

Service
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Service Manual

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PHILIPS



SPECIFICATIONS

GENERAL:

Mains voltage : 110-127V/220-240V Switchable for /55/98
 117V \pm 10% for /37
 220V \pm 10% for /61/93
 230 \pm 10% for /05/12
 240 \pm 10% for /79

Mains frequency : 50/60Hz

Power consumption : 30W at $1/8 P_{rated}$
 < 1W at ECO Standby

Clock accuracy : < 4 seconds per day

Dimension centre unit : : 430 x 110 x 290 mm (L x D x H)

TUNER:

FM

Tuning range : 87.5-108MHz

Grid : 50kHz
 100kHz for /37

IF frequency : 10.7MHz \pm 25kHz

Aerial input : 75 ohm coaxial
 300 ohm click fit for /37

Sensitivity at 26dB S/N : < 22uV

Selectivity at 600kHz bandwidth : > 25dB

Image rejection : > 20dB

Distortion at RF=1mV, dev. 75kHz : < 7%

-3dB Limiting point : < 26dBf

Crosstalk at RF=1mV, dev. 40kHz : > 18dB

AM

Tuning range : 531-1602kHz
 530-1700kHz for /98/37

Grid : 9kHz
 10kHz for /98/37

IF frequency : 450kHz \pm 1kHz

Aerial input : Frame aerial

Sensitivity at 26dB S/N : < 22uV

Selectivity at 18kHz bandwidth : > 18dB

IF rejection : > 45dB

Image rejection : > 28dB

Distortion at RF=50mV, M=80% : < 5%

AMPLIFIER:

Output power (4 ohm, 1kHz, 10% THD)
 L & R : 2 x 10W RMS

Frequency response within -3dB : 125Hz-16kHz

DSC : Rock, Pop, Jazz, Classic

Incredible Surround : On / Off

Input sensitivity

Aux in (at 1kHz) : 500mV at 600 ohm
 CD (Audio Disc1) : 0dB track (Trk 35)
 Tuner : FM67.5kHz DEV/AM 8

Output sensitivity

Headphone output at 32 ohm : 700mV \pm 2dB (Max. vol.)

COMPACT DISC:

Measurement done directly at the connector on the board.

Output Resistance : < 100 ohm

Output Voltage (0dB, 1kHz) : 0.5Vrms \pm 1dB (unloaded)

Channel Unbalance : < 3dB

Channel Separation (1kHz) : > 40dB

Frequency Response (\pm 3dB) : 125Hz-16kHz

Signal to Noise Ratio : > 58dBA

MP3-CD Bit Rate : 8-320 kbps

WMA-CD Bit Rate : 64-192 kbps

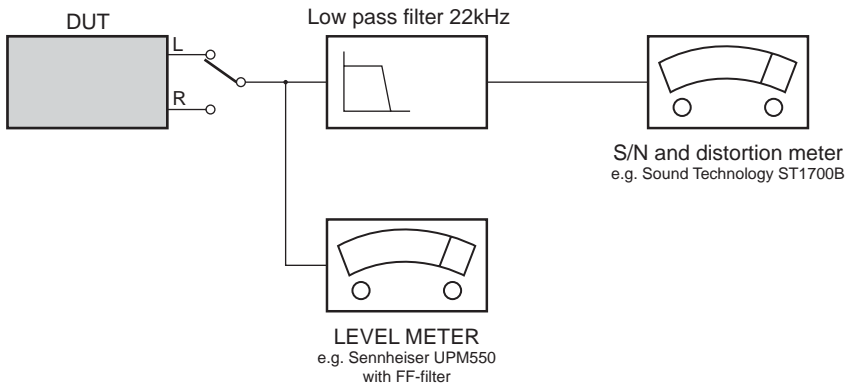
Sampling Frequencies : 8,11.025,12,16,22.05,24,
 32,44.1,48kHz

Recording Format : ISO9660 UDF format not supported

MEASUREMENT SETUP

CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)
L.P.F. = 13th order filter 4822 395 30204



SERVICE AIDS

Service Tools:

Universal Torx driver holder	4822 395 91019
Torx bit T10 150mm	4822 395 50456
Torx driver set T6-T20	4822 395 50145
Torx driver T10 extended	4822 395 50423

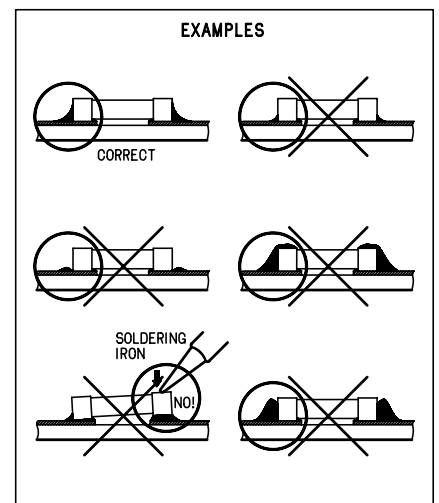
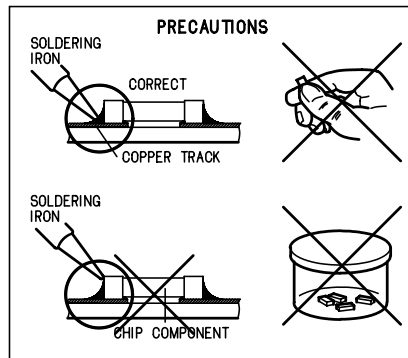
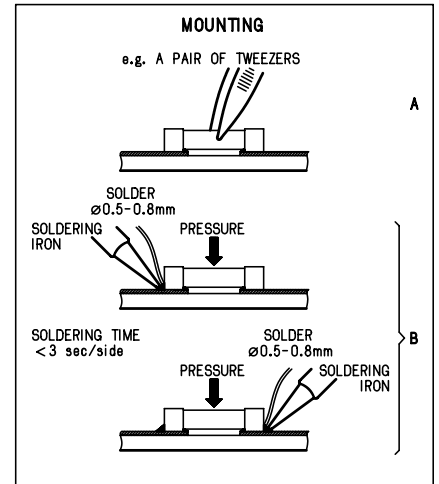
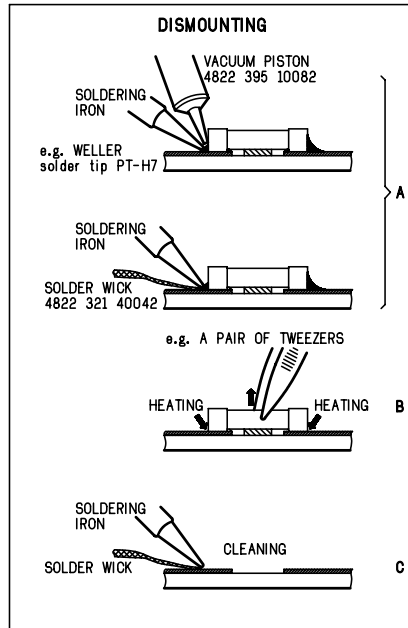
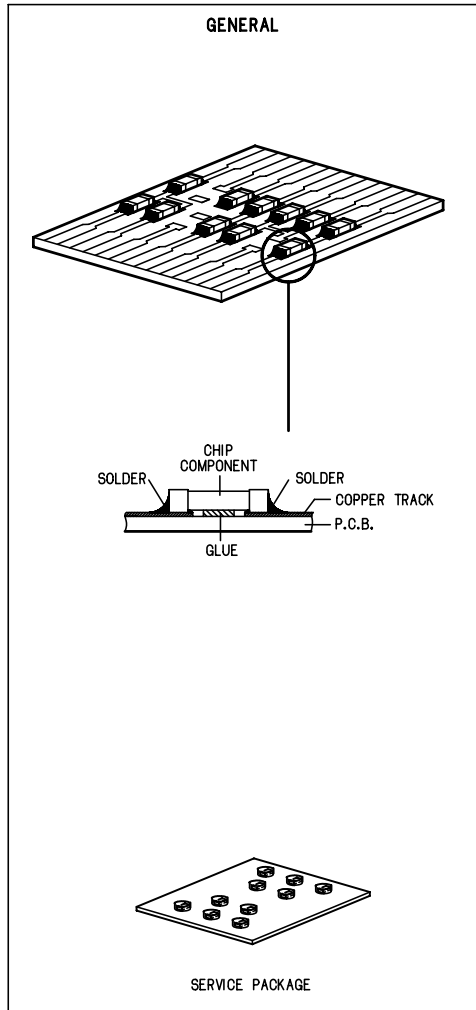
Compact Disc:

SBC426/426A Test disc 5 + 5A	4822 397 30096
SBC442 Audio Burn-in test disc 1kHz	4822 397 30155
SBC429 Audio Signals disc	4822 397 30184
Dolby Pro-logic Test Disc	4822 395 10216

ESD Equipment:

Anti-static table mat - large 1200x650x1.25mm ...	4822 466 10953
anti-static table mat - small 600x650x1.25mm	4822 466 10958
Anti-static wristband	4822 395 10223
Connectorbox (1M Ω)	4822 395 11307
Extension cable (to connect wristband to conn.box)	4822 320 11305
Connecting cable (to connect table mat to conn.box)	4822 320 11306
Earth cable (to Connect product to mat or box) --	4822 320 11308
Complete kit ESD3 (combining all above products)	4822 320 10671
Wristband tester	4822 344 13999

HANDLING CHIP COMPONENTS



(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.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).

Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.

Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet serti d'une résistance de sécurité.

Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).

Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.

Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.

Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.

Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.

Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione.

Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.

Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

ESD**(GB) ESD PROTECTION EQUIPMENT:**

Complete Kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671
Wristband tester 4822 344 13999

(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 \triangle .

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

De Veiligheidsonderdelen zijn aangeduid met het symbool \triangle .

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisés les pièces de rechange identiques à celles spécifiées.

Less composants de sécurité sont marqués \triangle .

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol \triangle markiert.

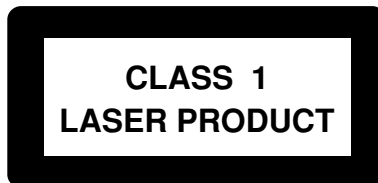
(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

Componenti di sicurezza sono marcati con \triangle .

(GB)

After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA.

**(GB) Warning !**

Invisible laser radiation when open.
Avoid direct exposure to beam.

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spårren är urkopplad. Betrakta ej strålen.

(SF) Varoitus !

Avatussa laitteessa ja suoalukituksen ohitettaessa olet alltiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

(DK) Advarse !

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for strålning.

(F)

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

INFORMATION ABOUT LEAD-FREE SOLDERING

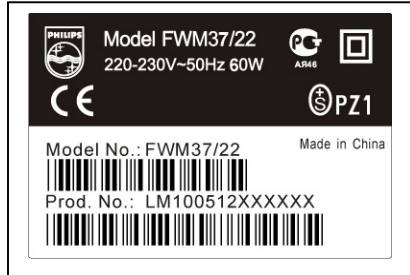
Philips CE is producing lead-free sets from 1.1.2005 onwards.

