

Service
Service
Service



Service Manual



TABLE OF CONTENTS

Handling chip components	1-1	Tuner board	
Service tools	1-1	circuit diagram.....	9-1
Leadfree and safety information	1-2	layout diagram.....	9-2
Technical specification	2-1	DVD / MPEG board	
Service measurement setup	2-2	circuit diagram.....	10-1...10-3
Connections and controls	3-1...3-3	layout diagram	10-4
Disassembly diagram	4-1...4-2	AMP Block	
Software version and upgrading	5-1	circuit diagram.....	11-1
Block diagram	6-1	layout diagram.....	11-2
Wiring diagram	6-2	Exploded view diagram.....	12-1
VFD / Key Board Assembly		Mechanical partslist.....	12-2
circuit diagram.....	7-1	Electrical partslist	13-1...13-2
layout diagram.....	7-2	Revision list	14-1
DVD Block			
circuit diagram.....	8-1		
layout diagram.....	8-2		



© Copyright 2006 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.

Published by YB 0637 Service Audio Subject to modification

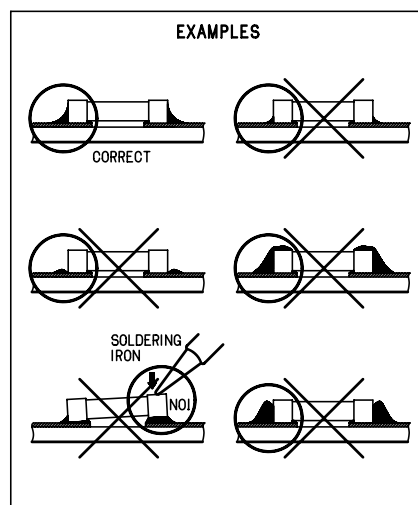
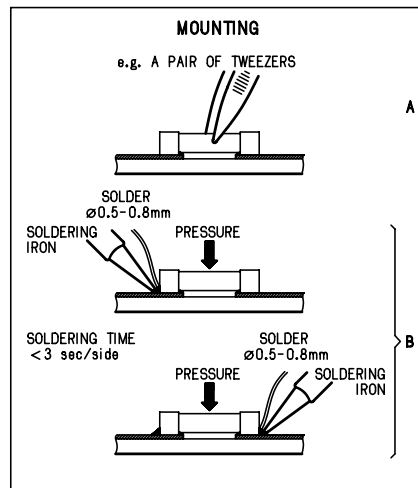
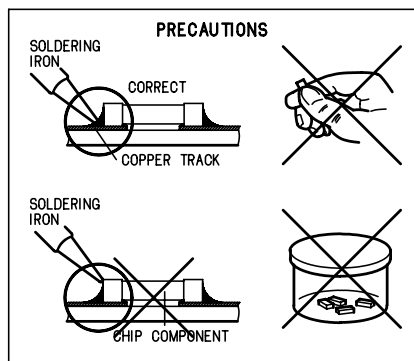
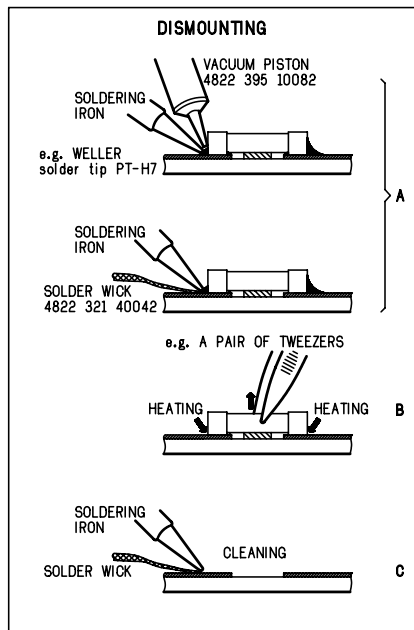
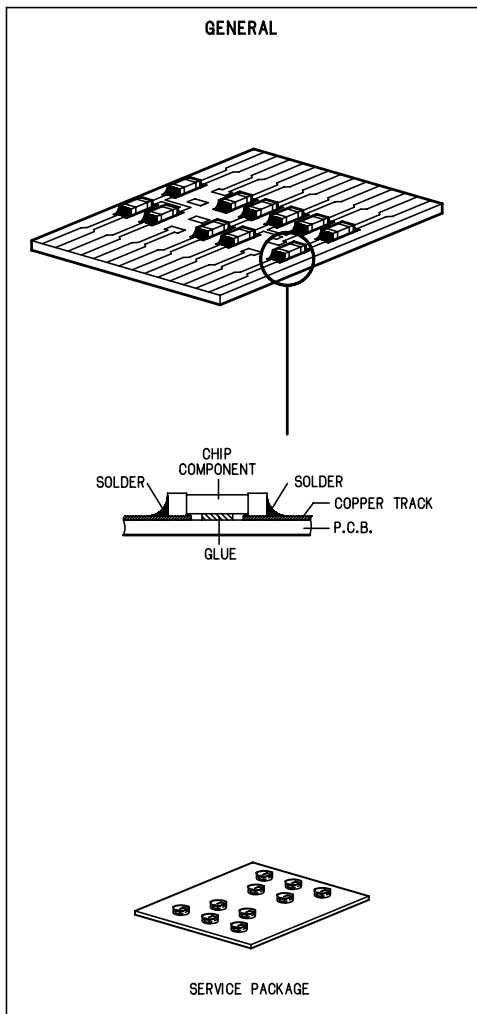
GB 3141 785 31440

Version 1.0



PHILIPS

HANDLING CHIP COMPONENTS



SERVICE TOOLS

- TORX T10 screwdriver with shaftlength 150mm.....4822 395 50423
- TORX screwdriver set SBC 163.....4822 295 50145
- Audio signal disc SBC 429.....4822 397 30184
- Playability test disc SBC 444.....4822 397 30245
- Test disc 5 (disc without errors) +
- Test disc 5A (disc with dropout errors, black spots and fingerprints)
SBC 426/426A.....4822 397 30096
- Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause").....4822 397 30155
- Universal test cassette Fe SBC 420.....4822 397 30071

AVAILABLE ESD PROTECTION EQUIPMENT

- anti-static table mat large 1200x650x1.25mm 4822 466 10953
- small 600x650x1.25mm 4822 466 10958
- anti-static wristband 4822 395 10223
- connection box (3 press stud connections, 1MΩ) 4822 320 11307
- extendible cable (2m, 2MΩ, to connect wristband to connection box) 4822 320 11305
- connecting cable (3m, 2MΩ, to connect table mat to connection box) 4822 320 11306
- earth cable (1MΩ, to connect any product to mat or to connection box) 4822 320 11308
- KIT ESD3 (combining all 6 prior products - small table mat) 4822 310 10671
- wristband tester 4822 344 13999

INFORMATION ABOUT LEAD-FREE SOLDERING

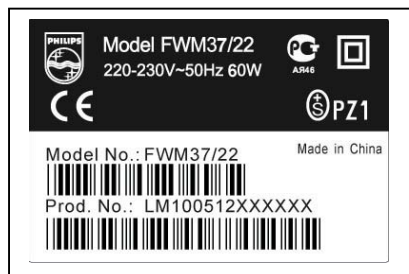
Philips CE is producing lead-free sets from 1.1.2005 onwards.

IDENTIFICATION:

Regardless of special logo (not always indicated) one must treat all sets from 1 Jan 2005 onwards, according next rules:



Example S/N:



Bottom line of typeplate gives a 14-digit S/N. Digit 5&6 is the year, digit 7&8 is the week number, so in this case 2005 wk12

So from 0501 onwards = from 1 Jan 2005 onwards

Important note: In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (lead/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - To reach at least a solder-temperature of 400°C,
 - To stabilize the adjusted temperature at the solder-tip
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free).
If one cannot avoid or does not know whether product is lead-free, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
- **Special information for BGA-ICs:**
 - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use the lead-free temperature profile, in case of doubt)
 - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. (MSL=Moisture Sensitivity Level). This will be communicated via AYS-website.
Do not re-use BGAs at all.
- For sets produced before 1.1.2005 (except products of 2004), containing leaded solder-alloy and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- 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

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.

SPECIFICATION

GENERAL

Mains voltage	-/55/96/98	: 120 / 230 V
	/93	: 220V
	/79	: 240V
	/37	: 120V
Mains frequency	-/55/96/98	: 50 / 60 Hz
	/79/93	: 50 Hz
	/37	: 60 Hz
Battery	for remote	: 3V (R03, AAA x 2)
Power consume	1/8 Prated	: < 32 W (max.)
	Standby	: < 5 W
Dimension (W x H x D)		
	DVD Part	: 208 x 62 x 244 mm
	AMP Part	: 208 x 57 x 244 mm
Weight		
	DVD Part	: 1.4 Kg
	AMP Part	: 2.4 Kg

AMPLIFIER

Output power	: 2 x 22 W RMS
	: 1000 W PMPO
Speaker impedance	: 2 x 8 ohm
Frequency response	: 100 Hz - 20 kHz (± 3 dB)
Aux input sensitivity	: 350 mV (600 ohm)

TUNER - FM SECTION

Tuning range	: 87.5 – 108 MHz
IF frequency	: 10.7 MHz \pm 0.2 MHz
Sensitivity	: 26 dBf at 46dB S/N
Selectivity	: 20 dB at 300kHz
IF rejection	: 50 dB
Image rejection	: 20 dB

TUNER - AM SECTION

Tuning range	MW(9 kHz)	: 531 - 1602 kHz
	AM (10 kHz)	: 530 – 1700 kHz
IF frequency		: 450 kHz \pm 3 kHz
Sensitivity	MW	: 4000 μ V/m at 26dB S/N
Selectivity	MW	: 16 dB
IF rejection	MW	: 24 dB
Image rejection	MW	: 20 dB

DVD / MP3 / CD

Laser Type	: Semiconductor
Disc Diameter	: 12cm / 8cm
Video Decoding	: MPEG-2 / MPEG-1
Signal System	: PAL / NTSC
Video S/N	: 53 dB (min.)
Composite Video Output	: 1.0 Vp-p, 75 Ω
S-Video Output	: Y - 1.0 Vp-p, 75 Ω C - 0.286 Vp-p, 75 Ω
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
No. of programmable tracks	: 20
Signal-to-noise ratio	: \geq 50 dBA
Channel separation	: \geq 40 dB (1 kHz)
Total harmonic distortion	: < 0.02% (1 kHz)

TFT LCD PANEL

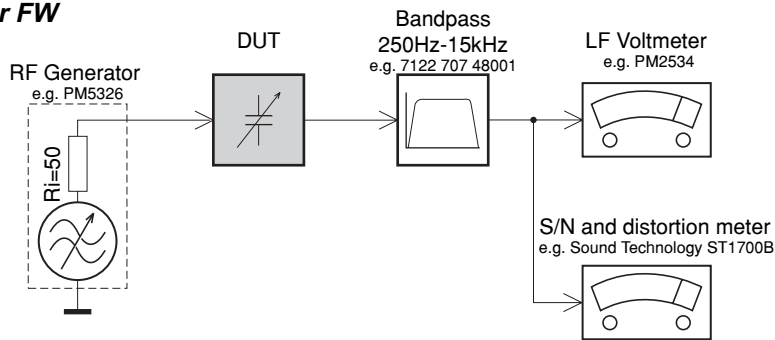
Number of pixels(HXV)	: 280x220
Brightness	dark room : >150cd/m ²
Contrast	dark room : 150 :1

LOUDSPEAKERS

2-way bass reflex system	
Dimension (W x H x D)	: 145 x 230 x 210 mm
Weight	: 2.4 Kg each

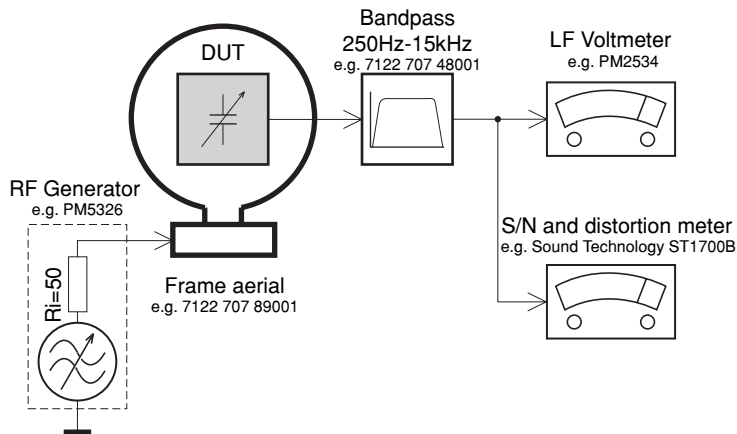
SERVICE MEASUREMENT

Tuner FW



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

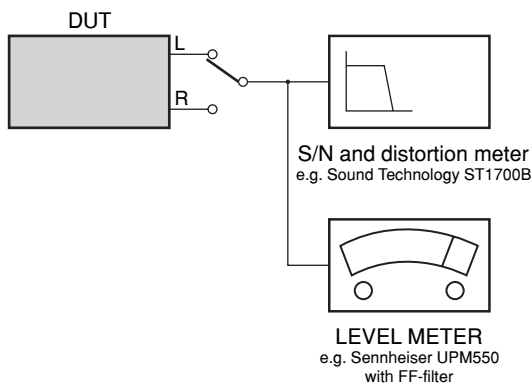
Tuner AM (MW,LW)



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

CD

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



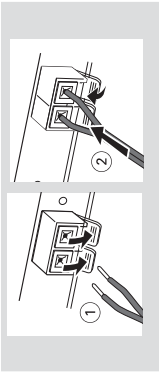
CONNECTION AND CONTROLS

Connections

Connecting antennas

Connect the supplied MW loop antenna and FM antenna to the respective terminals. Adjust the position of the antenna for optimal reception.

MW Indoor Loop Antenna



Position the antenna as far as possible from a TV, VCR or other radiation source.

FM Indoor Antenna



For better FM stereo reception, connect an outdoor FM antenna to the FM AERIAL (FM ANTENNA) terminal.

Connecting the control cable

Connect the serial port marked "CONTROL CABLE" at the rear of the DVD player to the same port at the rear of the power amplifier with the supplied flat control cable.

Connecting a TV

You must connect a TV to your DVD micro system in order to view the DVD/VCD playback.

IMPORTANT!

- There are various ways to connect the system to a TV. You only need to make one of the best connections, depending on the capabilities of your TV system.
- If COMPONENT video output jacks or S-Video jack is used for video connection, the system's Component setting will need to be set accordingly. Details are shown under "Video Setup Page".

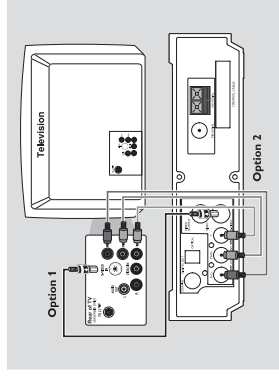
Connect the **VIDEO OUTPUT** jack to the video input jack on the TV using a video cable (yellow).

OR Option 1

Connect the **S-VIDEO** output jack to the S-Video input jack on the TV using an S-Video cable (not supplied).

OR Option 2

Use the component video cables (red/blue/green) to connect the DVD micro system's COMPONENT video output jacks to the corresponding component video input jacks (or labeled as **Pr/Cr Pb/CbY** or **YUV**) on the TV.



