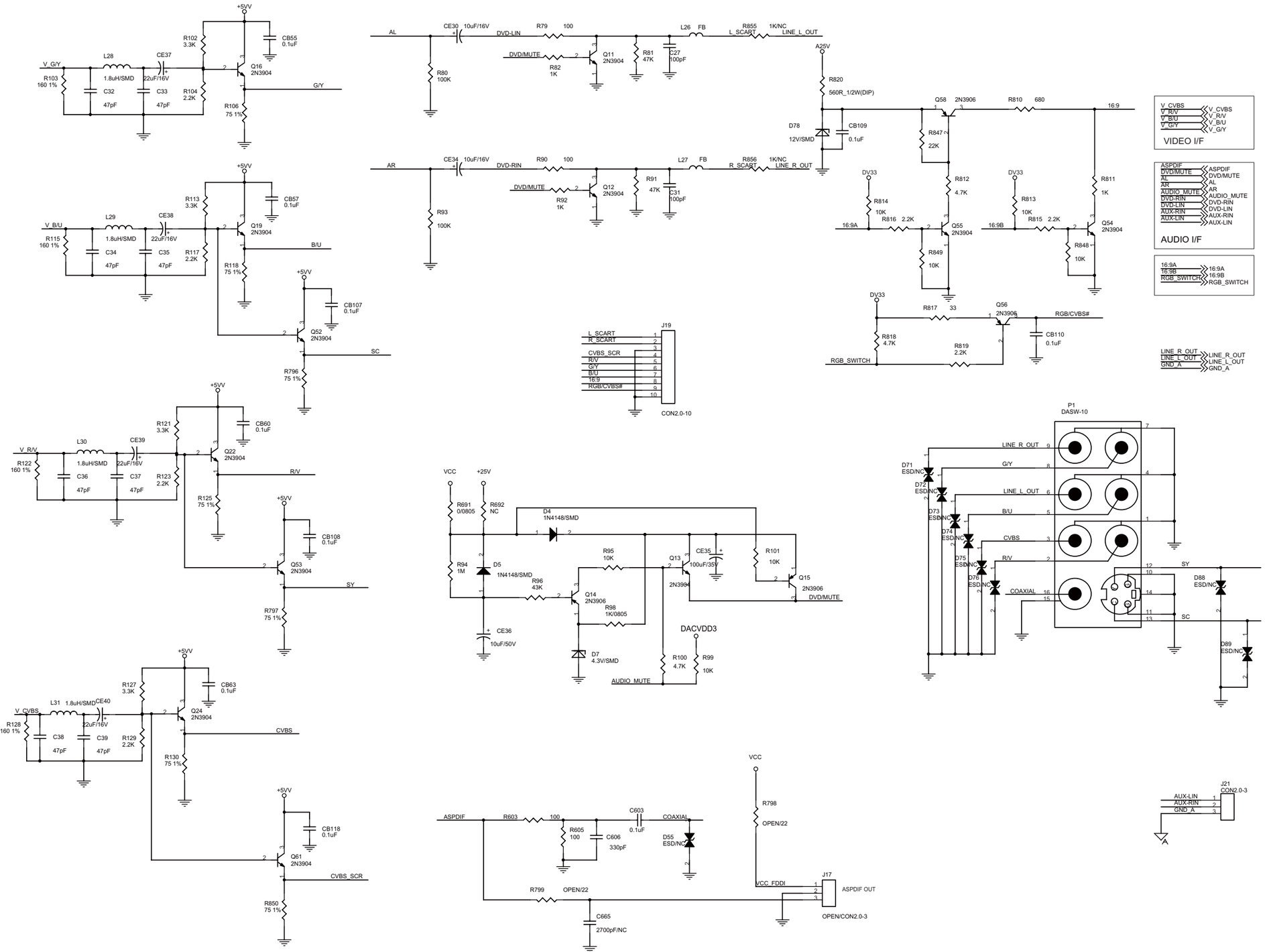




ESMT M12L64164A

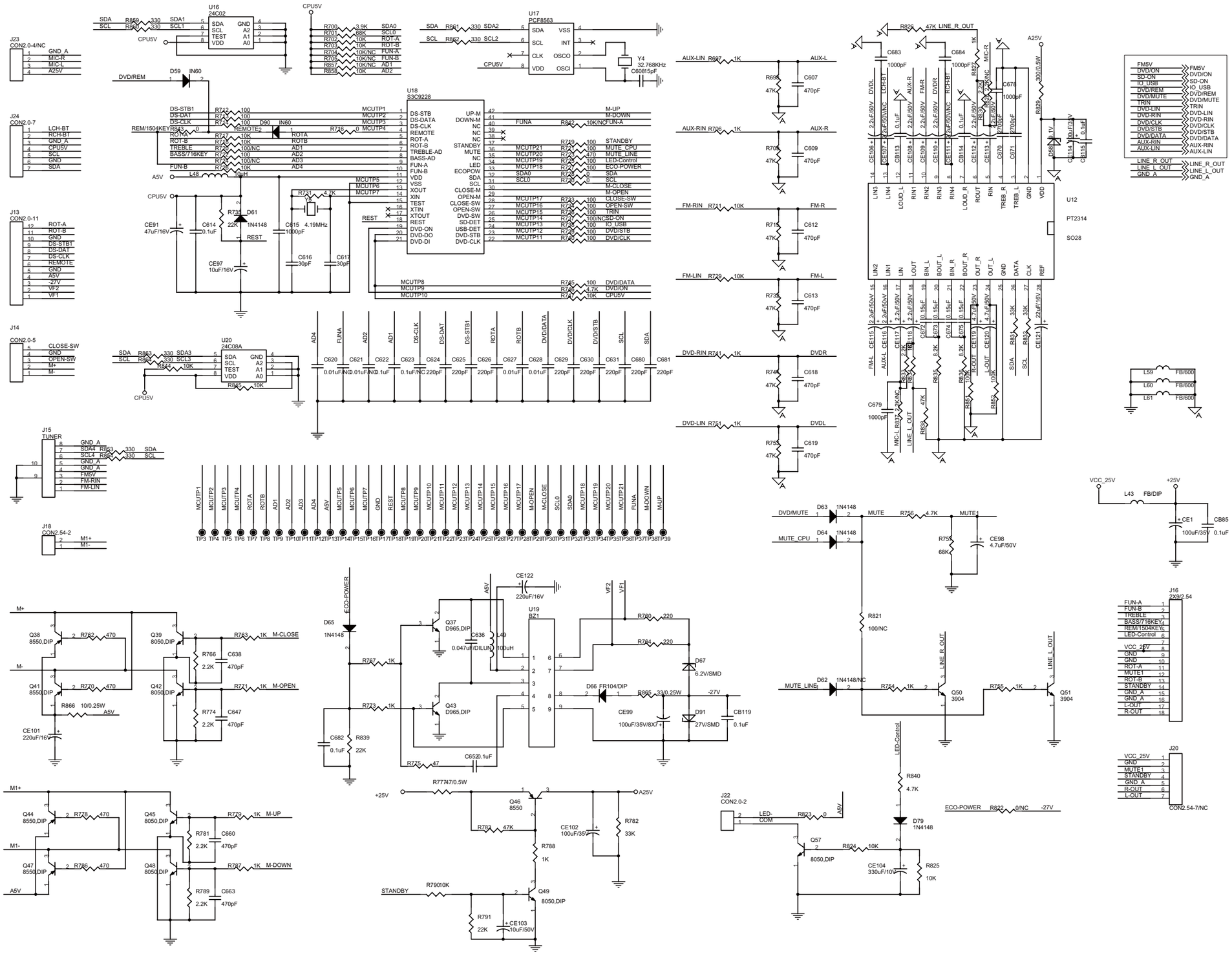
11-5

Decoder Board -- Circuit Diagram



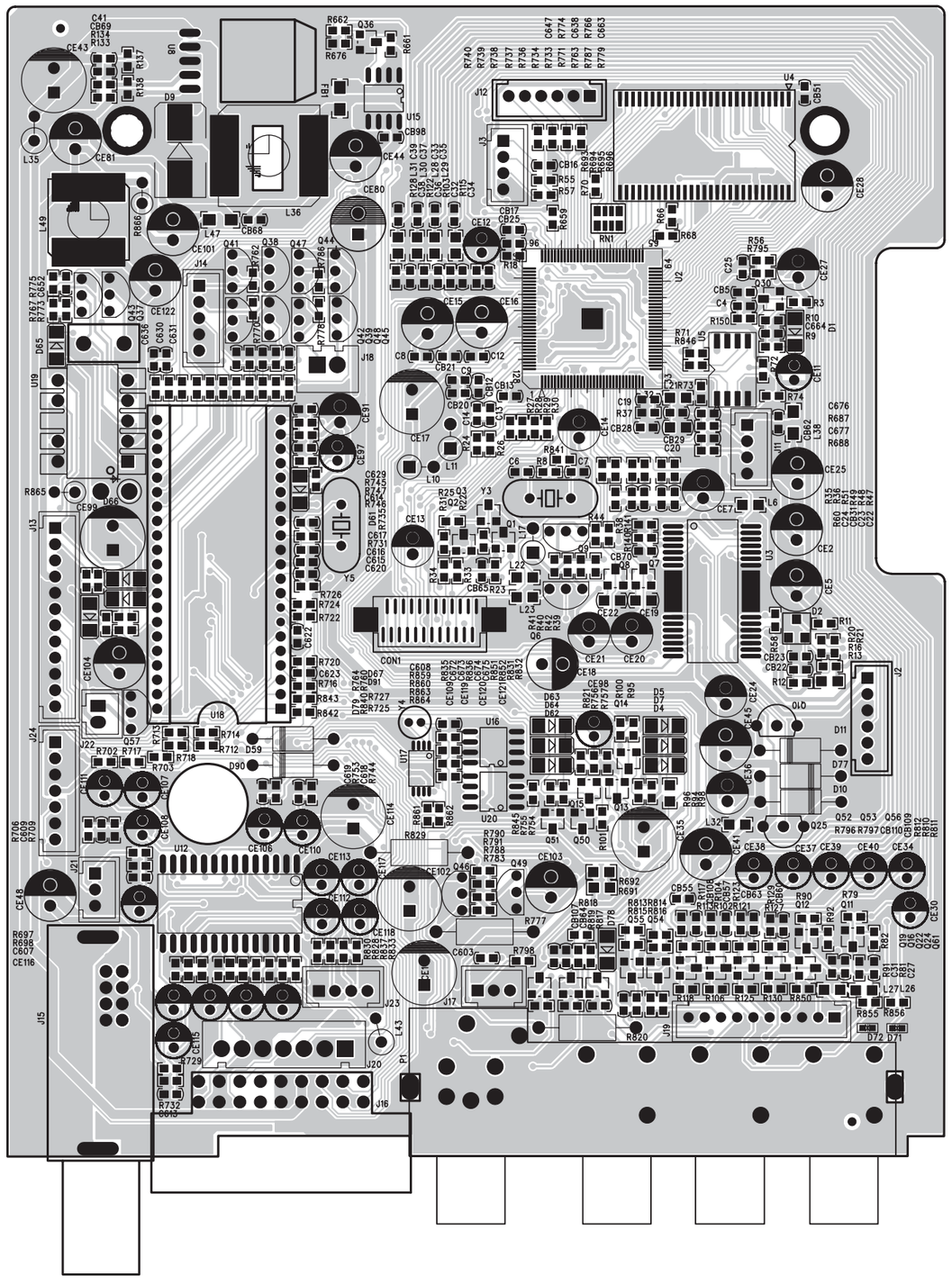
11-6

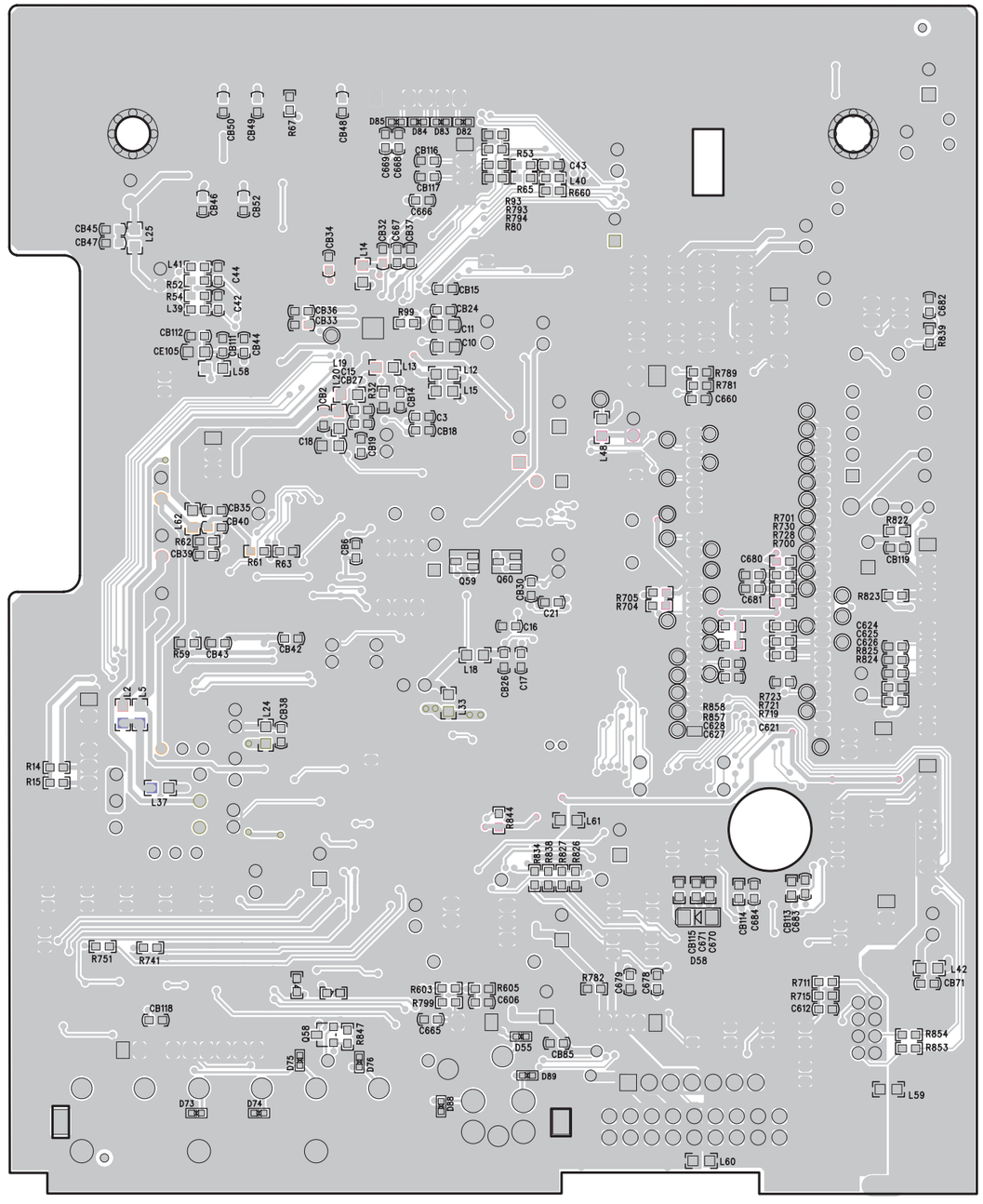
Decoder Board -- Circuit Diagram



11-7

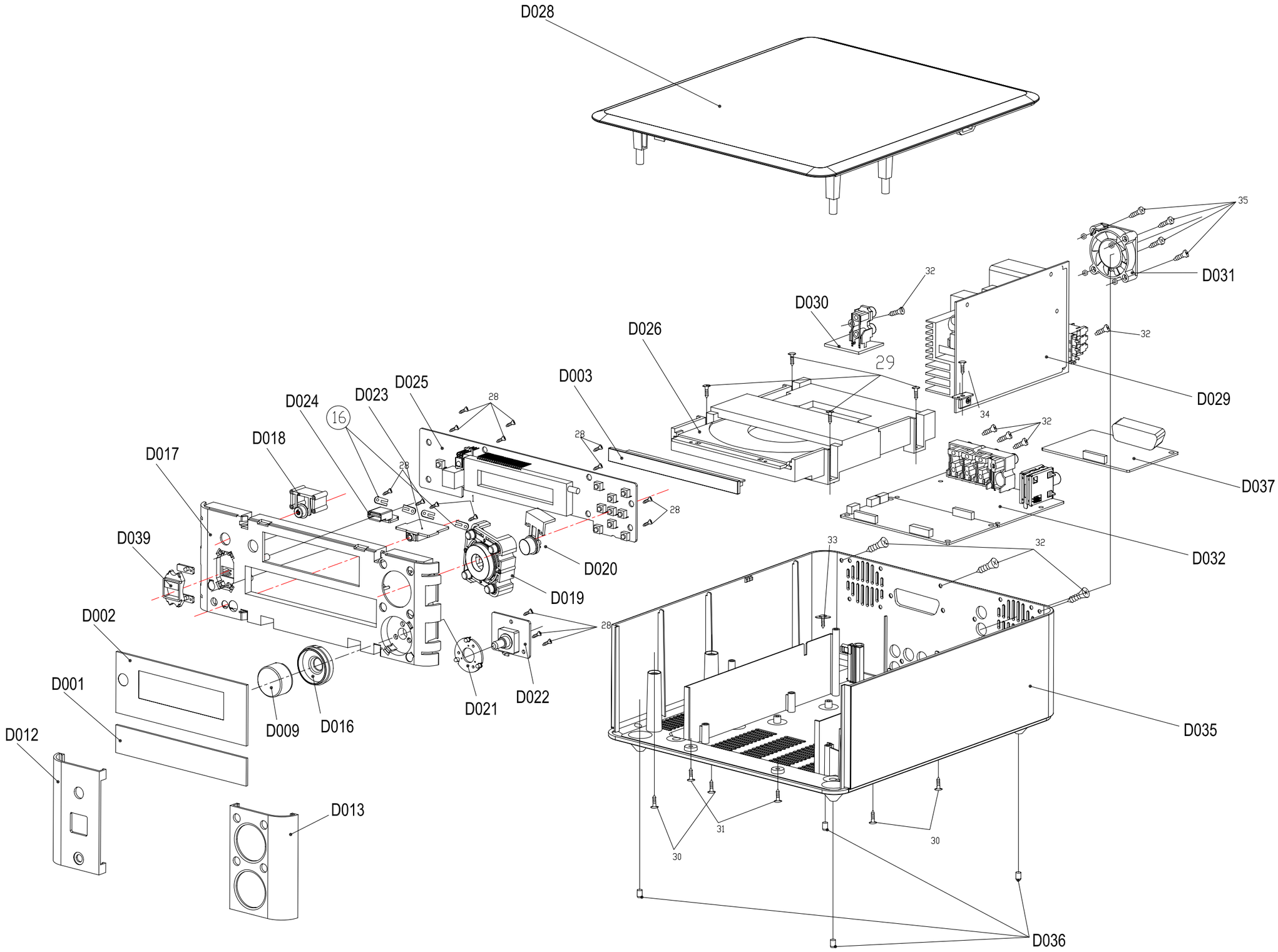
Decoder Board -- Layout Diagram





12-1

Exploded View Diagram



MECHANICAL PARTSLIST

CASING1	⚠	996510003237	AC LINE CORD 1.95M
