

Service  
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**Service**



# Service Manual



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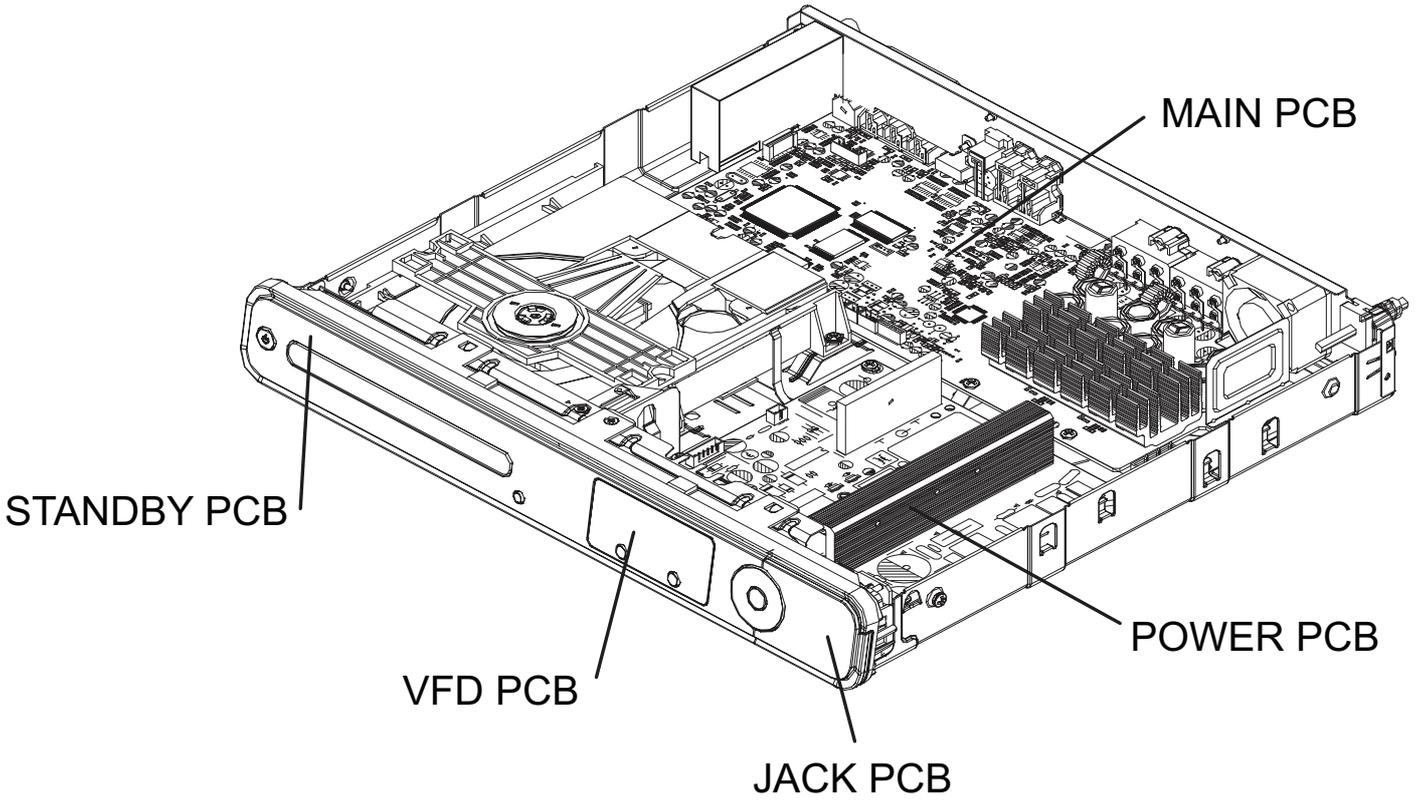
GB 3139 785 33821

Version 1.1



# PHILIPS

# LOCATION OF PCB BOARDS



## VERSION VARIATION:

| Type/Versions       | HTS3264D   |
|---------------------|------------|
| <b>Features</b>     | <b>/37</b> |
| Output Power - 600W | X          |
| Voltage (120V)      | X          |
| Aux IN              | X          |

## SERVICE SCENARIO MATRIX:

| Type/Versions          | HTS3264D   |
|------------------------|------------|
| <b>Board in used</b>   | <b>/37</b> |
| Main Board             | Bd         |
| Power Board            | Bd         |
| VFD+JACK+STANDBY Board | Bd         |

\*Bd = Board Level Repair

# SPECIFICATIONS

## AMPLIFIER

|  |                              |
|--|------------------------------|
| Total output power:                          |                              |
| - Home Theater mode .....                    | 600 W                        |
| - FTC* output power .....                    | 420 W                        |
| Frequency Response .....                     | 180 Hz – 18 kHz / $\pm 3$ dB |
| Signal-to-Noise Ratio.....                   | > 60 dB (A-weighted)         |
| Input Sensitivity                            |                              |
| - AUX 1 .....                                | 400 mV                       |
| - AUX 2 .....                                | 400 mV                       |
| - MP3 LINK .....                             | 400 mV                       |
| * (Main Ch@1kHz Sub Ch 60 Hz within 1% THD ) |                              |

## RADIO

|                            |                               |
|----------------------------|-------------------------------|
| Tuning Range.....          | FM 87.5-108 MHz               |
| .....                      | (100 kHz)                     |
| .....                      | 26 dB Quieting                |
| Sensitivity .....          | FM 22 dBf                     |
| IF Rejection Ratio .....   | FM 60 dB                      |
| Signal-to-Noise Ratio..... | FM 50 dB                      |
| Harmonic Distortion .....  | FM Mono 3%                    |
| .....                      | FM Stereo 3%                  |
| Frequency Response .....   | FM 180 Hz–10 kHz / $\pm 6$ dB |
| Stereo Separation.....     | FM 26 dB (1 kHz)              |
| Stereo Threshold.....      | FM 29 dB                      |

## DISC

|                          |                        |
|--------------------------|------------------------|
| Laser Type.....          | Semiconductor          |
| Disc Diametre .....      | 12cm / 8cm             |
| Video Decoding .....     | MPEG-1 / MPEG-2 /      |
| .....                    | / DivX 3/4/5/6, Ultra  |
| Video DAC .....          | 12 Bits                |
| Signal System.....       | NTSC / Multi           |
| Video Format .....       | 4:3 / 16:9             |
| Video S/N .....          | 56 dB                  |
| Composite Video          |                        |
| Output.....              | 1.0 Vp-p, 75 $\Omega$  |
| Frequency Response ..... | 4 Hz–20 kHz (44.1 kHz) |
| .....                    | 4 Hz–22 kHz (48 kHz)   |
| .....                    | 4 Hz–44 kHz (96 kHz)   |
| PCM.....                 | IEC 60958              |
| Dolby Digital .....      | IEC 60958, IEC 61937   |

## MAIN UNIT

|                           |                     |
|---------------------------|---------------------|
| Power Supply Rating ..... | 120 V; 60 Hz        |
| Power Consumption .....   | 100 W               |
| Dimensions.....           | 360 x 58 x 332 (mm) |
| .....                     | (w x h x d)         |
| Weight .....              | 2.9 kg              |

## IPOD DOCK

|                 |                 |
|-----------------|-----------------|
| Dimensions..... | 32.5 x 104 (mm) |
| .....           | (h x d)         |
| Weight .....    | 163.5 g         |

## FRONT AND REAR SPEAKERS

|                         |                       |
|-------------------------|-----------------------|
| System.....             | Full range satellite  |
| Impedance.....          | 3 $\Omega$            |
| Speaker drivers .....   | 3" full range speaker |
| Frequency response..... | 150 Hz – 20 kHz       |
| Dimensions.....         | 103 x 203 x 71 (mm)   |
| .....                   | (w x h x d)           |
| Weight .....            | 0.45 kg/each          |

## CENTRE SPEAKER

|                         |                       |
|-------------------------|-----------------------|
| System.....             | Full range satellite  |
| Impedance.....          | 6 $\Omega$            |
| Speaker drivers .....   | 3" full range speaker |
| Frequency response..... | 150 Hz – 20 kHz       |
| Dimensions.....         | 244 x 105 x 74 (mm)   |
| .....                   | (w x h x d)           |
| Weight .....            | 0.78 kg               |

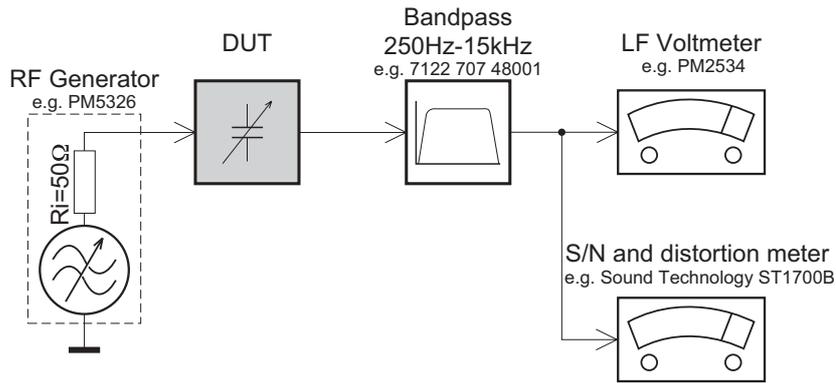
## SUBWOOFER

|                         |                      |
|-------------------------|----------------------|
| Impedance.....          | 6 $\Omega$           |
| Speaker drivers .....   | 165mm (6.5") woofer  |
| Frequency response..... | 40 Hz – 150 Hz       |
| Dimensions.....         | 123 x 310 x 369 (mm) |
| .....                   | (w x h x d)          |
| Weight .....            | 3.85 kg              |

Specifications subject to change without prior notice.

# MEASUREMENT SETUP

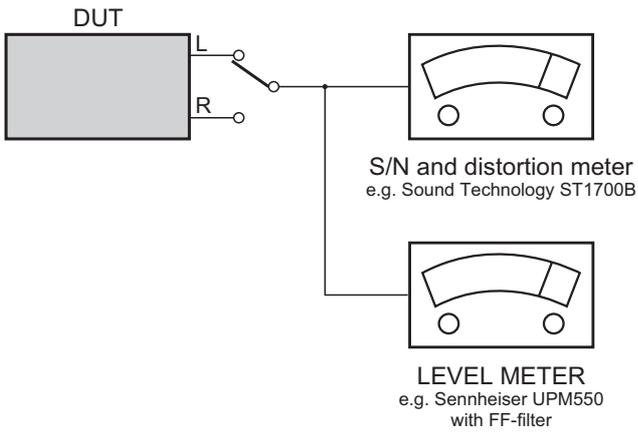
## Tuner FM



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

## CD

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



# SERVICE AIDS

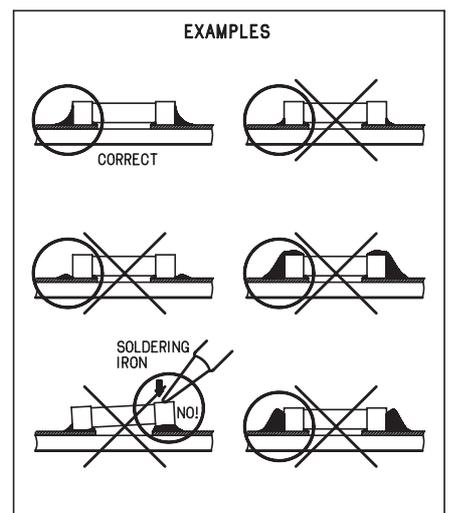
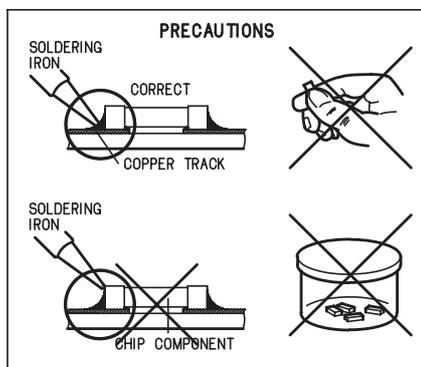
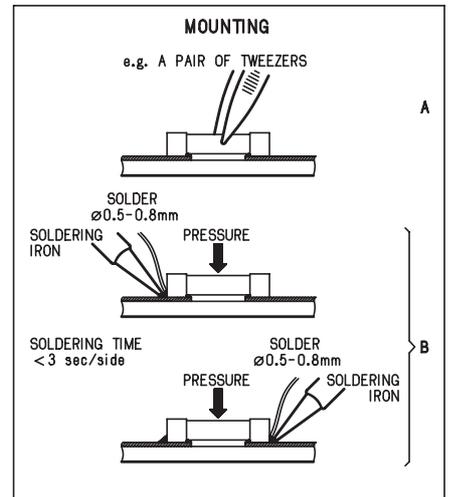
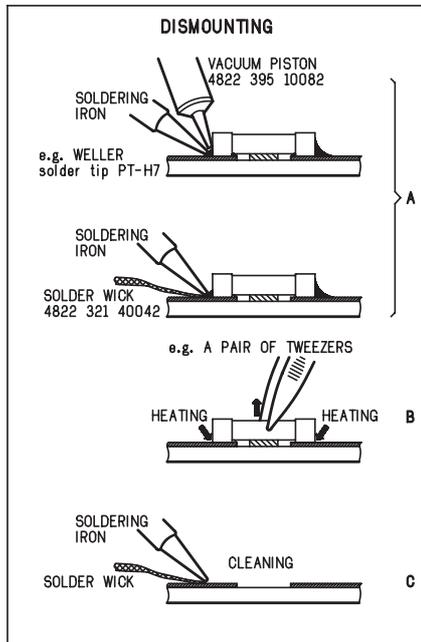
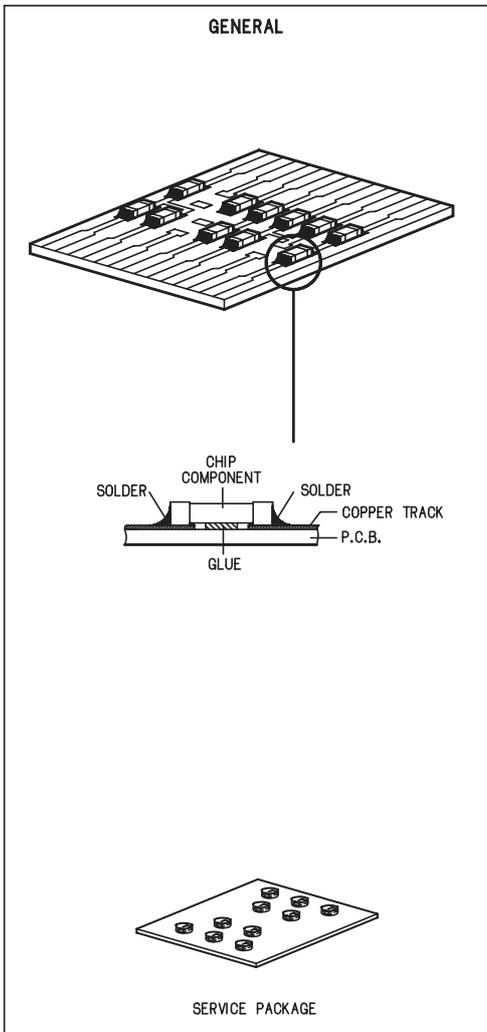
## Service Tools:

|                                    |                |
|------------------------------------|----------------|
| 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 |

## 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 enfiler 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 ridatta 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 bracciale a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

**(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  $\Delta$ .

**(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 symbol  $\Delta$ .

**(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.

Les composants de sécurité sont marqués  $\Delta$ .

**(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  $\Delta$  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  $\Delta$ .

**(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 spärren är urkopplad. Betrakta ej strålen.

**(SF) Varoitus !**

Avatussa laitteessa ja suojauslaitteiden ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

**(DK) Advarse !**

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

**(F)**

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

## Pb(Lead) Free Solder

When soldering, be sure to use the pb free solder.

### IDENTIFICATION:

Regardless of special logo (not always indicated) 

one must treat all sets from **1 Jan 2005** onwards, according next rules:

**Important note:** In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (lead-free/ 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 unused 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](http://www.atyourservice.ce.Philips.com) you find more information to:
  - BGA-de-/soldering (+ baking instructions)
  - Heating-profiles of BGAs and other ICs used in Philips-sets

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

For additional questions please contact your local repair-helpdesk.

## **System , Region Code , etc. Setting Prochure**

### **1)System Reset**

- Press "OPTIONS" button on R/C,TV will show setup menu
- Select the menu using the ▼ and ► on R/C
- Go preference page to do system reset

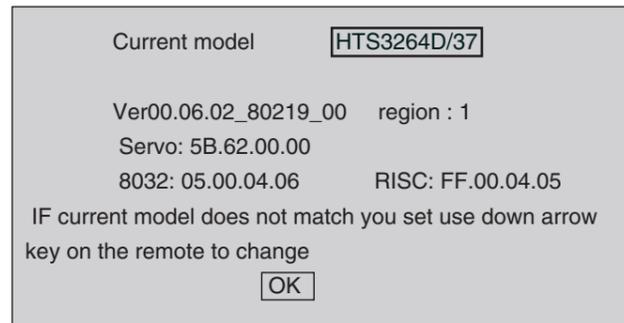
### **2)Region Code Change**

- In open model, press "9" "9" "9" on R/C,then input desired number to change region code :

|   |                       |
|---|-----------------------|
| 1 | USA                   |
| 2 | EU                    |
| 3 | AP                    |
| 4 | Australia ,NZ , Latam |
| 5 | Russia , INDIA        |
| 6 | CHINA                 |

### **3)Version Control Change**

- In open model, press "1" "5" "9" on R/C
- Press "ok" button to confirm
- TV will show message as below:



### **4)Password Change**

- Press "OPTIONS " button on R/C,TV will show setup menu
  - Select the menu using the ▼ and ► on R/C
  - Go preference page select "password" to change
- \* 000000 is default password supplied.

### **5)Check on the Sofeware Version**

- Open the CD Door
- Press "INFO" button on R/C
- TV will show the version on screen

### **6)Trade model**

- Press "Open/Close " button on R/C
- Press "2" "5" "9" on R/C,VFD will display "TRA ON " or "TRA OFF"

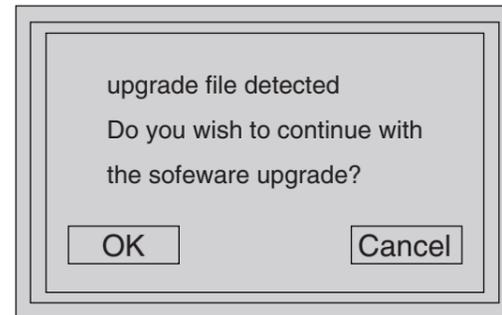
### **7) Upgrading new software**

- Copy "software files" into a CD-R
- Open the CD Door,then insert the CD-R program disc
- Close the CD Door
- VFD will show:

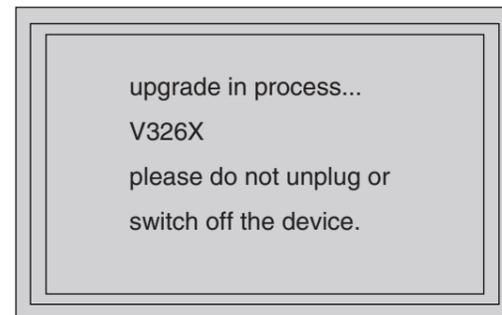
"Loading"  
 "Erase" -- erase the flash memory  
 "Writing" about 1 minute  
 "done "

\* the system will switch off and on again automatically.