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 (leaded/ 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

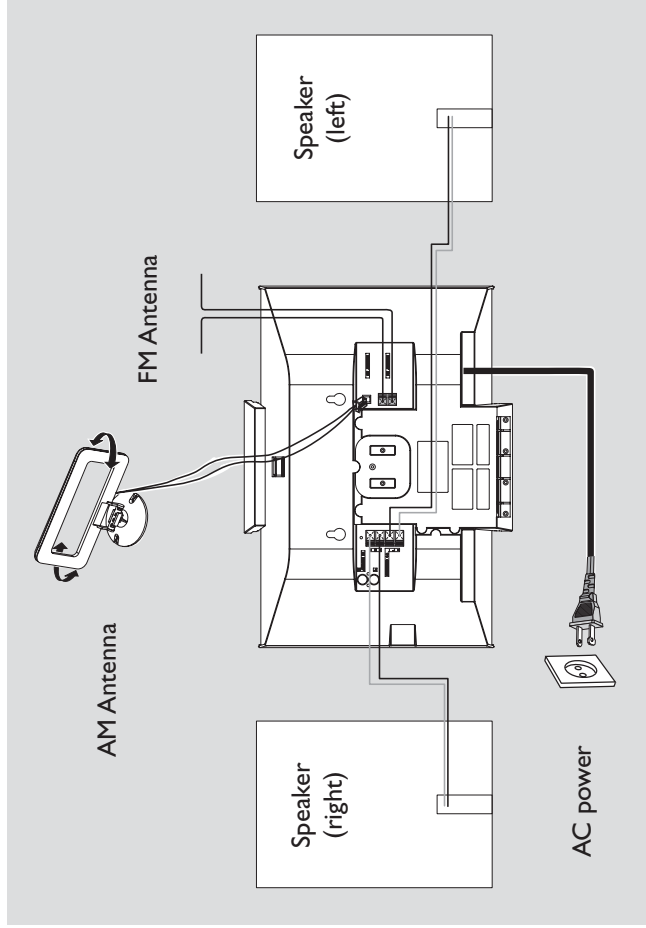
You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

SERVICE INSTRUCTION

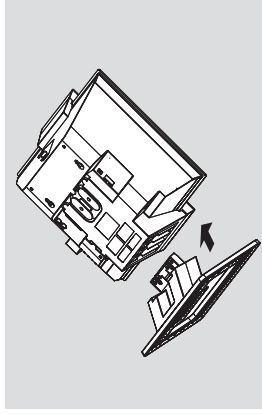
Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- 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.



Preparations

1 Align the side marked **PRESS** of the larger-size stand with the slots at the bottom of the main set.



2 Push the stand down into the slots until you hear a click.

3 Attach the two smaller-size stands to the speakers in the same way.

4 Place the main set and speakers upright on the desktop with the support of the stands.

Note:

To remove the stand from the main set or either speaker, while pressing down **PRESS**, pull the stand out from the slots.

Rear connections

The type plate is located at the rear of the system.

(A) Power

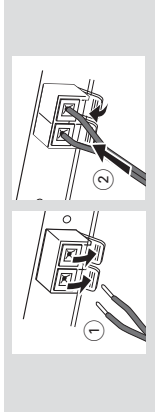
Before connecting the AC power cord to the wall outlet, ensure that all other connections have been made.

Warning!

- For optimal performance, use only the original power cable.
- Never make or change any connections with the power switched on.

To avoid overheating of the system, a safety circuit has been built in. Therefore, your system may switch to Standby mode automatically under extreme conditions. If this happens, let the system cool down before reusing it (not available for all versions).

FM Antenna



- For better FM stereo reception, connect an outdoor FM antenna to the FM ANTENNA terminal.

(C) Speakers Connection

Front Speakers

Connect the speaker wires to the SPEAKERS terminals, right speaker to "RIGHT" and left speaker to "LEFT", colored (marked) wire to "+" and black (unmarked) wire to "-".



- Full insert the stripped portion of the speaker wire into the terminal as shown.

Notes:

For optimal sound performance, use the supplied speakers.

Do not connect more than one speaker to any one pair of +/- speaker terminals.

Do not connect speakers with an impedance lower than the speakers supplied. Please refer to the SPECIFICATIONS section of this manual.

Placing the set and speakers

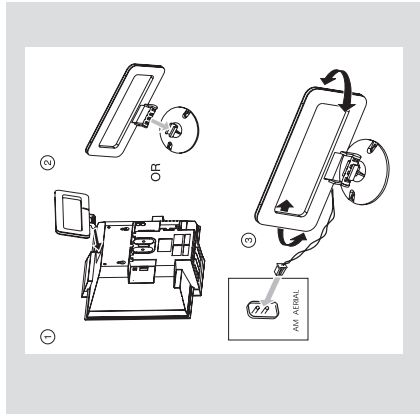
With the supplied detachable stands and wall mounting kit, you can either place the main set and speakers on desktop or mount them onto wall. Desktop installation is taken for example here. For how to mount the system onto wall, please refer to Appendix and the attached Wall Mounting Instructions.

(B) Antennas Connection

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

AM Antenna

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



Optional connection

The optional equipment and connecting cords are not supplied. Refer to the operating instructions of the connected equipment for details.

Connecting other equipment to our system

Connect the audio left and right OUT terminals of a TV, VCR, Laser Disc player, DVD player or CD Recorder to the **AUX/CDR IN** terminals.

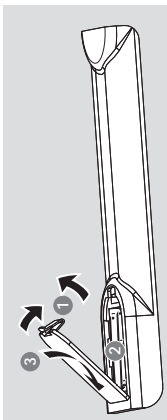
Note:

If you are connecting equipment with a mono output (a single audio out terminal), connect it to the AUX left terminal. Alternatively, you can use a "single to double" cinch cable (the output sound still remain mono).

PREPARATIONS & CONTROLS

Preparations

Inserting batteries into the Remote Control



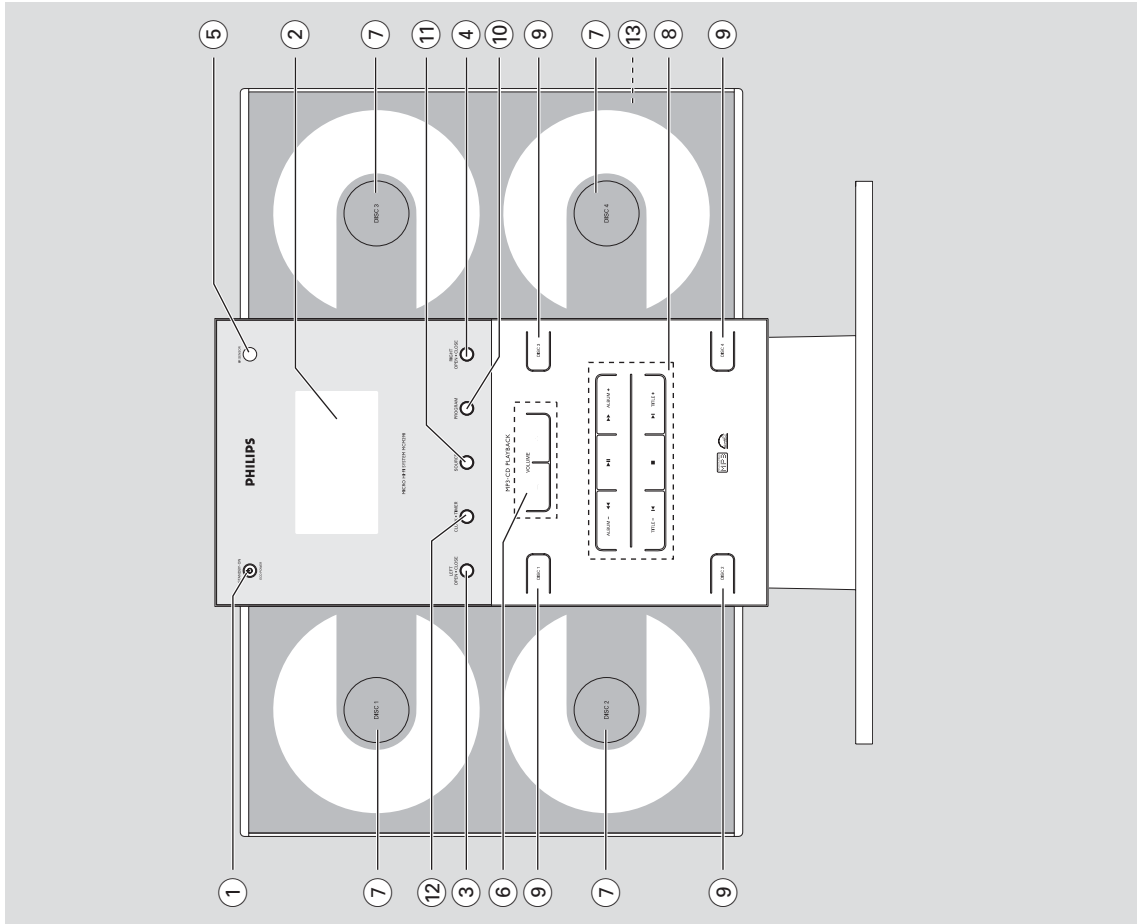
- 1 Open the battery compartment.
- 2 Insert two AAAA batteries following the indications (+/-) inside the compartment.
- 3 Close the cover.

Using the Remote Control to operate the Player

- 1 Aim the Remote Control directly at the remote sensor (IR) on the front panel.
- 2 Do not put any objects between the Remote Control and the stem while operating the stem.

CAUTION!

- Remove batteries if they are exhausted or if the Remote Control is not being used for a long time.
- Do not use old and new or different types of batteries in combination.
- Batteries contain chemical substances, so they should be disposed of properly.