CASING2		996510014869	FLAT FLEXIBLE CABLE 24PX150 A
D001		996510027202	SMALL LENS/PMMA
D002		996510027191	DISPLAY LENS/PMMA
D003		996510027188	DVD DOOR
D009		996510027195	VOLUME KNOB
D016		996510010511	VOLUME KNOB LIGHT GUIDE
D017		996510010508	PLASTIC FRONT-PANEL
D018		996510027196	CENTER BUTTON PARTS
D019		996510027189	FUNCTION BUTTON PARTS
D020		996510027205	CENTER BUTTON PARTS
D028		996510011821	TOP COVER
D031		996510008413	MINI FAN RDM4010S DC12V/0.07A
D035		996510027192	BOTTOM CABINET/HIPS
D036		996510008411	RUBBER FOOT 4X7.8
D039		996510027193	USB LIGHT GUIDE PARTS
D021		996510007821	LAMP PCB ASSY
D022		996510007824	VOLUME PCB ASSY
D023		996510007820	HEADPHONE PCB ASSY
D024		996510010500	USB BOARD ASSY
D026		996510029271	SONY313AAD-T LOADER MECHANISM
D029	⚠	996510027199	POWER BOARD POW182A-12(POW182A)
D030		996520032906	AUX BOARD ASS'Y