- OSD will show:



- Select "OK", OSD will show:

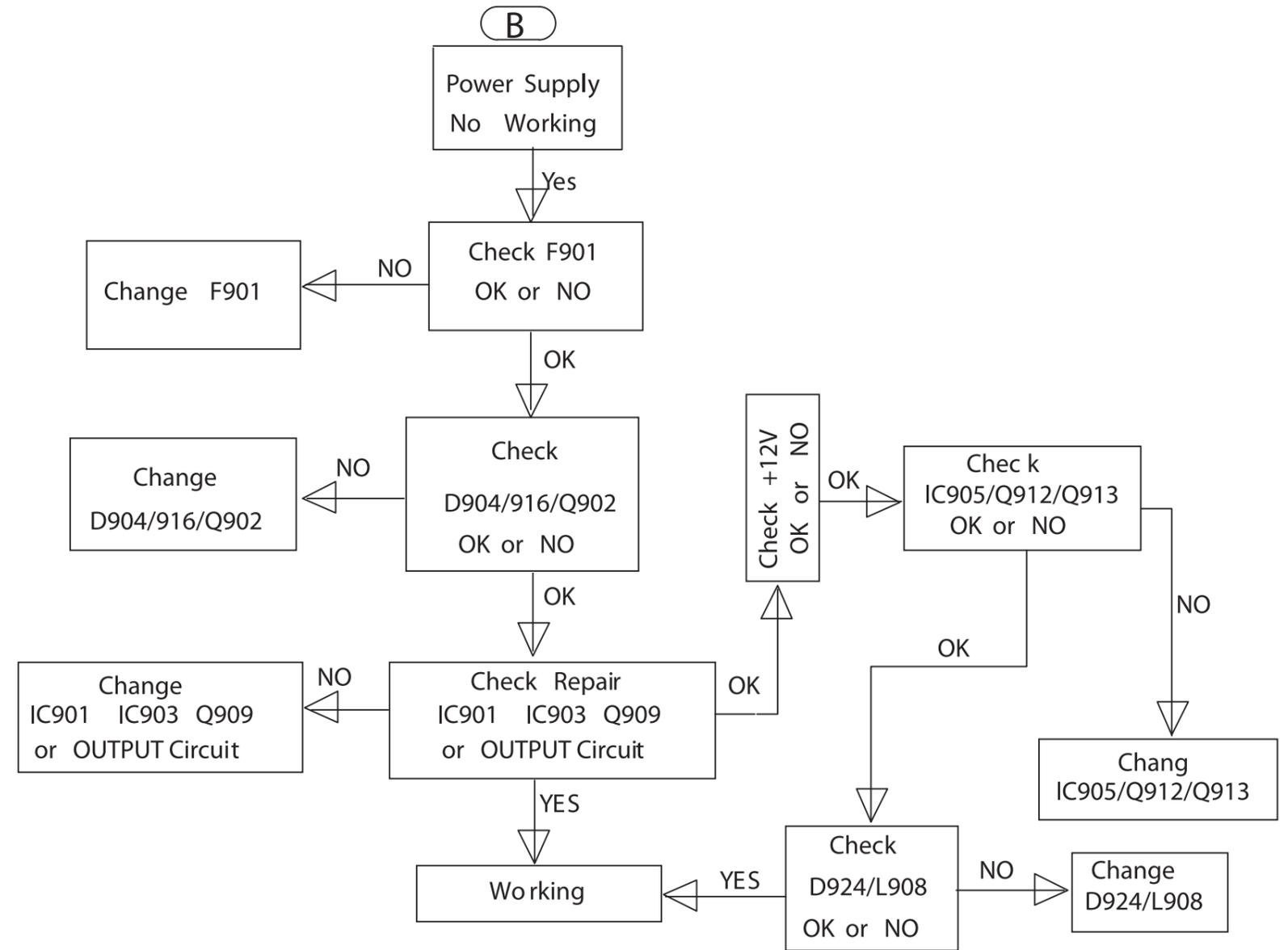
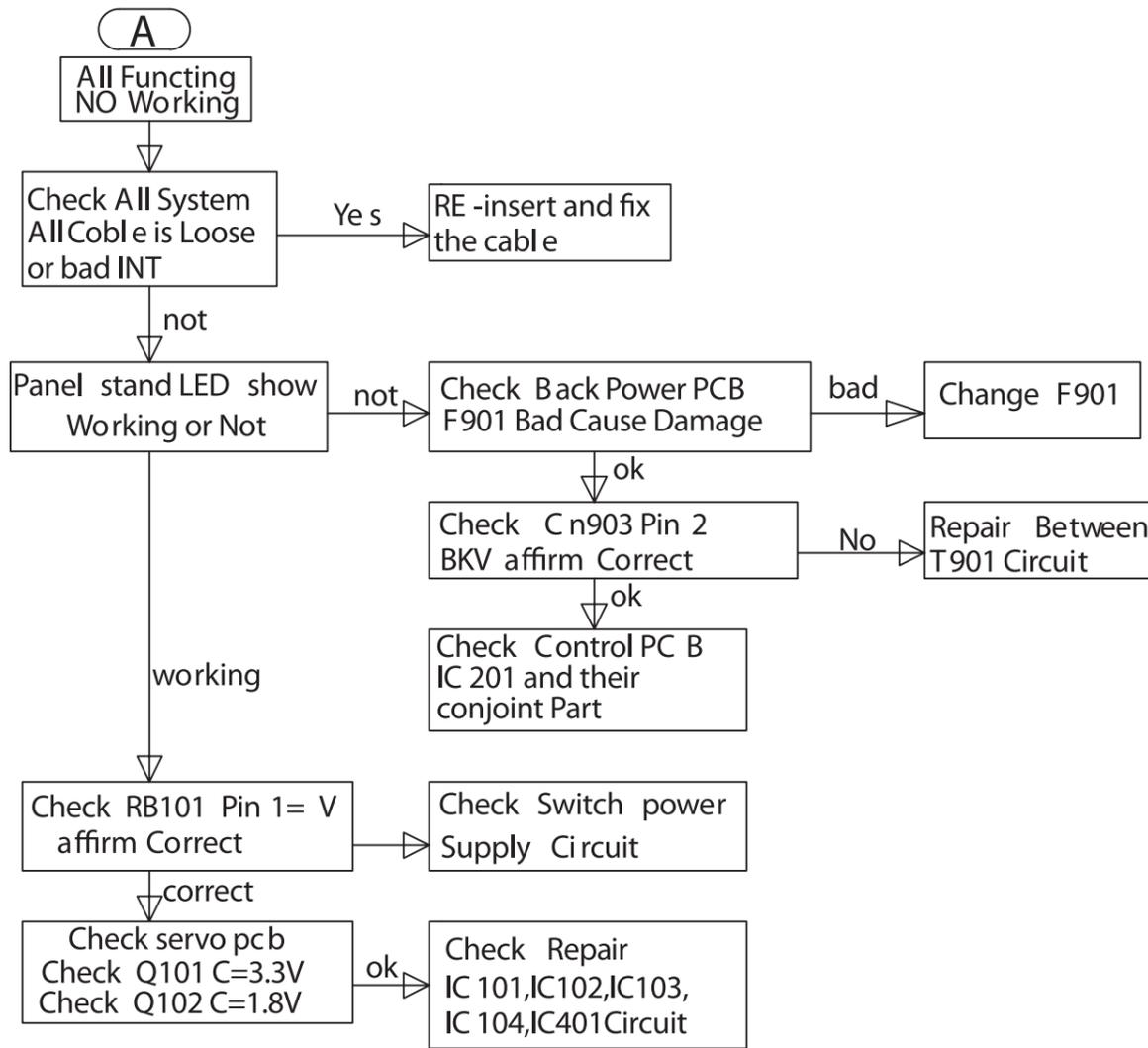


### **CAUTION!**

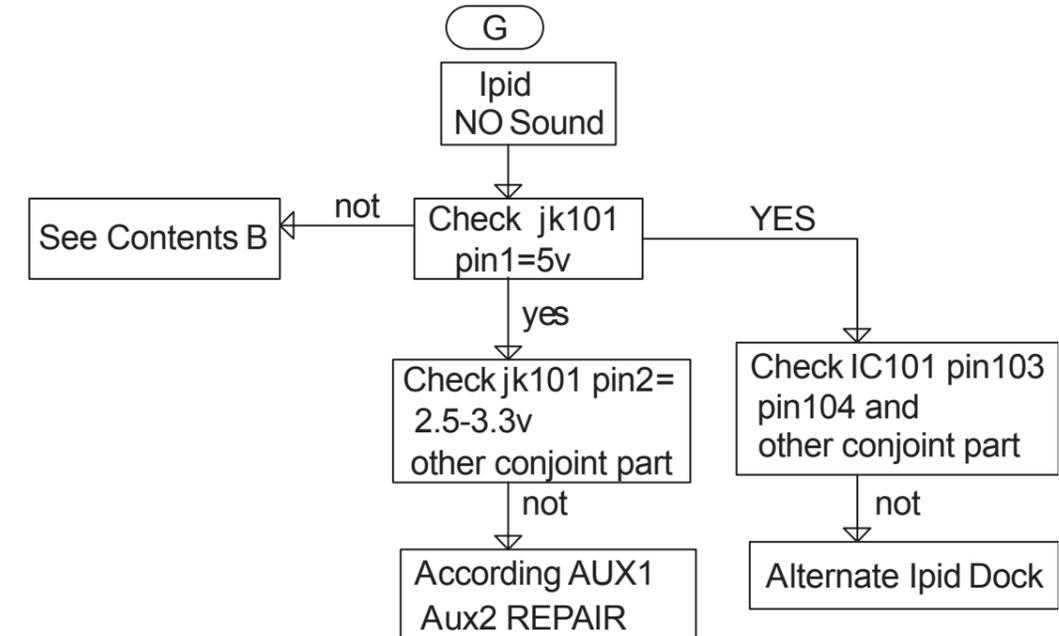
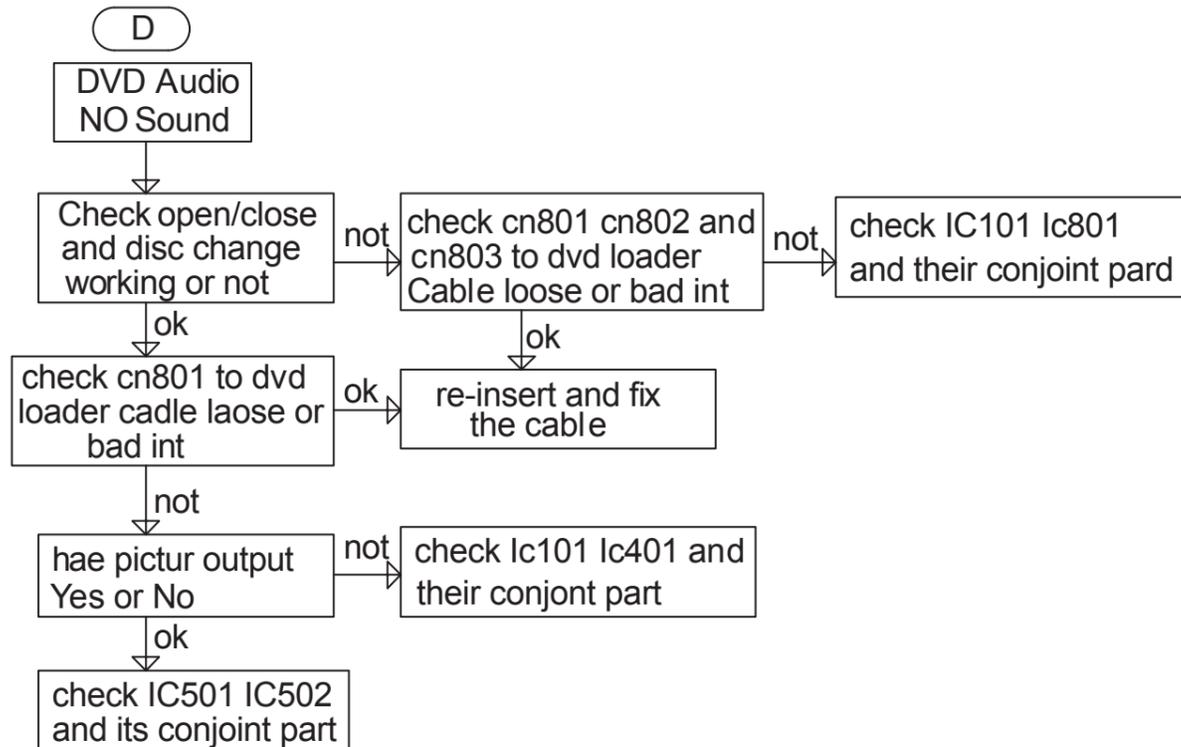
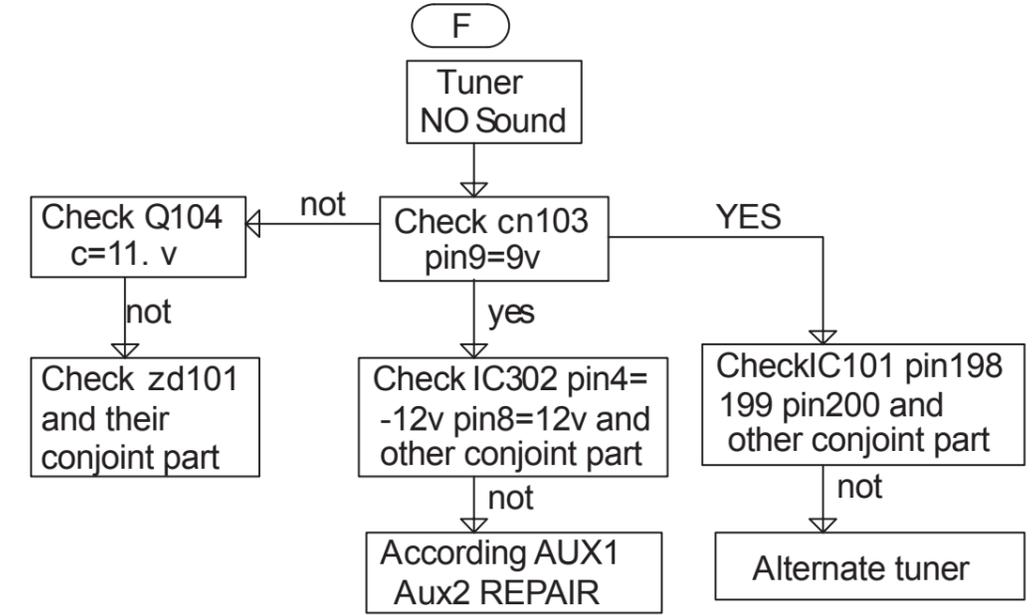
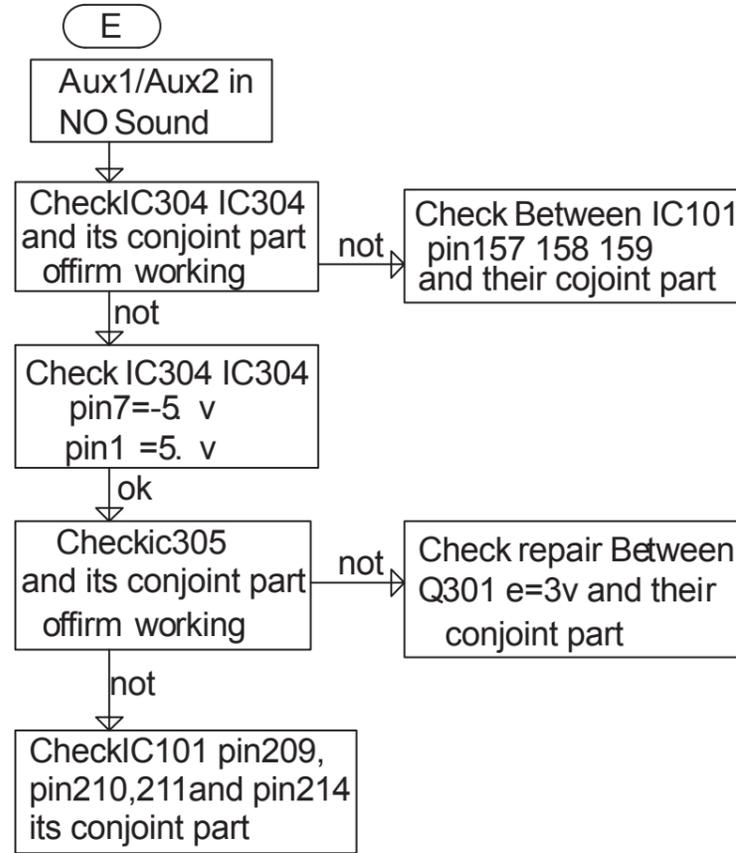
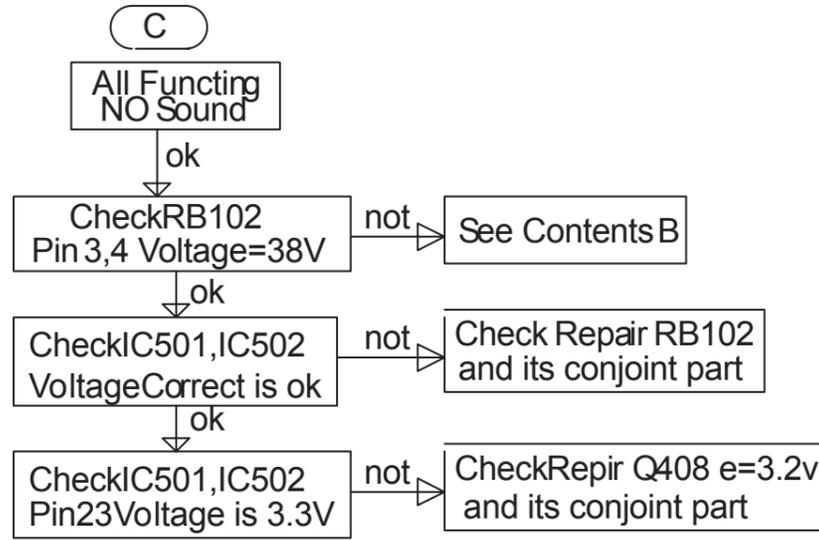
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

# REPAIR INSTRUCTIONS (part one)

## MAIN UNIT REPAIR CHART



# REPAIR INSTRUCTIONS (part two)



# DISASSEMBLY INSTRUCTIONS

## Dismantling of the Front Panel Assemble

- 1) Open the DVD Tray by using the Open/Close Button while the Set is ON and disconnect the mains supply after removing the Tray Cover.  
*Note: If this is not possible, the DVD Tray has to be open manually.*  
Take a mini screw driver about 2mm diameter and make a marking 24mm from the tip as shown in figure 2 . Place the set on its side, insert the mini screw driver till the marking and slide it towards the left as shown in figure 1 until the Tray moves out of the Front Panel.
- 2) Return the set to its upright position and remove the Tray Cover as shown in Figure 3 and close the tray manually by pushing it back in.