CONTROLS

Controls

Controls on the s stem (illustrations on page 3)

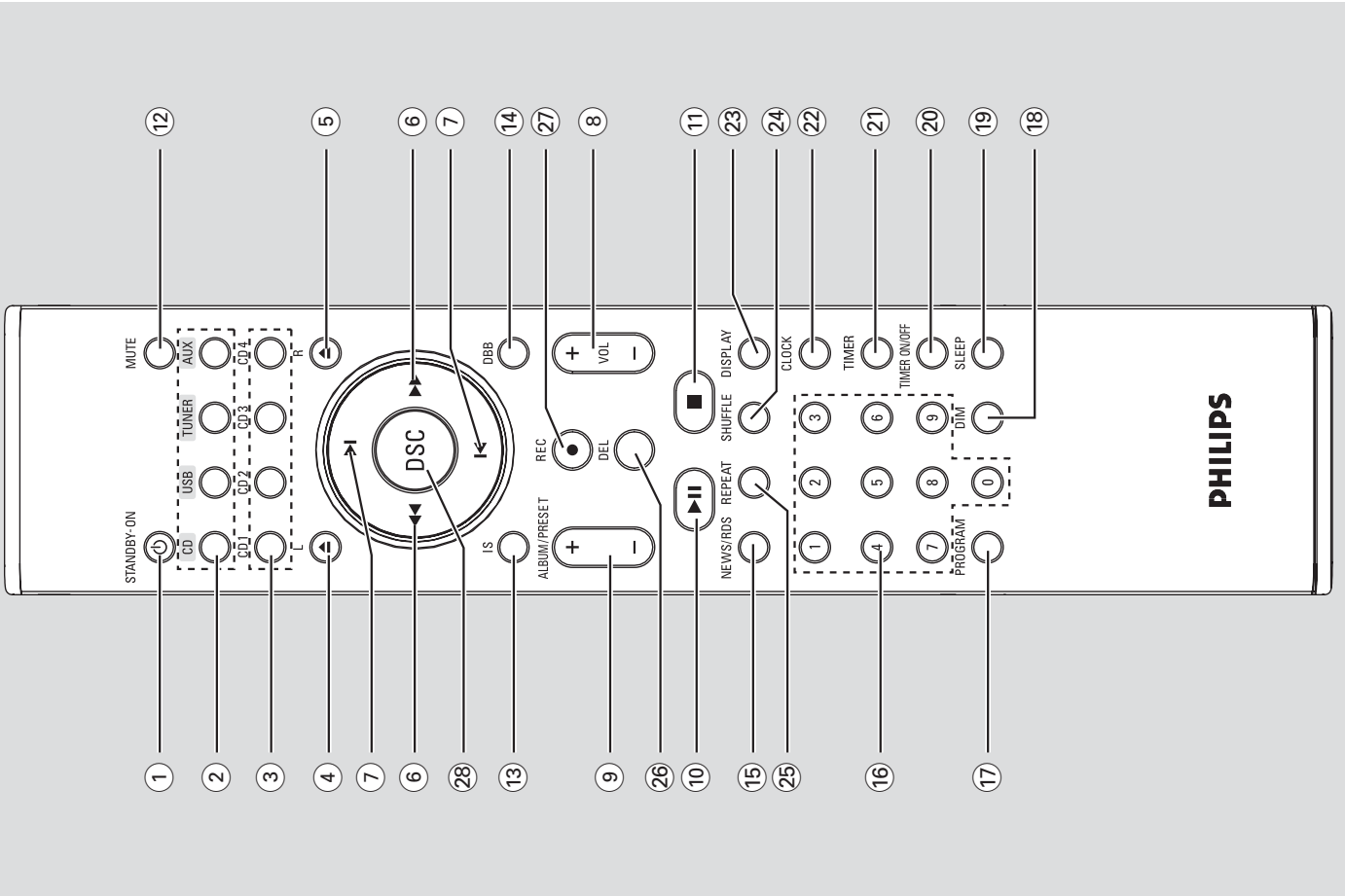
- 1 **STANDBY-ON/ECO POWER** switches the s stem on or to Eco Power standb /normal standb with clock displa .
- 2 **Displa screen** shows the status of the s stem.
- 3 **LEFT OPEN CLOSE** opens/closes the left CD door.
- 4 **RIGHT OPEN CLOSE** opens/closes the right CD door.
- 5 **IR** remote sensor
- 6 **VOLUME -/+** adjusts the volume level.
- 7 **Disc tra s**
- 8 **Mode Selection** **ALBUM -/+** tunes to a station. for CD/MP3-CD fast searches back and forward within a track/disc (press and hold). for MP3-CD skips to the beginning of a current/previous/ subsequent album. stops disc pla back or erases a disc program. starts or interrupts pla back. **TITLE -/+** selects a preset radio station. for CD/MP3 -CD skips to the beginning of a current/previous/ subsequent track. for Clock/Timer sets the minute.
- 9 **DISC 1/2/3/4** selects a disc tra for pla back.
- 10 **PROGRAM** for CD/MP3-CD programmes tracks and reviews the program. for TUNER programs tuner stations.
- 11 **SOURCE** selects the respective sound source for CD/ TUNER (FM/AM)/ AUX.

12 CLOCK TIMER

- Y sets the clock or timer function.
- 13 connects headphones

Controls on the remote (illustrations on page 4)

- 1 **STANDBY-ON** switches the s stem on or to Eco Power standb /normal standb with clock displa .
- 2 **Source selection (USB unavailable for this version)** selects the respective sound source for CD/ TUNER (FM/AM)/ AUX.
- 3 **CD 1/2/3/4** selects a disc tra for pla back.
- 4 **L ▲** opens/closes the left CD door.
- 5 **R ▲** opens/closes the right CD door.
- 6 **◀◀/▶▶** for TUNER tunes to a station. for CD/MP3-CD fast searches back and forward within a track/disc (press and hold). for MP3-CD skips to the beginning of a current/previous/ subsequent album. for Clock/Timer sets the hour.
- 7 **◀/▶** for CD/MP3 -CD skips to the beginning of a current/previous/ subsequent track.
- 8 **VOL +/-** adjusts the volume level.
- 9 **ALBUM/PRESET +/-** for TUNER selects a preset radio station. for MP3-CD skips to the beginning of a current/previous/ subsequent album. for Clock/Timer sets the minute.



CONTROLS AND TROUBLESHOOTING

Controls

- ⑩ **▶ II**
Y starts or interrupts pla back.
- ⑪ **■**
Y stops disc pla back or erases a disc program.
- ⑫ **MUTE**
Y interrupts and resumes sound reproduction.
- ⑬ **IS (Incredible Surround)**
Y activates or deactivates the surround sound effect.
- ⑭ **DBB (D namic Bass Boost)**
Y enhances the bass.
- ⑮ **NEWS/RDS (unavailable for this version)**
- ⑯ **Numeric Ke pad (0-9)**
for CD/MP3-CD selects a track for pla back directl .
- ⑰ **PROGRAM**
for CD/MP3-CD programs tracks and reviews the program.
for TUNER programs tuner stations.
- ⑱ **DIM**
Y turns on or off the dim function for the displa screen.
- ⑲ **SLEEP**
Y activates/deactivates or selects the sleeper time.
- ⑳ **TIMER ON/OFF**
Y activates/deactivates the timer function.
- ㉑ **TIMER**
Y sets the timer function.
- ㉒ **CLOCK**
Y sets the clock function.
- ㉓ **DISPLAY**
Y displa s disc information during pla back.
- ㉔ **SHUFFLE**
Y pla s disc tracks in random order.
- ㉕ **REPEAT**
Y repeats a track/disc program/entire disc.
- ㉖ **DEL (unavailable for this version)**
- ㉗ **REC (unavailable for this version)**
- ㉘ **DSC (Digital Sound Control)**
Y selects sound characteristics: ROCK/JAZZ/POP/CLASSIC.

- Notes for remote control:**
- First select the source you wish to control by pressing one of the source select keys on the remote control (for example CD, TUNER).
 - Then select the desired function (for example ▶ II, ↵ ▶).

Troubleshooting

WARNING

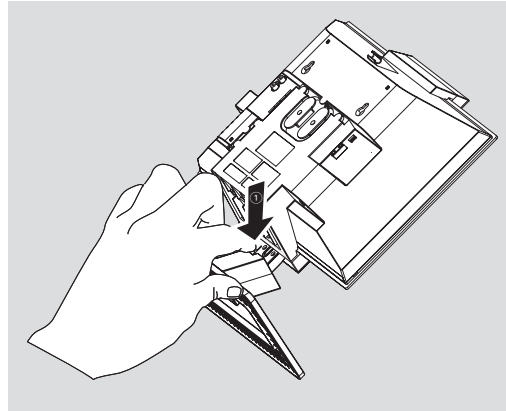
Under no circumstances should you try to repair the system yourself, as this will invalidate the warranty. Do not open the system as there is a risk of electric shock.
If a fault occurs, first check the points listed below before taking the system for repair. If you are unable to remedy a problem by following these hints, consult your dealer or Philips for help.

Problem	Solution
“NO DISC” is displayed.	<ul style="list-style-type: none"> ✓ Insert a disc. ✓ Check if the disc is inserted upside down. ✓ Wait until the moisture condensation at the lens has cleared. ✓ Replace or clean the disc, see “Maintenance”. ✓ Use a finalised CD-RW or a correct MP3-CD format disc. ✓ If the signal is too weak, adjust the antenna or connect an external antenna for better reception. ✓ Increase the distance between the Micro HiFi S stem and our TV or VCR. ✓ Remove and reconnect the AC power plug and switch on the s stem again. ✓ Adjust the volume. ✓ Disconnect the headphones. ✓ Check that the speakers are connected correctl . ✓ Check if the stripped speaker wire is clamped. ✓ Make sure the MP3-CD was recorded within 32~256 kbps bit rate with sampling frequencies at 48 kHz, 44.1 kHz or 32 kHz. ✓ Check the speaker connections and location.
Radio reception is poor.	<ul style="list-style-type: none"> ✓ Select the source (CD or TUNER, for example) before pressing the function button (▶ II, ↵, ▶). ✓ Reduce the distance between the remote control and the s stem. ✓ Insert the batter with its polarities (+/- signs) aligned as indicated. ✓ Replace the batter . ✓ Point the remote control directl toward IR sensor on the front of the s stem. ✓ Set the clock correctl . ✓ Press TIMER to switch on the timer. ✓ Power has been interrupted or the power cord has been disconnected. Reset the clock/timer.
The s stem does not react when buttons are pressed.	<ul style="list-style-type: none"> ✓ Check the remote control battery level. ✓ Check the remote control is pointed towards the s stem. ✓ Check if the remote control is in standby mode. ✓ Check if the remote control is not paired with the s stem.
Sound cannot be heard or is of poor quality .	<ul style="list-style-type: none"> ✓ Check the speaker connections and location. ✓ Check if the speaker wires are clamped. ✓ Make sure the MP3-CD was recorded within 32~256 kbps bit rate with sampling frequencies at 48 kHz, 44.1 kHz or 32 kHz. ✓ Check the speaker connections and location.
The left and right sound outputs are reversed.	<ul style="list-style-type: none"> ✓ Select the source (CD or TUNER, for example) before pressing the function button (▶ II, ↵, ▶). ✓ Reduce the distance between the remote control and the s stem. ✓ Insert the batter with its polarities (+/- signs) aligned as indicated. ✓ Replace the batter . ✓ Point the remote control directl toward IR sensor on the front of the s stem. ✓ Set the clock correctl . ✓ Press TIMER to switch on the timer. ✓ Power has been interrupted or the power cord has been disconnected. Reset the clock/timer.
The remote control does not function properly .	<ul style="list-style-type: none"> ✓ Check the remote control battery level. ✓ Check the remote control is pointed towards the s stem. ✓ Check if the remote control is in standby mode. ✓ Check if the remote control is not paired with the s stem.
The timer is not working.	<ul style="list-style-type: none"> ✓ Check the remote control battery level. ✓ Check the remote control is pointed towards the s stem. ✓ Check if the remote control is in standby mode. ✓ Check if the remote control is not paired with the s stem.
The Clock/Timer setting is erased.	<ul style="list-style-type: none"> ✓ Check the remote control battery level. ✓ Check the remote control is pointed towards the s stem. ✓ Check if the remote control is in standby mode. ✓ Check if the remote control is not paired with the s stem.