Note:

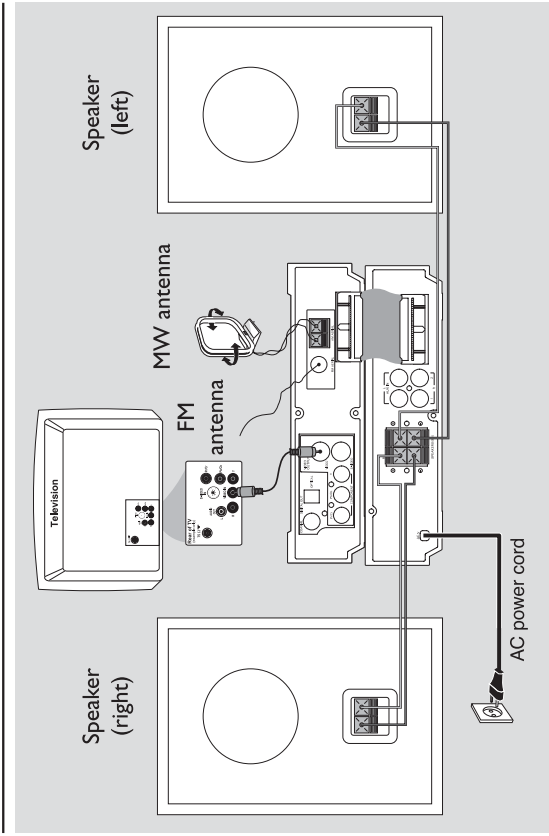
- To avoid magnetic interference, do not position the front speakers too close to your TV.

Connecting the power cord

After everything is connected properly, plug in the AC power cord to the power outlet.

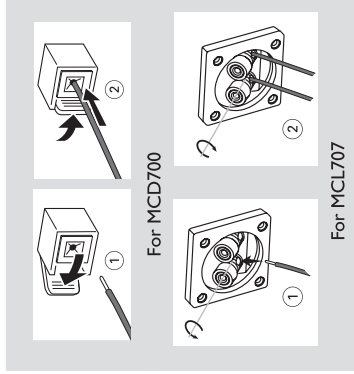
Never make or change any connection with the power switched on.

Connections



IMPORTANT!

- The type plate is located at the bottom of the system.
- The voltage selector located at the bottom of this system is preset at 220V-240V from the factory. For countries that operate at 110V-127V, please adjust to 110V-127V before you switch on the system.
- Before connecting the AC power cord to the wall outlet, ensure that all other connections have been made.
- Never make or change any connections with the power switched on.



Connecting the speakers

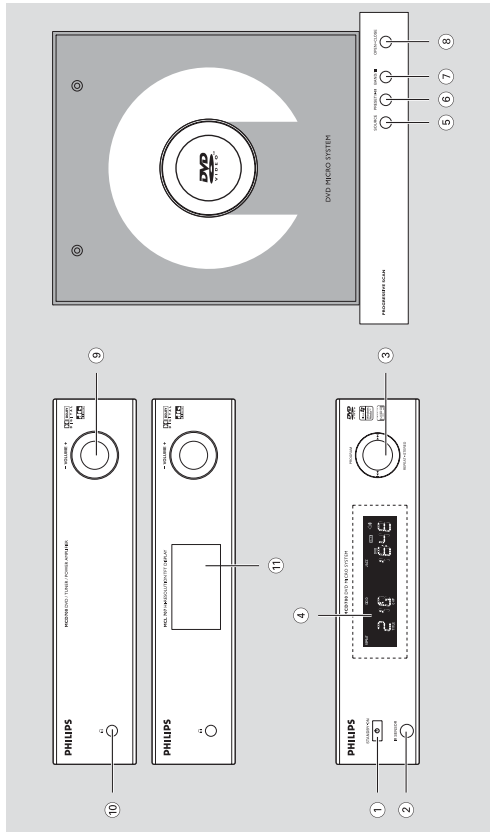
Connect the speakers to the SPEAKERS (8Ω) terminals with two speaker cables. Right speaker to "R" and left speaker to "L"; red wire to "+" and silver wire to "-". Fully insert the stripped portion of the speaker wire into the terminal as shown.

Notes:

- Ensure that the speaker cables are correctly connected. Improper connections may damage the system due to short-circuit.
- For optimal sound performance, use the supplied speakers.
- Do not connect more than one speaker to any one pair of +/- speaker jacks.
- Do not connect speakers with an impedance lower than the speakers supplied. Please refer to the SPECIFICATIONS section of this manual.

CONNECTION AND CONTROLS

Functional Overview



DVD player and power amplifier

- 1 **STANDBY ON**
 - switches the system on or to standby mode.
- 2 **IR SENSOR**
 - point the remote control towards this sensor:
- 3 **Control knob**
 - Disc press the control knob to the left/right to skip to the previous/next chapter/title/track.
 - Tuner press the control knob to the left/right to tune to a higher/lower radio frequency.
 - press and hold, then release the key to start automatic search for a radio frequency downward/upward.

PROGRAM

- DVD/WCD/CD press the control knob upward to enter the program menu.
- MP3/WMA-CD press the control knob upward to add/delete a programmed track to/from the program list.

- Picture CD **during playback** press the control knob upward to select a slide show mode.
- Tuner press the control knob upward to program preset radio stations.
- REPEAT-STEREO**
 - Disc press the control knob downward to repeat a track or disc.
 - FM press the control knob downward to set stereo or mono sound mode.
- 4 **Display**
 - shows the current status of the DVD player.
- 5 **SOURCE**
 - selects the respective sound source: DVD/AUX1/AUX2/TUNER.
 - switches the system on.
- 6 **PRESET/▶▶**
 - Disc: starts or interrupts disc playback
 - TUNER: selects a preset radio station

Connections

Recording (digital)

Connect the system's **DIGITAL OUT (COAXIAL or OPTICAL)** jack to the **DIGITAL IN** jack on a digital recording device (such as DTS-Digital Theatre compatible, with Dolby Digital decoder).

Before starting operation, set **SPDIF** according to the audio connection. (See **'SPDIF Setup'**).

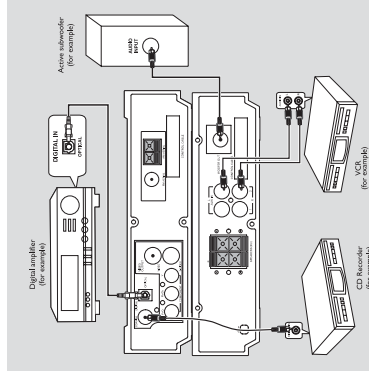
Connecting a digital amplifier

Connect the **DIGITAL OUT (COAXIAL or OPTICAL)** port to the coaxial/optical input jack of a digital amplifier with a coaxial/optical cable (not supplied) for superior digital sound effect.

Connecting additional equipment

IMPORTANT!

- Some discs are **copy-protected**. You cannot record the disc through a **VCR** or **digital recording device**.
- **When making connections**, make sure the **colour of cables matches the colour of jacks**.
- **Always refer to the owner's manual of the other equipment for complete connection and usage details.**



Viewing and listening to the playback of other equipment

Connect the system's **AUX IN (R/L)** jacks to the **AUDIO OUT** jacks on the other audio/visual device (such as a TV/VCR, Laser Disc player or cassette deck).
 Before starting operation, press **AUX** on the remote repeatedly in order to activate the input source (**AUX1** or **AUX2**).

Connecting an active subwoofer

Connect the DVD micro system's **WOOFER OUT** jack to the **AUDIO INPUT** jack on an active woofer (not supplied).

For more information on operation instruction please visit Philips Audio internet site :

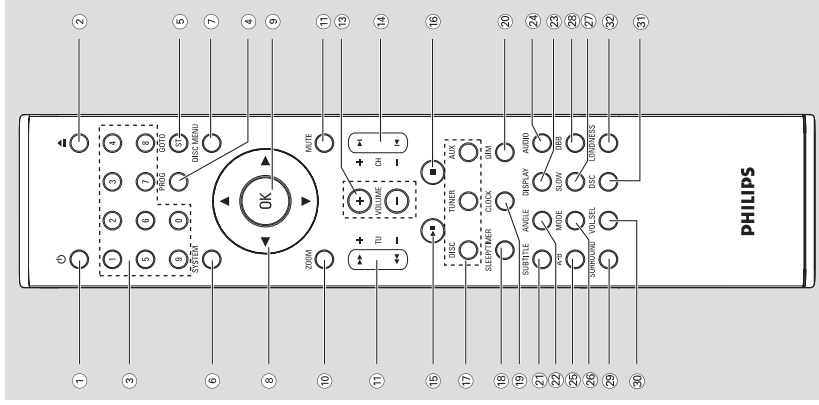
<http://www.audio.philips.com>

Functional Overview

- 12 **TU +/- (◀ / ▶)**
Tuner
- press to tune to a lower/higher radio frequency gradually.
- press and hold, then release the key to start automatic search for a radio frequency downward/upward.
- Disc**
- searches backward/forward in a disc at different speeds.
- 13 **VOLUME +/-**
- adjusts the volume upward/downward.
- adjusts the hours and minutes in clock/timer setting mode.
- switches the set timer ON or OFF.
- 14 **CH +/- (◀ / ▶)**
Disc: skips to the previous/next chapter/title/track
- Tuner: selects a preset radio station.
- 15 **▶ ||**
- starts or interrupts disc playback.
- 16 **■**
- stops disc playback or erases a program.
- 17 **DISC/TUNER/AUX**
- selects the respective sound source for DVD/TUNER/AUX1/AUX2.
- exits P-SCAN (progressive scan). (for **DISC** only)
- 18 **SLEEP/TIMER**
Standby mode
- sets a time for switching on the system automatically.
- Power-on mode**
- sets the sleep timer function (auto off).
- 19 **CLOCK**
Standby mode
- sets the system clock.
Playback mode
- displays the system clock.
- 20 **DIM**
- selects different levels of brightness for the display screen in standby mode.
- 21 **SUBTITLE**
- selects a subtitle language.
- 22 **ANGLE**
- selects a DVD camera angle.
- 23 **DISPLAY**
- displays information on TV screen during playback
- 24 **AUDIO**
for VCD
- sets Stereo, Mono-Left or Mono-Right sound mode.
for DVD
- selects an audio language.
- 25 **A-B**
- repeats playback of a specific section on a disc.
- 26 **MODE**
- selects various repeat modes or the shuffle play mode for a disc.
- 27 **SLOW**
- selects different slow playback modes for a VCD/SVCD/DVD.
- 28 **DBB**
- enables or disables bass enhancement.
- 29 **SURROUND (unavailable for this version)**
- selects surround (Dolby Digital, DTS-Digital Theatre Systems or VSS-Virtual Surround Sound) or stereo sound effect.
- 30 **VOL-SEL (unavailable for this version)**
- selects different speaker modes.
- 31 **DISC**
- selects different types of preset sound equalizer settings (CLASSIC, JAZZ, POP or ROCK).
- 32 **LOUDNESS**
- enables or disables automatic loudness adjustment.

Functional Overview

- 7 **BAND/■**
Disc: stops disc playback or erases a program.
- Tuner: switches between MW and FM.
- 8 **OPEN-CLOSE**
- opens or closes the disc compartment.
- 9 **VOLUME +/-**
- adjusts the volume upward/downward.
- adjusts the hours and minutes in clock/timer setting mode.
- switches the set timer ON or OFF.
- 10 **☎**
- connect a headphone
- 11 **TFT screen (for MCL707 only)**
- serves as a simple monitor not supporting OSD display and other functions.
- 12 **0**
- 13 **1**
- 14 **2**
- 15 **3**
- 16 **4**
- 17 **5**
- 18 **6**
- 19 **7**
- 20 **8**
- 21 **9**
- 22 **PRESET**
- 23 **STOP**
- 24 **PAUSE**
- 25 **REPEAT**
- 26 **SHUFFLE**
- 27 **DISC MENU**
- 28 **OK**
- 29 **STOP**
- 30 **STOP**
- 31 **STOP**
- 32 **STOP**
- 33 **STOP**
- 34 **STOP**
- 35 **STOP**
- 36 **STOP**
- 37 **STOP**
- 38 **STOP**
- 39 **STOP**
- 40 **STOP**
- 41 **STOP**
- 42 **STOP**
- 43 **STOP**
- 44 **STOP**
- 45 **STOP**
- 46 **STOP**
- 47 **STOP**
- 48 **STOP**
- 49 **STOP**
- 50 **STOP**
- 51 **STOP**
- 52 **STOP**
- 53 **STOP**
- 54 **STOP**
- 55 **STOP**
- 56 **STOP**
- 57 **STOP**
- 58 **STOP**
- 59 **STOP**
- 60 **STOP**
- 61 **STOP**
- 62 **STOP**
- 63 **STOP**
- 64 **STOP**
- 65 **STOP**
- 66 **STOP**
- 67 **STOP**
- 68 **STOP**
- 69 **STOP**
- 70 **STOP**
- 71 **STOP**
- 72 **STOP**
- 73 **STOP**
- 74 **STOP**
- 75 **STOP**
- 76 **STOP**
- 77 **STOP**
- 78 **STOP**
- 79 **STOP**
- 80 **STOP**
- 81 **STOP**
- 82 **STOP**
- 83 **STOP**
- 84 **STOP**
- 85 **STOP**
- 86 **STOP**
- 87 **STOP**
- 88 **STOP**
- 89 **STOP**
- 90 **STOP**
- 91 **STOP**
- 92 **STOP**
- 93 **STOP**
- 94 **STOP**
- 95 **STOP**
- 96 **STOP**
- 97 **STOP**
- 98 **STOP**
- 99 **STOP**
- 100 **STOP**



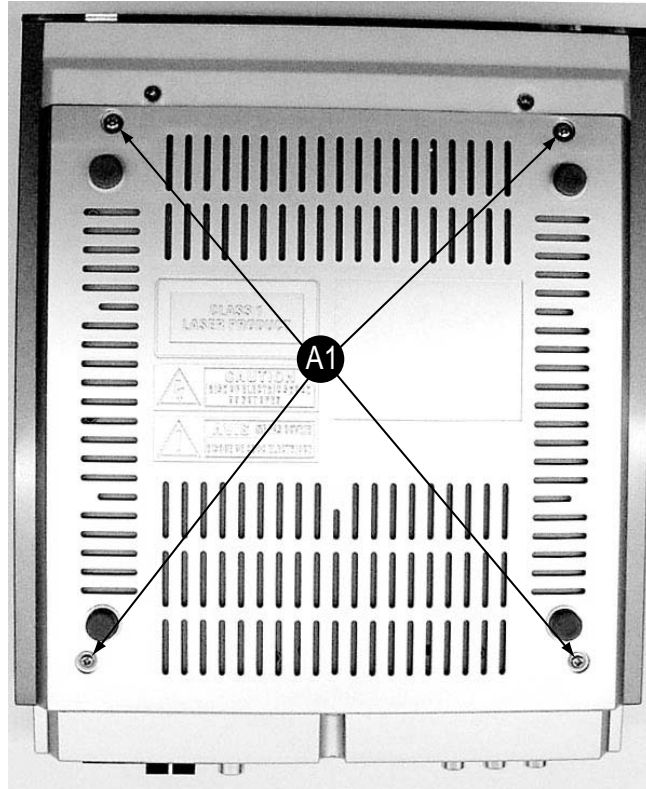
Remote control

- 1 **⏻**
- switches the system on/ off.
- 2 **▶**
- opens or closes the disc compartment
- 3 **Numeric Keypad (0-9)**
- inputs a track/title/chapter number of the disc.
- inputs the number of a preset radio station.
- 4 **PROG**
DVD/VCD/CD: enters the program menu.
MP3/WMA-CD: adds/deletes a programmed track to/from the program list.
Picture CD: during playback, to select a slide show mode.
Tuner: programs preset radio stations.
- 5 **GOTO/ST**
Disc: fast searches in a disc by entering a time, title, chapter or track.
FM: sets stereo or mono sound mode.
- 6 **SYSTEM (disc mode only)**
- enters or exits the system menu.
- 7 **DISC MENU (disc mode only)**
DVD/VCD: enters or exits the disc contents menu.
VCD2.0: switches the playback control mode on or off.
MP3/WMA: switches between Album and Filelist.
- 8 **▼ / ▲ / ▶ / ◀**
- selects an item in a menu.
- moves an enlarged picture up/down/left/right.
- 9 **OK**
- confirms a selection.
- 10 **ZOOM**
DVD/VCD/Picture CD: enlarges or reduces a picture or active image on the TV screen.
- 11 **MUTE**
- disables or enables sound output.