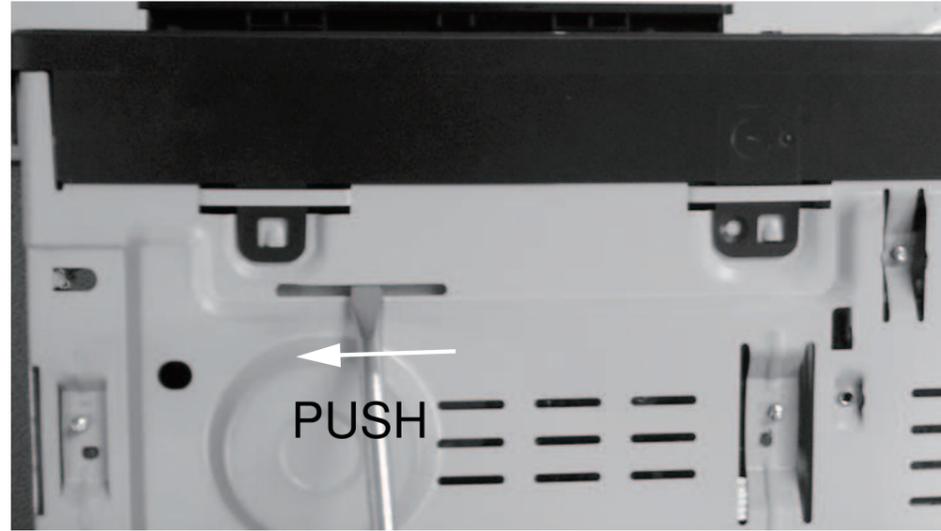


Figure 1



Figure 2

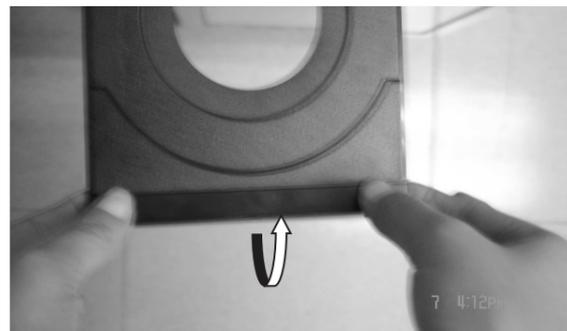


Figure 3

- 3) Loosen 6 screws and remove the Top Cover by lifting the rear portion upwards before sliding it out towards the rear.
  - 1 screw "A" each on the left & right side as shown in figure 4.
  - 4 screws "B" at the back panel as shown in figure 5.
- 4) Loosen 6 screws "C" at the bottom panel as in figure 6 to remove the front panel.



Figure 4

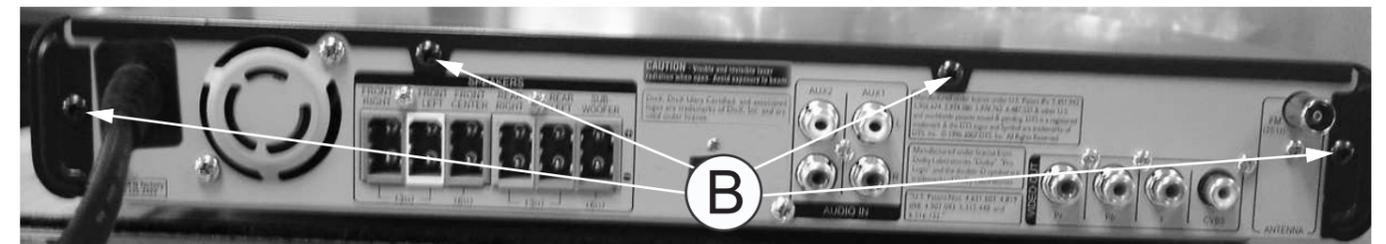


Figure 5

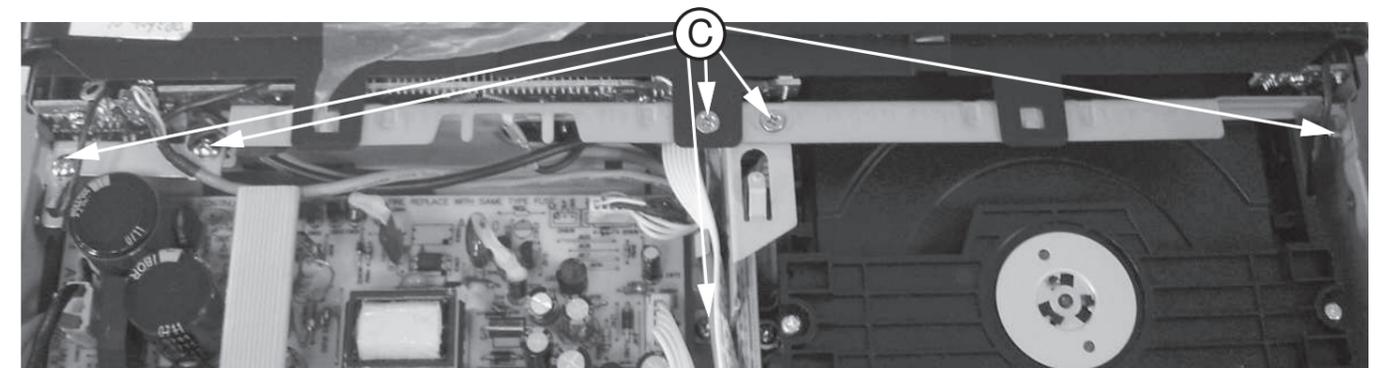


Figure 6

- 1) Loosen 4 screws "D" on the top of power board as shown in figure 7.
- 2) With a pincers to nip this space as shown in figure 8 and to take up the power board.

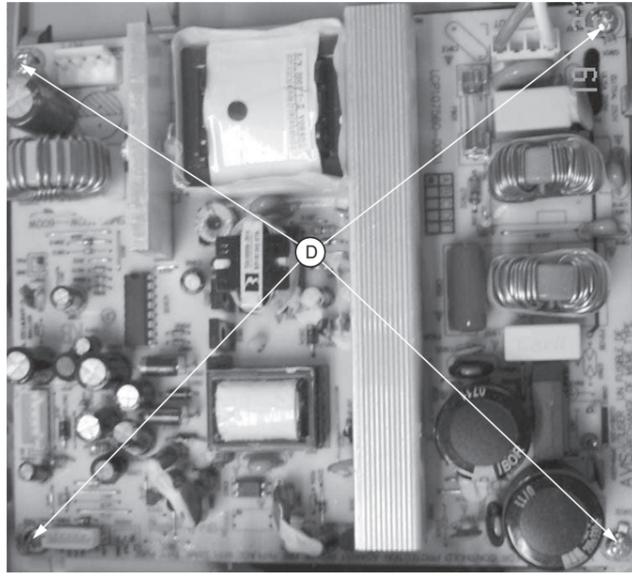


Figure 7

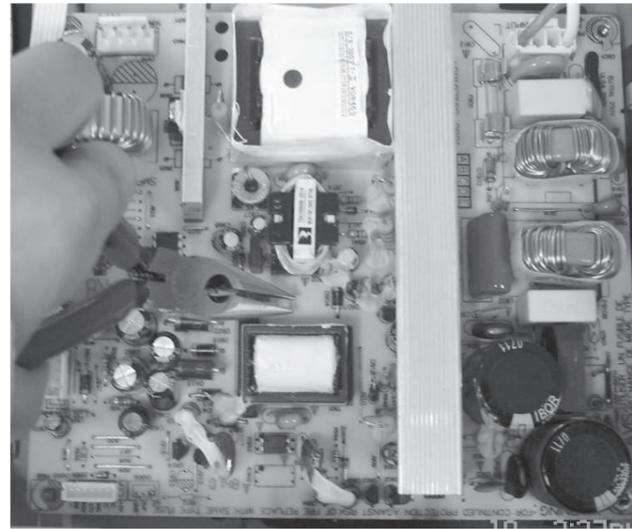


Figure 8

- 1) Loosen 4 screws "E" on the top of main board as shown in figure 9.
- 2) Loosen 6 screws "F" at the back panel as shown in figure 10.

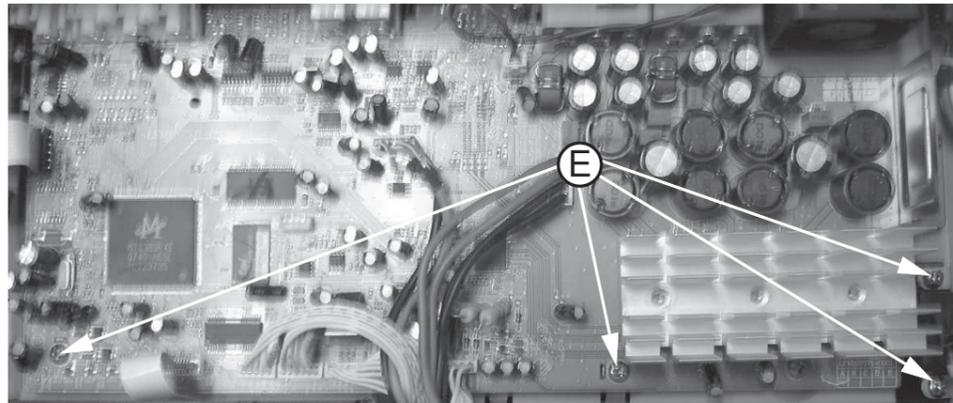


Figure 9

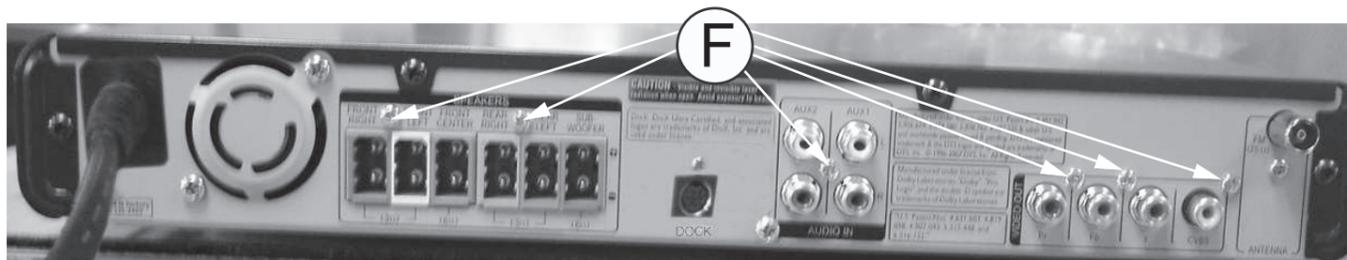


Figure 10

- 1) Loosen 4 screws "G" at the DVD module as shown in figure 11.

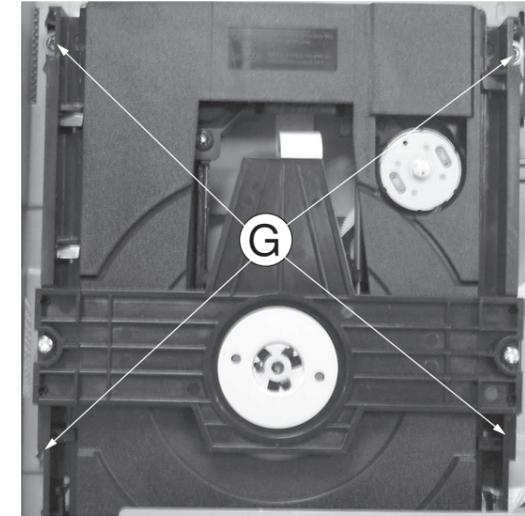


Figure 11

- 1) Loosen 10 screws "H" on the top of VFD+JACK+STANDBY board as shown in figure 12.

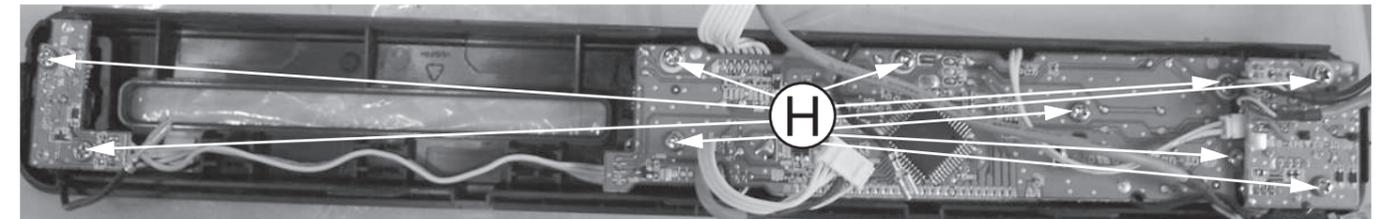


Figure 12

- 1) Loosen 1 screw "I" at the back panel as shown in figure 13.