DISMANTLING INSTRUCTIONS

Detaching the Stands from the Speakers and Main Sets

- 1 To detach the stand from the main unit,
 - a. As shown, hold down **PRESS ▼**
 - b. Move out the stand to detach.



- 2 Detach the speaker stands in the same way as you do the main unit stand.

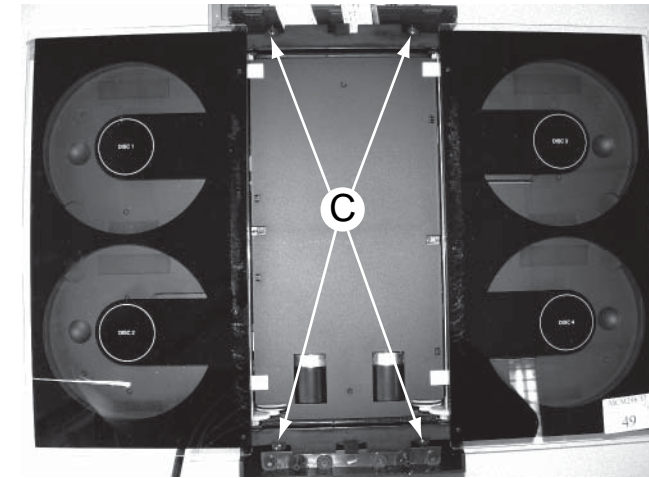
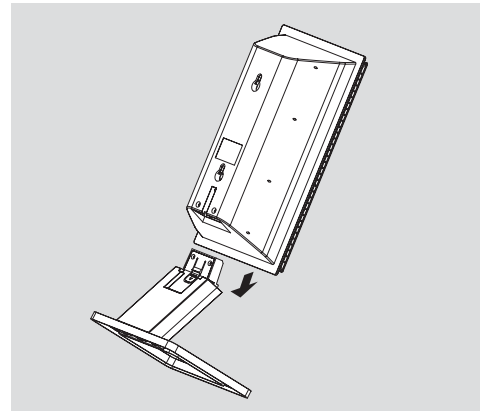


Figure 2

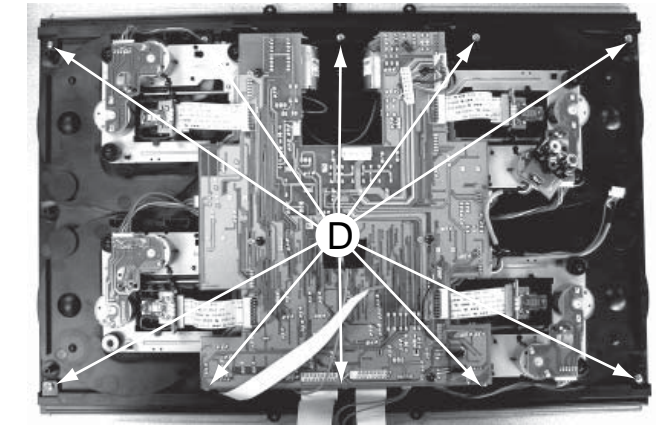


Figure 3

Dismantling of the Front and Rear Panel assembly

- 1) Loosen 4 screws A to remove the Front Panel Ass'y by sliding it out towards the underside before lifting up as shown in Figure 1.
- 2) Loosen 7 screws B and 4 screws C to remove the Rear Panel Ass'y .
 - 7 screws on the rear
 - 2 screws each on the upside & downside as shown in Figure 2.
- 3) Loosen 10 screws D (see Figure 3) to remove the CD Door Track, then remove Left and Right CD Door.
 - 5 screws each on the upper & under side.

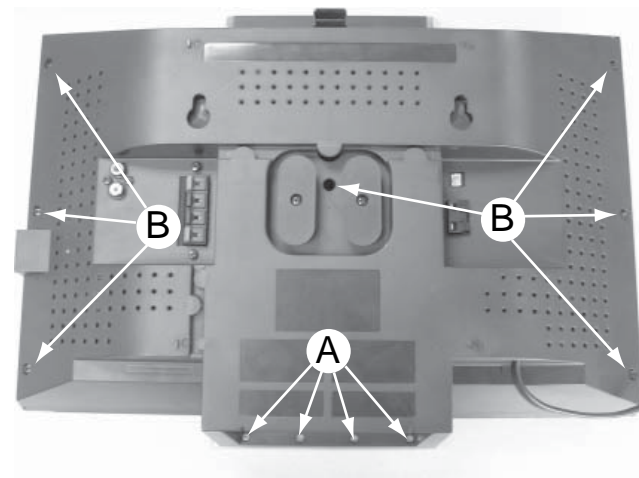


Figure 1

Detaching the Control Panel Ass'y from the Front Panel Ass'y

- 1) Loosen 11 screws E (see Figure 4) to remove the Control Panel Ass'y .

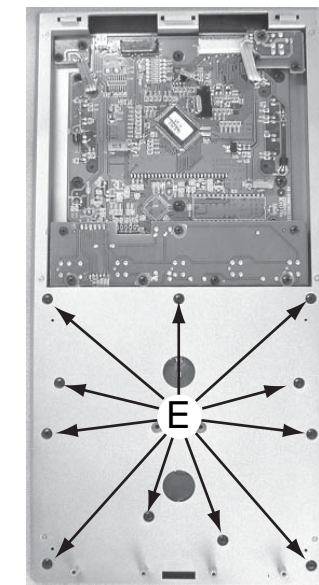


Figure 4

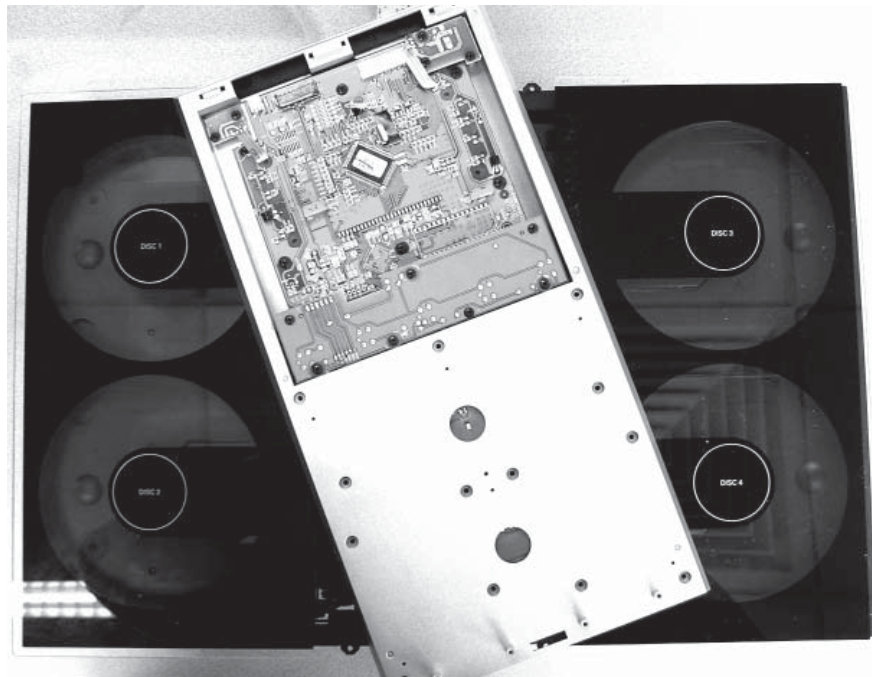
DISMANTLING INSTRUCTIONS

Repair Hints & Service Positions

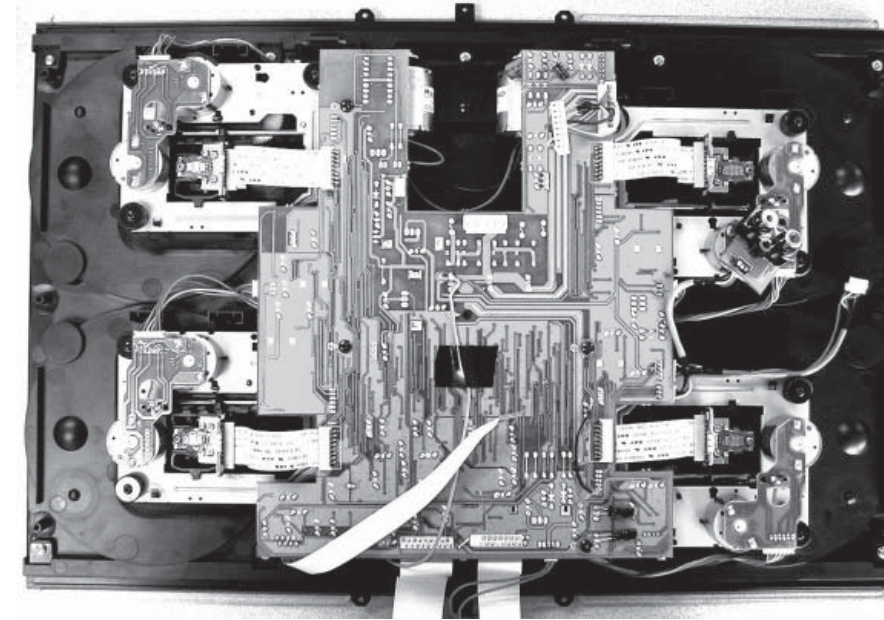
- 1) During repair it is possible to disconnect the Tuner Board and/or CD Module completely unless the fault is suspected to be in that area. This will not affect the performance of the rest of the set.

Note: The flex cables are very fragile, care should be taken not to damage them during repair. After repair, be very sure that the flex cables are inserted properly into the flex sockets before encasing, otherwise faults may occur.