DISASSEMBLY INSTRUCTION - DVD PART

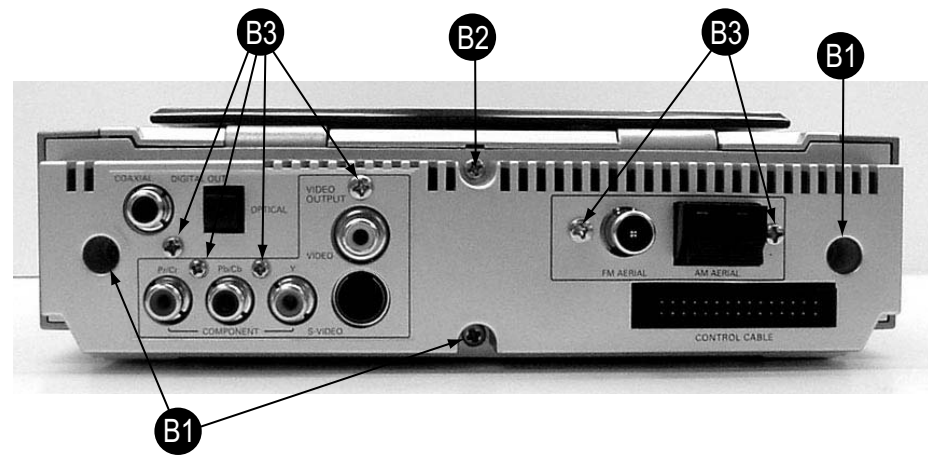
A. Remove Bottom Cover

A1 remove screws M2.5x4 (washer head) - 4 pcs.



B. Remove Back Panel

B1 remove screws M3x6 - 3 pcs.
 B2 remove screw ST 3x10 - 1 pc.
 B3 remove screws ST 3x10 - 6 pcs. (for jacks)



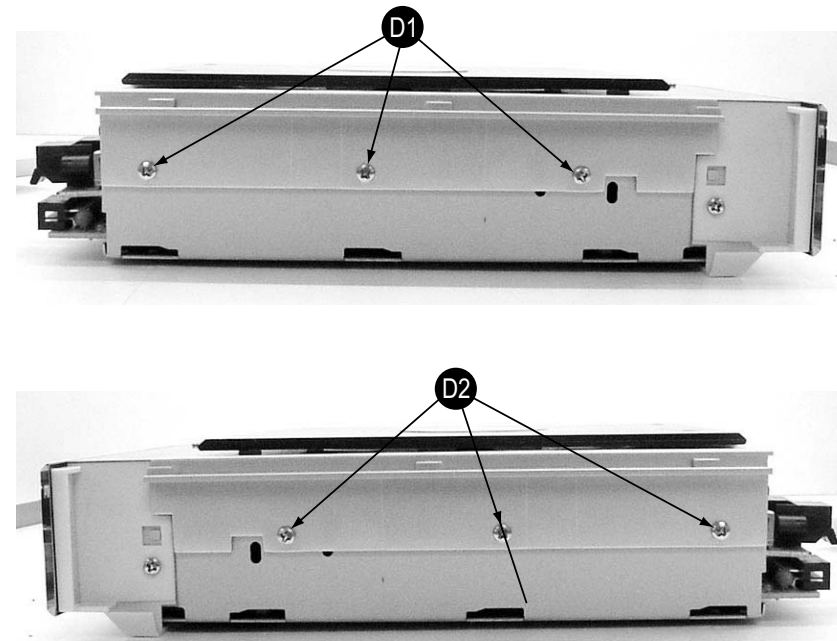
C. Remove Side Panel (L & R)

C1 Slide out the Side Panels.



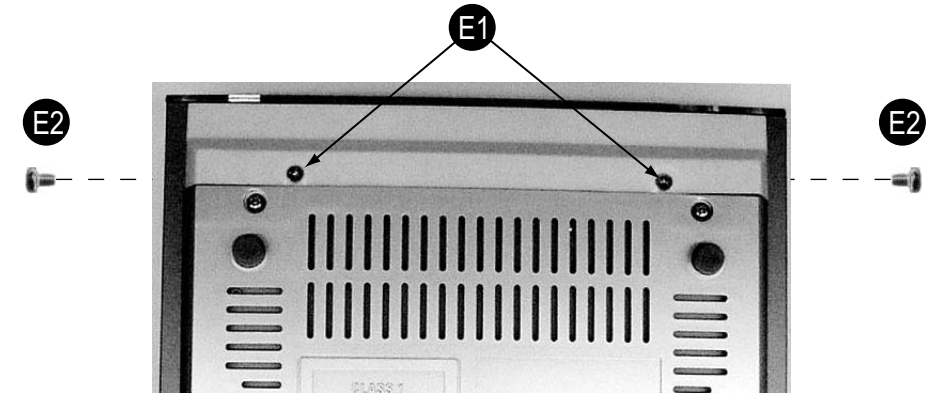
D. Remove Top Cabinet

D1 remove screws M3x6 - 3 pcs.
 D2 remove screws M3x6 - 3 pcs.



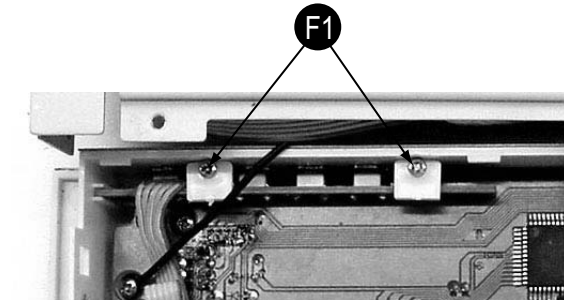
E. Remove Front Cabinet

E1 remove screws MK3x10 - 2 pcs.
 E2 remove screws M3x4 - 2 pcs.



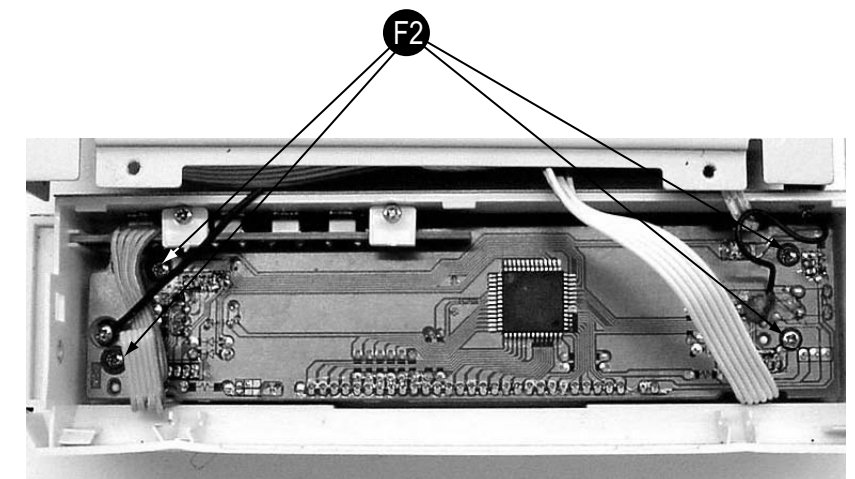
F. Remove Display Board Assembly

F1 remove screws ST 2.5x8 - 2 pcs.
 (take out Push Key PCB Assy)



F. Remove Display Board Assembly

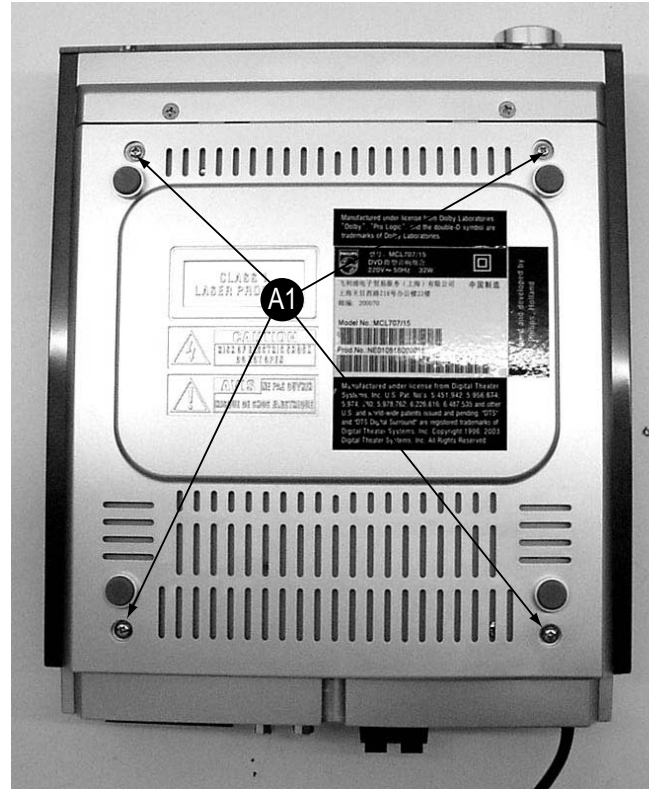
F2 remove screws ST 2.5x8 - 4 pcs.



DISASSEMBLY INSTRUCTION - AMP PART

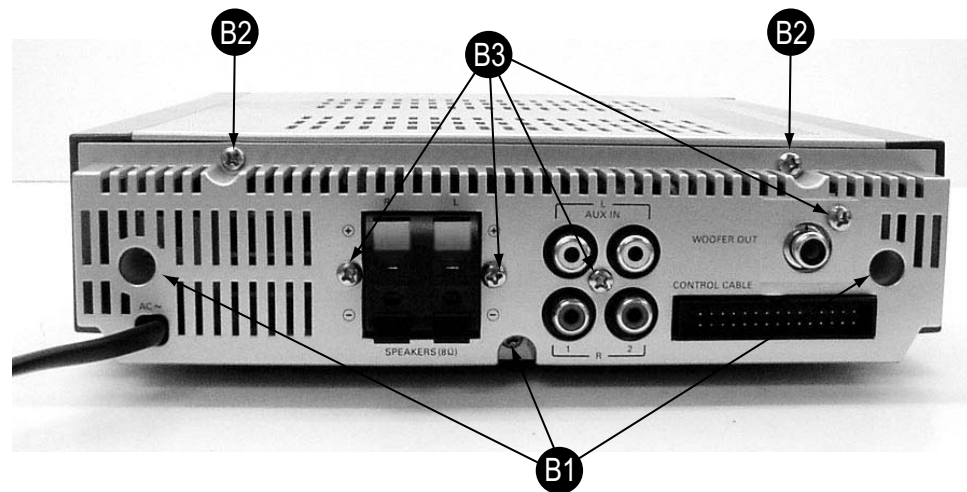
A. Remove Bottom Cover

A1 remove screws M2.5x4 (washer head) - 4 pcs.



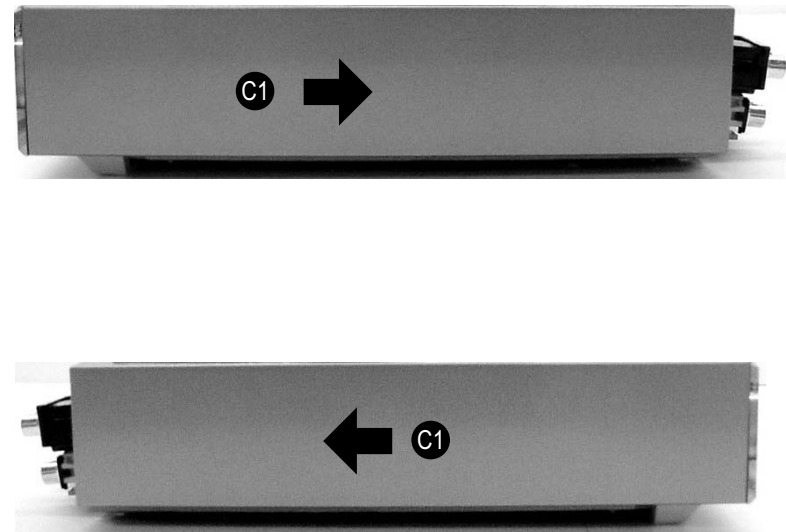
B. Remove Back Panel

B1 remove screws M3x6 - 3 pcs.
 B2 remove screw ST 3x10 - 2 pc.
 B3 remove screws ST 3x10 - 4 pcs. (for jacks)



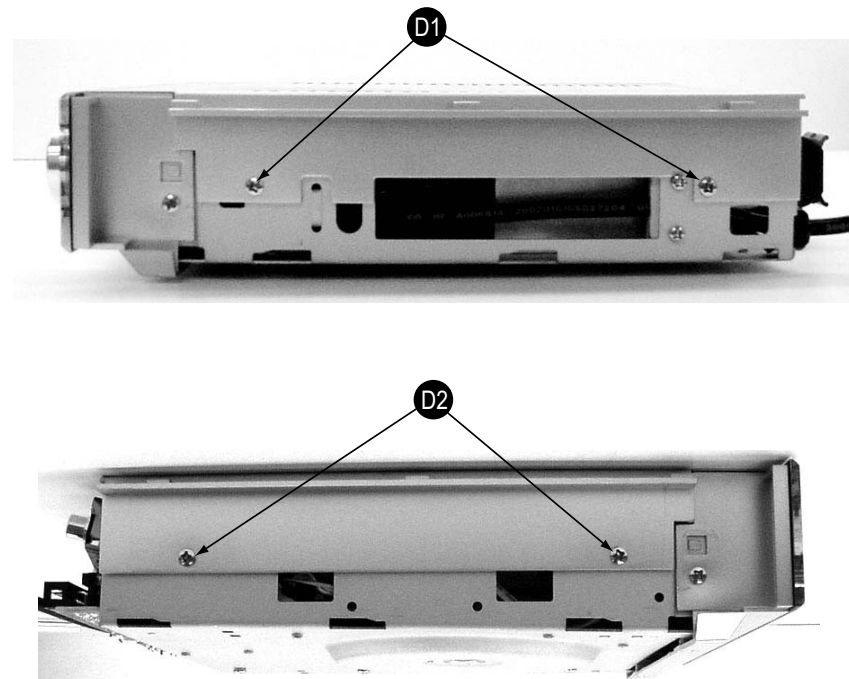
C. Remove Side Panel (L & R)

C1 Slide out the Side Panels.