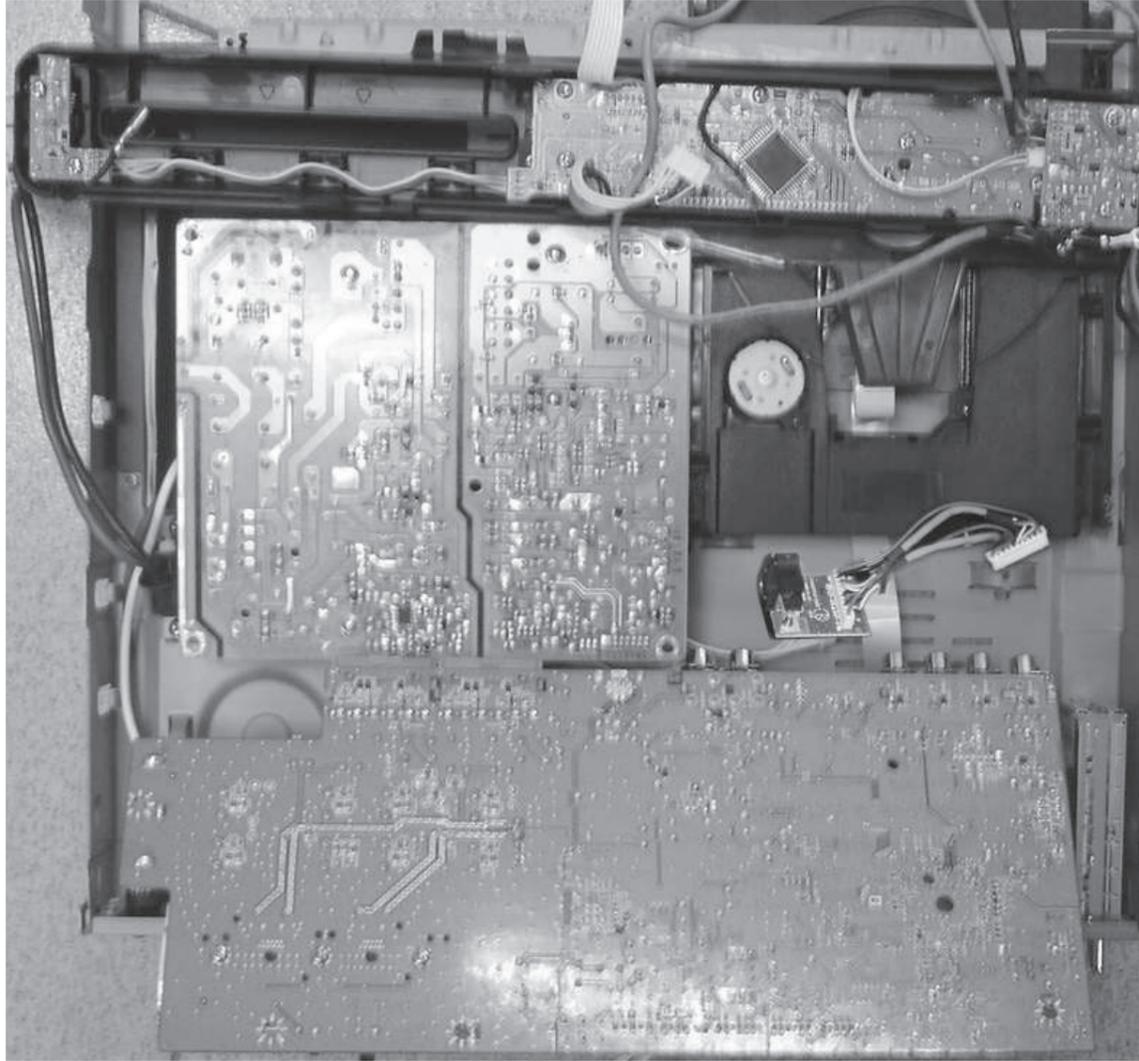
Figure 13

## SERVICE POSITIONS

3 - 3

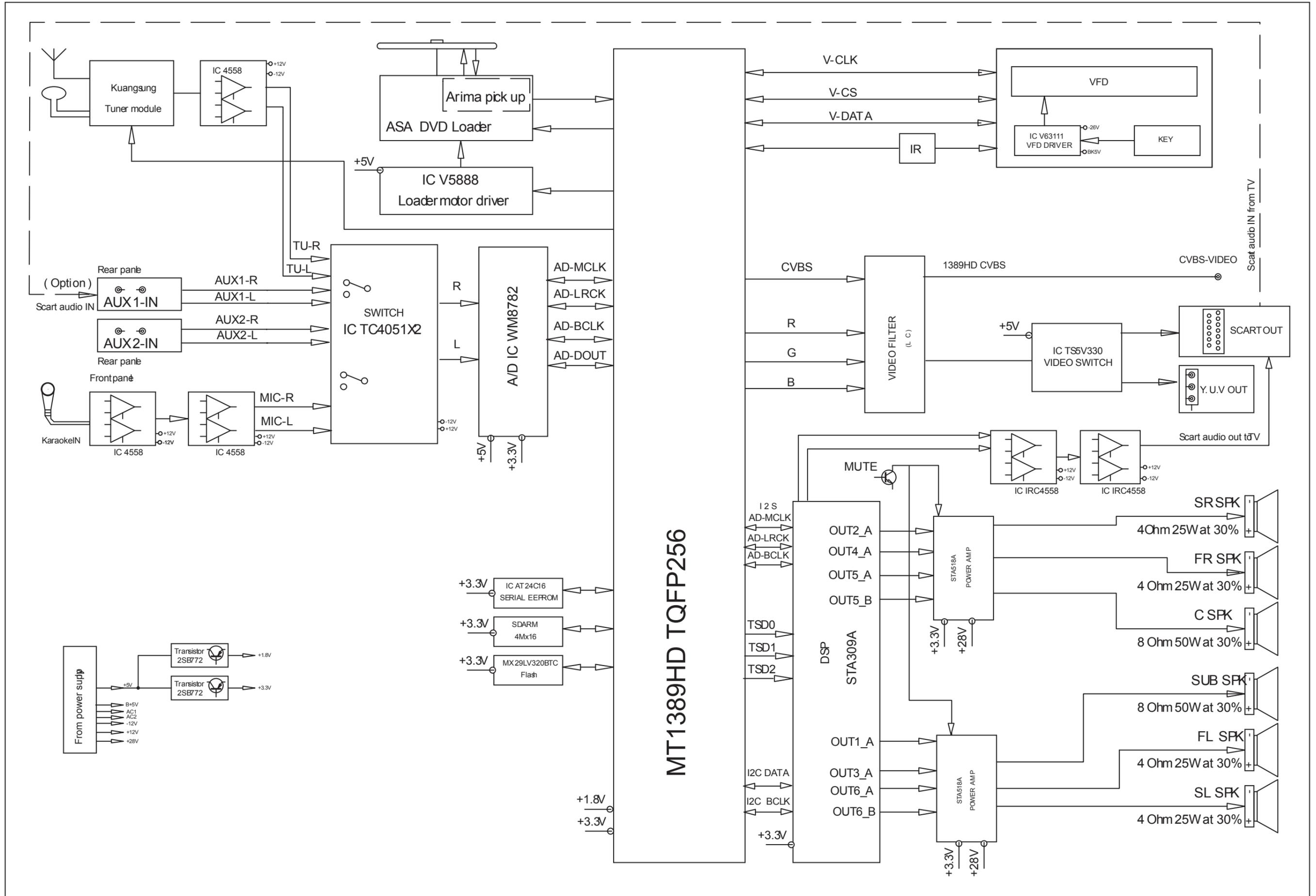
3 - 3

Service position A

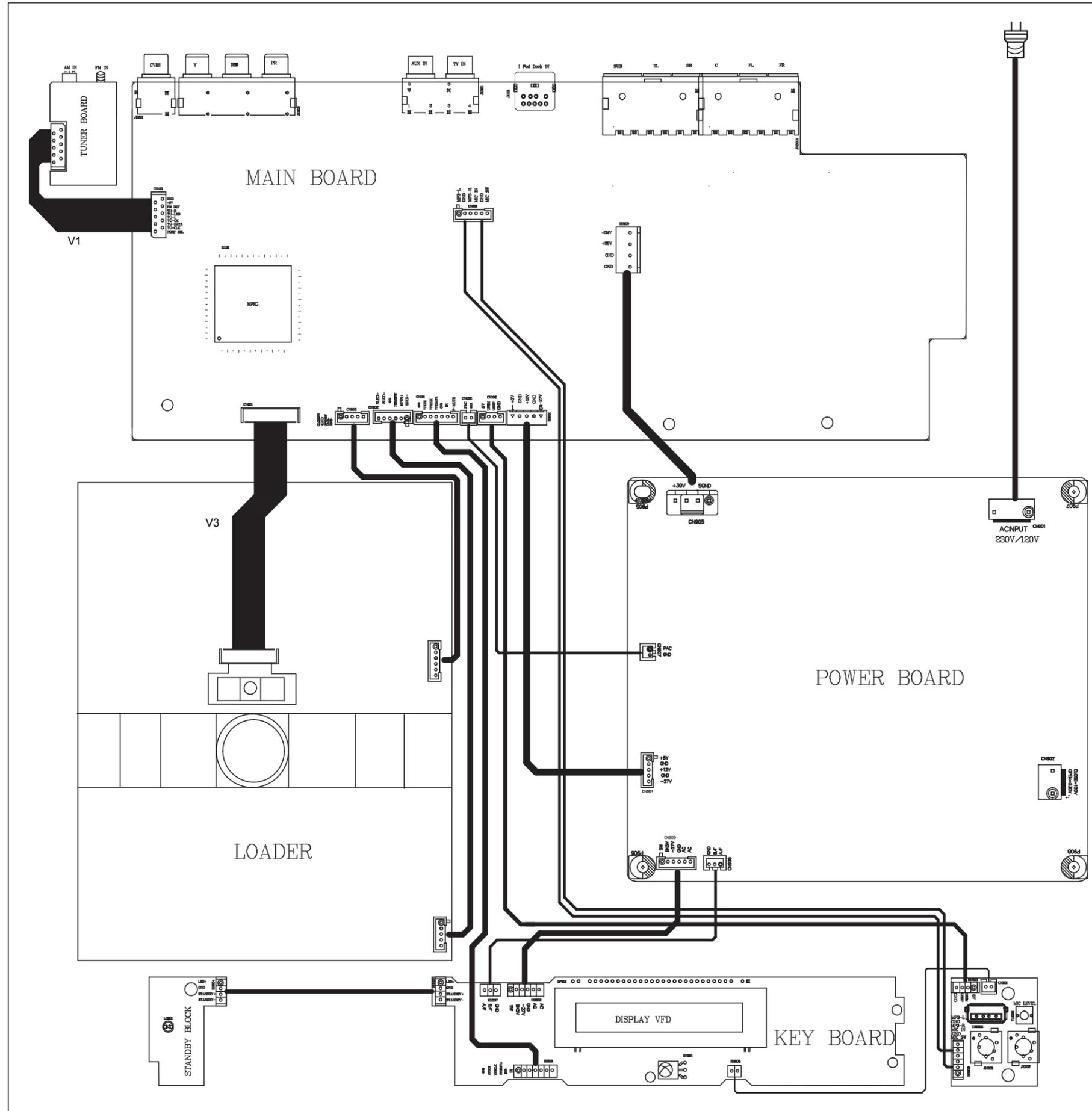


Note: In some service positions the components or copper patterns of one board may risk touching its neighbouring pc boards or metallic parts. To prevent such short-circuit use a piece of hard paper or other insulating material between them.

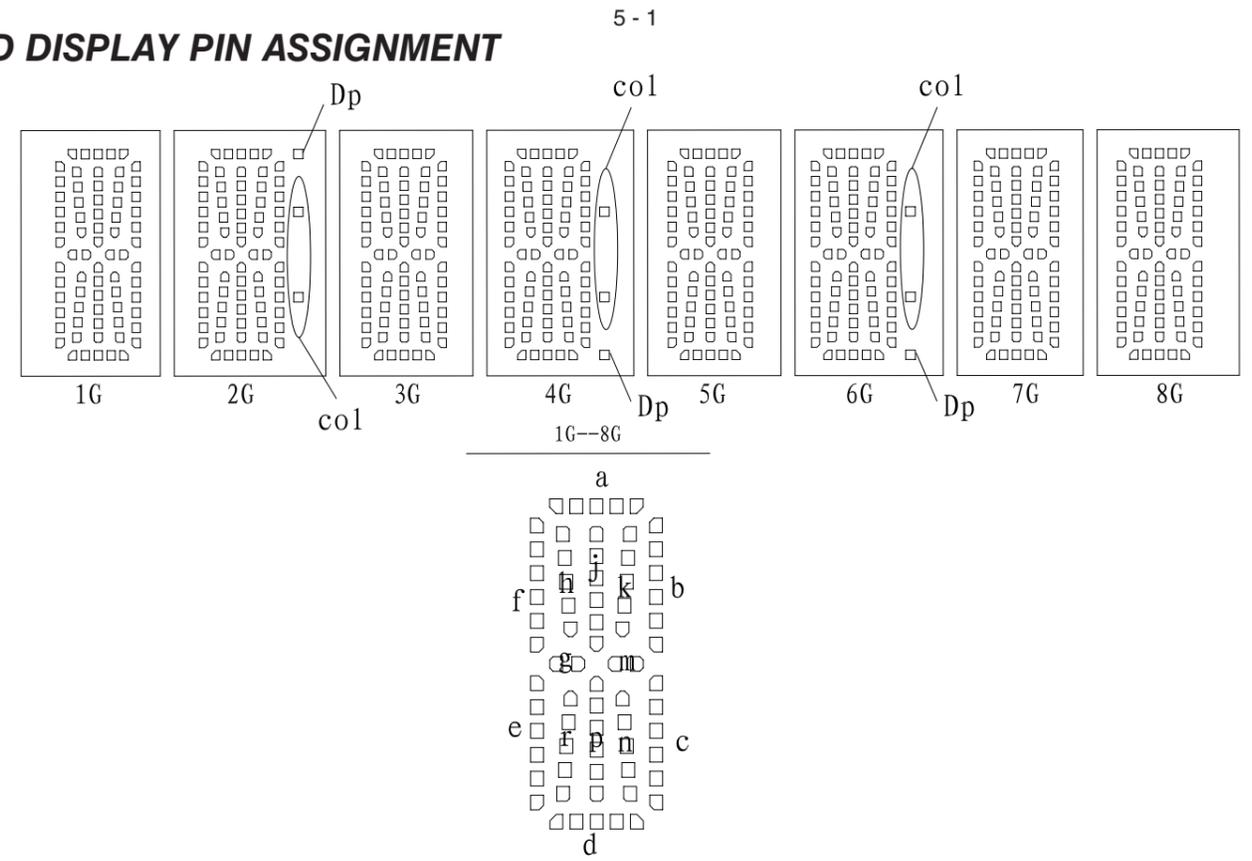
**BLOCK DIAGRAM**



WIRING DIAGRAM



**FTD DISPLAY PIN ASSIGNMENT**



# CONTROL BOARD

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 PCB Layout Top & Bottom View.....5-3

|     | 1G   | 2G   | 3G   | 4G   | 5G   | 6G   | 7G   | 8G   |
|-----|------|------|------|------|------|------|------|------|
| P1  | a    | a    | a    | a    | a    | a    | a    | a    |
| P2  | j, p |
| P3  | h    | h    | h    | h    | h    | h    | h    | h    |
| P4  | k    | k    | k    | k    | k    | k    | k    | k    |
| P5  | b    | b    | b    | b    | b    | b    | b    | b    |
| P6  | f    | f    | f    | f    | f    | f    | f    | f    |
| P7  | m    | m    | m    | m    | m    | m    | m    | m    |
| P8  | g    | g    | g    | g    | g    | g    | g    | g    |
| P9  | c    | c    | c    | c    | c    | c    | c    | c    |
| P10 | e    | e    | e    | e    | e    | e    | e    | e    |
| P11 | r    | r    | r    | r    | r    | r    | r    | r    |
| P12 | n    | n    | n    | n    | n    | n    | n    | n    |
| P13 | d    | d    | d    | d    | d    | d    | d    | d    |
| P14 | /    | col  | /    | col  | /    | col  | /    | /    |
| P15 | /    | Dp   | /    | Dp   | /    | Dp   | /    | /    |

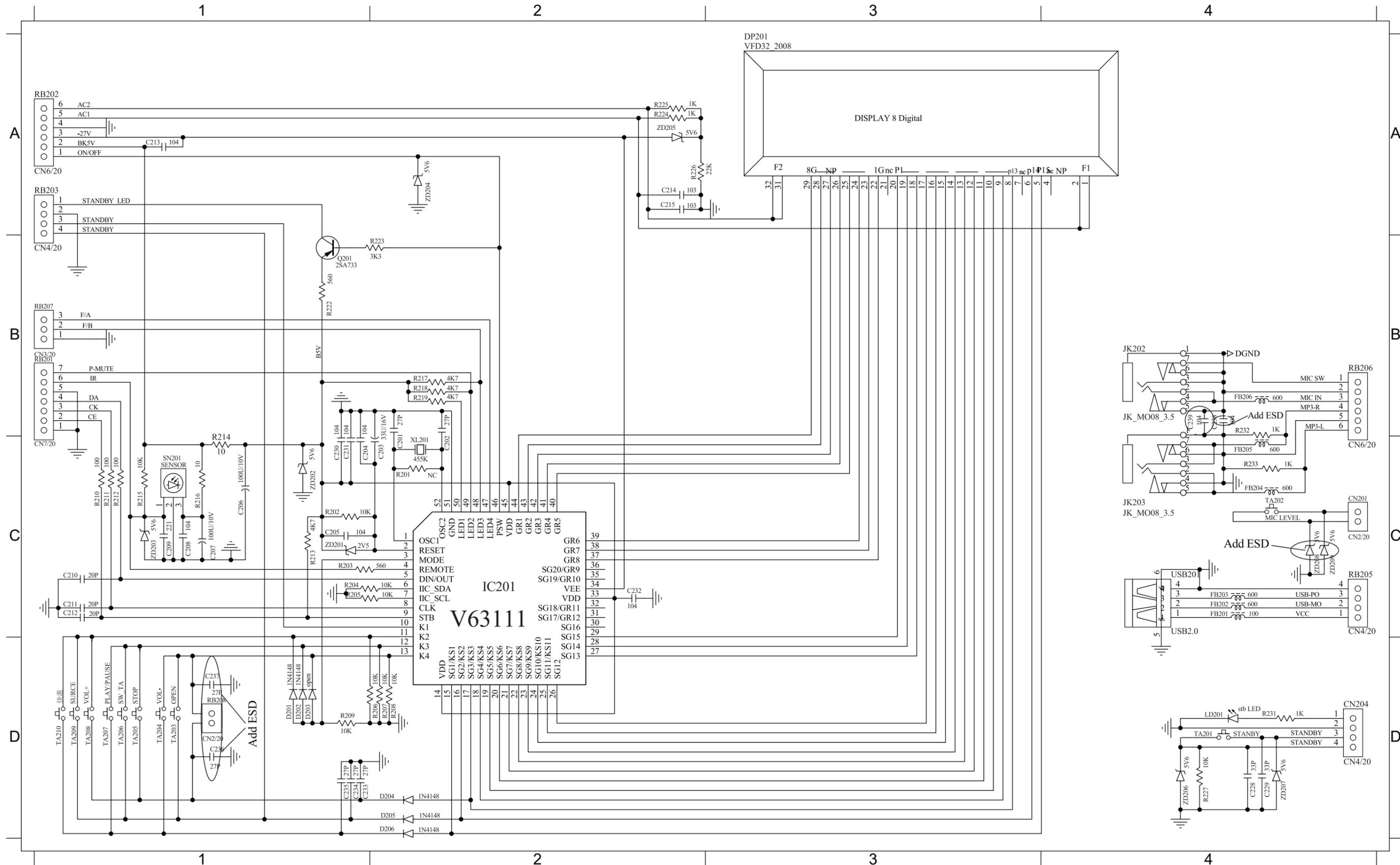
**PIN CONNECTION**

|                 |    |    |    |    |     |     |    |     |     |     |     |    |    |    |    |    |
|-----------------|----|----|----|----|-----|-----|----|-----|-----|-----|-----|----|----|----|----|----|
| 管脚序号 (Pin NO.)  | 1  | 2  | 3  | 4  | 5   | 6   | 7  | 8   | 9   | 10  | 11  | 12 | 13 | 14 | 15 | 16 |
| 连接 (Connection) | F1 | F1 | NP | NC | P15 | P14 | NC | P13 | P12 | P11 | P10 | P9 | P8 | P7 | P6 | P5 |
| 管脚序号 (Pin NO.)  | 17 | 18 | 19 | 20 | 21  | 22  | 23 | 24  | 25  | 26  | 27  | 28 | 29 | 30 | 31 | 32 |
| 连接 (Connection) | P4 | P3 | P2 | P1 | NC  | 1G  | 2G | 3G  | 4G  | 5G  | 6G  | 7G | 8G | NP | F2 | F2 |

注 (Notes) : Fn : 灯丝 (Filament Pin)    nG : 栅极 (Grid Pin)  
 Pn : 阳极 (Anode Pin)                  NP : 无引出脚 (No Pin)  
 NC : 无功能 (No connection Pin)

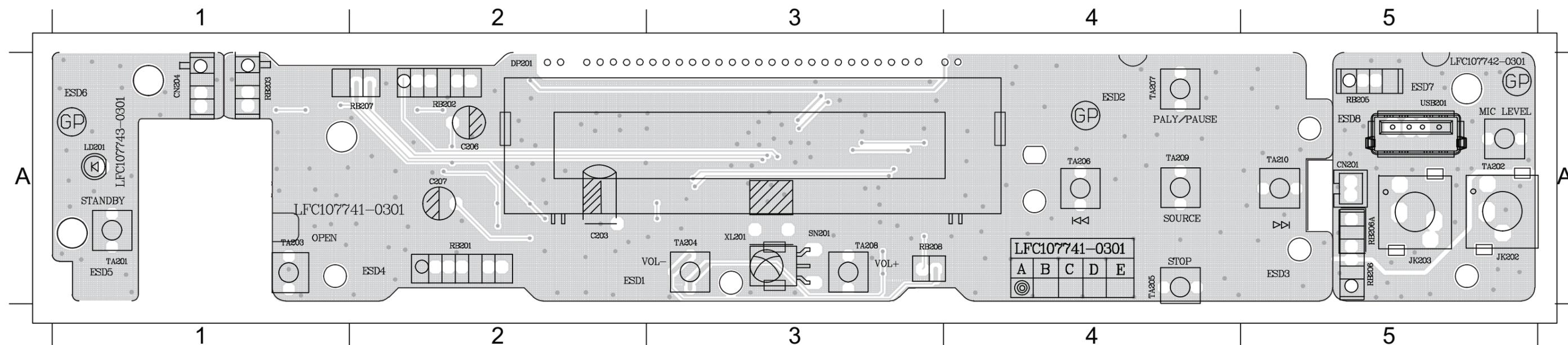
# CIRCUIT DIAGRAM

C201 C2 C205 C1 C209 C1 C213 A1 C229 D4 C233 D1 C237 D1 D202 D1 DP201 A3 FB204 C4 JK203 C4 R203 C1 R207 D2 R211 C1 R215 C1 R219 B2 R225 A2 R232 B4 RB203 A1 TA201 D4 TA206 D1 TA210 D1 ZD202 C1 ZD206 D4  
 C202 C2 C206 C1 C210 C1 C214 A2 C230 C1 C234 D1 C238 B4 D204 D2 FB201 C4 FB205 C4 LD201 D4 R204 C1 R208 D2 R212 C1 R216 C1 R222 B1 R226 A2 R233 C4 RB205 C4 TA203 D1 TA207 D1 USB201 C4 ZD203 C1 ZD207 D4  
 C203 C2 C207 C1 C211 C1 C215 A2 C231 C1 C235 D1 C239 B4 D205 D2 FB202 C4 FB206 B4 Q201 C1 R205 C1 R209 D1 R213 C1 R217 B2 R223 B2 R227 D4 RB201 B1 RB206A B4 TA204 D1 TA208 D1 XL201 C2 ZD204 A2  
 C204 C1 C208 C1 C212 C1 C228 D4 C232 C2 C236 D1 D201 D1 D206 D2 FB203 C4 IC201 C2 R202 C1 R206 D2 R210 C1 R214 B1 R218 B2 R224 A2 R231 D4 RB202 A1 SN201 C1 TA205 D1 TA209 D1 ZD201 C1 ZD205 A2



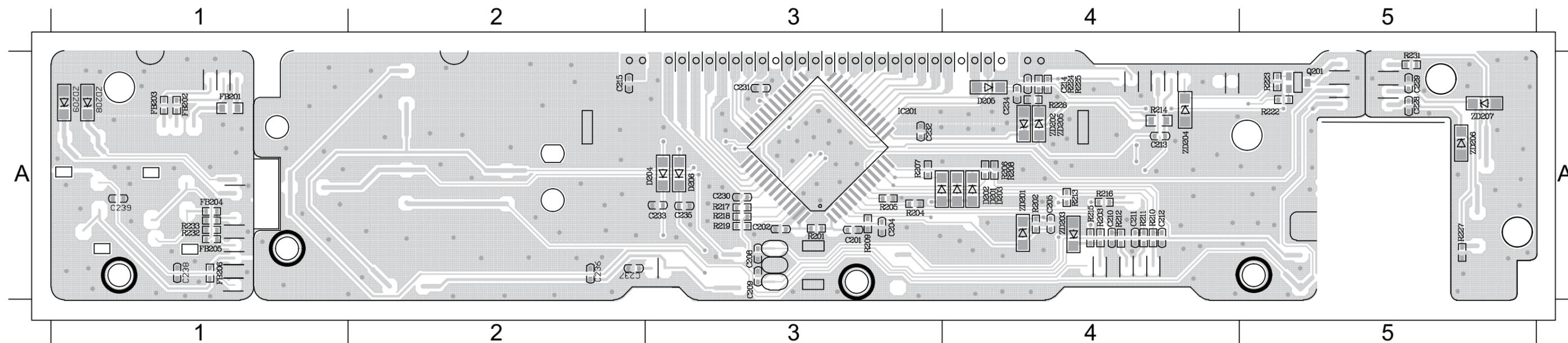
### PCB LAYOUT - TOP VIEW

C203 A2 C207 A2 ESD1 A2 ESD6 A1 JK203 A5 RB201 A2 RB203 A1 RB206AA5 TA201 A1 TA204 A3 TA206 A4 TA208 A3 TA210 A5 XL201 A3  
 C206 A2 DP201 A2 ESD2 A4 ESD7 A5 LD201 A1 RB202 A2 RB205 A5 SN201 A3 TA203 A1 TA205 A4 TA207 A4 TA209 A4 USB201A5