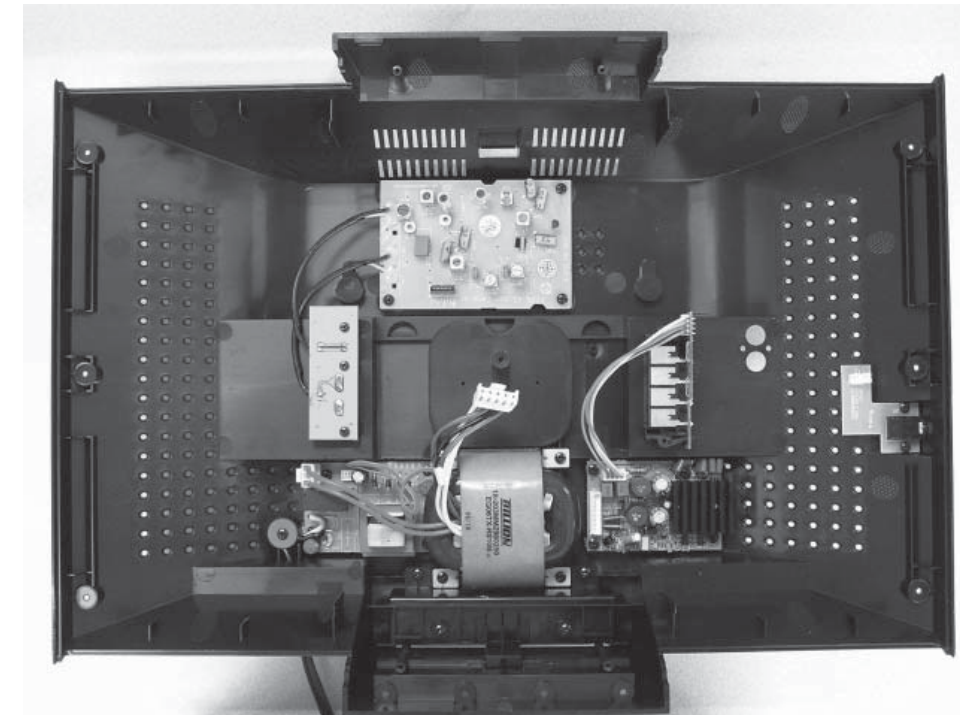
Service position A



Service position B



Service position C



SERVICE TEST PROGRAM

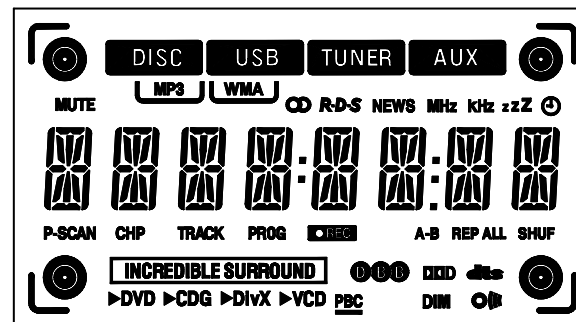