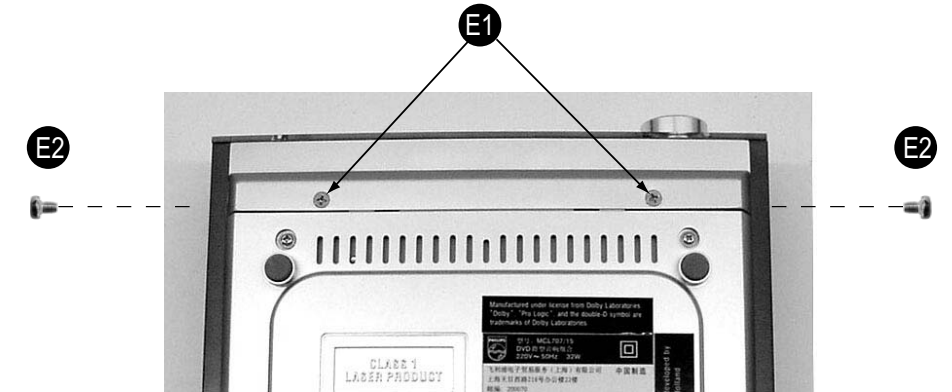
D. Remove Top Cabinet

D1 remove screws M3x6 - 2 pcs.
 D2 remove screws M3x6 - 2 pcs.



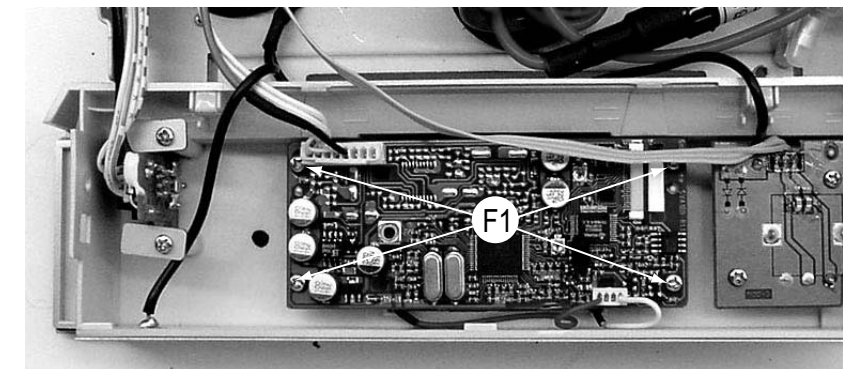
E. Remove Front Cabinet

E1 remove screws MK3x10 - 2 pcs.
 E2 remove screws M3x4 - 2 pcs.



F. Remove TFT Module (for MCL707 only)

F1 remove screws ST 2.5x8 - 4 pcs.



SOFTWARE VERSION AND UPGRADING

A. MPEG SOFTWARE VERSION CHECK

1. Press SYSTEM button (on the remote control) to enter general setting page.

TV Screen shows

```
---Common Setting Page---
TV Setting
OSD Lang.
Screen Saver
```

2. Press ► button (on the remote control) to select Preference Page.

TV Screen shows

```
---Original Setting Page---
TV set standard
Sound
Subtitle
Language chosen by disk
Age Controlling
Factory setting
```

3. Enter Password“811502”.

TV Screen shows

```
Ver    MCL701/xxxx
Date   mmm dd yyyy
Time   hh : mm : ss
Region code    x
```

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

B. CPU VERSION CHECK

1. Keep PLAY and STOP buttons (on the set) while plug in the power cord.

TV Screen shows

```
MCL701 Vxxx
```

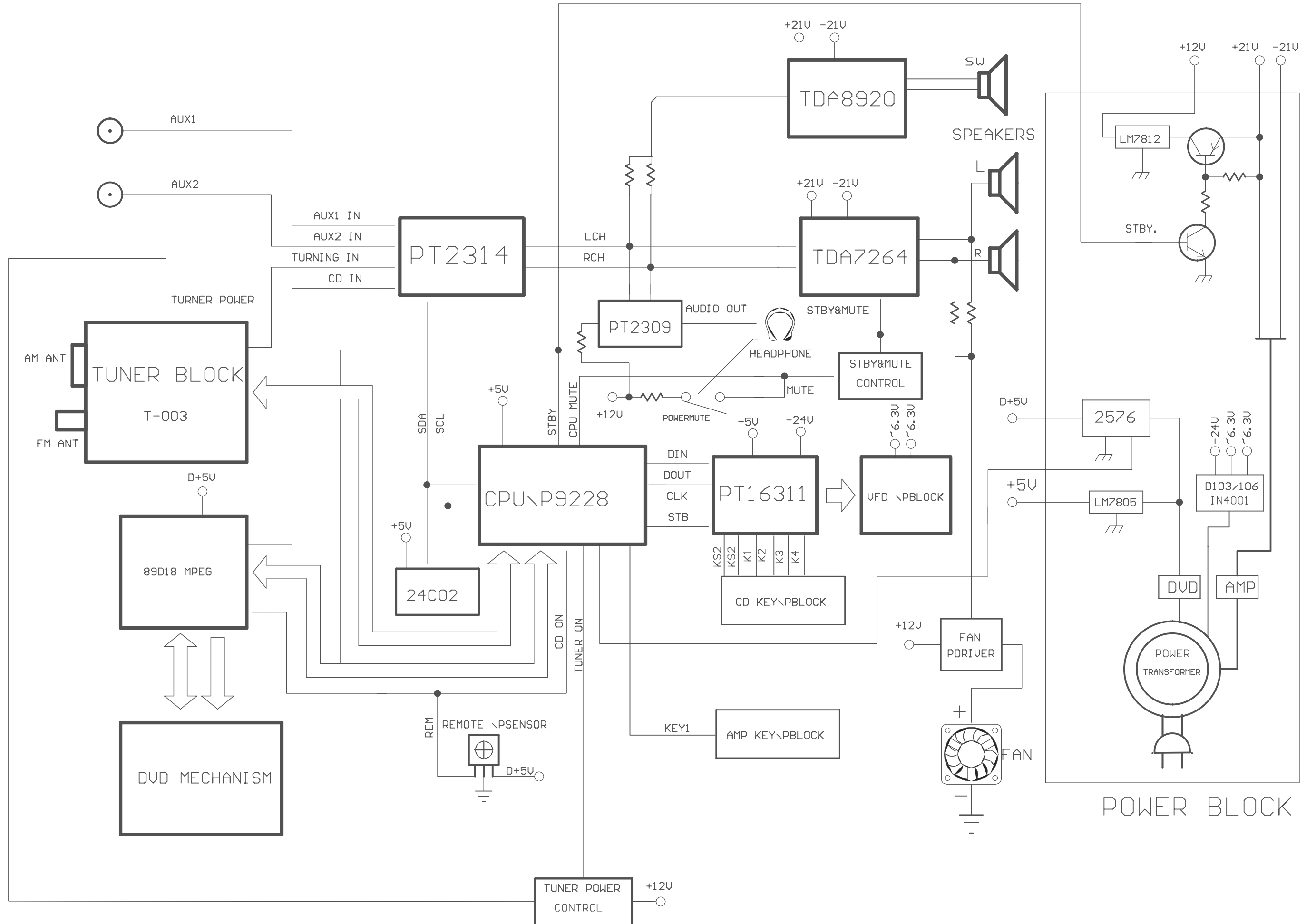
C. MPEG SOFTWARE UPGRADING:

1. Download the firmware for Philips support website <http://www.philips.com/support>
2. Prepare as uploading CD.
3. Load the CD in the CD Tray.
4. TV Screen shows

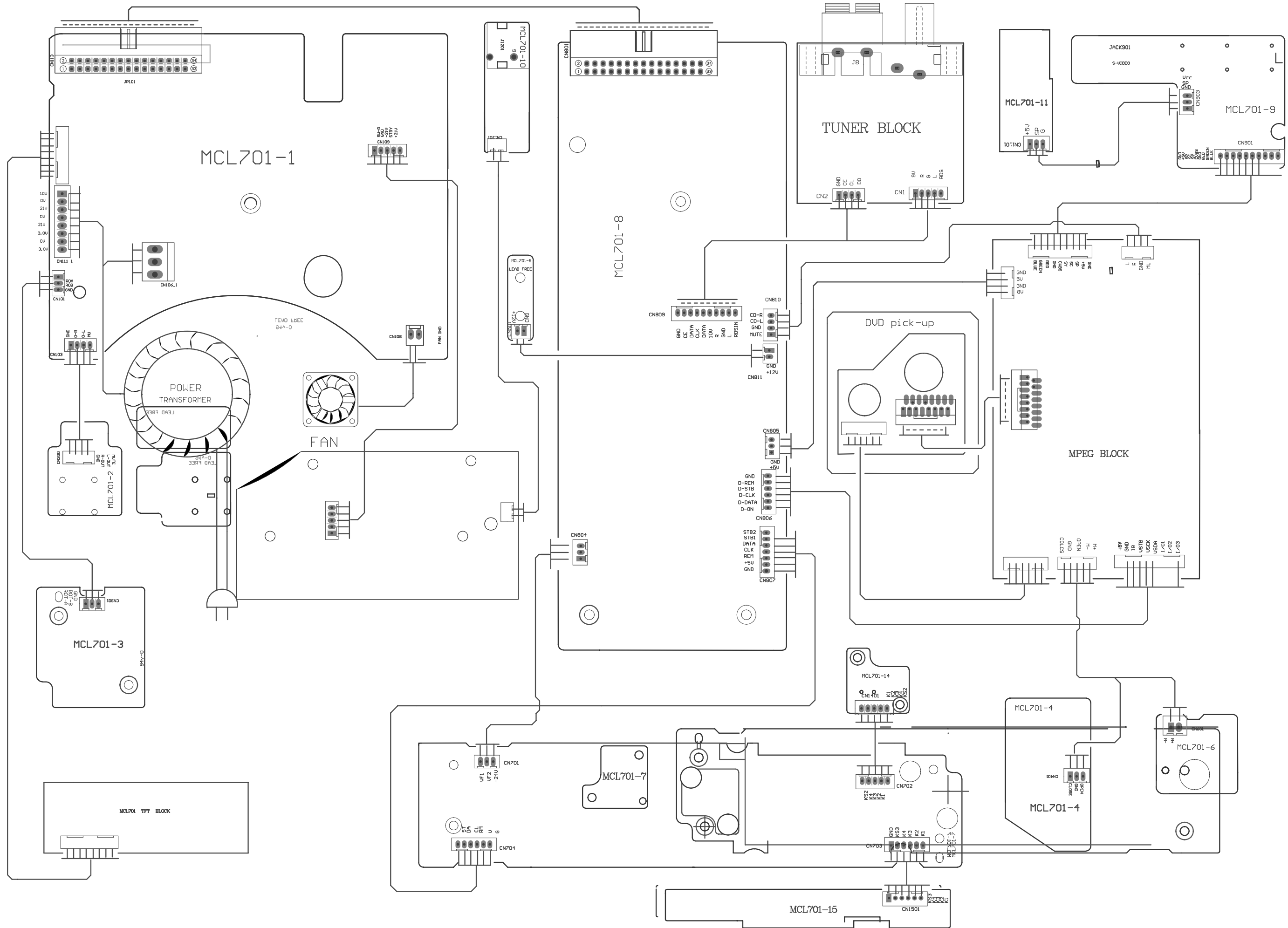
```
Upgrade?
Press PLAY to start
Upgrading
File Copying
```

and upgrading will run automatically

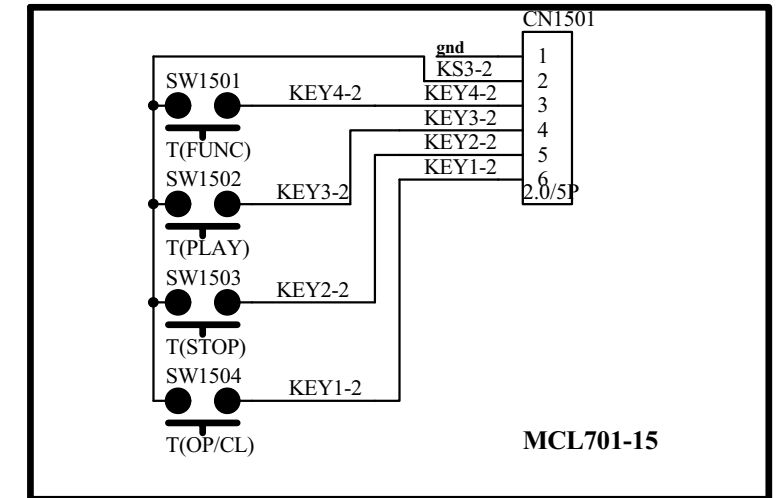
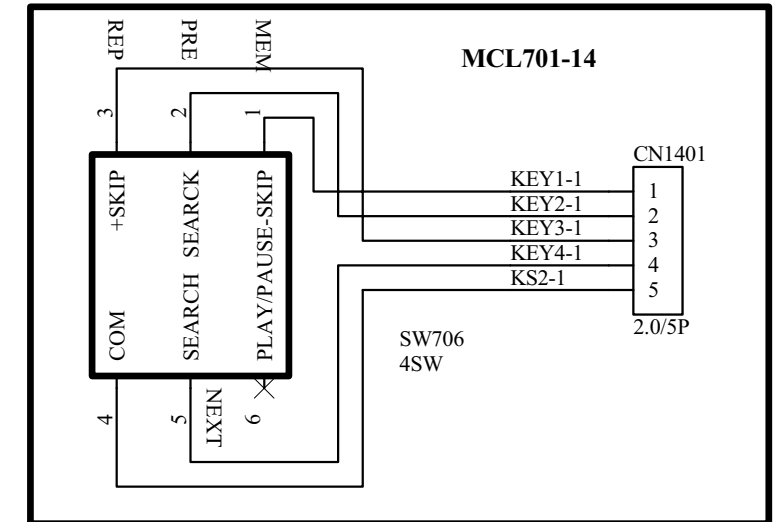
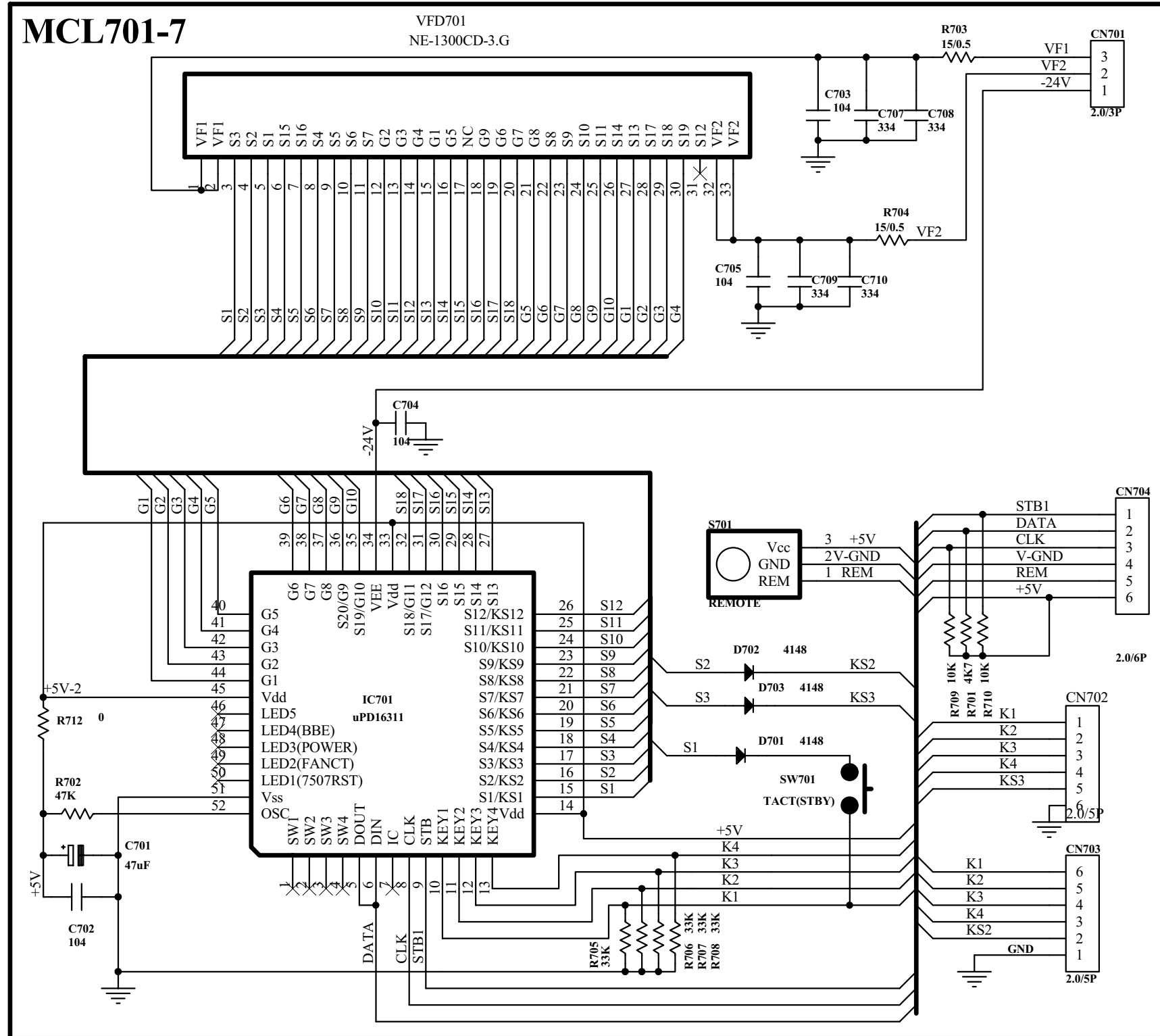
SET BLOCK DIAGRAM