### PCB LAYOUT - BOTTOM VIEW

C201 A3 C208 A3 C212 A4 C228 A5 C232 A3 C236 A3 D201 A4 D206 A3 FB204 A1 Q201 A5 R205 A3 R209 A3 R213 A4 R217 A3 R223 A5 R227 A5 ZD201 A4 ZD205 A4  
 C202 A3 C209 A3 C213 A4 C229 A5 C233 A3 C237 A3 D202 A4 FB201 A1 FB205 A1 R202 A4 R206 A4 R210 A4 R214 A4 R218 A3 R224 A4 R231 A5 ZD202 A4 ZD206 A5  
 C204 A3 C210 A4 C214 A4 C230 A3 C234 A4 C238 A1 D204 A3 FB202 A1 FB206 A1 R203 A4 R207 A3 R211 A4 R215 A4 R219 A3 R225 A4 R232 A1 ZD203 A4 ZD207 A5  
 C205 A4 C211 A4 C215 A2 C231 A3 C235 A3 C239 A1 D205 A4 FB203 A1 IC201 A3 R204 A3 R208 A4 R212 A4 R216 A4 R222 A5 R226 A4 R233 A1 ZD204 A4

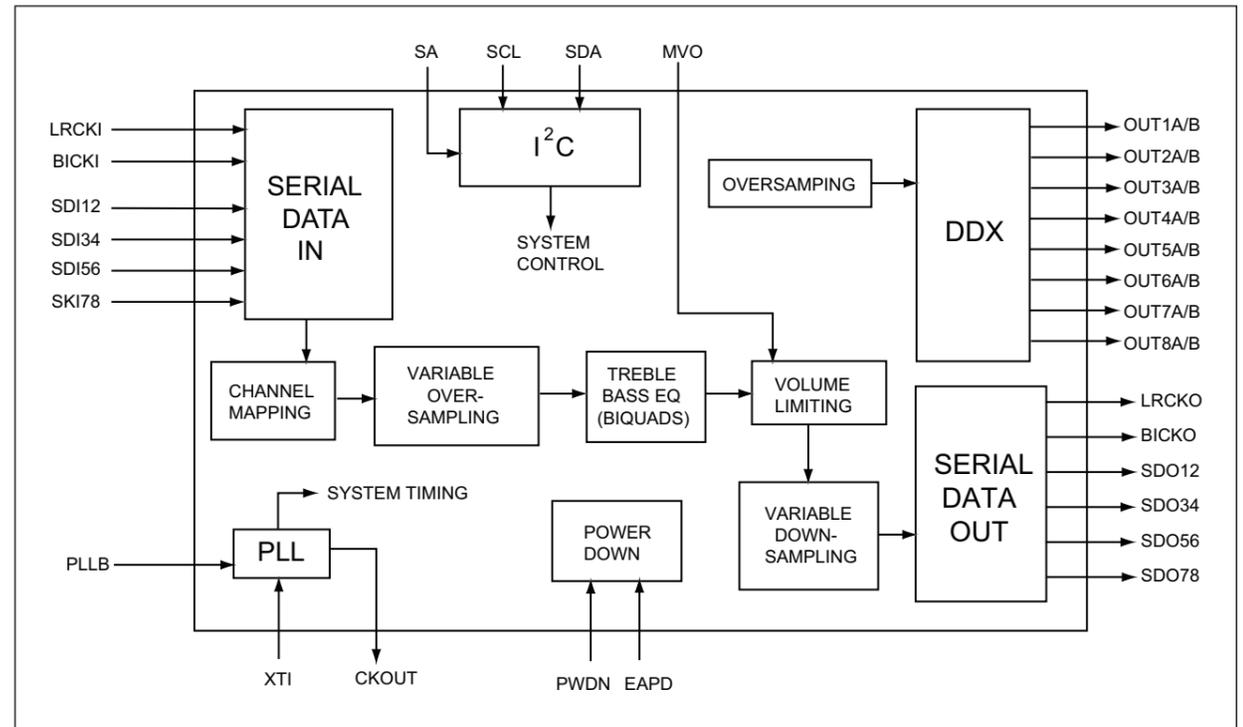


# MAIN BOARD

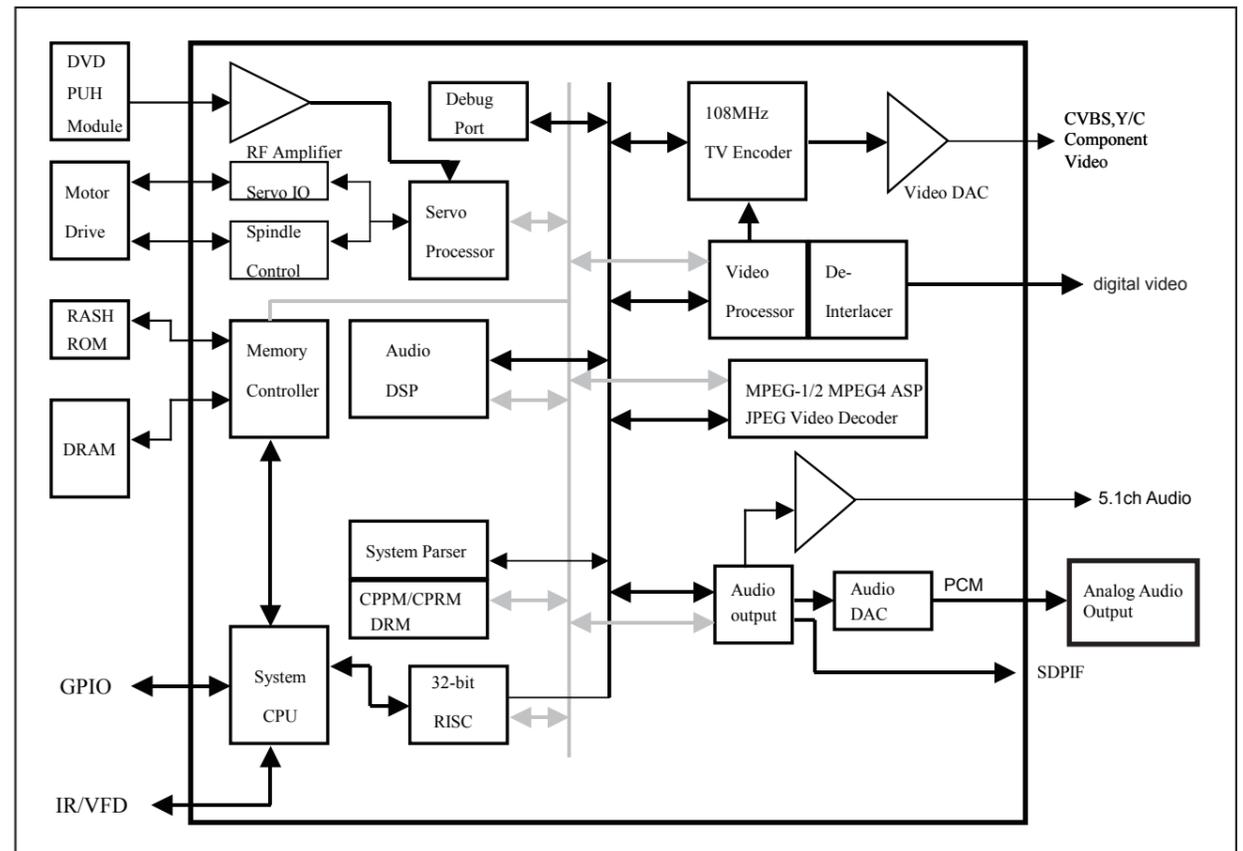
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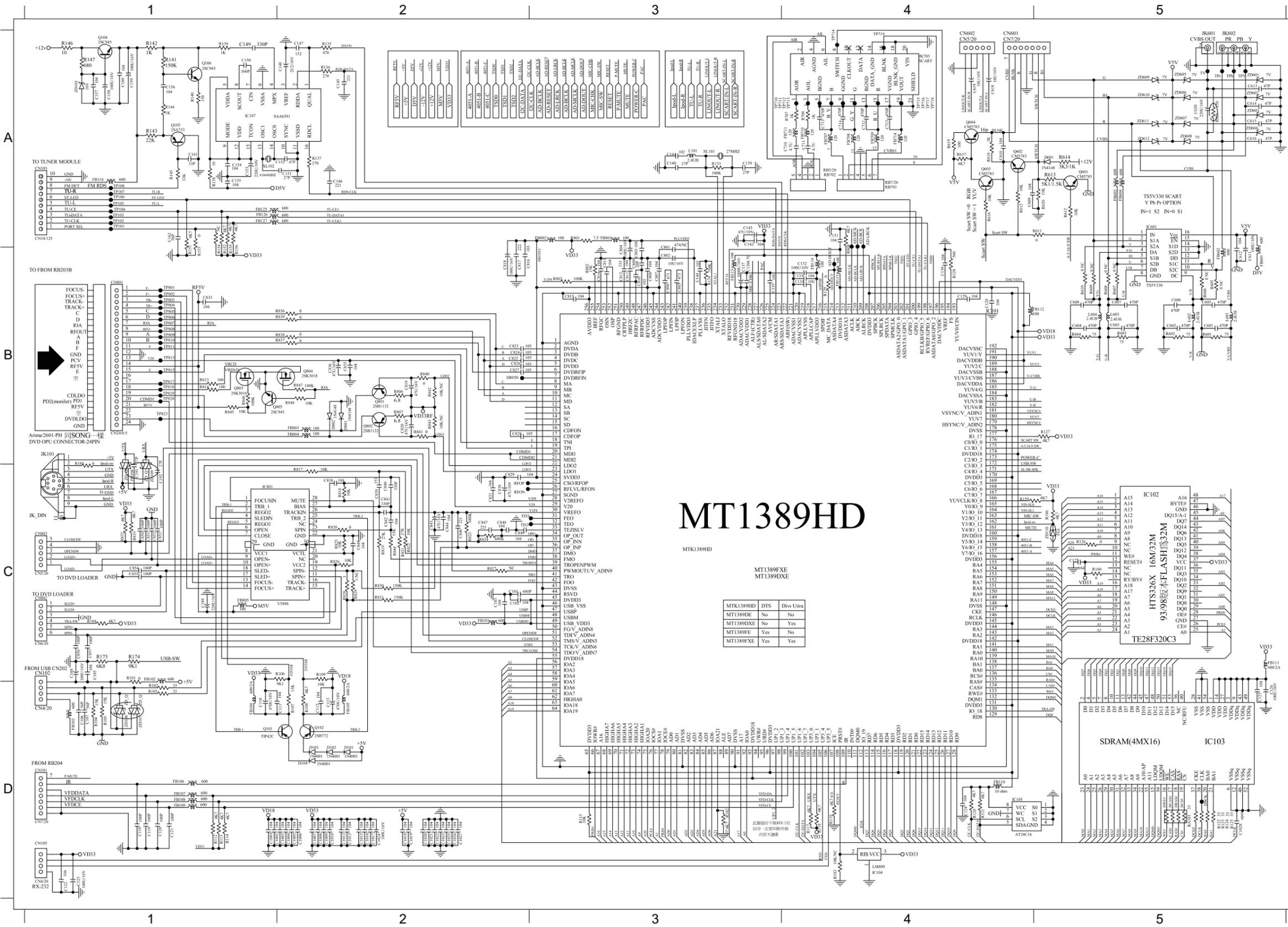
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## INTERNAL IC DIAGRAM - STA309A



## INTERNAL IC DIAGRAM - MT1389HD

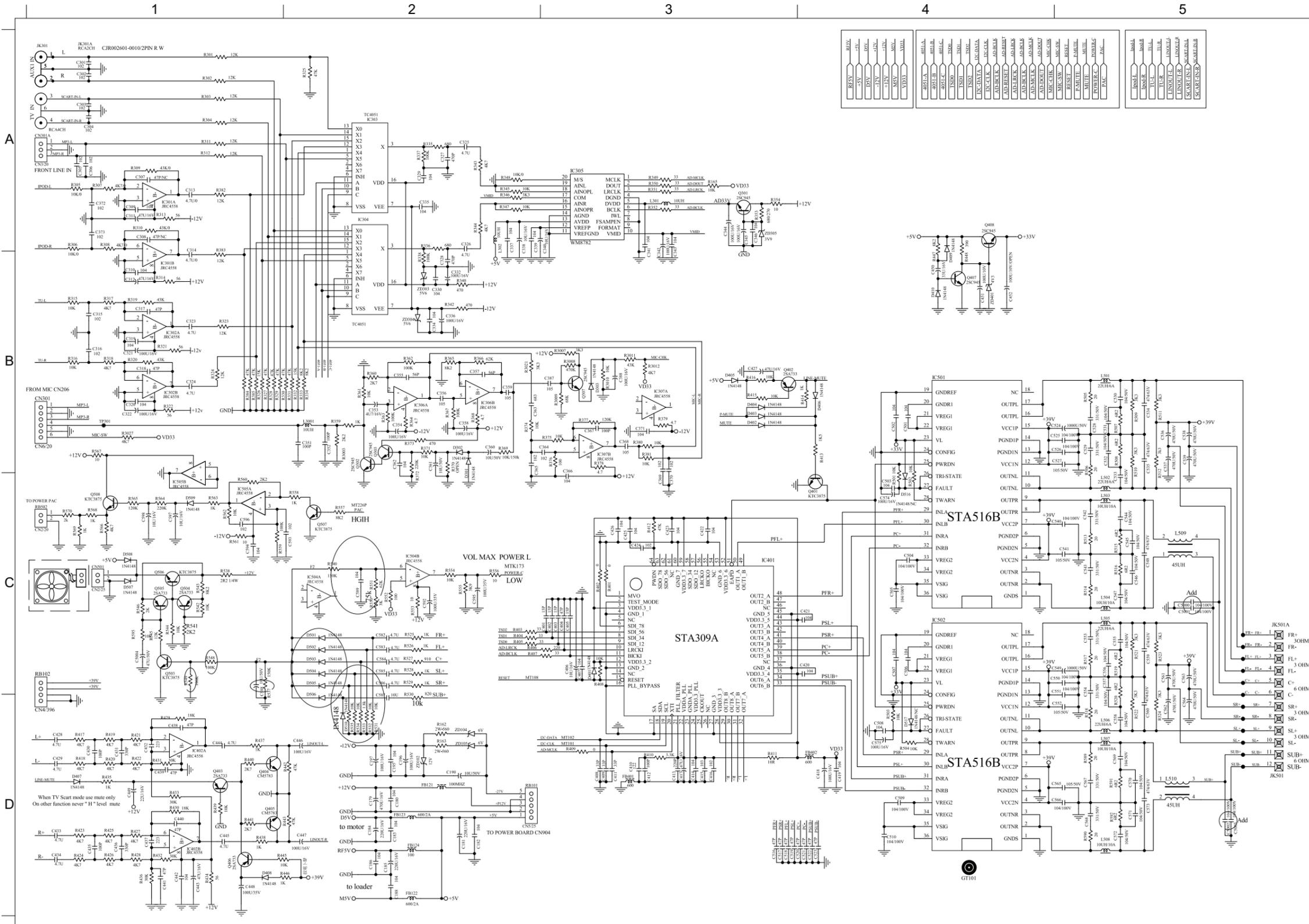




# MT1389HD

| MTK1389HD | DTS | Dvss Ultra |
|-----------|-----|------------|
| MT1389DE  | No  | No         |
| MT1389DXE | No  | Yes        |
| MT1389FL  | Yes | No         |
| MT1389FXE | Yes | Yes        |