D032		996510027198	MCD712/12 DECODER+MCU PARTS
D037		996520032907	SCART CONTROL BOARD ASS'Y

ACCESSORIES

ACC1	994000005078	AUDIO SINGLE WIRE W/RCA 1.5M
ACC2	996510018744	FM ANT CONNECTOR 1.5m BLACK
ACC4	996510027194	MCD712/12 SPEAKER BOXES
ACC5	996510027197	PRC500-58 REMOTE CONTROL

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

ELECTRICAL PARTSLIST

VFD DISPLAY BOARD ASSEMBLY

B200	⚠ 996510002975	TRANSFORMER EE13 5V
D208	996510002976	DIODE FR104
DZ200	996510006505	ZENER DIODE 6.2V 1W
IC203	996510000500	IC PT6311/SC16311/CD16311
LED200	994000004948	LED LAMP(BLUE)
S1	996510010498	IR SENSOR BRACKET
S200	994000004961	IR SENSOR BLACK
SW200	996510000020	LIGHT TOUCH SW.
SW202	996510000263	LIGHT TOUCH SWITCH 6X6X5
VFD200	996510002921	VFD DISPLAY NE-705D-3.GB
CN100	996510000228	RCA SOCKET 2p AV2-8.4-13 RD WH
J1501	996510010544	SOCKET 21PINS CS-106 1501D6