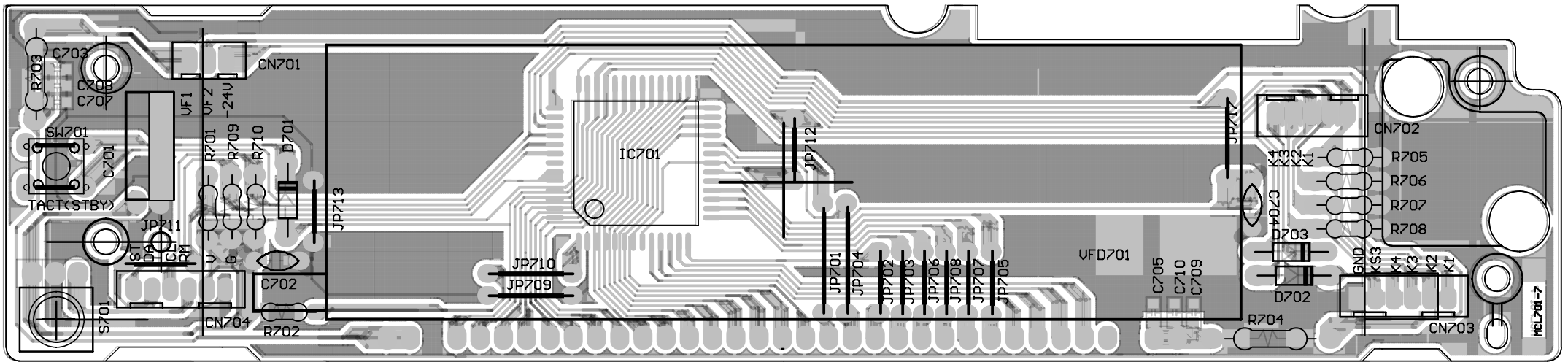
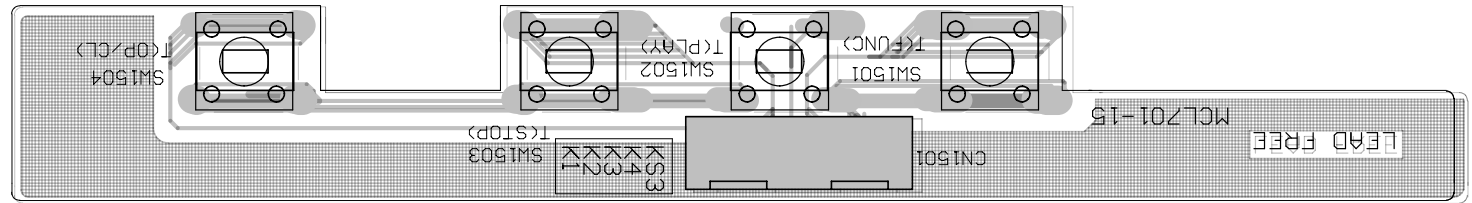
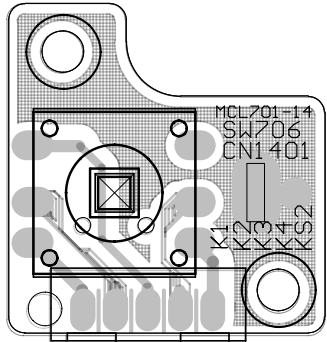
SET WIRING DIAGRAM



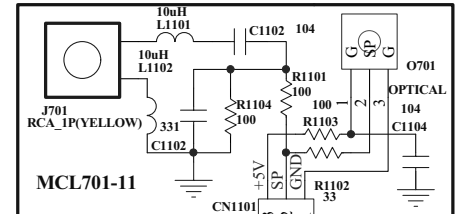
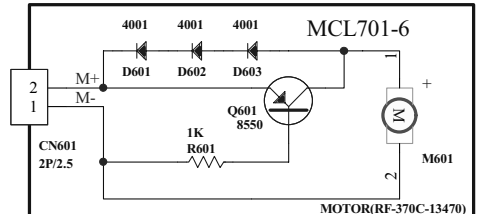
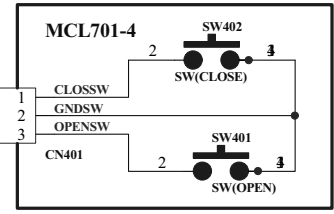
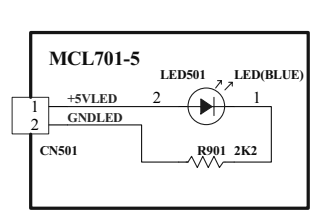
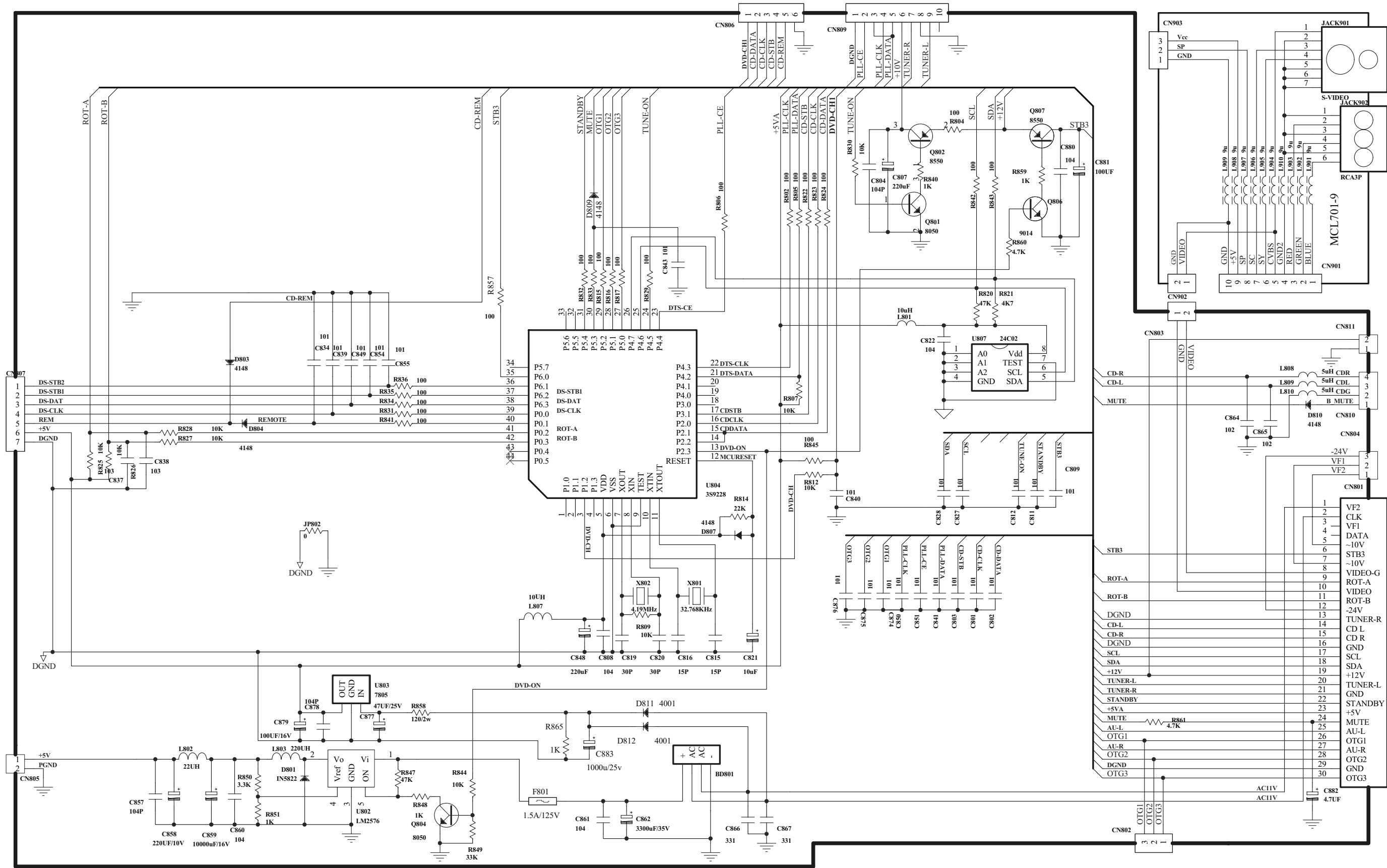
CIRCUIT DIAGRAM - VFD / KEY BOARD ASSEMBLY



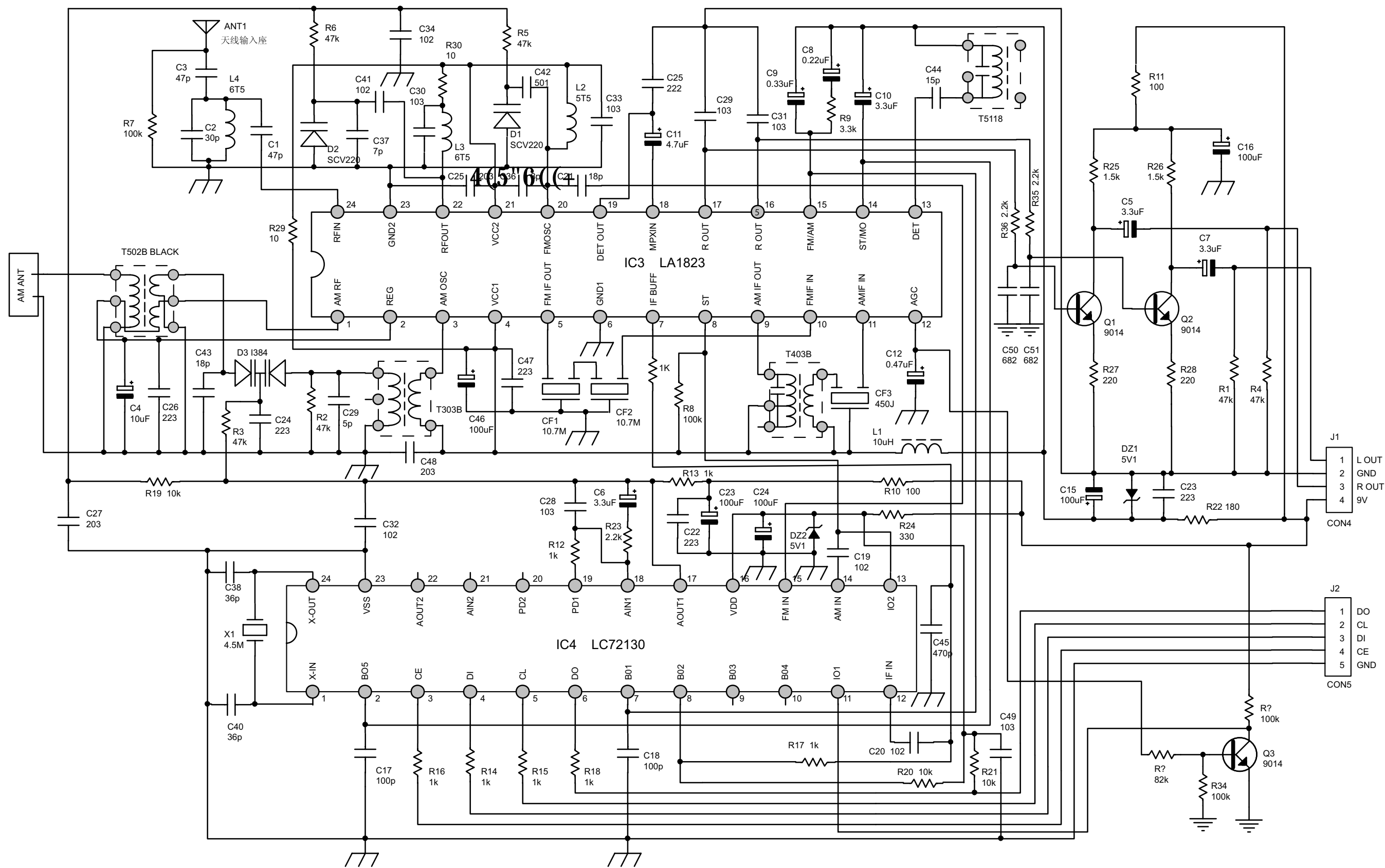
LAYOUT DIAGRAM - VFD / KEY BOARD ASSEMBLY