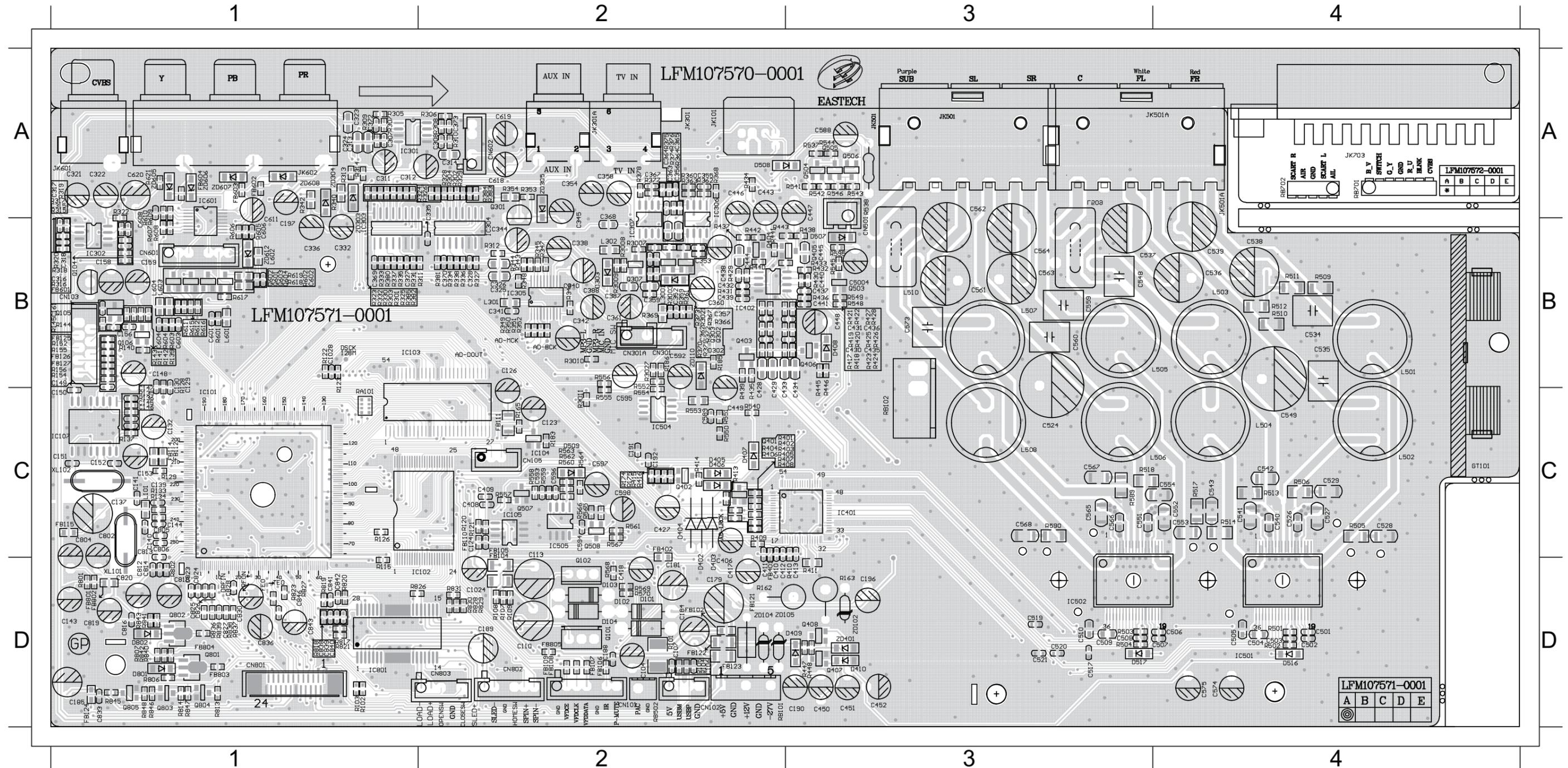
- C1001 D1 C608 B5 FB105 D2 R153 A1
- C1002 D1 C609 B5 FB106 D1 R155 A1
- C1003 D2 C611 B5 FB107 D1 R156 A1
- C1004 D2 C612 B5 FB108 D1 R159 C4
- C1005 D2 C613 A5 FB109 D1 R160 C5
- C1006 D2 C614 A5 FB110 D4 R174 C1
- C1007 D2 C615 A5 FB111 C5 R175 C1
- C1008 D2 C616 A5 FB112 B4 R182 D3
- C1009 D2 C620 A5 FB113 B4 R184 C1
- C101 C2 C802 B3 FB114 B4 R185 C1
- C1010 D2 C803 B3 FB115 B3 R186 C5
- C1012 D2 C804 A3 FB116 A1 R601 B5
- C1013 D2 C805 B3 FB125 B1 R602 B5
- C1016 D2 C807 B3 FB127 B1 R604 B5
- C1017 D2 C808 B3 FB201 B5 R605 B5
- C1018 D2 C809 B3 FB602 B5 R607 B5
- C1019 D2 C810 B3 FB603 A5 R610 B5
- C102 C2 C811 B3 FB604 A5 R620 A5
- C1020 D2 C812 B3 FB801 A3 R621 A5
- C1021 D2 C813 B3 FB802 A3 R801 A3
- C1022 D2 C814 B3 FB803 B2 R802 B3
- C1023 D2 C815 B3 FB804 B2 R803 B3
- C1024 D2 C816 B2 FB805 C1 R806 B2
- C1025 D2 C817 B2 IC101 B4 R807 B2
- C1026 D2 C818 B2 IC102 C5 R808 A4
- C1027 D2 C819 B2 IC103 D5 R813 B1
- C1028 D5 C820 B2 IC104 D4 R814 B1
- C103 C2 C823 B2 IC105 D4 R817 C2
- C104 C1 C824 B2 IC801 C1 R818 C2
- C105 C1 C825 B2 JK101 B1 R819 C2
- C106 D1 C826 B2 JK601 A5 R820 C2
- C107 D1 C827 B2 JK602 A5 R821 C2
- C110 D2 C828 B2 L601 B5 R822 C2
- C111 D2 C829 C2 L602 B5 R823 C2
- C112 D2 C830 C2 L603 B5 R824 C2
- C113 D2 C831 C2 L604 B5 R825 C2
- C118 D1 C833 B1 Q101 D1 R826 C2
- C119 D1 C835 B2 Q102 D2 R828 C2
- C120 D1 C836 B2 Q104 A1 R830 C2
- C121 D1 C838 C2 Q801 B2 R831 C2
- C122 D1 C839 C2 Q802 B2 R832 C1
- C123 D1 C840 C2 Q803 B1 R833 C1
- C124 D4 C841 C2 Q804 B2 R836 B1
- C125 D5 C842 C2 Q805 B1 R837 B1
- C126 D5 C843 C2 R101 C1 R838 B1
- C127 C5 C844 C2 R102 C1 R839 B1
- C128 B4 C845 C2 R103 C1 R840 B2
- C129 B4 C846 C2 R104 D1 R841 B2
- C130 B4 C847 C2 R105 D1 R844 C2
- C131 A4 C848 C2 R106 C1 R845 B1
- C132 B4 C849 C2 R107 D2 R846 B1
- C133 B4 C850 C1 R108 D2 R847 B2
- C134 B4 C851 C1 R109 C2 R848 B2
- C135 B3 C852 C1 R112 D1 RA101 D5
- C136 B3 C853 C1 R113 D1 XL101 A3
- C137 B3 C854 C1 R114 D1 ZD101 A1
- C139 A3 C855 C1 R115 D3 ZD106 D1
- C140 A3 C856 C1 R117 D4 ZD107 D1
- C142 A3 C857 C1 R118 D4 ZD108 C1
- C143 A3 CN101 D1 R119 D4 ZD109 C1
- C144 B3 CN102 C1 R120 D4 ZD110 B5
- C157 A1 CN103 A1 R121 D4 ZD601 A5
- C158 A1 CN105 D1 R122 D5 ZD602 A5
- C159 A1 CN801 B1 R123 D5 ZD603 A5
- C160 A1 CN802 C1 R124 D5 ZD604 A5
- C162 A1 CN803 C1 R125 D5 ZD605 A5
- C189 C1 D101 D2 R126 C5 ZD606 A5
- C191 C1 D102 D2 R127 B5 ZD607 A5
- C192 C1 D103 D2 R128 B4 ZD608 A5
- C601 B5 D104 D2 R129 B4
- C602 B5 D801 B2 R133 A3
- C603 B5 D802 B2 R134 B3
- C604 B5 FB101 C2 R146 A1
- C605 B5 FB102 C1 R147 A1
- C606 B5 FB103 C1 R151 A1
- C607 B5 FB104 D1 R152 A1



|      |    |       |    |          |    |       |    |       |    |
|------|----|-------|----|----------|----|-------|----|-------|----|
| C179 | D2 | C425  | C3 | C582     | C2 | R3012 | B3 | R505  | B5 |
| C180 | D2 | C426  | C3 | C583     | C2 | R302  | A1 | R506  | B5 |
| C181 | D2 | C427  | B3 | C584     | C2 | R3027 | B1 | R507  | B5 |
| C182 | D2 | C450  | B4 | C585     | C2 | R303  | A1 | R508  | B5 |
| C183 | D2 | C451  | B4 | C586     | C2 | R304  | A1 | R509  | B5 |
| C184 | D2 | C5000 | C5 | C587     | D2 | R305  | A1 | R510  | B5 |
| C185 | D2 | C5001 | C5 | C588     | C1 | R306  | A1 | R511  | B5 |
| C186 | D2 | C5002 | D5 | C589     | C2 | R307  | A1 | R512  | B5 |
| C188 | D2 | C5003 | D5 | C592     | C2 | R308  | A1 | R513  | C5 |
| C190 | D2 | C5004 | C1 | C593     | C2 | R309  | A1 | R514  | C5 |
| C195 | D2 | C501  | B4 | C594     | C1 | R310  | A1 | R515  | C5 |
| C196 | D2 | C502  | B4 | C595     | C2 | R311  | A1 | R516  | C5 |
| C197 | D2 | C503  | C4 | C596     | C1 | R312  | A1 | R517  | C5 |
| C301 | A1 | C504  | C4 | C597     | C1 | R313  | A1 | R518  | D5 |
| C302 | A1 | C505  | C4 | C598     | C1 | R314  | B1 | R519  | C5 |
| C303 | A1 | C506  | C4 | CN301AB1 |    | R315  | B1 | R520  | D5 |
| C304 | A1 | C507  | C4 | CN501    | C1 | R316  | B1 | R521  | D5 |
| C305 | A1 | C508  | D4 | D401     | C3 | R317  | B1 | R522  | D5 |
| C306 | A1 | C509  | D4 | D402     | B3 | R318  | B1 | R523  | D5 |
| C311 | A1 | C510  | D4 | D403     | B3 | R319  | B1 | R524  | D5 |
| C312 | B1 | C516  | D3 | D404     | B3 | R320  | B1 | R525  | C2 |
| C313 | A1 | C517  | D3 | D405     | B3 | R321  | B1 | R526  | C2 |
| C314 | B1 | C518  | D3 | D406     | B4 | R322  | B1 | R527  | C2 |
| C315 | B1 | C519  | D3 | D409     | B4 | R323  | B1 | R528  | C2 |
| C316 | B1 | C520  | D4 | D410     | B4 | R324  | B1 | R529  | C2 |
| C317 | B1 | C521  | D4 | D501     | C2 | R325  | A2 | R530  | D2 |
| C318 | B1 | C522  | D4 | D502     | C2 | R326  | B1 | R531  | D2 |
| C319 | B1 | C523  | D4 | D503     | C2 | R327  | B1 | R532  | D2 |
| C320 | B1 | C524  | B3 | D504     | C2 | R328  | B1 | R533  | D2 |
| C321 | B1 | C525  | B3 | D505     | C2 | R329  | B1 | R534  | D2 |
| C322 | B1 | C526  | B3 | D506     | C2 | R330  | B1 | R535  | D2 |
| C323 | B1 | C527  | B3 | D507     | C1 | R331  | B2 | R537  | C1 |
| C324 | B1 | C528  | B5 | D508     | C1 | R332  | B2 | R538  | C1 |
| C325 | A2 | C529  | B5 | D509     | C1 | R333  | B2 | R540  | C2 |
| C326 | A2 | C530  | B5 | D510     | D2 | R334  | B2 | R541  | C1 |
| C327 | A2 | C531  | B5 | FB121    | D2 | R335  | A2 | R542  | C1 |
| C328 | B2 | C532  | B5 | FB122    | D2 | R336  | A2 | R543  | C1 |
| C329 | A2 | C533  | B5 | FB123    | D2 | R337  | A2 | R544  | C1 |
| C330 | B2 | C534  | B5 | FB124    | D2 | R338  | B2 | R545  | C1 |
| C332 | B2 | C535  | B5 | FB401    | D3 | R340  | B2 | R546  | C1 |
| C334 | B2 | C536  | B5 | FB402    | D4 | R342  | B2 | R548  | C1 |
| C335 | A2 | C537  | B5 | IC302    | B1 | R343  | A2 | R549  | C1 |
| C336 | B2 | C538  | B5 | IC303    | A2 | R344  | A2 | R550  | C2 |
| C337 | A2 | C539  | B5 | IC304    | A2 | R345  | A2 | R551  | C2 |
| C338 | A2 | C540  | C3 | IC305    | A3 | R346  | A2 | R552  | C2 |
| C339 | A2 | C541  | C4 | IC401    | C3 | R347  | A2 | R553  | C2 |
| C340 | A3 | C542  | C4 | IC501    | B4 | R348  | A2 | R554  | C2 |
| C341 | A3 | C543  | C4 | IC502    | C4 | R349  | A3 | R555  | C2 |
| C342 | A3 | C544  | C4 | IC504    | C2 | R350  | A3 | R556  | C2 |
| C343 | A3 | C545  | C4 | IC505    | C1 | R351  | A3 | R557  | C2 |
| C344 | A3 | C546  | C4 | JK301    | A1 | R352  | A3 | R558  | C2 |
| C345 | A3 | C547  | C4 | JK501    | C5 | R353  | A3 | R560  | C1 |
| C346 | A3 | C548  | C4 | JK501AC5 |    | R354  | A3 | R561  | C1 |
| C362 | B2 | C549  | C4 | L301     | A3 | R382  | A1 | R562  | C1 |
| C372 | A1 | C550  | C4 | L302     | A2 | R383  | A1 | R563  | C1 |
| C373 | A1 | C551  | C4 | L501     | B5 | R384  | B1 | R564  | C1 |
| C401 | C3 | C552  | D4 | L502     | C5 | R385  | B1 | R565  | C1 |
| C402 | C3 | C553  | C5 | L503     | C5 | R401  | C3 | R566  | C1 |
| C403 | C3 | C554  | C5 | L504     | C5 | R402  | C3 | R567  | B1 |
| C404 | C3 | C555  | C5 | L505     | C5 | R403  | C2 | R568  | C1 |
| C405 | C3 | C556  | C5 | L506     | D5 | R404  | C2 | R569  | C1 |
| C406 | C3 | C557  | C5 | L507     | D5 | R405  | C2 | R570  | C1 |
| C407 | C3 | C558  | D5 | L508     | D5 | R406  | C2 | R589  | D5 |
| C408 | D3 | C559  | C5 | L509     | C5 | R407  | C2 | R590  | D5 |
| C409 | D3 | C560  | C5 | L510     | D4 | R408  | C3 | R591  | D5 |
| C410 | D3 | C561  | C5 | Q301     | A3 | R409  | D3 | R592  | D5 |
| C411 | D3 | C562  | C5 | Q401     | C4 | R410  | D3 | R595  | C1 |
| C412 | D3 | C563  | C5 | Q402     | B3 | R411  | D3 | RB101 | D2 |
| C413 | D3 | C564  | C5 | Q407     | B4 | R412  | C3 | RB102 | C1 |
| C414 | D3 | C565  | D5 | Q408     | A4 | R413  | B4 | RB502 | C1 |
| C415 | D3 | C566  | D5 | Q503     | C1 | R414  | B4 | ZD102 | D2 |
| C416 | D3 | C567  | D5 | Q504     | C1 | R415  | B3 | ZD104 | D2 |
| C417 | D3 | C568  | D5 | Q505     | C1 | R416  | B3 | ZD105 | D2 |
| C418 | D4 | C569  | D5 | Q506     | C1 | R442  | D2 | ZD303 | B2 |
| C419 | D4 | C570  | D5 | Q507     | C2 | R447  | B4 | ZD304 | B2 |
| C420 | C4 | C571  | D5 | Q508     | C1 | R448  | B4 | ZD305 | A3 |
| C421 | C4 | C572  | D5 | R162     | D2 | R501  | C4 | ZD401 | B4 |
| C422 | C3 | C573  | D5 | R163     | D2 | R502  | C4 |       |    |
| C423 | C3 | C574  | C5 | R165     | A3 | R503  | D4 |       |    |
| C424 | C3 | C575  | D5 | R301     | A1 | R504  | D4 |       |    |

PCB LAYOUT - TOP VIEW

|       |    |      |    |      |    |       |    |      |    |      |    |      |    |      |    |      |    |          |       |       |       |       |       |       |          |       |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |    |
|-------|----|------|----|------|----|-------|----|------|----|------|----|------|----|------|----|------|----|----------|-------|-------|-------|-------|-------|-------|----------|-------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|----|
| C1024 | D2 | C158 | B1 | C317 | A1 | C344  | B2 | C501 | D4 | C529 | C4 | C560 | B3 | C596 | C2 | C816 | D1 | C843     | D1    | D405  | C2    | FB112 | C1    | FB803 | D1       | JK101 | A2   | L601 | B1   | Q801 | D1   | R126  | C1   | R303 | B1   | R322 | A1   | R342 | A1   | R402 | C2   | R501 | D4   | R542 | A3   | R562 | C2   | R610 | A1    | R836  | D1    | ZD110 | B2 |
| C1028 | B1 | C159 | B1 | C318 | B1 | C345  | C2 | C502 | D4 | C534 | B3 | C561 | B3 | C597 | C2 | C818 | D1 | C846     | D1    | D406  | C2    | FB114 | C1    | FB804 | D1       | JK301 | A2   | L602 | B1   | Q802 | D1   | R128  | B1   | R304 | A2   | R323 | B1   | R343 | B2   | R403 | C2   | R502 | D4   | R543 | A3   | R563 | C2   | R621 | A1    | R837  | D1    | ZD303 | B1 |
| C104  | D2 | C179 | D2 | C321 | A1 | C362  | B2 | C503 | D4 | C535 | B3 | C562 | A3 | C598 | C2 | C819 | D1 | CN101D2  | D409  | D3    | FB115 | C1    | FB805 | D2    | JK501    | A3    | L603 | B1   | Q803 | D1   | R129 | C1    | R305 | A1   | R324 | A2   | R344 | B2   | R404 | C2   | R503 | D3   | R544 | A3   | R564 | C2   | R801 | D1   | R838  | D1    | ZD304 | A1    |    |
| C106  | D2 | C181 | D2 | C322 | A1 | C372  | A1 | C504 | D4 | C536 | B4 | C563 | B3 | C601 | B1 | C820 | D1 | CN102D2  | D410  | D3    | FB121 | D2    | IC101 | C1    | JK501AA4 | L604  | B1   | Q804 | D1   | R133 | C1   | R306  | A2   | R325 | B1   | R345 | B2   | R405 | C2   | R504 | D3   | R545 | B3   | R565 | C2   | R802 | D1   | R839 | D1    | ZD305 | A2    |       |    |
| C107  | D2 | C184 | D2 | C323 | A1 | C373  | A2 | C505 | D4 | C537 | B3 | C564 | B3 | C602 | B1 | C823 | D1 | CN103B1  | D507  | B3    | FB122 | D2    | IC102 | D1    | JK601    | A1    | Q101 | D2   | Q805 | D1   | R134 | C1    | R307 | A1   | R326 | A2   | R346 | B2   | R406 | C2   | R505 | C4   | R546 | A3   | R566 | C2   | R806 | D1   | R840  | D1    | ZD401 | D3    |    |
| C110  | D2 | C188 | D2 | C324 | A1 | C406  | D2 | C506 | D4 | C538 | B4 | C565 | C3 | C603 | B1 | C824 | D1 | CN105C2  | D508  | A2    | FB123 | D2    | IC103 | B1    | JK602    | A1    | Q102 | D2   | R101 | D2   | R152 | B1    | R308 | A2   | R327 | B2   | R347 | B2   | R407 | C2   | R506 | C4   | R548 | B3   | R567 | C2   | R807 | D1   | R841  | D1    | ZD605 | A1    |    |
| C113  | C2 | C189 | D2 | C325 | B2 | C408  | C2 | C507 | D4 | C539 | B4 | C566 | C3 | C604 | B1 | C825 | D1 | CN301AB2 | D509  | C2    | FB124 | D1    | IC104 | C2    | L301     | B2    | Q104 | B1   | R102 | D1   | R155 | B1    | R309 | A1   | R328 | A2   | R348 | B2   | R408 | C2   | R509 | B3   | R549 | B3   | R568 | D2   | R813 | D1   | R845  | D1    | ZD606 | A1    |    |
| C123  | C2 | C190 | D3 | C326 | B2 | C409  | C2 | C508 | D3 | C540 | C4 | C567 | C3 | C606 | B1 | C826 | D1 | CN501B3  | D801  | D1    | FB125 | B1    | IC105 | C2    | L302     | B2    | Q301 | A2   | R103 | D1   | R156 | B1    | R310 | A2   | R329 | A2   | R349 | B2   | R409 | C2   | R510 | B3   | R550 | C2   | R569 | D2   | R814 | D1   | R846  | D1    | ZD607 | A1    |    |
| C124  | C2 | C191 | C2 | C327 | B1 | C410  | D2 | C509 | D3 | C541 | C4 | C568 | C3 | C608 | A1 | C827 | D1 | CN801D1  | D802  | D1    | FB126 | B1    | IC302 | B1    | L501     | B3    | Q401 | C2   | R104 | D2   | R162 | D2    | R311 | B2   | R330 | B1   | R350 | B2   | R410 | D3   | R511 | B3   | R551 | C2   | R570 | D2   | R817 | D1   | R847  | D1    | ZD608 | A1    |    |
| C126  | B2 | C192 | C2 | C328 | B2 | C411  | D2 | C510 | D3 | C542 | C4 | C573 | B3 | C611 | B1 | C828 | D1 | CN802D2  | FB102 | D2    | FB127 | B1    | IC303 | B1    | L502     | C4    | Q402 | C2   | R105 | D2   | R163 | D3    | R312 | B2   | R331 | B1   | R351 | B2   | R411 | D3   | R512 | B3   | R552 | C2   | R589 | C3   | R818 | D1   | R848  | D1    |       |       |    |
| C129  | B1 | C196 | D3 | C332 | B1 | C412  | D2 | C517 | D3 | C543 | C4 | C574 | D4 | C620 | A1 | C830 | D1 | CN803D2  | FB104 | C2    | FB401 | D2    | IC304 | B2    | L503     | B5    | Q407 | D3   | R107 | D2   | R165 | C2    | R313 | A1   | R332 | B1   | R352 | B2   | R412 | D2   | R513 | C4   | R553 | C2   | R590 | C3   | R819 | D1   | RA101 | C1    |       |       |    |
| C130  | B1 | C197 | B1 | C335 | A2 | C413  | D3 | C519 | D3 | C548 | B3 | C575 | D4 | C802 | C1 | C833 | D1 | D101     | D2    | FB105 | C2    | FB402 | D2    | IC305 | B2       | L504  | C4   | Q408 | D3   | R108 | D2   | R174  | C2   | R314 | A1   | R333 | B1   | R353 | A2   | R413 | C2   | R514 | C4   | R554 | C2   | R595 | B3   | R820 | D1    | RB101 | D2    |       |    |
| C132  | C1 | C311 | A1 | C336 | B1 | C417  | D2 | C520 | D3 | C549 | C4 | C588 | A3 | C804 | C1 | C836 | D1 | D102     | D2    | FB106 | D2    | FB601 | B1    | IC401 | C3       | L505  | B5   | Q503 | B3   | R109 | D2   | R175  | C2   | R315 | A1   | R334 | B2   | R354 | A2   | R414 | C2   | R517 | C4   | R555 | C2   | R601 | B1   | R821 | D1    | RB102 | C3    |       |    |
| C137  | C1 | C312 | A1 | C338 | B2 | C418  | D2 | C521 | D3 | C551 | C3 | C589 | C2 | C805 | C1 | C838 | D1 | D103     | D2    | FB107 | D2    | FB602 | A1    | IC501 | D4       | L506  | C3   | Q504 | A3   | R115 | D1   | R185  | B2   | R316 | B1   | R335 | B1   | R382 | B1   | R415 | C2   | R518 | C3   | R556 | B2   | R602 | B1   | R823 | D1    | RB502 | C2    |       |    |
| C139  | C1 | C313 | A1 | C340 | B2 | C427  | C2 | C524 | C3 | C552 | C4 | C592 | B2 | C806 | C1 | C839 | D1 | D104     | D2    | FB108 | D2    | FB603 | A1    | IC502 | D3       | L507  | B3   | Q505 | A3   | R120 | C2   | R186  | B2   | R317 | A1   | R336 | B2   | R383 | A2   | R416 | C2   | R537 | A3   | R557 | C2   | R603 | B1   | R826 | D1    | XL101 | D1    |       |    |
| C140  | C1 | C314 | A2 | C341 | B2 | C450  | D3 | C526 | C4 | C553 | C4 | C593 | C2 | C812 | D1 | C840 | D1 | D402     | D2    | FB109 | D2    | FB604 | A1    | IC504 | C2       | L508  | C3   | Q506 | A3   | R121 | C2   | R187  | B1   | R318 | B1   | R337 | B1   | R384 | A2   | R442 | B2   | R538 | A3   | R558 | C2   | R604 | B1   | R828 | D2    | ZD102 | D3    |       |    |
| C143  | D1 | C315 | A1 | C342 | B2 | C451  | D3 | C527 | C4 | C554 | C4 | C594 | C2 | C813 | C1 | C841 | D1 | D403     | D2    | FB110 | C2    | FB801 | D1    | IC505 | C2       | L509  | A3   | Q507 | C2   | R122 | B1   | R302  | A2   | R319 | A1   | R338 | B2   | R385 | B1   | R447 | D3   | R540 | C2   | R560 | C2   | R605 | B1   | R830 | D2    | ZD104 | D2    |       |    |
| C144  | C1 | C316 | B1 | C343 | C2 | C500A | B3 | C528 | C4 | C559 | B3 | C595 | C2 | C814 | D1 | C842 | D1 | D404     | C2    | FB111 | C2    | FB802 | D1    | IC801 | D1       | L510  | B3   | Q508 | C2   | R123 | B1   | R3027 | B2   | R320 | B1   | R340 | A1   | R401 | C2   | R448 | D3   | R541 | A3   | R561 | C2   | R607 | B1   | R831 | D2    | ZD105 | D2    |       |    |