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

Factory Parts List

UNIT	MCD712/12 DVD UNIT PARTS
D025	MCD710 VFD DISPLAY BOARD
B200	? TRANSFORMER EE13 5V
R204	CARBON FILM RESISTOR 100 1/8W J-52
R205	CARBON FILM RESISTOR 100 1/8W J-52
R211	CARBON FILM RESISTOR 10K 1/8W J-52
R231	CARBON FILM RESISTOR 10K 1/8W J-52
R232	CARBON FILM RESISTOR 10K 1/8W J-52
R226	CARBON FILM RESISTOR 10K 1/8W J-52
R227	CARBON FILM RESISTOR 10K 1/8W J-52
R255	CARBON FILM RESISTOR 33K 1/8W J-52
R256	CARBON FILM RESISTOR 33K 1/8W J-52
R257	CARBON FILM RESISTOR 33K 1/8W J-52
R258	CARBON FILM RESISTOR 33K 1/8W J-52
R260	CARBON FILM RESISTOR 47 1/8W J-52
R259	CARBON FILM RESISTOR 4.7K 1/8W J-52
R208	CARBON FILM RESISTOR 4.7K 1/8W J-52
R203	CARBON FILM RESISTOR 10 1/8W J-52
R210	CARBON FILM RESISTOR 15 1/4W J-52
R254	CARBON FILM RESISTOR 47K 1/8W J-52
R228	CARBON FILM RESISTOR 5.6 1/2W J-52
R229	CARBON FILM RESISTOR 5.6 1/2W J-52
R201	CARBON FILM RESISTOR 220 1/8W J-52
R202	CARBON FILM RESISTOR 220 1/8W J-52
C234	NONINDUCTIVE CAP.473p 100V K-5
C205	ELECTROLYTIC CAP.47u 16V L-5 5X7
C219	ELECTROLYTIC CAP.47u 16V L-5 5X7
R232	CHIP CERAMIC CAP.100p 50V K
DATA	CHIP CERAMIC CAP.100p 50V K
CLK	CHIP CERAMIC CAP.100p 50V K
C203	CHIP CERAMIC CAP.104p 50V K-5
C217	CHIP CERAMIC CAP.104p 50V K-5
C233	CHIP CERAMIC CAP.104p 50V K-5
C202	CHIP CERAMIC CAP.104p 50V K-5
C232	ELECTROLYTIC CAP.470u 16V L-5 8X11.5/12
C235	ELECTROLYTIC CAP. 100u 35V L-5 6.3X11
L201	INDUCTOR 200u 6X5
D204	DIODE 4148-52
D205	DIODE 4148-52
D206	DIODE 4148-52
D207	DIODE 4148-52
D209	DIODE 4148-52
DZ200	ZENER DIODE 6.2V 1W
D208	FASTER DIODE FR104 -52
LED200	LED 3R4CB71D-2B-208 (BLUE)
Q208	TRANSISTOR D965-R -5
Q209	TRANSISTOR D965-R -5
IC203	IC PT6311/SC16311/CD16311 (H=1.4)
S200	IR SENSOR 1MA81P36D1TD001(36kHz)
SW200	TACT SWITCH 6X6X5 130g
SW201	TACT SWITCH 6X6X5 130g
SW204	TACT SWITCH 6X6X5 130g
SW205	TACT SWITCH 6X6X5 130g
SW208	TACT SWITCH 6X6X5 130g
SW202	TACT SWITCH 6X6X5 250g
SW203	TACT SWITCH 6X6X5 250g

Factory Parts List

SW206	TACT SWITCH 6X6X5 250g
SW207	TACT SWITCH 6X6X5 250g
SW209	TACT SWITCH 6X6X5 250g
VFD200	NE-705D-3.GB VFD DISPLAY
	VFD DISPLAY PCB 35-MCD710-02A1
D025A	MCD710 IR SENSOR BRACKET(ABS)
VFD200	BLACK SPONGE 20X10X7 40°
JP201	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP202	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP203	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP204	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP205	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP206	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP207	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP208	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP209	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP210	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP211	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP212	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP213	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP214	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP215	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP216	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP217	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP218	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP219	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP220	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP221	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP222	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP223	JUMPER WIRE Φ0.6X40mm (375m=1kG)
JP224	JUMPER WIRE Φ0.6X40mm (375m=1kG)
D201	JUMPER WIRE Φ0.6X40mm (375m=1kG)
D037	MCD710/12 SCART BOARD
R1506	CARBON FILM RESISTOR 100 1/8W J-52
R1507	CARBON FILM RESISTOR 100 1/8W J-52
R1504	CARBON FILM RESISTOR 10K 1/8W J-52
R1505	CARBON FILM RESISTOR 10K 1/8W J-52
J1501	21PINS SOCKET CS-121/SCART-113
	SCART PCB 35-MCD710-15A1
JP1	JUMPER WIRE Φ0.6X40mm (375m=1kG)
D023	MCD710 HEADPHONE BOARD
	AXIAL FIXED INDUCTOR 100u
J201	HEADPHONE JACK Φ3.5 TE-03501S-11
	HEADPHONE PCB 35-MCD710-04A1
D021	MCD710 LAMP BOARD
R700	CARBON FILM RESISTOR 220 1/8W J-52
R701	CARBON FILM RESISTOR 220 1/8W J-52
R702	CARBON FILM RESISTOR 220 1/8W J-52
LED701	LED Φ3 H3.6(BLUE-LIGHT)
LED702	LED Φ3 H3.6(BLUE-LIGHT)
LED703	LED Φ3 H3.6(BLUE-LIGHT)
	LAMP PCB 35-MCD710-07A1
D024	MCD710 USB BOARD
J1001	USB JACK(A-TYPE 4P FEMALE 90°DIP BLACK)
	USB PCB 35-MCD710-10B1
D022	MCD710 VOLUME BOARD