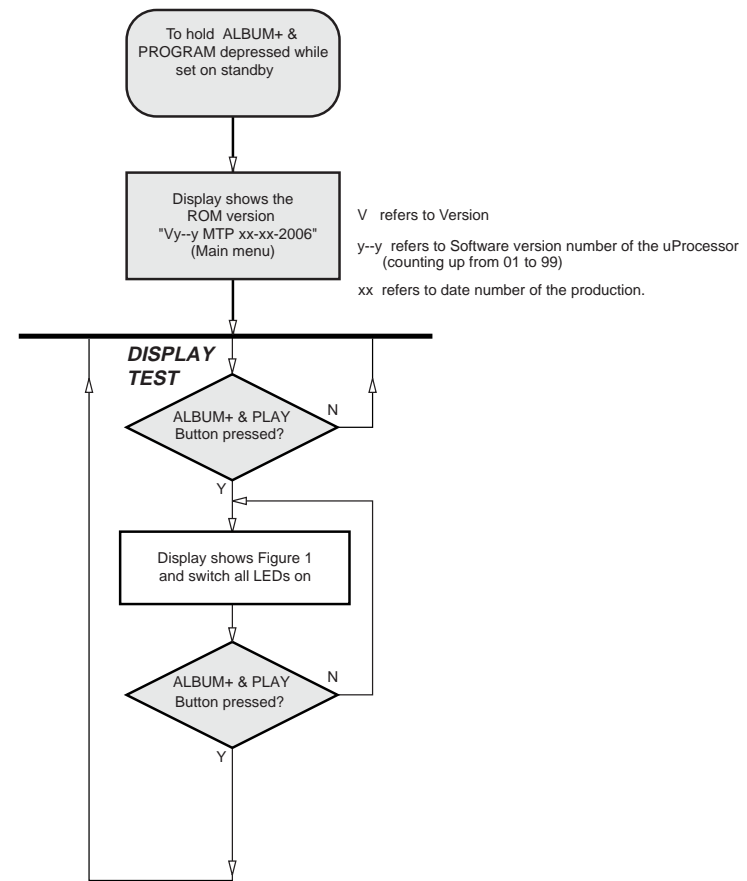
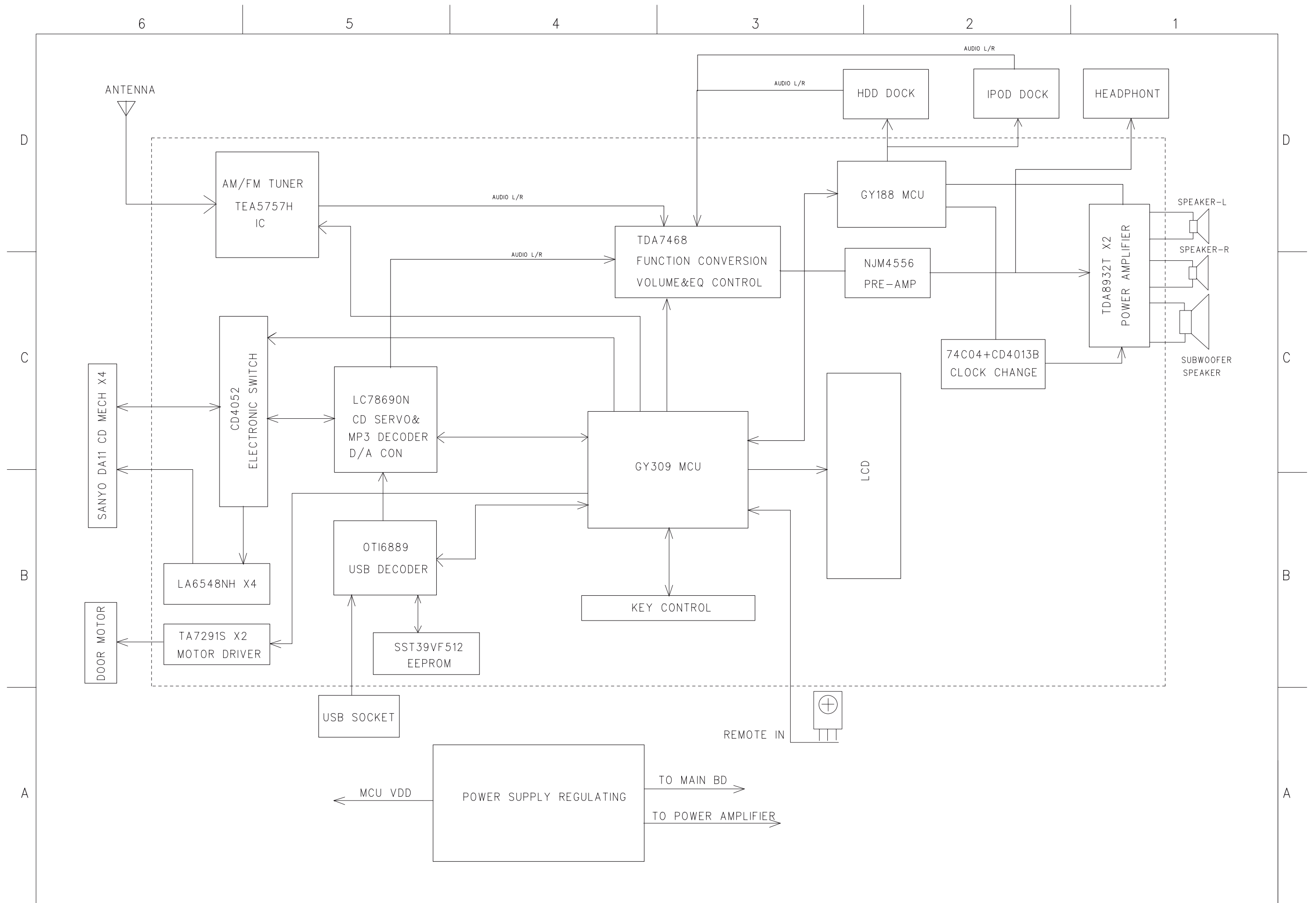
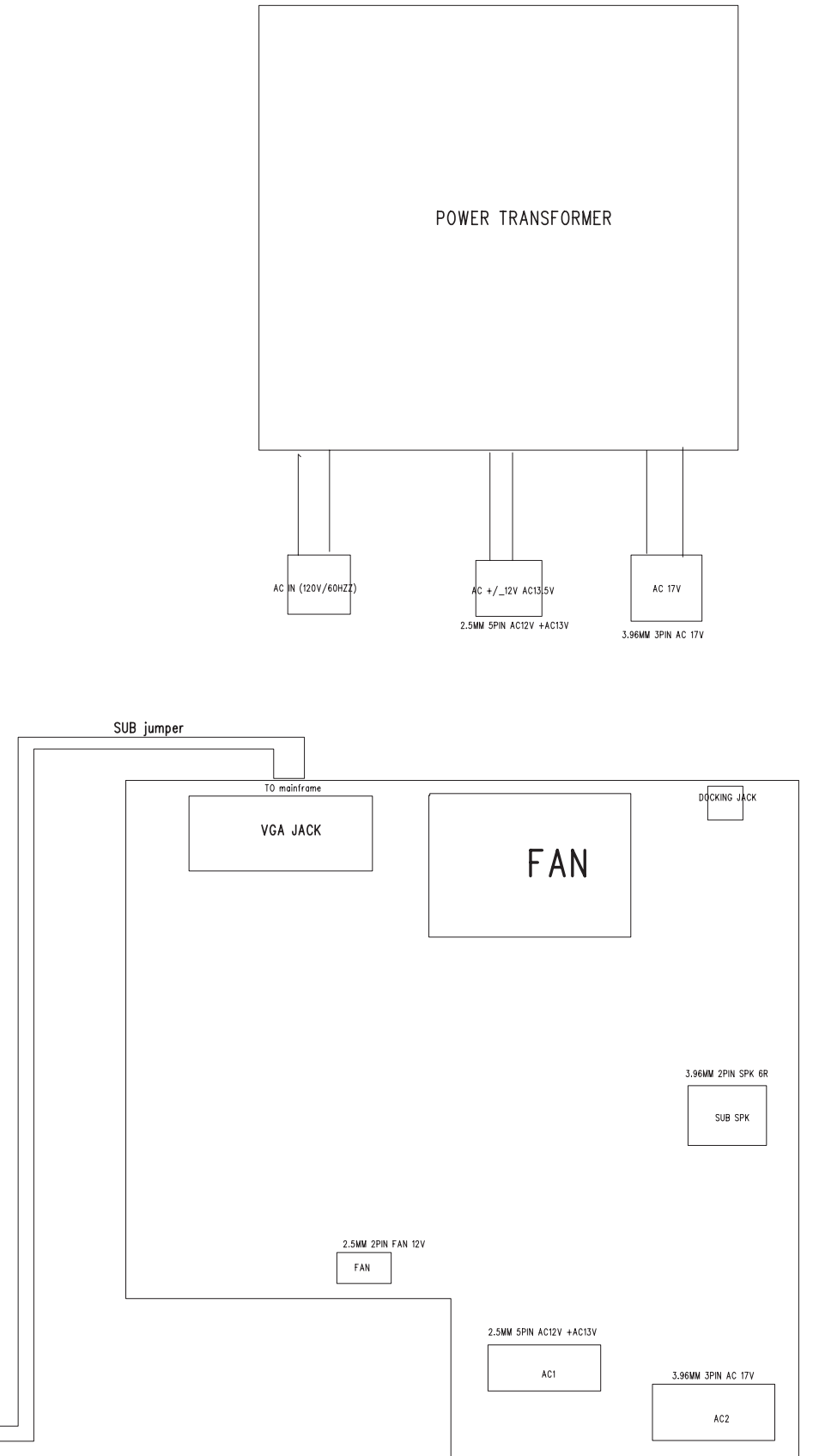
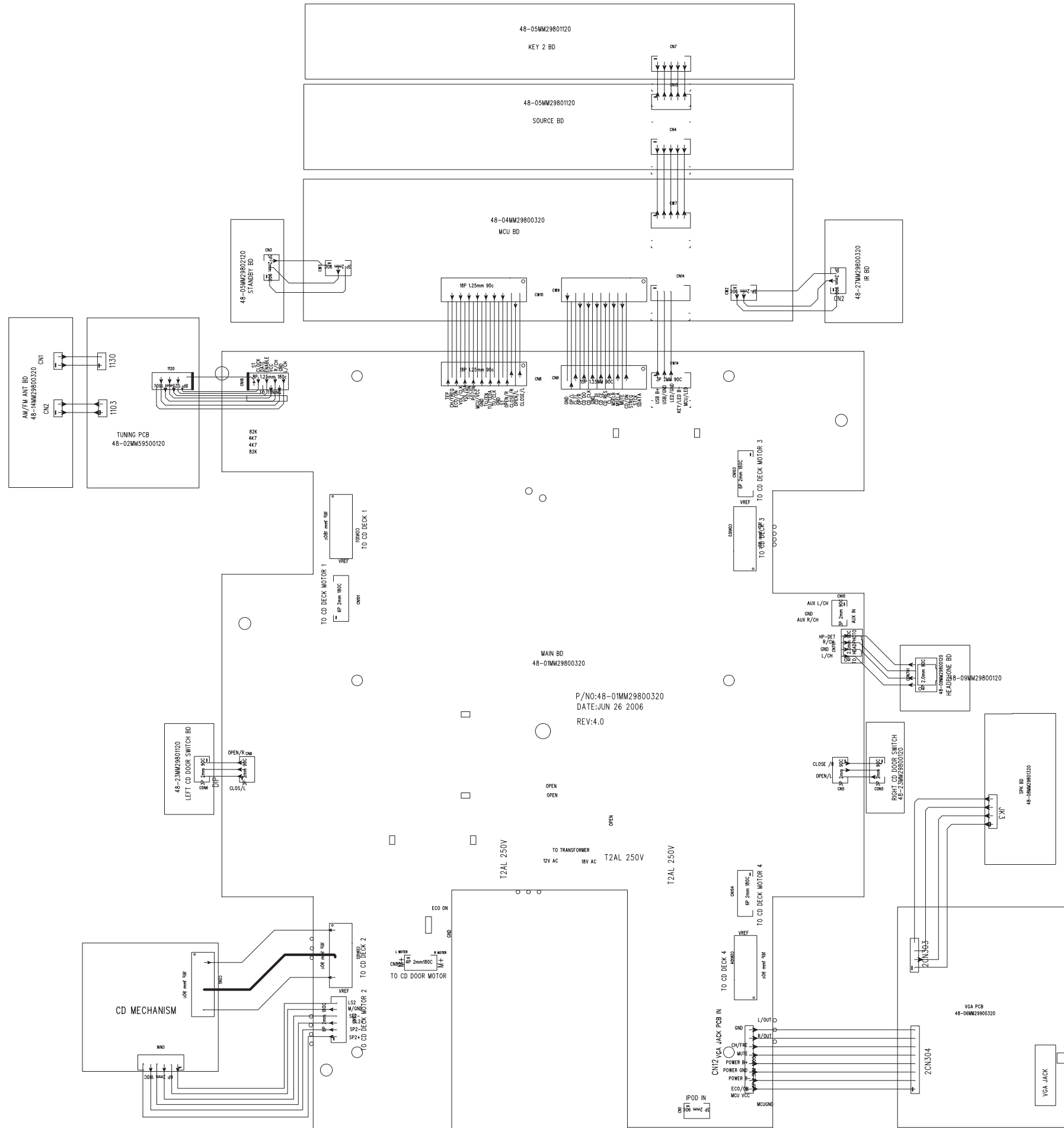