CIRCUIT DIAGRAM - DVD BLOCK

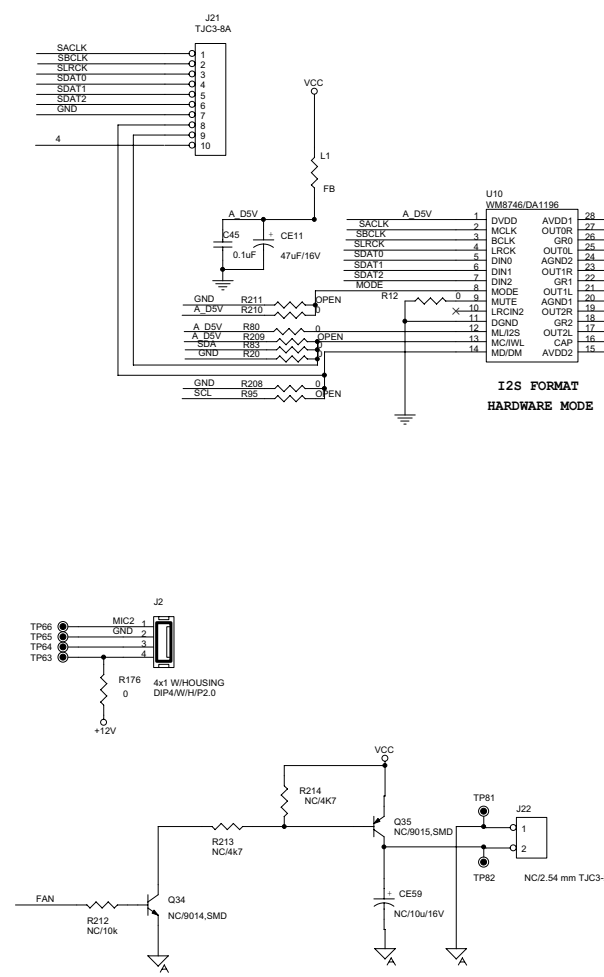
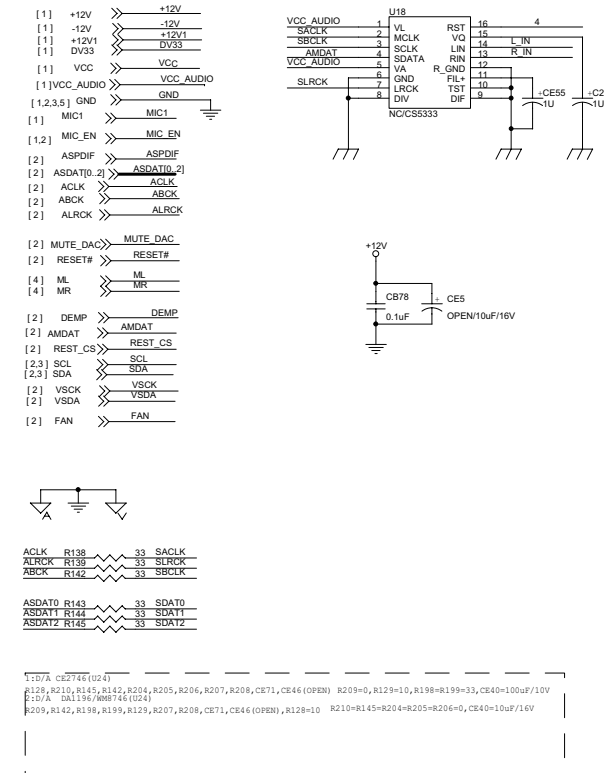


CIRCUIT DIAGRAM - TUNER BOARD



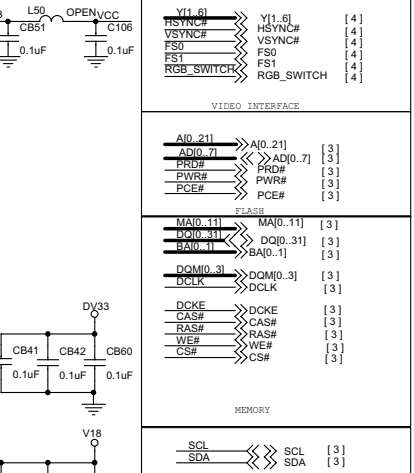
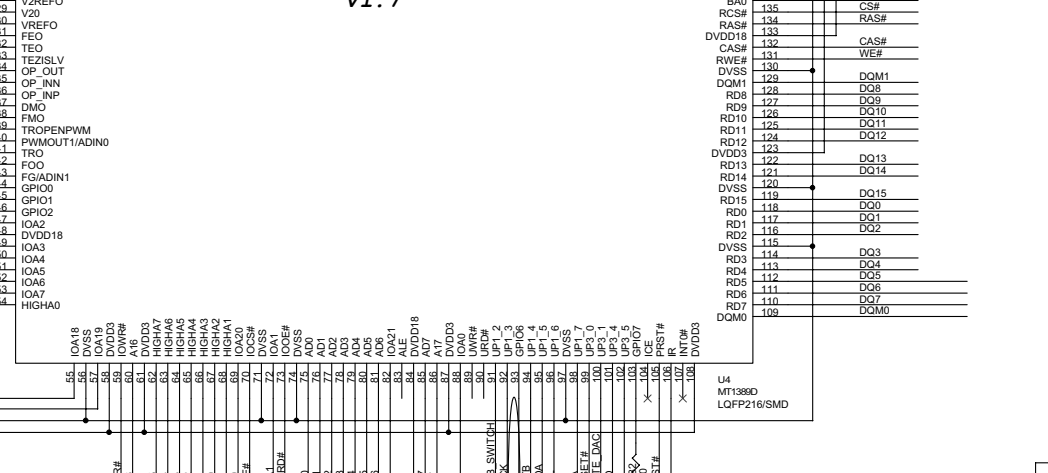
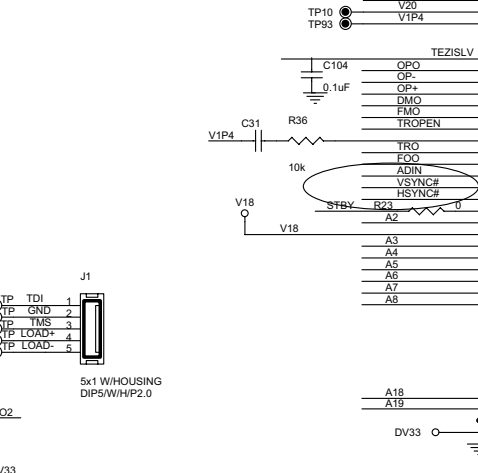
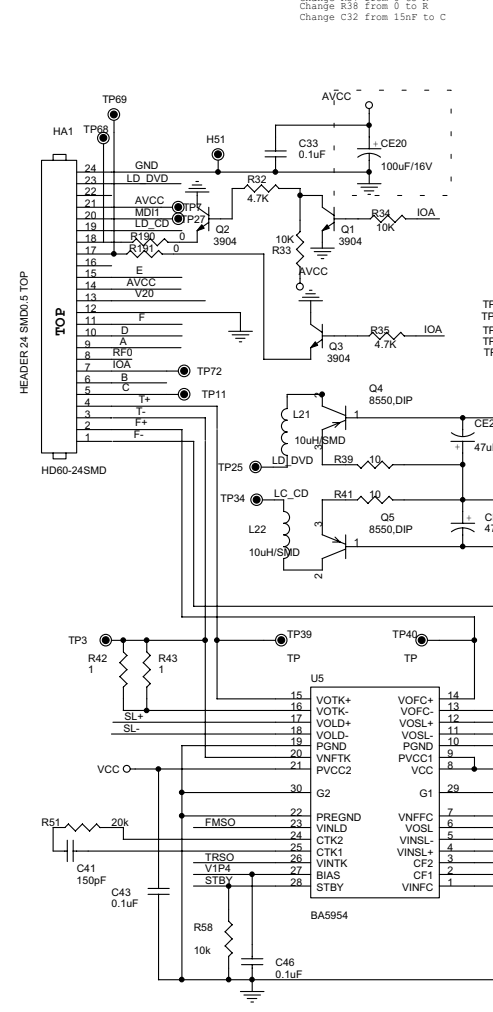
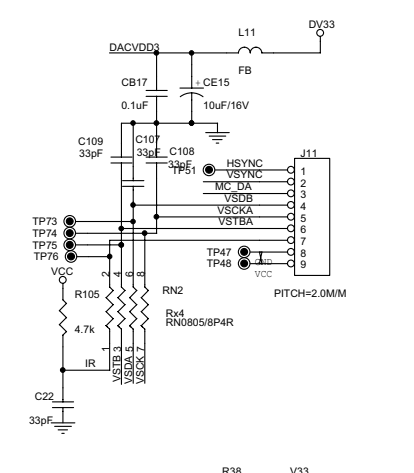
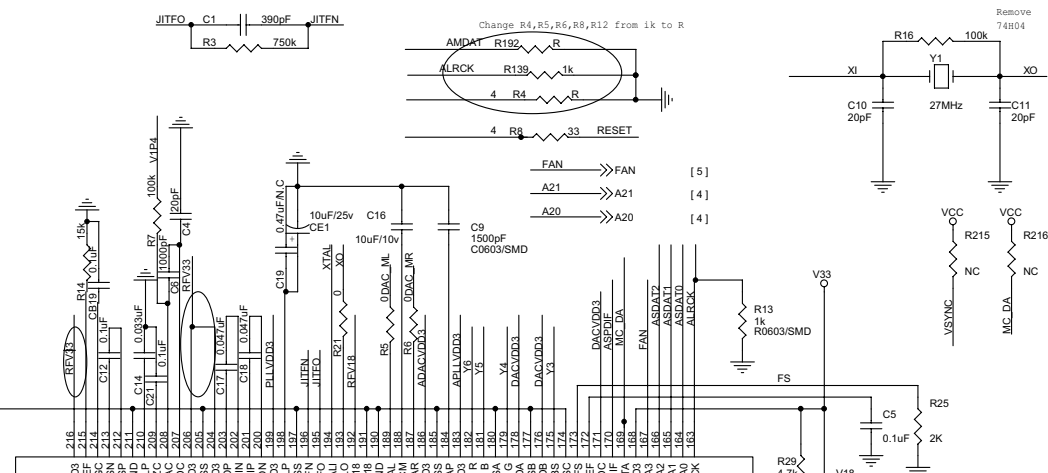
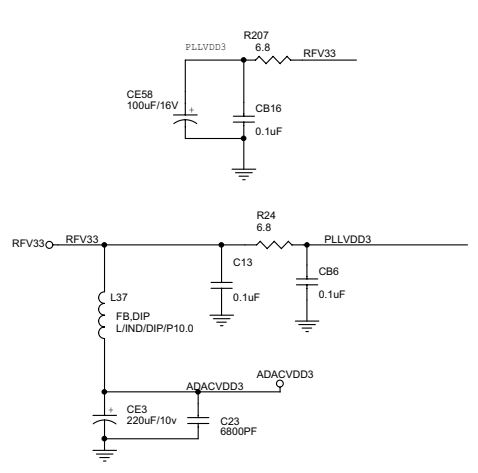
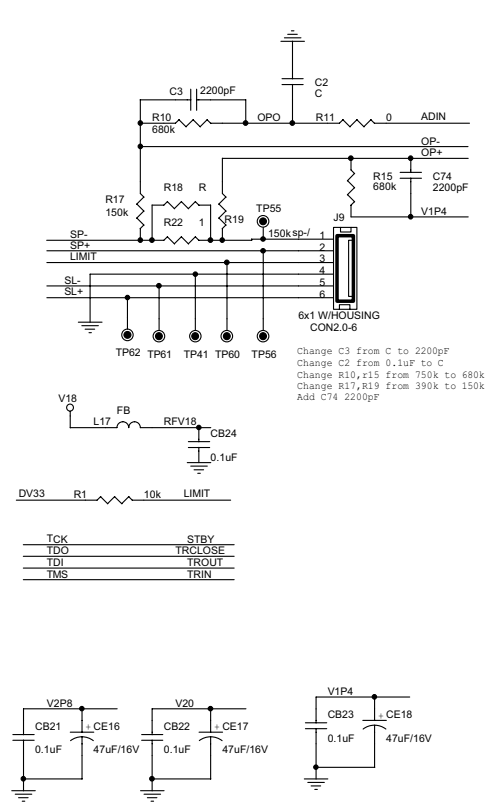
CIRCUIT DIAGRAM - DVD MPEG BOARD

(MPEG board is not repaired. diagram for reference only)



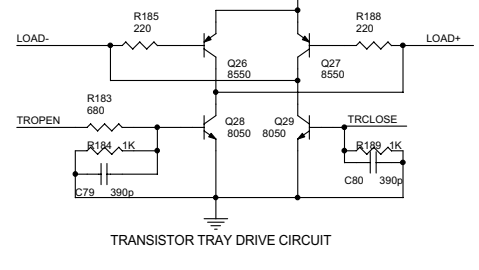
CIRCUIT DIAGRAM - DVD MPEG BOARD

(MPEG board is not repaired. diagram for reference only)



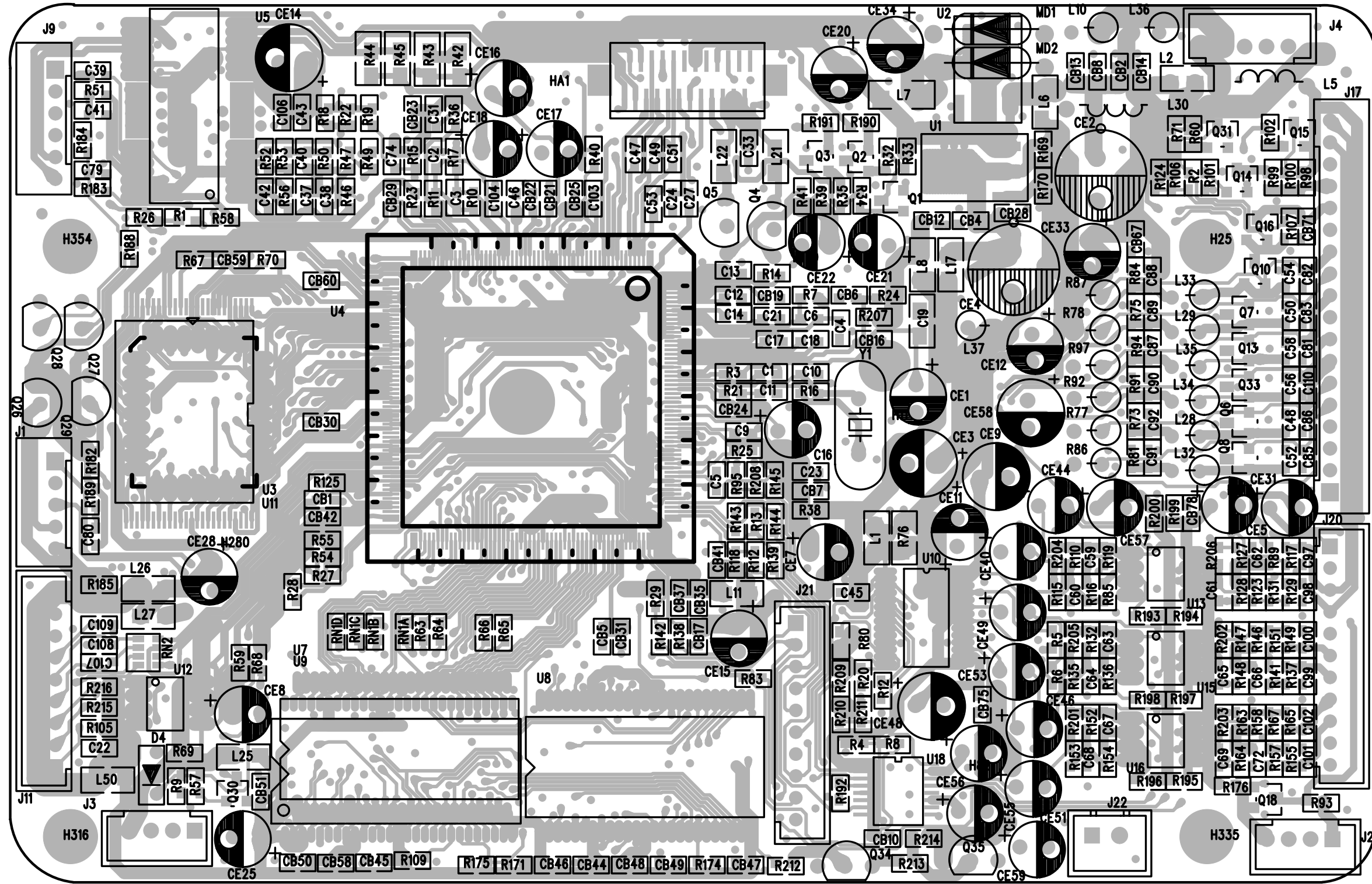
MT1389D V1.7

AVCC	AVCC	[1]
V18	V18	[1]
DV33	DV33	[1]
URST#	URST#	[1]
VCC	VCC	[1]
POWER		
Y1[6]	Y1[6]	[4]
HSYNC#	HSYNC#	[4]
VSYNC#	VSYNC#	[4]
FS0	FS0	[4]
FS1	FS1	[4]
RGB_SWITCH	RGB_SWITCH	[4]
VIDEO INTERFACE		
AD[0..21]	AD[0..21]	[3]
AD[0..7]	AD[0..7]	[3]
PRD#	PRD#	[3]
PWR#	PWR#	[3]
PCE#	PCE#	[3]
FLASH		
MA[0..11]	MA[0..11]	[3]
DO[0..31]	DO[0..31]	[3]
BA[0..1]	BA[0..1]	[3]
MEMORY		
SCL	SCL	[3]
SDA	SDA	[3]
IIC		
ASDAT[0..2]	ASDAT[0..2]	[5]
ALRCK	ALRCK	[5]
ACLK	ACLK	[5]
ABCK	ABCK	[5]
ASPDF	ASPDF	[5]
RESET#	RESET#	[4,5]
AUDIO INTERFACE		