Factory Parts List

E800	CODER R166ECC-D1-15F-24P-I066
	VOLUME PCB 35-MCD710-08A1
D030	MCD710 AUX BOARD
R1	CHIP RESISTOR 470 1/16W J (0805)
R2	CHIP RESISTOR 470 1/16W J (0805)
C1	CHIP CAP.332p 50V K (0805) X7R
C2	CHIP CAP.332p 50V K (0805) X7R
CN100	RCA SOCKET 2P AV2-8.4-13 W/R
	AUX PCB 35-MCD710-13A1
	MCD712/12 DECODER+MCU PARTS
IC102	CPU U252(S3C9228 XYZ-CAN CHANGE)
D032	DVD DECODER BOARD 89LA712-12(89L716)
	MCD712/12 DECODER+MCU SOFTWARE
	MCD712/12 MCU SOFTWARE
	MCD712/12 DVD SOFTWARE(V1.0S)
	SONY313AAD LOADER MECHANISIM
D027	SONY KHM-313AAD LOADER DRIVER
D026	DVD MECHANISM BRACKET RT-632N2-H
	MCD710 STANDBY BUTTON PARTS
D018	MCD710 STANDBY BUTTON BRACKET(ABS)
D010	MCD710 STANDBY BUTTON/ABS
	MCD710 CENTER BUTTON PARTS
D020	MCD710 CENTER BUTTON BRACKET(ABS)
D008	MCD710 CENTER BUTTON(ABS PLATE)
	MCD710 FUNCTION BUTTON PARTS
D019	MCD710 BUTTON BRACKET ABS
D004	MCD710 DIRECTION BUTTON ABS
D007	MCD710 FUNCTION BUTTON ABS
D006	MCD710 FUNCTION BUTTON(OPEN/CLOSE)
D005	MCD710 FUNCTION BUTTON(STOP) ABS
	MCD710 USB LIGHT GUIDE PARTS
D038	MCD716 USB DOOR SPRING
D015	MCD716 USB LAMP LENS ABS
D014	MCD716 USB DOOR ABS
D039	MCD716 USB DOOR BRACKET(ABS)
CASING	MCD712/12 DVD UNIT CASING PARTS
D029	POWER BOARD POW182A-12(POW182A)
D012	MCD710 FRONT ALUMINUM PANEL-L
D013	MCD710 FRONT ALUMINUM PANEL-R
D034	MCD710 PCB IRON BRACKET
	SCUTCHEON(PHILIPS 34X6.23)
D028	MCD710 TOP COVER(HIPS BLACK)
D035	MCD710 BOTTOM CABINET/HIPS
D017	MCD710 FRONT CABINET/HIPS
D009	MCD710 VOLUME KNOB (ABS PLATE)
D002	MCD710 DISPLAY LENS/PMMA(712)
D001	MCD710 SMALL LENS/PMMA(712/12)
D016	MCD710 VOLUME KNOB LIGHT GUIDE(PMMA)
D003	MCD908 DVD DOOR/ABST100(MCD712)
D031	MINI FAN(RDM4010S DC12V/0.07A)
D036	RUBBER-FOOT Φ4X6
	FIBRE WASHER Φ3XΦ14X1
	WHITE SPONGE 47X10X2 40°
	BLACK SPONGE 14.5X5X1 40°
	CABLE TIE L=70
	BLACK SPONGE 38.5X5X1 40°