Figure 1

SET BLOCK DIAGRAM



SET WIRING DIAGRAM

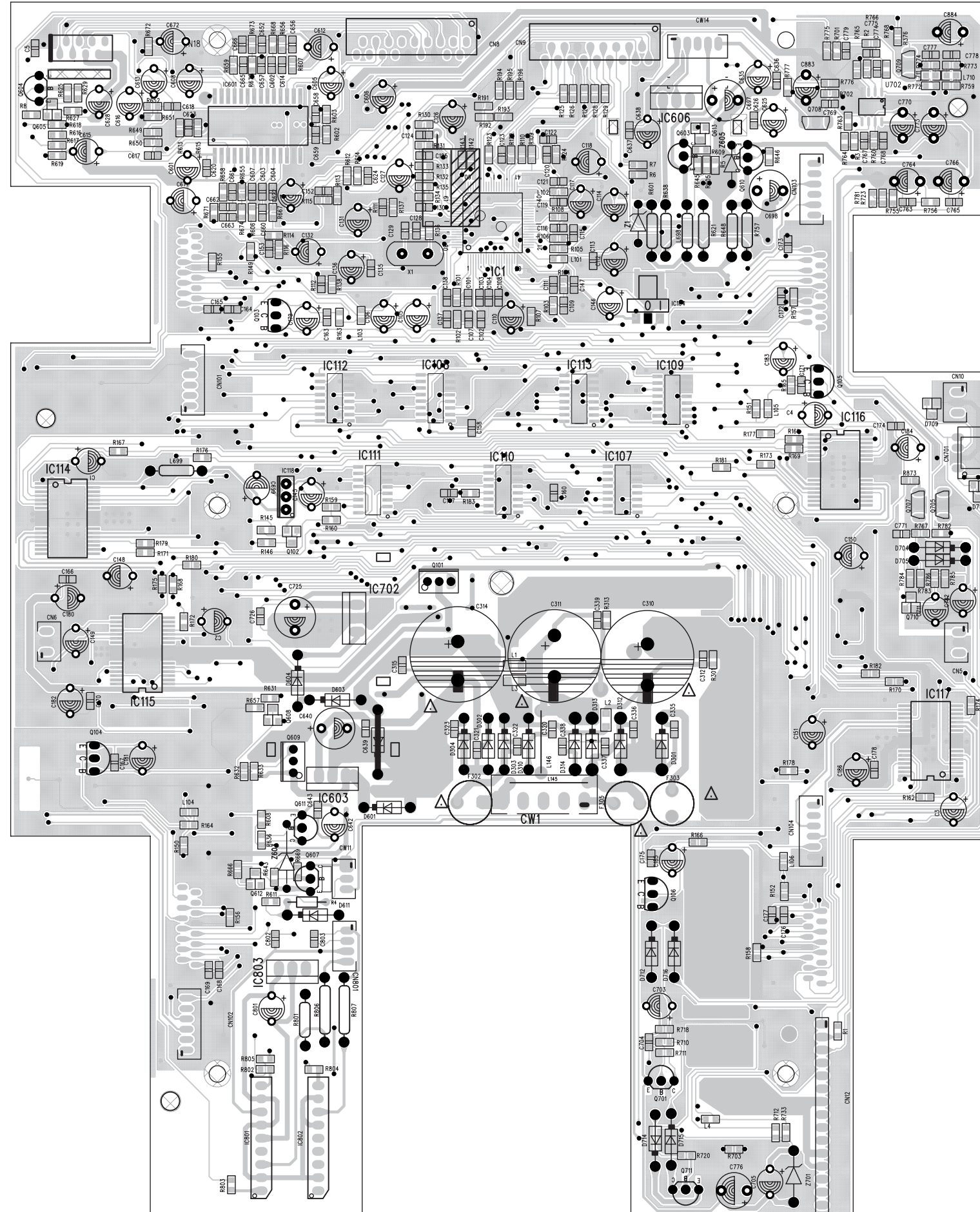


MAIN BOARD

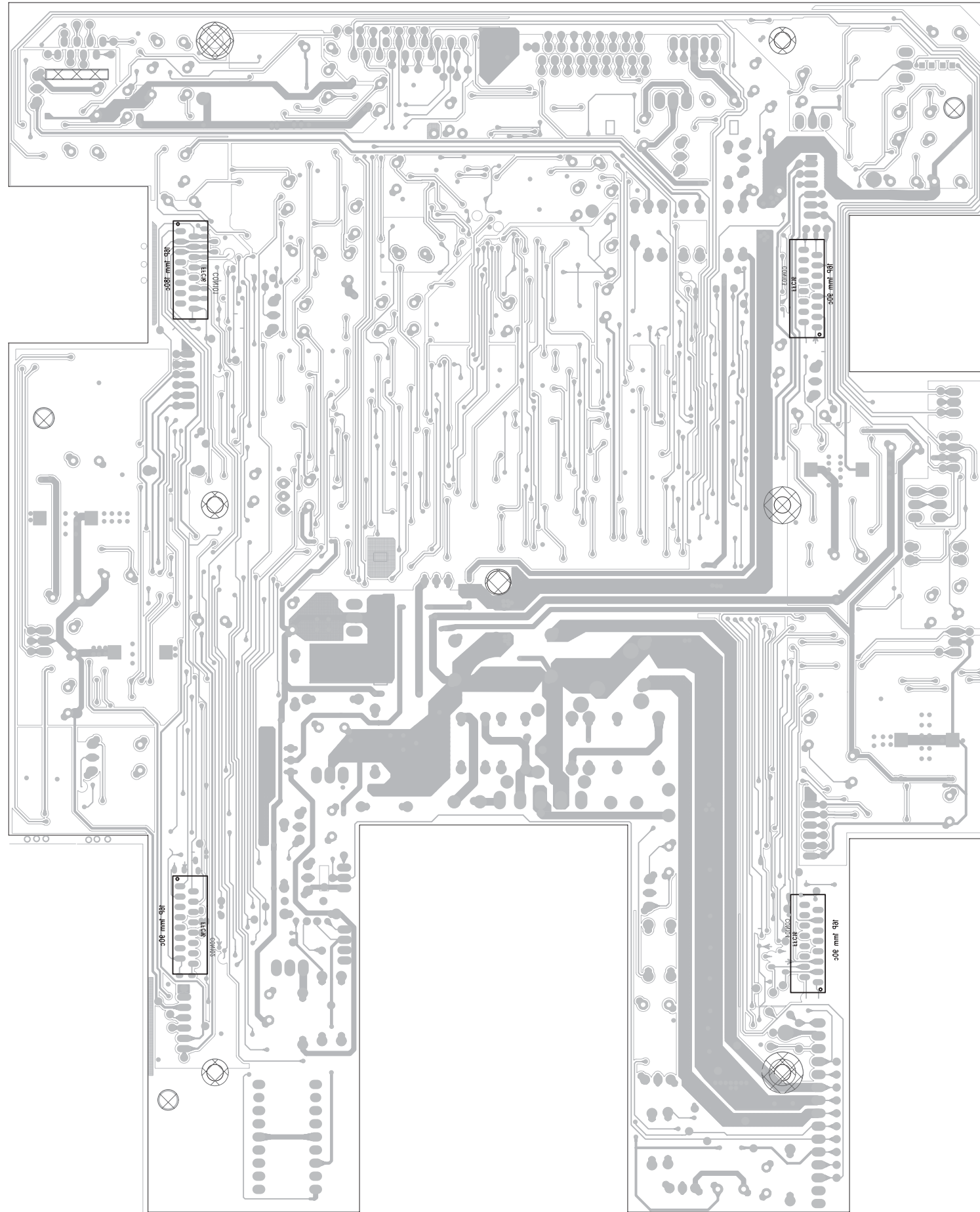
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Main PCB - Layout Bottom View	6-3
Main PCB - Circuit Diagram (Audio Part)	6-4
Main PCB - Circuit Diagram (CD Part)	6-5
Class D Power PCB - Layout Top View	6-6

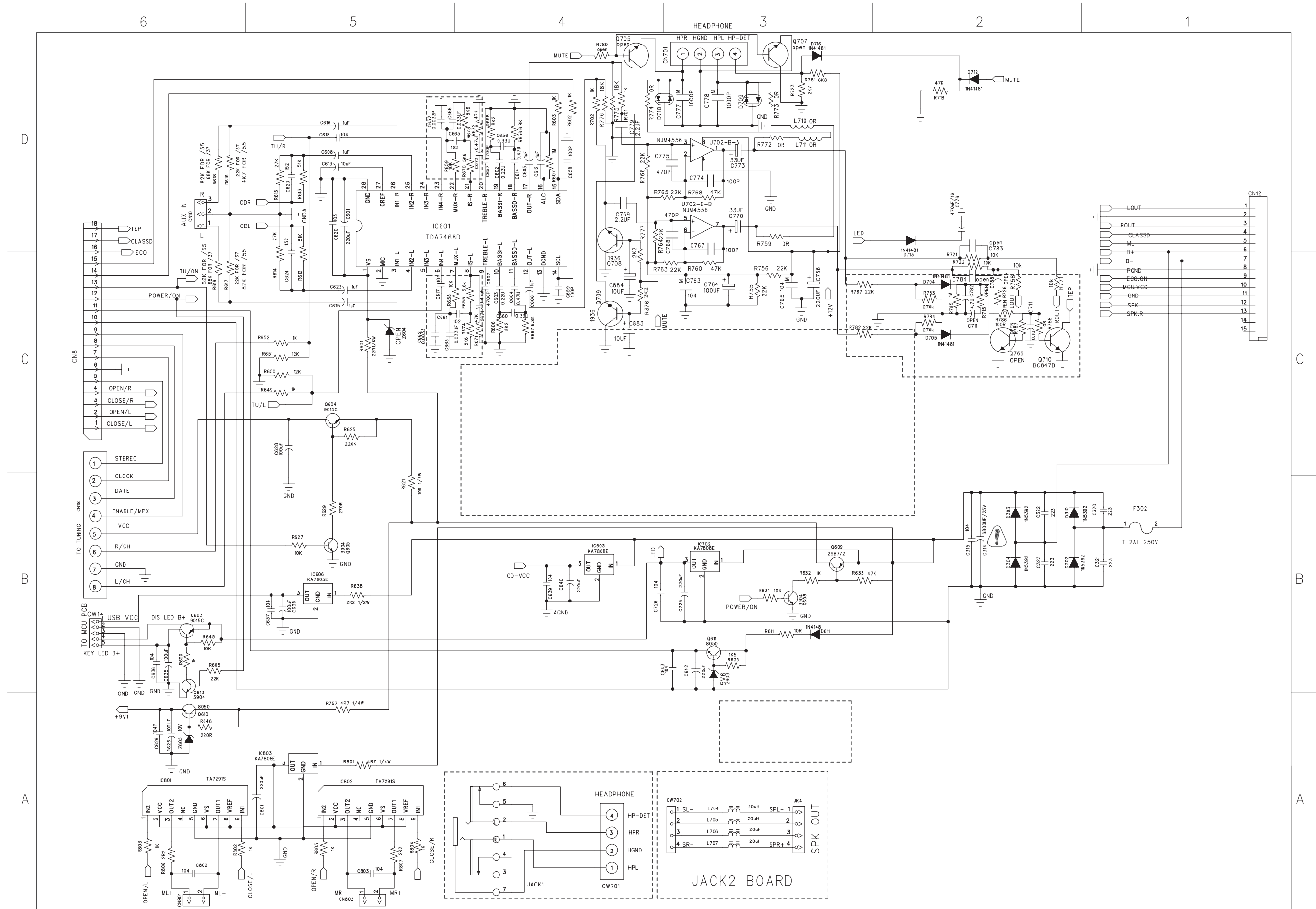
PCB LAYOUT - MAIN BOARD (TOP VIEW)



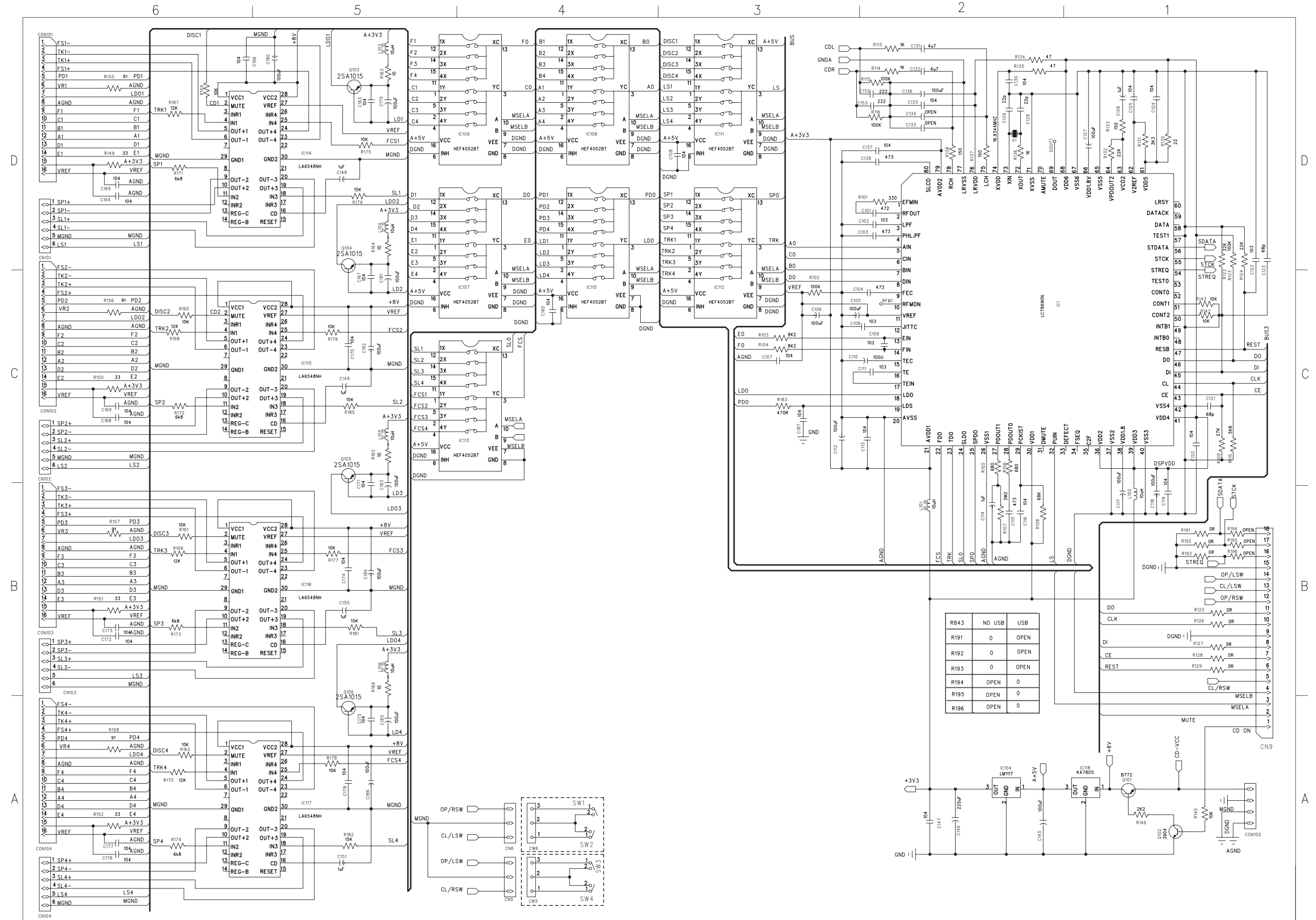
PCB LAYOUT - MAIN BOARD (BOTTOM VIEW)