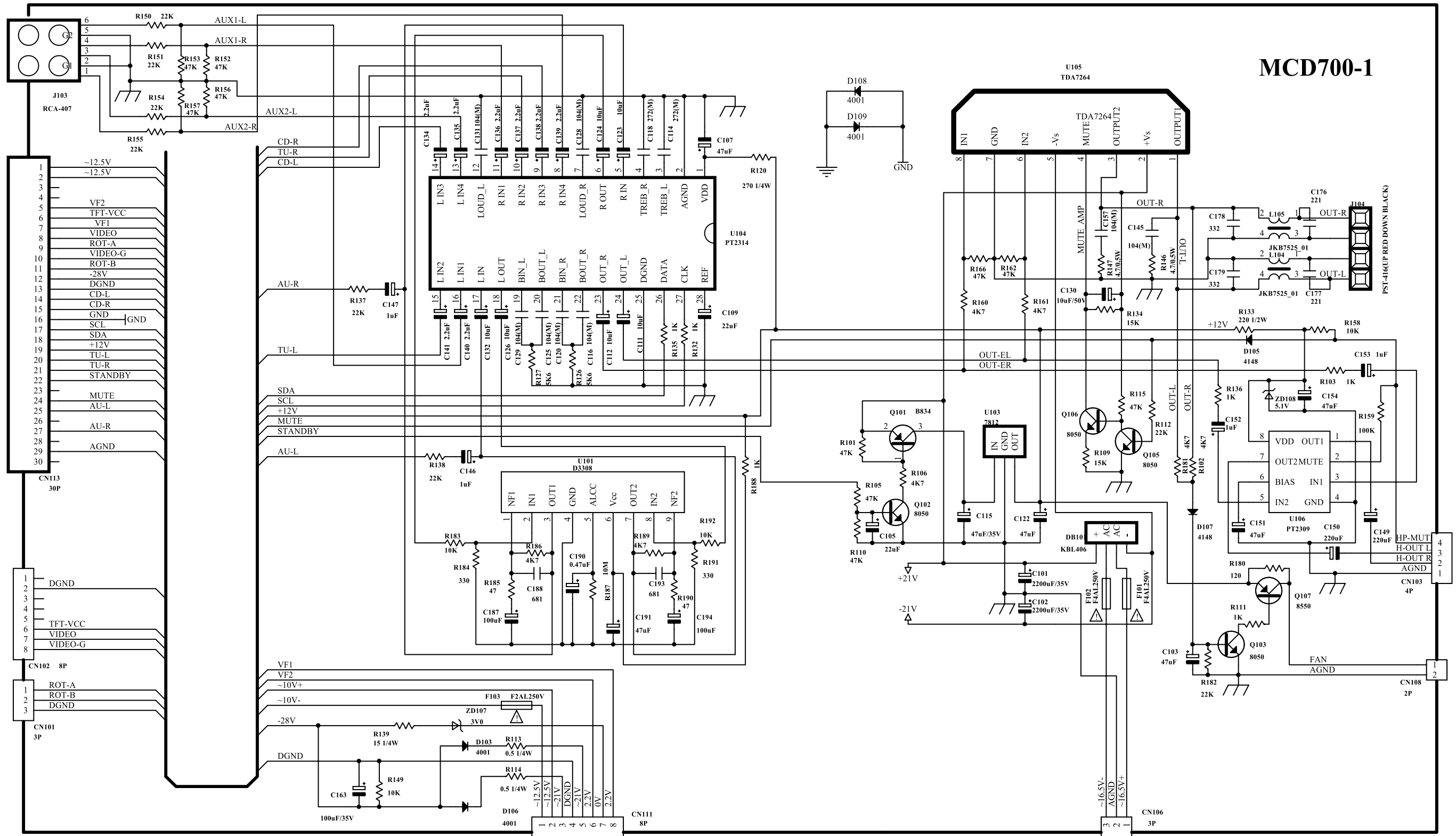


LAYOUT DIAGRAM - DVD MPEG BOARD

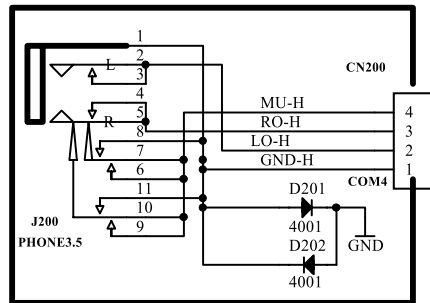
(MPEG board is not repaired. diagram for reference only)



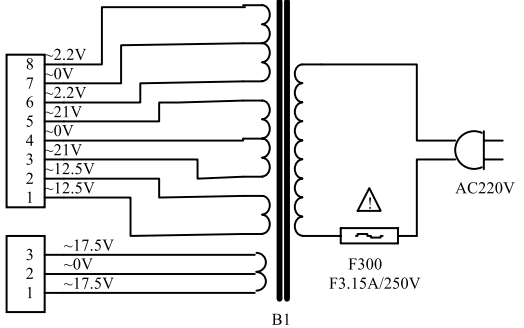
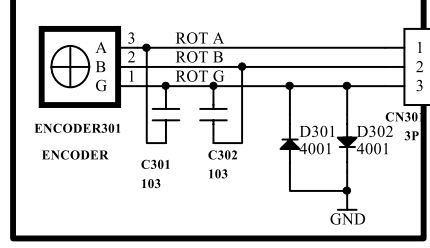
CIRCUIT DIAGRAM - AMP BLOCK



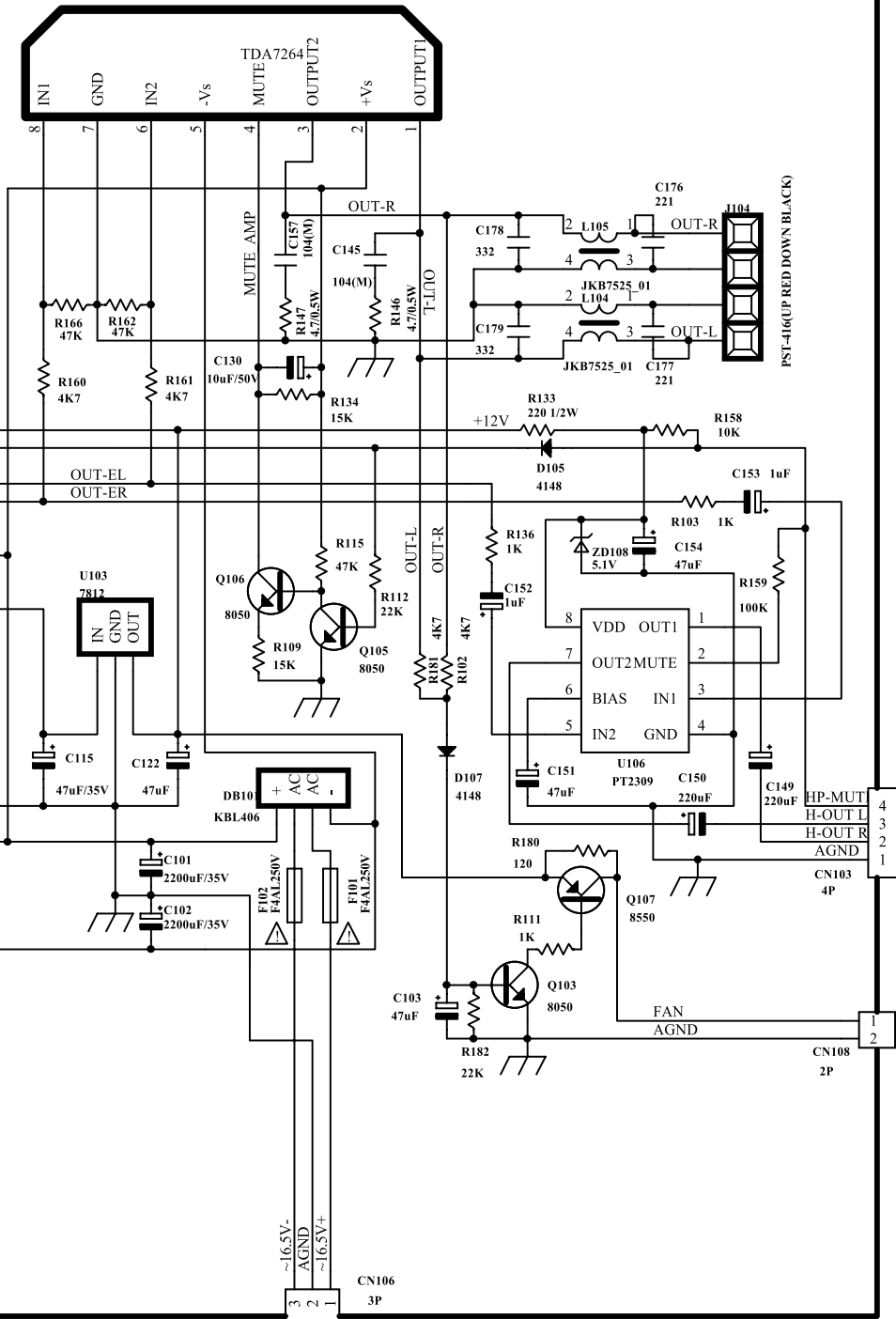
MCD700-2



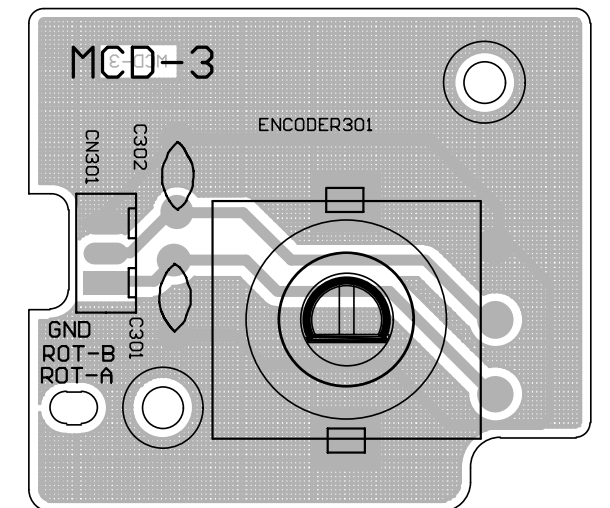
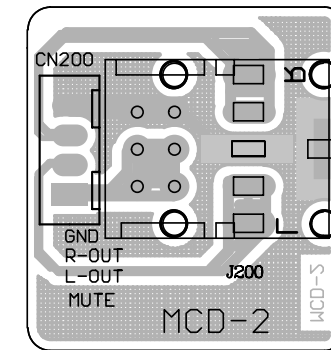
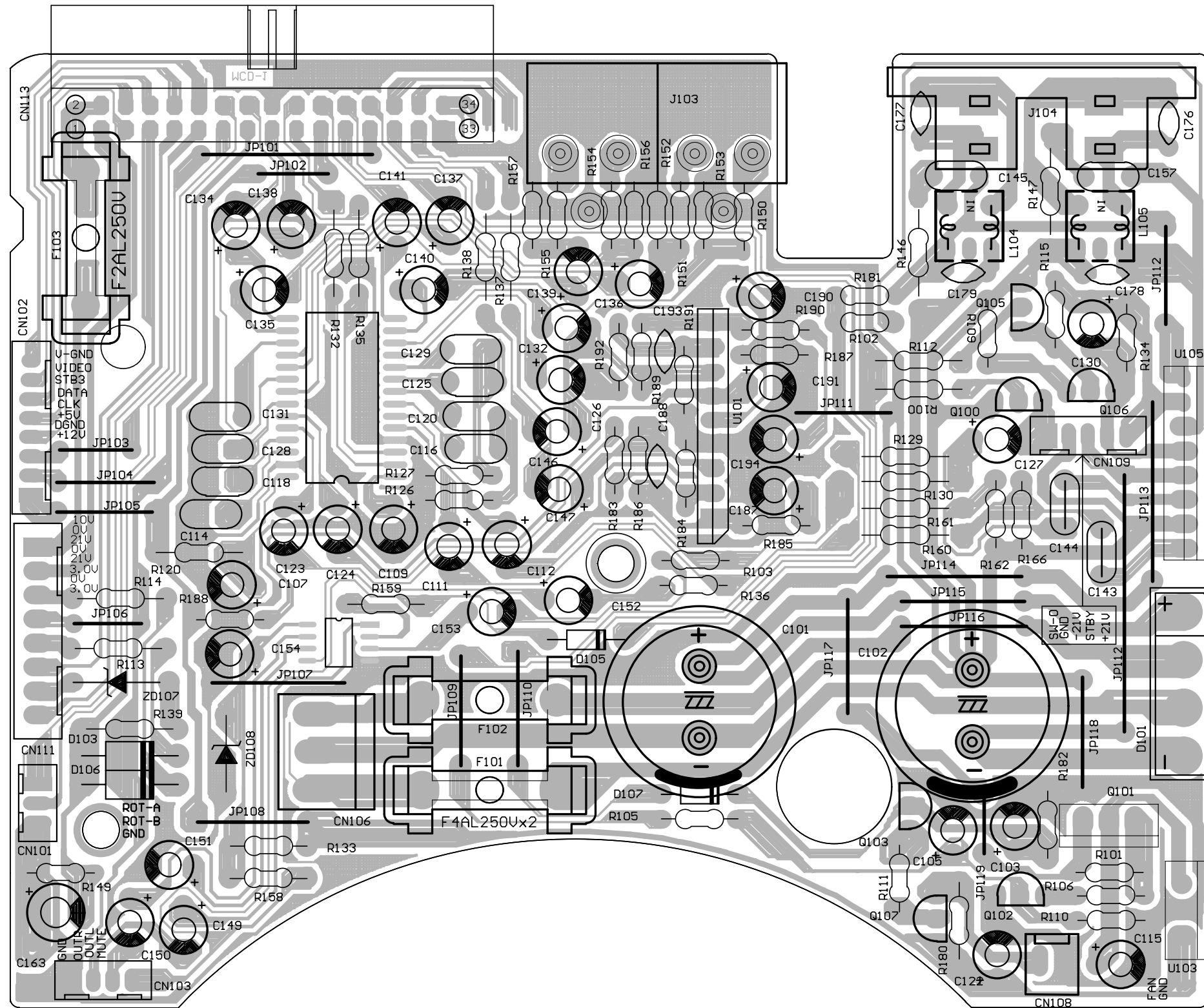
MCD700-3