Factroy Parts List

CASING1	POWER CORD 1.95m VH3.96 VDE
	SCREW 3 X 10 FA BLACK
	SCREW 3 X 15 PA Φ5
	SCREW 3 X 8 PWA (PLATING)
	SCREW 3 X 12 BA(BLACK)
	SCREW 3 X 15 BA
	SCREW 3X6 PT (PLATING)
	SCREW 3 X 4 BMTT (PLATING)
	SCREW 3 X 12 FA Φ6
	SCREW 2.6 X 8 BA BLACK
	SCREW 2.6 X 8 PWTΦ10 WASHER (PLATING)
	SCREW 3 X 6 FMTT Φ6 BLACK
	SCREW 3 X 10 PA (PLATING)
	M3 NUT (PLATING)
	SCREW 3 X 15 FM
CASING2	FLAT FLEXIBLE CABLE 24PX150X0.5XA
	26WIRE+28SHIELDINGING 420 2.0/4PX2
	28WIRE 280+350 2.0/3P/7P 2.0/12PX1
	28WIRE+28SHIELDINGING 100 2.0/3PX1
	28SHIELDINGING 80 2.0/10PX1 2.0/10PX1
	26 WIRE 280 2.0/2P
	22WIRE+26WIRE+28SHIELDINGING 150
	26 WIRE 280 2.0/4PX1 2.0/4PX1
	26WIRE 230 2.0/5PX2
	28WIRE 250 2.0/6PX2
	POWER CORD SOCKET /VH3.96/3P
	DUSTPROOF PAPER 51X40 BLACK
	DUSTPROOF PAPER 118X78 BLACK
ACC	MCD712/12 ACCESSORY PARTS
	MCD712/12-A INSTRUCTION MANUAL
	MCD712/12-B INSTRUCTION MANUAL
	MCD712/12 QUICK START GUIDE
	WARRANTY CARD(PH 9965 100 15858)
	PLASTIC BAG(PE) 30X20cm PHILIPS
	BATTERY MANAGE PAPER SHEET 148X210
ACC1	COAXIAL CABLE 1.5m/RCA JACK(YELLOW)
ACC2	FM WIRE 1.5m(STV1 GRAY PLUG)
	PLASTIC BAG(PE) 24X7cm PHILIPS
	MCD712/12 PACKING PARTS
	MCD710 POLYFOAM
	PLASTIC BAG(PE) 20X7cm PHILIPS
	PLASTIC BAG(PE) 44X38cm PHILIPS
ACC3	MCD712/12 DISPLAY BOX
	REGION CODE LABEL(FOR 12 VERSION)
	PASSED LABEL Φ13
	MCD712/12 DISPLAY BOX LABEL 91X111
	LASER WARNING LABEL PH Φ15 BLACK
	MCD712/12 MAIN UNIT LABEL 59.5X39.5
	MCD/DCD710/12 SPECIAL LABEL 59.5X39.5
	MCD712 POS BILLBOARD
ACC4	MCD712/12 SPEAKER BOXES
	NON-POLARITG ELEC.CAP.2.2u 100V M SNP
	22 DOUBLE RUN WIRE 2P 250 RED/BLACK
	TWEETER Φ13 4Ω10W
	ANTIMAGNETIC SPEAKER 4 1/2"4Ω50W
	GRILLE FIXER Φ7×8.5 Φ9 BLACK

Factory Parts List

	RUBBER FOOT Φ12X9.3X7 BLACK
	MCD710 PLASTIC GRID/ABS(RC-801K-31A)
	MCM710 WOOFER RING/HIPS
	MCM710 TWEETER RING/HIPS
	PHILIPS SCUTCHEON 28.6X5.6X1.5(PLASTIC)
	MCD712 WOODEN BOX 206X170X270/A65313
	SCREW 2.6 X 6 PWTΦ10(BLACK)
	SCREW 3 X 12 BA (PLATING)
	SCREW 3 X 16 HA (PLATING)
	SPEAKER WIRE 2m/17/0.16/Φ1.5X3
	MCD712/12 SPEAKER BOX BACK LABEL 40X27
	PLASTIC BAG(PO) 55X40cm PHILIPS
	PLASTIC BAG(PE) 23X8cm PHILIPS
ACC5	PRC500-58 REMOTE CONTROL MCD712/12
	PRC500-58 REMOTE CONTROL BOARD
R1	CHIP RESISTOR 0 1/16W J (0805)
R2	CHIP RESISTOR 680 1/16W J (0805)
C1	ELECTROLYTIC CAP.47u 10V L 4X7
D1	INFRARED-EMITTING DIODE Φ3
Q1	CHIP TRANSISTOR BC817-25(SOT23)
U1	IC TM58PR11S18C
	REMOTE CONTROL PCB PRC500-A 139X40X1.6
	PRC500-58 SOFTWARE
	PRC500-58 REMOTE CONTROL CASING PARTS
	BUTTON BATTERIES 3V CR2025
	PRC500-58 CONDUCTIVE RUBBER
	PRC500 REMOTE CONTACT SPRING PLATE
	PCR500 REMOTE SPRING Φ0.6
	PCR500 IRON BLOCK 35X26.6X4
	SRC500 RC TOP CABINET/ABS
	PRC500 RC BOTTOM CABINET(ABS80141)
	PRC500 RC BATTERY COVER(ABS80141)
	PRC500 REMOTE CONTROL LENS/PC
	PRC500 PLATE RING/ABS
	INSULATION PAPER 32X24X0.15
	PRC500-58 REMOTE CONTROL LABEL
	ADD-ONS INSTRUCTION LABEL PH 38X18
	PLASTIC BAG(PE) 20X6cm PHILIPS