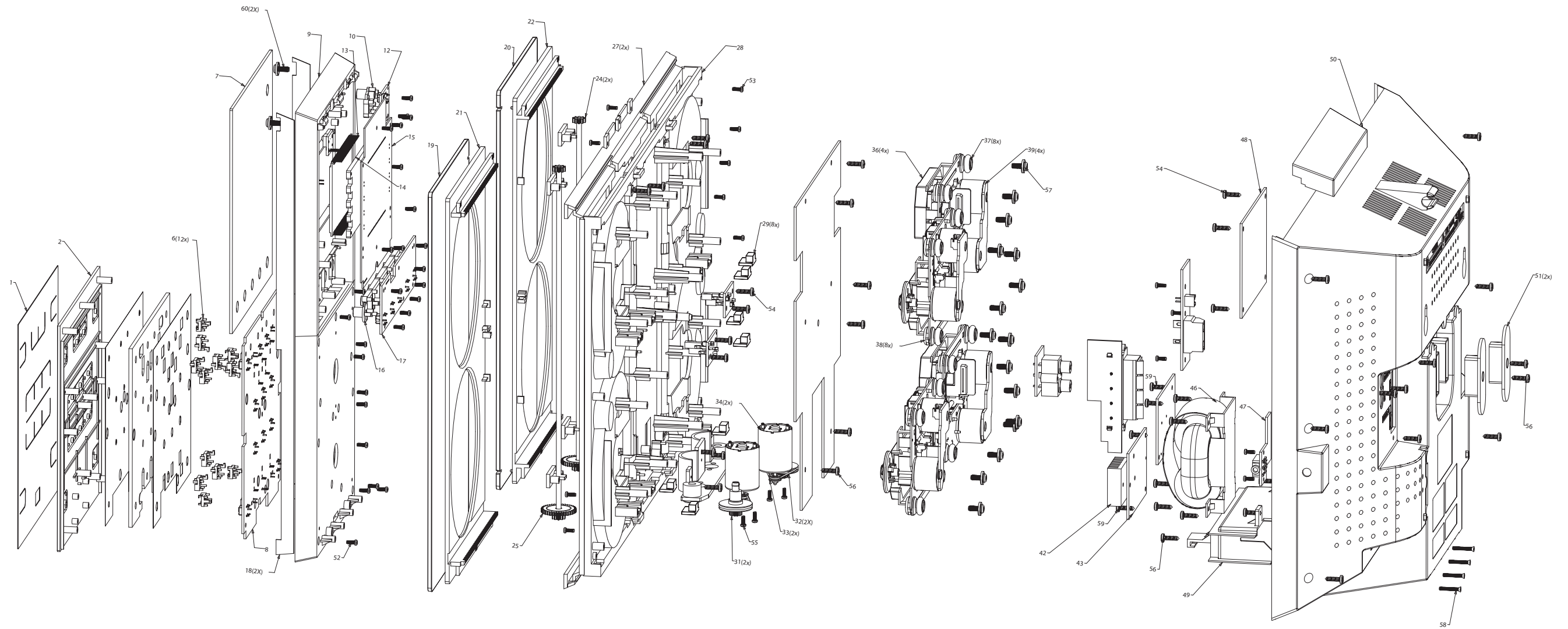
CIRCUIT DIAGRAM - MAIN BOARD AUDIO PART



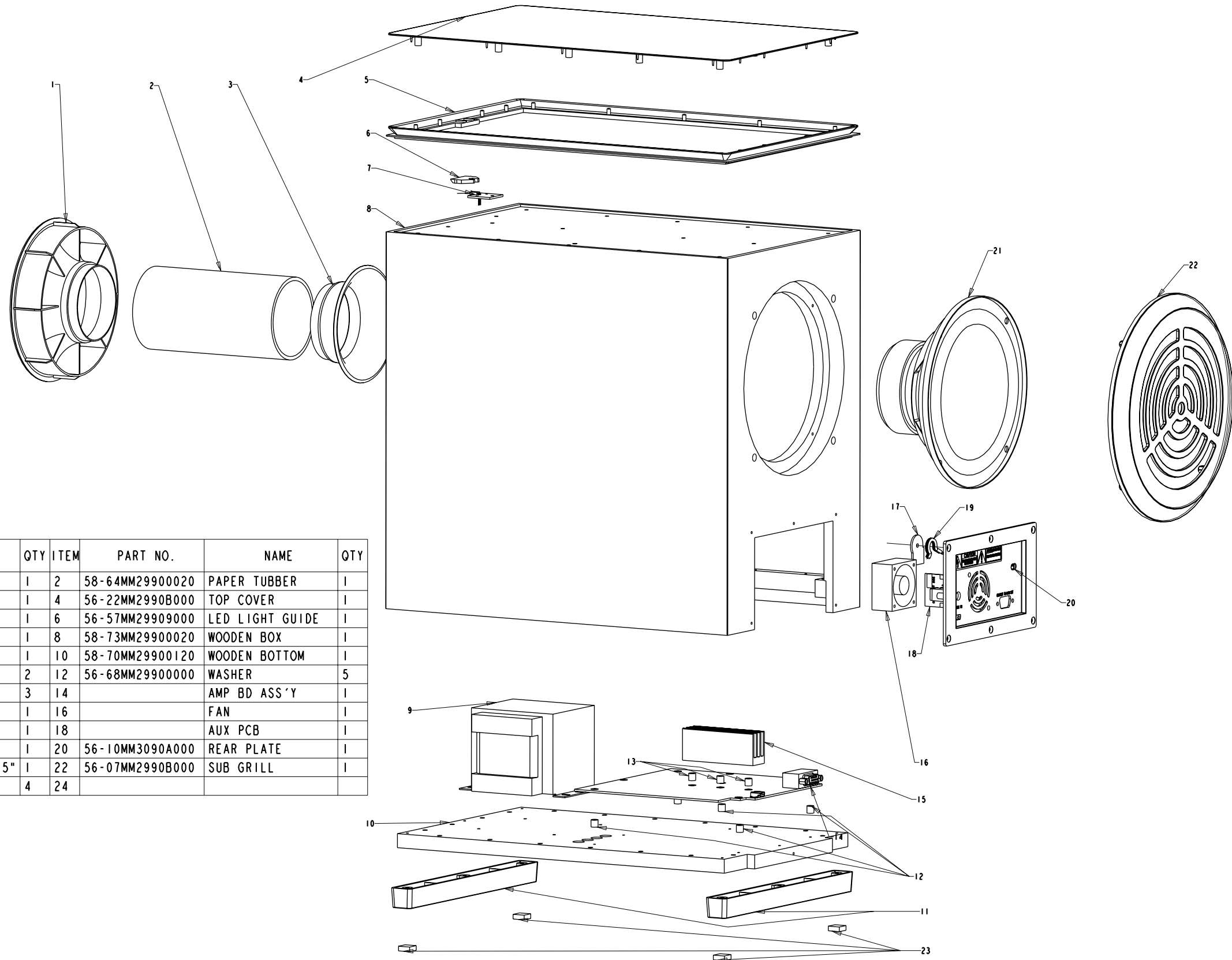
CIRCUIT DIAGRAM - MAIN BOARD CD PART



MAIN SET MECHANICAL EXPLODED VIEW



SUBWOOFER MECHANICAL EXPLODED VIEW



ITEM	PART NO.	NAME	QTY	ITEM	PART NO.	NAME	QTY
1	56-87MM2990B000	SUB DUCT OUT	1	2	58-64MM29900020	PAPER TUBBER	1
3	56-87MM2991B000	SUB DUCT IN	1	4	56-22MM2990B000	TOP COVER	1
5	56-78MM29908000	TOP LING	1	6	56-57MM29909000	LED LIGHT GUIDE	1
7		LED BD ASS'Y	1	8	58-73MM29900020	WOODEN BOX	1
9		TRANSFORMER	1	10	58-70MM29900120	WOODEN BOTTOM	1
11	56-80MM2990A000	SUB STAND	2	12	56-68MM29900000	WASHER	5
13	56-62MM29900020	POST	3	14		AMP BD ASS'Y	1
15	61-48MM29900120	HEAT SINK 100W	1	16		FAN	1
17		PCB FOR AC CORD	1	18		AUX PCB	1
19		AC CORD	1	20	56-10MM3090A000	REAR PLATE	1
21		SUB WOOFER SPK 6.5"	1	22	56-07MM2990B000	SUB GRILL	1
23	58-263103100020	FOOT RUBBER	4	24			

MECHANICAL & ACCESSORIES PARTS LIST

02	996510001575	CONTROL PANEL
07	996510001572	FRONT LENS
09	996500040378	FRONT PANEL
10	996500040388	STAND KEY
16	996500040389	SOURCE KEY
19	996500040393	CD DOOR LENS-R
20	996500040392	CD DOOR LENS -L
21	996500040384	CD DOOR RIGHT
22	996500040383	CD DOOR LEFT
24	996500040386	ROLLER TOP GEAR
25	996500040385	ROLLER BOTTOM GEAR
27	996500042424	CD DOOR TRACK
28	996500040379	MIDDLE PANEL
31	996500040387	DRIVER PULLEY
32	996500040395	BELT 29.5x1.3x1.3mm
33	994000002818	DOOR MOTOR PULLY
34	994000002815	DC MOTOR 5V
37	994000001944	DAMPER-RUBBER (30C)
38	996500040396	DAMPER-RUBBER (50C)
39	994000005398	CD MECHANISM DA11B3VF
46	△ 996510001558	TRANSFORMER EI76 120V T08498A
50	996510001576	REAR PANEL
	996500040091	MAIN SET STAND ASSEMBLY
	996500040405	16P FFC 1mm L=60mm
	996500040407	18P FFC 1.25mm L=130mm
	994000001362	8P FFC1.25MM L=160MM
	996510001570	USB/RCA CABLE 2M (WHITE)
	996510001571	15P CABLE (WHITE) L2M
	996510001573	USB DOOR HANDLE
	996510001574	USB SPRING
	996510001577	ROLLER HOLDER
	996510001578	STAND HOLDER
	996510001579	FIX WIRE HOLDER COVER
	994000004392	LASER COVER (FOR SANYO CD)
	996510001580	DISPLACE COVER
	996510001581	USB LIGHT GUIDE LENS
	996510001582	CONTROL KEY LIGHT GUIDE LENS
	996510001583	LCD LIGHT GUIDE
	996510001584	USB RING
	△ 996500040377	AC CORD CUL APP 6FT
	996510001559	SUB GRILL
	996510001561	REMOTE CONTROL
	996500040382	WALL BRACKET
	996500040390	SCREW SPACE (RED)
	996500040398	SELF-TAPPING SCREW 4.6x30mm

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

ELECTRICAL PARTSLIST

	996510001562	MAIN BD ASS'Y MCM309R/37
F302	△ 994000001222	FUSE RADIAL LT 2A 250V
	996500040400	TUNER BOARD ASS'Y
	996510001563	DISPLAY BD ASS'Y (37)
	996510001555	POWER BD ASS'Y (37)
	2C929△	994000001225 SAFETY CAP 275V 0.22UF -20%
	2F901△	994000001223 FUSE RADIAL T5A 250V
	2F902△	994000001229 FUSE RADIAL T200MA/250V
	2F903△	996500042464 AXIAL FUSE 3.9x10.5mm T1A/250V
	2F904△	994000001223 FUSE RADIAL T5A 250V
	2F905△	994000001223 FUSE RADIAL T5A 250V
	2F908	996500042464 AXIAL FUSE 3.9x10.5mm T1A/250V
	2F909	996500042464 AXIAL FUSE 3.9x10.5mm T1A/250V
	RL901	996500039818 RELAY ME-7-006-HSL DC6V AC10A
	996510001557	LED BD ASS'Y
	996500042443	LED LAMP 2x5x7mm(S.BLUE)
	996510001564	KEY BD ASS'Y (37)

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