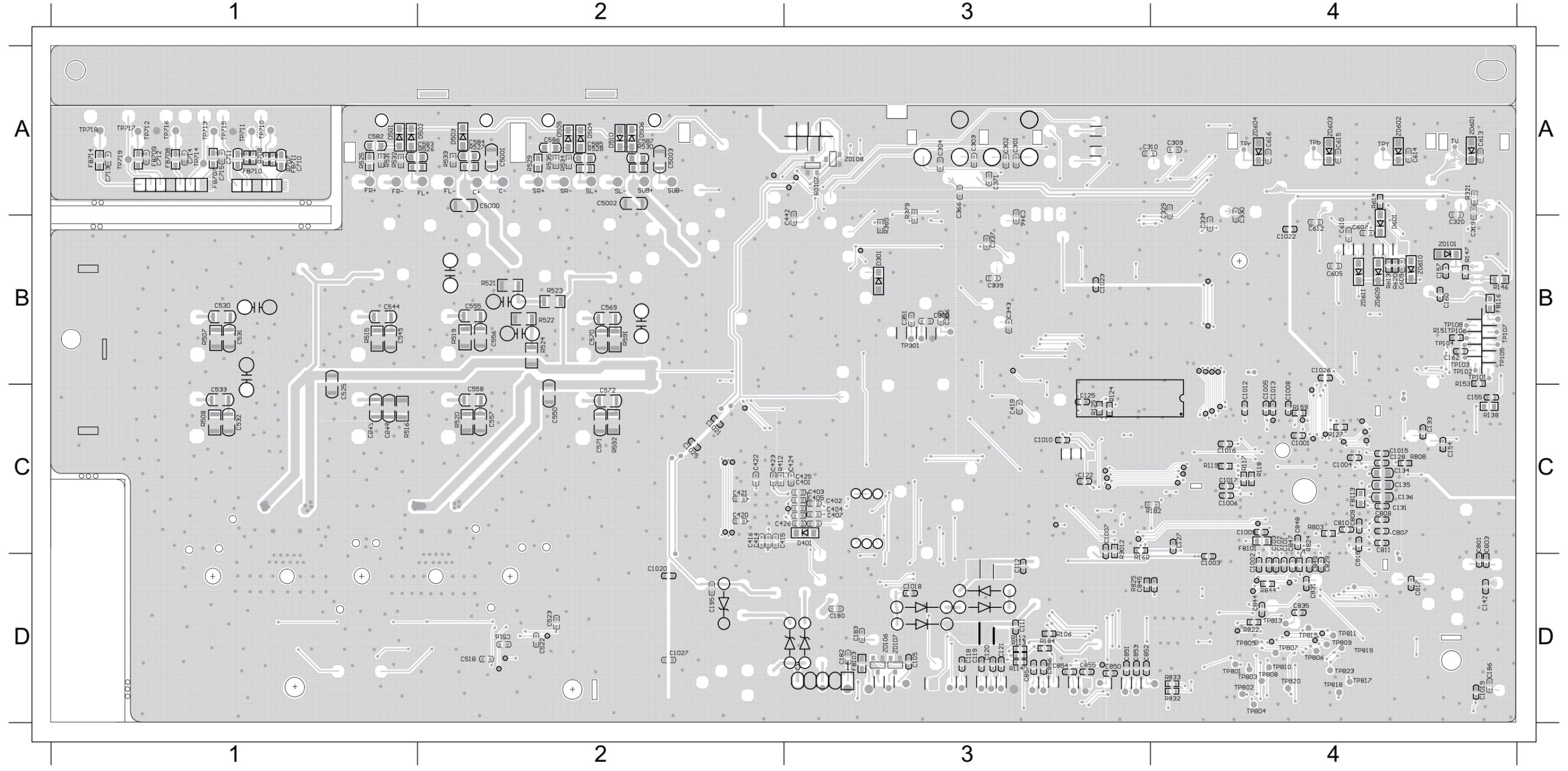


# PCB LAYOUT - BOTTOM VIEW

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6 - 5

|          |          |          |         |         |         |         |          |         |         |         |         |         |         |          |         |          |         |         |          |          |
|----------|----------|----------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|----------|---------|----------|---------|---------|----------|----------|
| C1001 C4 | C1012 B4 | C1023 B3 | C121 D3 | C157 B4 | C303 A3 | C346 A3 | C420 C2  | C516 D2 | C546 C1 | C582 A1 | C614 A4 | C829 D4 | C853 D3 | D506 A2  | R118 C4 | R182 C3  | R522 B2 | R533 A2 | R832 D4  | ZD604 A4 |
| C1002 D4 | C1013 B4 | C1025 C2 | C122 C3 | C160 B4 | C304 A3 | C401 C3 | C421 C2  | C518 D2 | C547 C1 | C583 A2 | C615 A4 | C831 D4 | C854 D3 | D510 A1  | R119 C4 | R184 D3  | R523 B2 | R534 A2 | R833 D4  |          |
| C1003 D4 | C1015 C4 | C1026 B4 | C125 C3 | C162 B4 | C305 B3 | C402 C3 | C422 C2  | C522 D2 | C550 C2 | C584 A2 | C616 A4 | C835 D4 | C855 D3 | FB101 C4 | R124 C3 | R3012 C3 | R524 B2 | R535 A2 | R844 D4  |          |
| C1004 C4 | C1016 C4 | C1027 D2 | C127 C4 | C180 D3 | C306 B3 | C403 C3 | C423 C2  | C523 D2 | C555 B2 | C585 A2 | C803 C4 | C844 D4 | C856 D3 | FB103 D3 | R125 C3 | R321 A4  | R525 A1 | R591 B2 | ZD101 B4 |          |
| C1005 B4 | C1017 C4 | C103 C4  | C128 C4 | C182 D3 | C319 B4 | C404 C3 | C424 C3  | C525 C1 | C556 B2 | C586 A2 | C807 C4 | C845 D3 | C857 D3 | FB113 A4 | R127 C4 | R507 B1  | R526 A2 | R592 C2 | ZD106 D3 |          |
| C1006 C4 | C1018 D3 | C105 D3  | C131 C4 | C183 D3 | C320 B4 | C405 C3 | C425 C3  | C530 B1 | C557 C2 | C587 A2 | C808 C4 | C847 C4 | D401 C3 | FB116 B4 | R146 A4 | R508 C1  | R527 A2 | R620 B4 | ZD107 D3 |          |
| C1007 C3 | C1019 D4 | C111 D3  | C133 C4 | C185 C4 | C329 A4 | C407 C3 | C426 C2  | C531 B1 | C558 C2 | C605 B4 | C809 C4 | C848 C4 | D501 A1 | R106 D3  | R147 A4 | R515 B1  | R528 A2 | R803 C4 | ZD108 A3 |          |
| C1008 C4 | C102 C4  | C112 D3  | C134 C4 | C186 D4 | C330 A4 | C414 C2 | C5000 A2 | C532 C1 | C569 B2 | C607 B4 | C810 C4 | C849 C4 | D502 A2 | R112 D3  | R151 B4 | R516 C1  | R529 A2 | R808 C4 | ZD109 A3 |          |
| C1009 C4 | C1020 D2 | C118 D3  | C135 C4 | C195 D2 | C334 A4 | C415 C2 | C5001 A2 | C533 C1 | C570 B2 | C609 B4 | C811 C4 | C850 D3 | D503 A2 | R113 D3  | R153 B4 | R519 B2  | R530 A2 | R822 D4 | ZD601 A4 |          |
| C101 C4  | C1021 C2 | C119 D3  | C136 C4 | C301 A3 | C337 B3 | C416 C2 | C5002 A2 | C544 B1 | C571 C2 | C612 B4 | C815 C4 | C851 D3 | D504 A2 | R114 D3  | R159 C4 | R520 C2  | R531 A1 | R824 C4 | ZD602 A4 |          |
| C1010 C3 | C1022 B4 | C120 D3  | C142 D4 | C302 A3 | C339 B3 | C419 C3 | C5003 A2 | C545 B1 | C572 C2 | C613 A4 | C817 D4 | C852 D3 | D505 A2 | R117 C4  | R160 D3 | R521 B2  | R532 A1 | R825 C3 | ZD603 A4 |          |

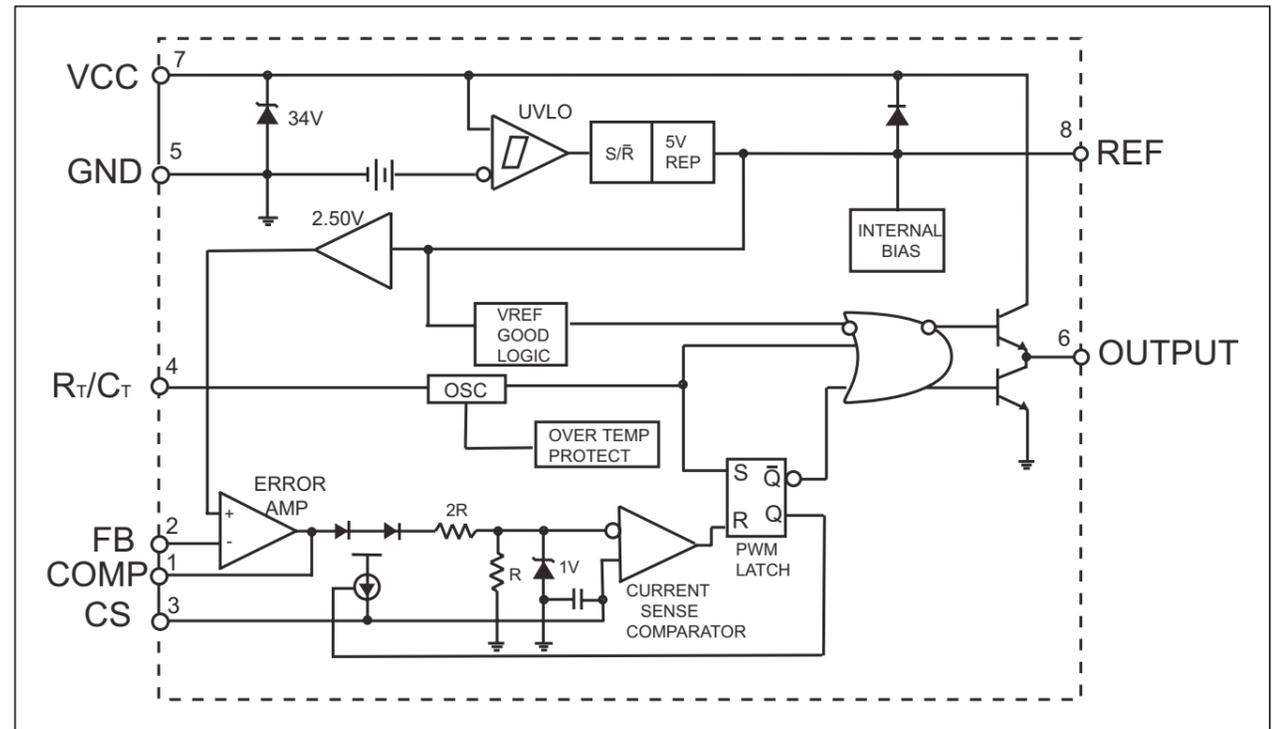


# POWER BOARD

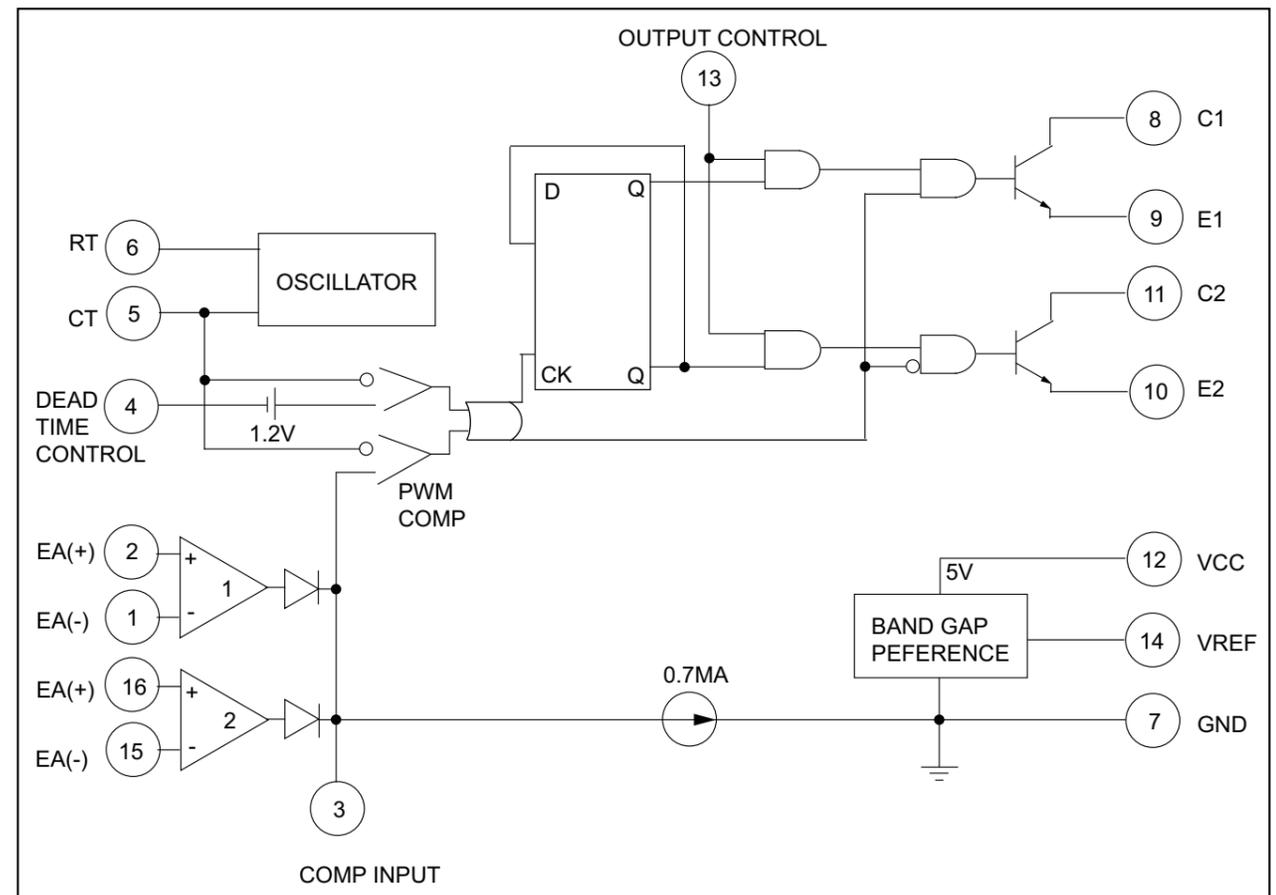
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**INTERNAL IC DIAGRAM - AP3843GMTR**