MCD700-1

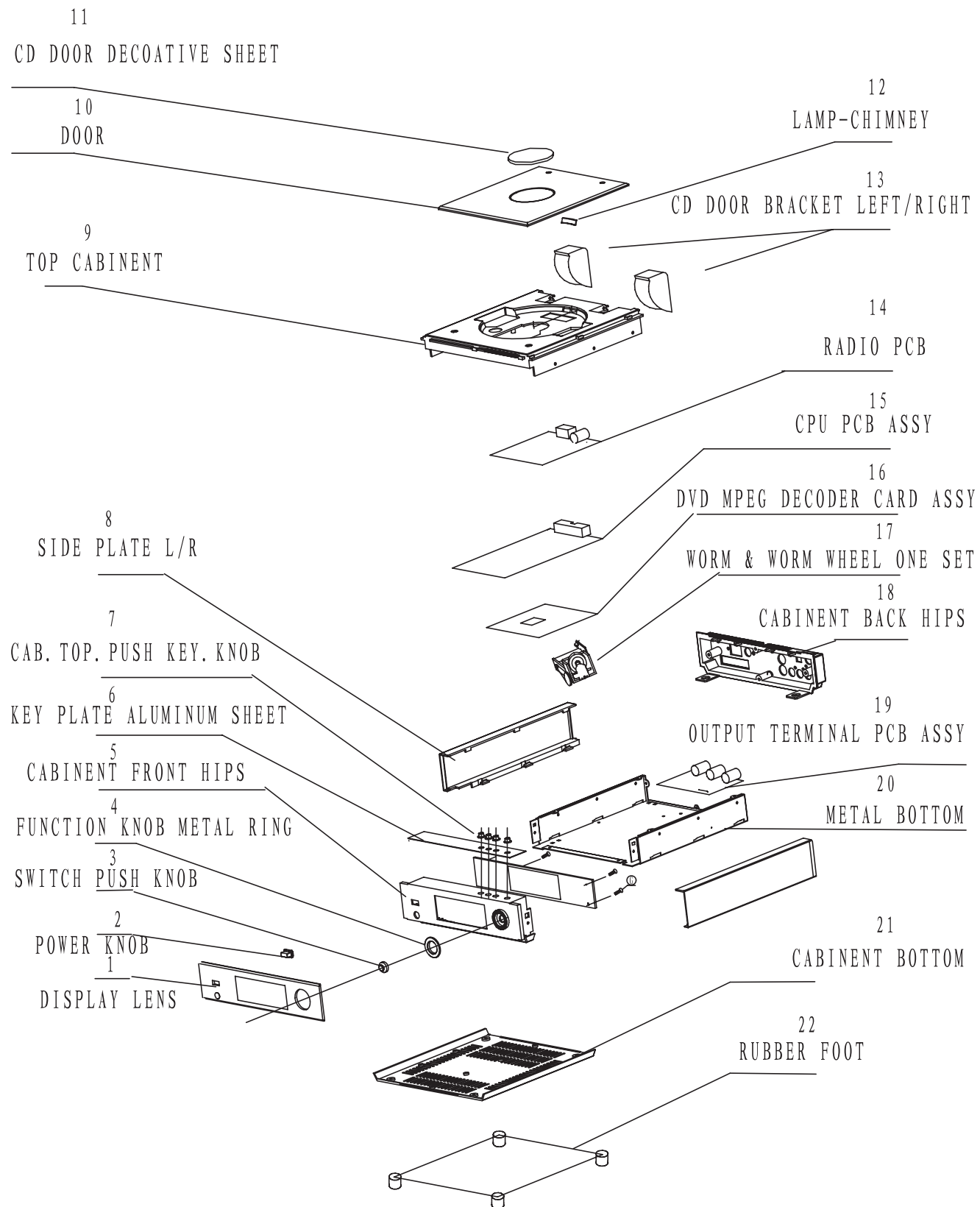


LAYOUT DIAGRAM - AMP BLOCK

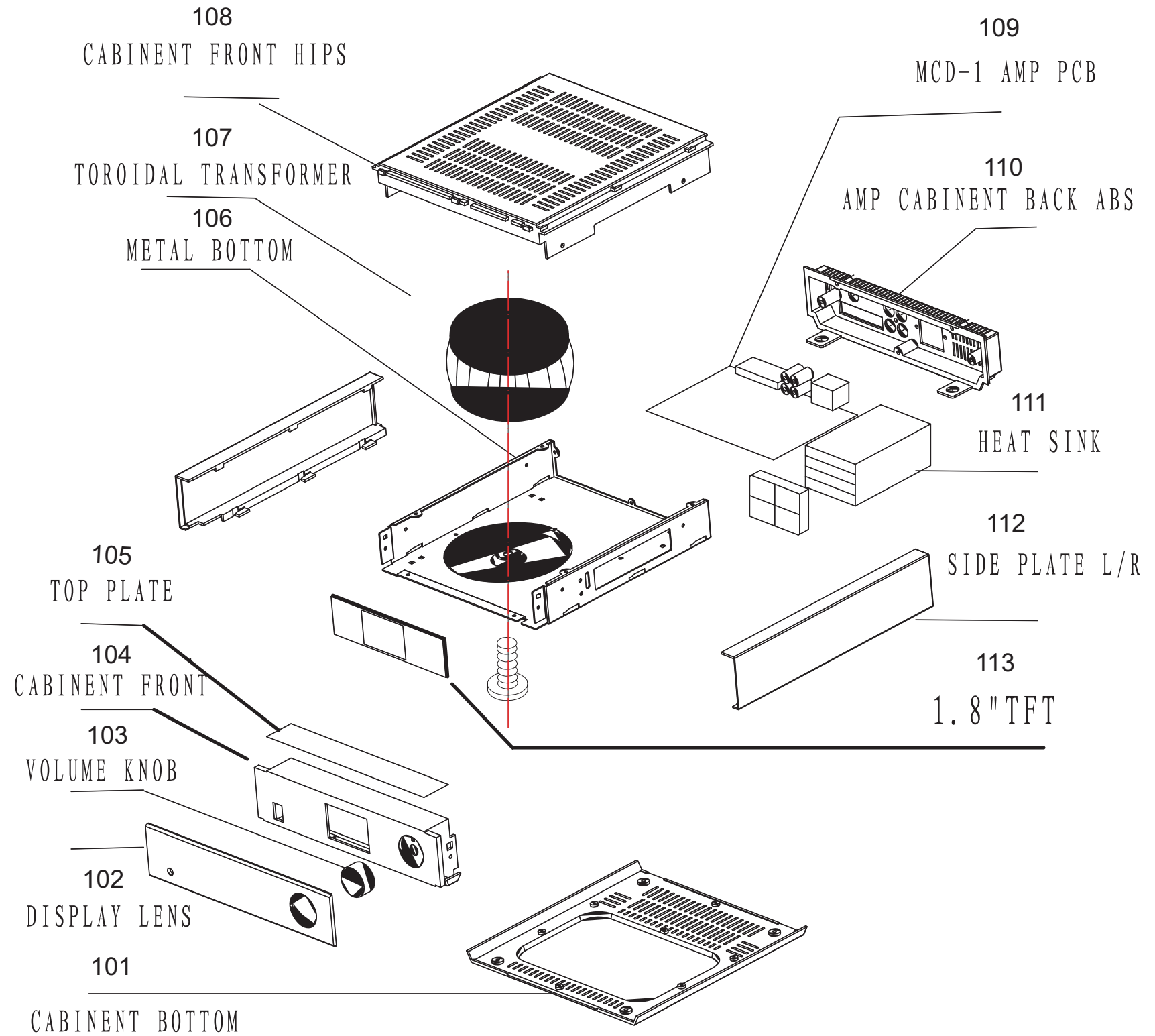


EXPLODED VIEW DIAGRAM

DVD PART



AMP PART



ACCESSORIES PARTS LIST

	9940 000 05078	AUDIO SINGLE WIRE 1.5M
	9940 000 04178	CONTROL CABLE 30P L=300MM
	9965 000 41615	ANTENNA HOLDER ASS'Y AM
	9940 000 02562	AM ANTENNA HOLDER
	9965 000 41022	BRACKET ASS'Y PH MCD700
	9965 000 42054	SPEAKER BOX ASS'Y MCL701/93

MECHNICAL&MISCELLANEOUS PARTS FOR DVD

6	9940 000 02503	DVD UNIT PUSH KEY PLATE
11	9940 000 02504	CD DOOR DECOATIVE SHEET
4	9940 000 02505	FUNCTION KNOB METAL RING
	9940 000 02506	OVERLAY FOR FUNCTION KNOB
5	9965 000 41986	DVD CABINET FRONT
9	9965 000 41988	DVD CABINET TOP
18	9940 000 02482	MCD700 DVD CABINET BACK
21	9965 000 42055	MCD700 DVD CABINET BOTTOM
10	9940 000 02485	MCD700 DVD DOOR
	9965 000 42056	MCD700PCB BRACKET
	9965 000 42057	MCD700 LENS DISPLAY
7	9940 000 02494	CAB. TOP PUSH KEY KNOB
	9940 000 02495	MCD700 SWITCH PUSH KNOB
	9965 000 42058	DVD DECODER CARD ASS'Y
	9940 000 02563	DVD MECHANISM IDM520A
	9940 000 03185	DVD VIBRATION CUSHION
	9940 000 05068	DOOR SWITCH
	9940 000 02487	WORM & WORM WHEEL BRACKET
17	9965 000 42059	WORM PREFORMING NE-1300 ASS'Y
	9940 000 02511	LEATHER BELT

MECHNICAL&MISCELLANEOUS PARTS FOR AMP

105	9940 000 03088	MCD700 AMP TOP PLATE ALU SHEET
103	9940 000 02501	VOLUME KNOB
	9965 000 42060	MCD700 AMP UNIT METAL
104	9965 000 41982	AMP CABINET FRONT
108	9965 000 42061	MCD700 AMP CABINET TOP
110	9940 000 02481	MCD700 AMP CABINET BACK
	9965 000 41980	CABINET BOTTOM
	9965 000 42062	AMP UNIT MCD700 LENS DISPLAY
	9940 000 02496	MCD700 VOL KNOB
	9940 000 02497	MCD700 POWER KNOB
112	9965 000 42075	SIDE PLATE-L ASH
112	9965 000 42076	SIDE PLATE-R ASH
107	9965 000 42063	TRANSFOR. 368AD 220V
	△ 9965 000 39115	AC LINE CORD 1.95M KS
	9940 000 02535	VOLUME CODER ED-1612-00-F15
113	9940 000 02567	1.8" TFT LCD

ELECTRICAL PARTS - DISPLAY PCB

	9940 000 05215	LED DIODE RED
IC701	9940 000 02539	IC PT6311
	9965 000 41321	VFD DISPLAY
S701	9940 000 02542	IR SENSOR
SW701	9940 000 02543	LIGHT TOUCH SWITCH

ELECTRICAL PARTS - CPU PCB

BD801	△ 9940 000 02521	THYRISTOR RS406(4A)
U802	9940 000 02546	IC YD2576-ADJ
U807	9940 000 02547	IC AT24C02-PC27(2.7V)
U803	9940 000 02548	IC LM7805
	9965 000 42064	MCU PARTS ASS'Y MCL701/93
X801	9940 000 02551	CRYSTAL OSC FREQ. 32.768 KHZ
CN801	9940 000 02552	PIN CONNECTOR 30P
JP818	△ 9940 000 03412	FUSE F1.5A/125V

ELECTRICAL PARTS - AMP PCB

ZD107	9940 000 02515	ZENER DIODE 3V
ZD108	9965 000 42069	ZENER DIODE IN5231B
Q101	9940 000 02517	TRANSISTOR 2SB772
Q100	9940 000 02518	TRANSISTOR 8050C
Q102	9940 000 02518	TRANSISTOR 8050C
Q103	9940 000 02518	TRANSISTOR 8050C
Q105	9940 000 02518	TRANSISTOR 8050C
Q106	9940 000 02518	TRANSISTOR 8050C
Q107	9940 000 02519	TRANSISTOR 8550C
D101	9940 000 02521	THYRISTOR RS406(4A)
U101	9940 000 03427	IC NE008
U105	9940 000 04976	IC TDA7264
U106	9940 000 02524	IC PT2309-S(L)
U104	9940 000 05066	I.C.PT2314 PRINCETON
U103	9940 000 05067	IC 7812
CN113	9940 000 02533	PIN CONNECTOR 30P
J104	9940 000 02527	4PINS SPEAKER SOCKET PST-416
J103	9940 000 02528	4PINS RCA SOCKET
F103	△ 9940 000 02529	FUSE F2AL250V
F101	△ 9940 000 02531	FUSE F4AL250V
F102	△ 9940 000 02531	FUSE F4AL250V
	9940 000 02532	MINI FAN RDM4010S DC12V

ELECTRICAL PARTS - TUNER BOARD PCB

T1	9940 000 03149	I.F.T 511BE
T3	9940 000 03146	I.F.T. COIL 205B
T4	9940 000 03147	I.F.T. COIL 303B
T2	9940 000 03148	I.F.T.COIL 403B
L3	9965 000 42066	WOUND COIL D2X5.5X0.4
L1	9965 000 42067	WOUND COIL D2X6.5X0.4
L2	9965 000 42067	WOUND COIL D2X6.5X0.4
Z3	9940 000 03151	AM FILTER 450J
Z1	9940 000 03153	FM CERMIC FILTER FREQUENCY 10.
Z2	9940 000 03153	FM CERMIC FILTER FREQUENCY 10.
	9940 000 03758	TRIMMER CAP 10PF
ZD1	9965 000 42068	ZENER DIODE 5.1V 1/2W
ZD2	9965 000 42068	ZENER DIODE 5.1V 1/2W
D1	9940 000 03154	VARIODE DIODE SCV220
D2	9940 000 03154	VARIODE DIODE SCV220
D3	9940 000 03155	VARIODE DIODE 1384
IC4	9940 000 03158	LC72130 & LA1823
IC3	9940 000 03159	IC LA1823 SANYO
X1	9940 000 03163	CRYSTAL 4.5MHZ
	9940 000 03435	ANT. LEADING-OUT JACK

MULTI-BOARD PARTS

J200	9940 000 02534	HEADPHONE JACK 3.5MM
LED	9940 000 02537	LED (BLUE) 3R4CB71D-2B-208
J1201	9940 000 02558	SINGLE RCA SOCKET
SW706	9940 000 02557	SWITCH(4-DIRECTIONS)
SW1501	9940 000 02555	LIGHT TOUCH SWITCH
SW1502	9940 000 02555	LIGHT TOUCH SWITCH
SW1503	9940 000 02555	LIGHT TOUCH SWITCH
SW1504	9940 000 02555	LIGHT TOUCH SWITCH
J1101	9940 000 02556	OPTICAL & COAXIAL SOCKET
JACK901	9940 000 02553	3PINS RCA SOCKET(R/B/G)
JACK902	9940 000 02554	S-VIDEO SINGLE RCA SOCKET
SW401	9940 000 02536	SPECIAL SWITCH TC-V030A
SW402	9940 000 02536	SPECIAL SWITCH TC-V030A
	9965 000 42065	NE-1300 SWITCH BRACKET

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

REVISION LIST

Version 1.0 (3141 785 31440)

- Initial Release