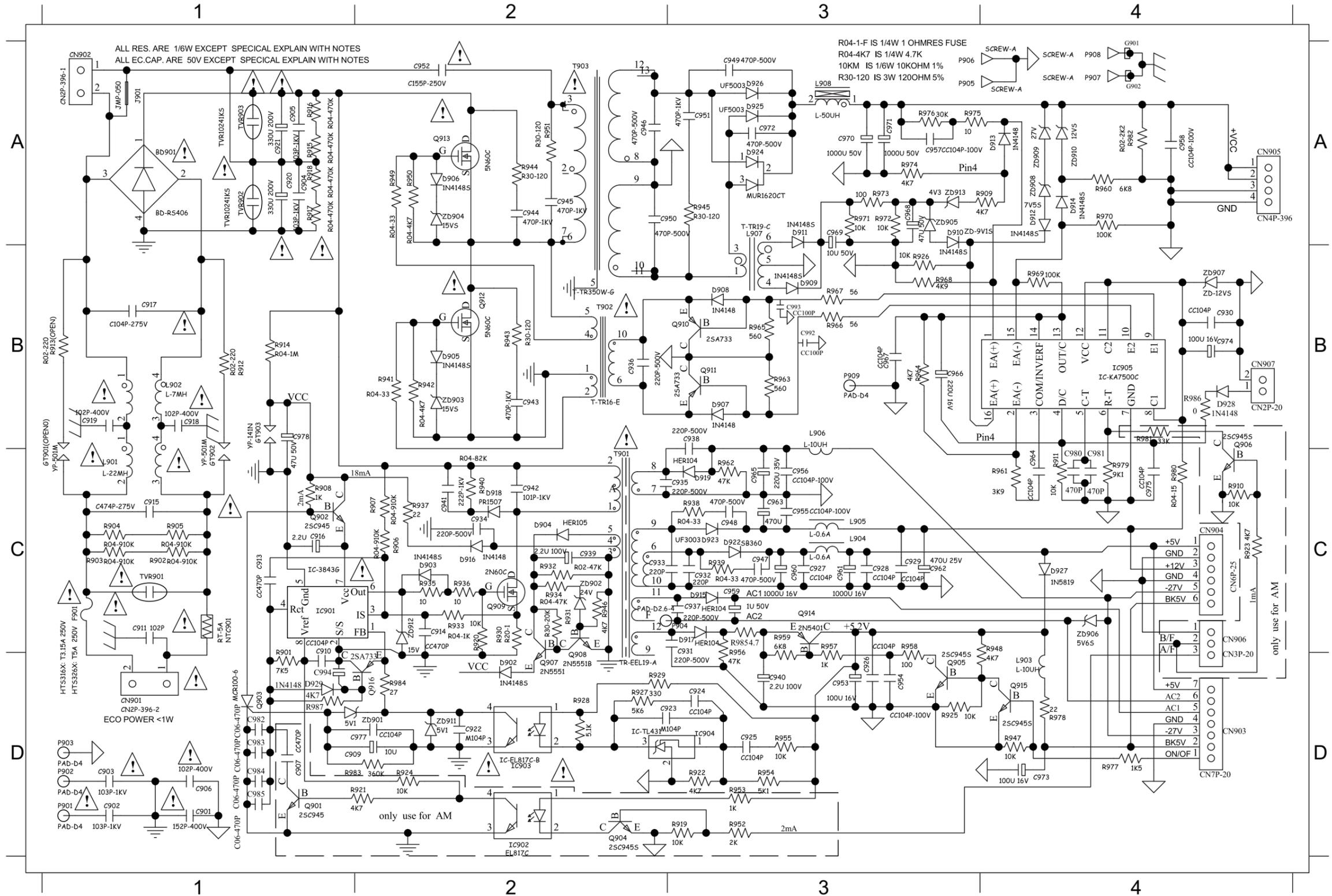


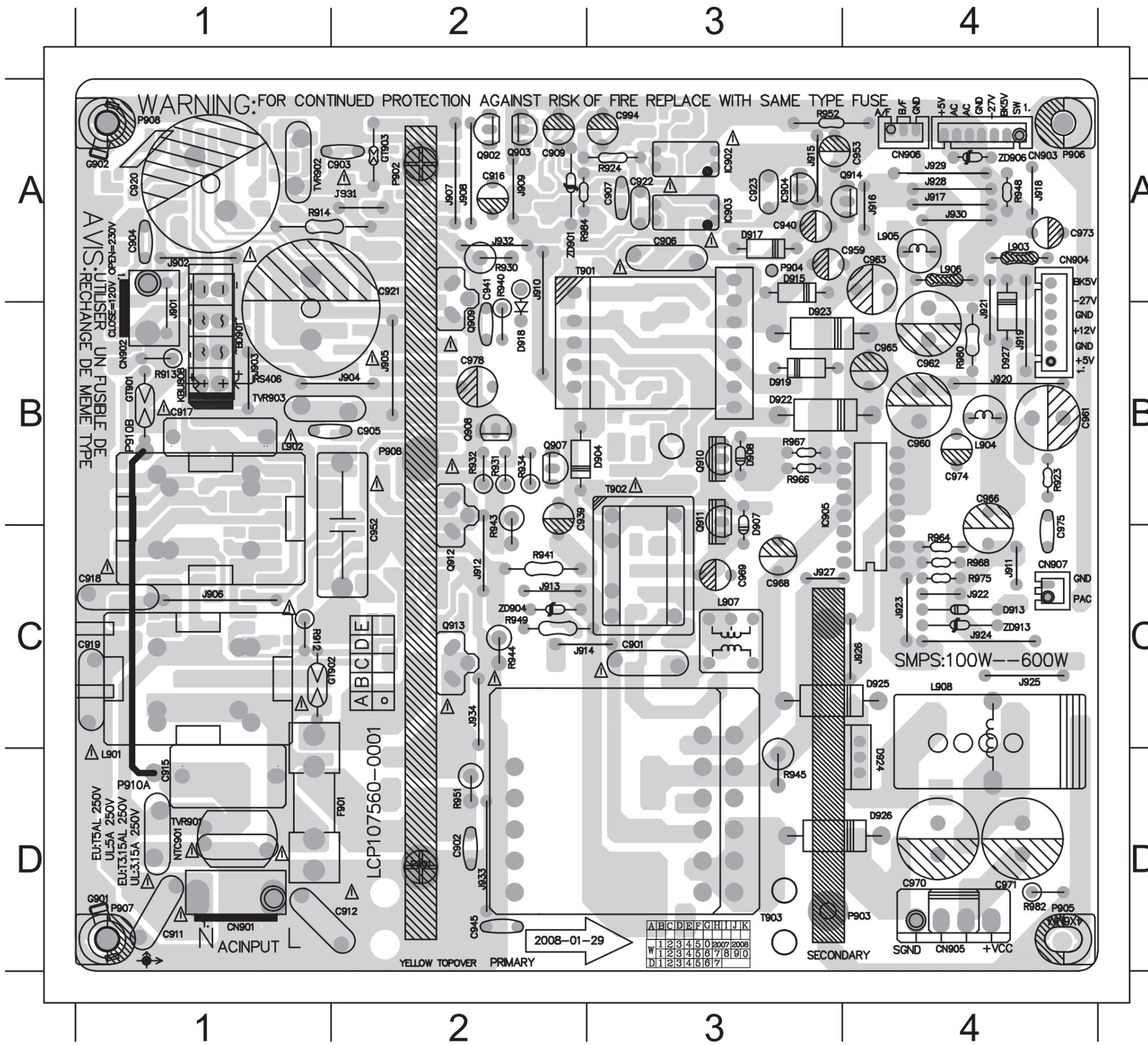
**INTERNAL IC DIAGRAM - KA7500C**



# CIRCUIT DIAGRAM

|       |    |      |    |      |    |      |    |      |    |      |    |      |    |       |    |      |    |      |    |       |    |        |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |        |    |       |    |
|-------|----|------|----|------|----|------|----|------|----|------|----|------|----|-------|----|------|----|------|----|-------|----|--------|----|------|----|------|----|------|----|------|----|------|----|------|----|------|----|--------|----|-------|----|
| BD901 | A1 | C915 | C1 | C926 | D3 | C937 | C3 | C948 | C3 | C960 | C3 | C972 | A3 | C985  | D1 | D904 | B2 | D916 | B2 | GT902 | B2 | L907   | A3 | Q912 | B2 | R907 | C2 | R922 | D3 | R935 | C2 | R946 | C2 | R959 | C3 | R970 | A4 | R982   | A4 | ZD902 | C2 |
| C901  | D1 | C916 | C1 | C927 | C3 | C938 | B3 | C949 | A3 | C961 | C3 | C973 | D4 | C992  | B3 | D905 | B2 | D917 | C3 | IC901 | C1 | L908   | A3 | Q913 | A2 | R908 | C1 | R925 | D3 | R936 | C2 | R947 | D4 | R960 | A4 | R971 | A3 | R983   | D1 | ZD903 | B2 |
| C902  | D1 | C917 | B1 | C928 | C3 | C939 | C2 | C950 | A2 | C962 | C3 | C974 | B4 | C993  | B3 | D906 | A2 | D918 | C2 | IC903 | D2 | NTC901 | C1 | Q914 | C3 | R909 | A3 | R926 | B3 | R937 | C2 | R948 | C4 | R961 | C4 | R972 | A3 | R984   | D2 | ZD904 | A2 |
| C903  | D1 | C918 | B1 | C929 | C3 | C940 | D3 | C951 | A3 | C963 | C3 | C975 | C4 | C994  | D1 | D907 | B3 | D919 | C3 | IC904 | D3 | Q902   | C1 | Q915 | D4 | R911 | C4 | R927 | D2 | R938 | C3 | R949 | A2 | R962 | C3 | R973 | A3 | R985   | C3 | ZD905 | A3 |
| C904  | A1 | C919 | B1 | C930 | B4 | C941 | C2 | C952 | A2 | C964 | C4 | C977 | D1 | CN901 | D1 | D908 | B3 | D922 | C3 | IC905 | C4 | Q903   | D1 | Q916 | D2 | R912 | B1 | R928 | D2 | R939 | C3 | R950 | A2 | R963 | B3 | R974 | A3 | R986   | B4 | ZD906 | C4 |
| C905  | A1 | C920 | A1 | C931 | C3 | C942 | C2 | C954 | D3 | C965 | C3 | C978 | B1 | CN903 | D4 | D909 | B3 | D923 | C3 | L901  | C1 | Q905   | D3 | R901 | C1 | R914 | B1 | R929 | D2 | R940 | C2 | R951 | A2 | R964 | B3 | R975 | A3 | R987   | D1 | ZD907 | B4 |
| C906  | D1 | C921 | A1 | C932 | C3 | C943 | B2 | C955 | C3 | C966 | B3 | C980 | C4 | CN904 | C4 | D910 | A3 | D924 | A3 | L902  | B1 | Q907   | D2 | R902 | C1 | R915 | A1 | R930 | C2 | R941 | B2 | R954 | D3 | R965 | B3 | R976 | A3 | T901   | C2 | ZD908 | A4 |
| C909  | D1 | C922 | D2 | C933 | C2 | C944 | A2 | C956 | C3 | C967 | B3 | C981 | C4 | CN905 | A4 | D911 | A3 | D927 | C4 | L903  | D4 | Q908   | D2 | R903 | C1 | R916 | A1 | R931 | C2 | R942 | B2 | R955 | D3 | R966 | B3 | R977 | D4 | T902   | B2 | ZD909 | A4 |
| C910  | C1 | C923 | D2 | C934 | C2 | C945 | C1 | C957 | A3 | C968 | A3 | C982 | D1 | CN907 | B4 | D912 | A4 | D928 | B4 | L904  | C3 | Q909   | D2 | R904 | C1 | R917 | A1 | R932 | C2 | R943 | B2 | R956 | C3 | R967 | B3 | R978 | D4 | T903   | A2 | ZD910 | A4 |
| C913  | C1 | C924 | D3 | C935 | C2 | C946 | A2 | C958 | A4 | C969 | A3 | C983 | D1 | D902  | D2 | D914 | A4 | D929 | D1 | L905  | C3 | Q910   | B3 | R905 | C1 | R918 | A1 | R933 | C2 | R944 | A2 | R957 | C3 | R968 | B3 | R979 | C4 | TVR901 | C1 | ZD911 | D2 |
| C914  | C2 | C925 | D3 | C936 | B2 | C947 | C3 | C959 | C3 | C971 | A3 | C984 | D1 | D903  | B2 | D915 | C3 | F901 | C1 | L906  | B3 | Q911   | B3 | R906 | C2 | R920 | C2 | R934 | C2 | R945 | A3 | R958 | C3 | R969 | B4 | R980 | C4 | ZD901  | D2 | ZD913 | A3 |



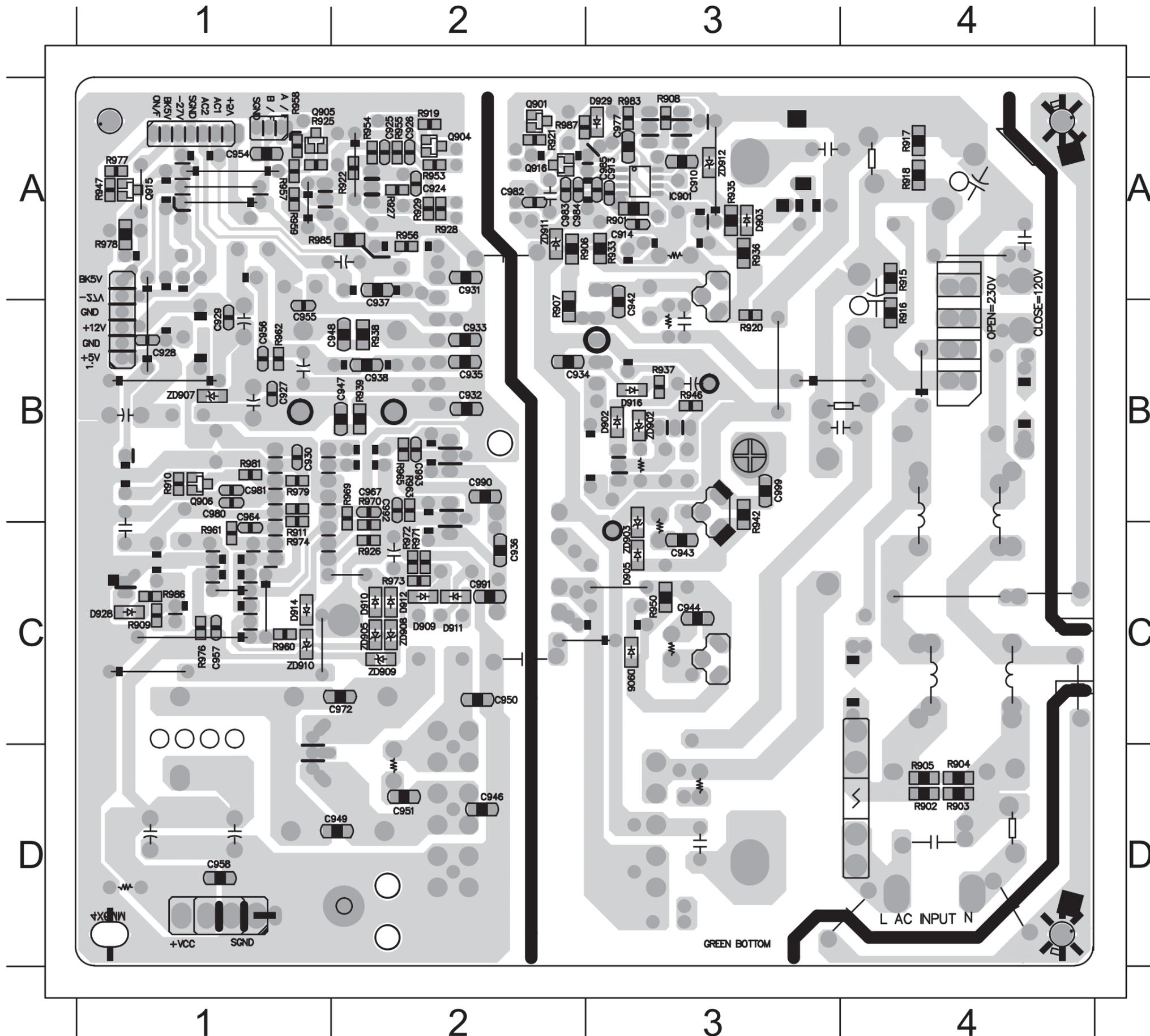


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|-------|----|--------|----|--------|----|
| BD901 | B1 | IC903  | A3 | R914   | A1 |
| C901  | C3 | IC904  | A3 | R930   | A2 |
| C902  | D2 | IC905  | B3 | R931   | B2 |
| C903  | A2 | J901   | A1 | R932   | B2 |
| C904  | A1 | J902   | A1 | R934   | B2 |
| C905  | B2 | J903   | B1 | R940   | A2 |
| C906  | A3 | J904   | B2 | R941   | C2 |
| C909  | A2 | J905   | B2 | R943   | C2 |
| C915  | D1 | J906   | C2 | R944   | C2 |
| C916  | A2 | J907   | A2 | R945   | D3 |
| C917  | B1 | J908   | A2 | R948   | A4 |
| C918  | C1 | J909   | A2 | R949   | C2 |
| C919  | C1 | J910   | A2 | R951   | D2 |
| C920  | A1 | J911   | C4 | R964   | C4 |
| C921  | A2 | J912   | C2 | R966   | B3 |
| C922  | A3 | J913   | C2 | R967   | B3 |
| C923  | A3 | J914   | C2 | R968   | C4 |
| C939  | B2 | J915   | A3 | R975   | C4 |
| C940  | A3 | J916   | A4 | R980   | B4 |
| C941  | A2 | J917   | A4 | R982   | D4 |
| C945  | D2 | J918   | A4 | R984   | A2 |
| C952  | C2 | J920   | B4 | T901   | A2 |
| C959  | A4 | J921   | B4 | T902   | B3 |
| C960  | B4 | J922   | C4 | T903   | D3 |
| C961  | B4 | J923   | C4 | TVR901 | D1 |
| C962  | B4 | J924   | C4 | ZD901  | A2 |
| C963  | B4 | J925   | C4 | ZD904  | C2 |
| C965  | B4 | J926   | C4 | ZD906  | A4 |
| C966  | B4 | J927   | C3 | ZD911  | A2 |
| C968  | C3 | J929   | A4 | ZD913  | C4 |
| C969  | C3 | J930   | A4 |        |    |
| C971  | D4 | J931   | A2 |        |    |
| C973  | A4 | J932   | A2 |        |    |
| C974  | B4 | J933   | D2 |        |    |
| C975  | B2 | J934   | D2 |        |    |
| C978  | B2 | L901   | D1 |        |    |
| C994  | A3 | L902   | B1 |        |    |
| CN901 | D1 | L903   | A4 |        |    |
| CN903 | A4 | L904   | B4 |        |    |
| CN904 | A4 | L905   | A4 |        |    |
| CN905 | D4 | L906   | A4 |        |    |
| CN907 | C4 | L907   | C3 |        |    |
| D904  | B3 | L908   | C4 |        |    |
| D907  | B3 | NTC901 | D1 |        |    |
| D908  | B3 | Q902   | A2 |        |    |
| D915  | A3 | Q903   | A2 |        |    |
| D917  | A3 | Q907   | B2 |        |    |
| D918  | B2 | Q908   | B2 |        |    |
| D919  | B3 | Q909   | B2 |        |    |
| D922  | B3 | Q910   | B3 |        |    |
| D923  | B3 | Q911   | B3 |        |    |
| D924  | D4 | Q912   | C2 |        |    |
| D927  | B4 | Q913   | C2 |        |    |
| F901  | D2 | Q914   | A4 |        |    |
| GT902 | C2 | R912   | C1 |        |    |

PCB LAYOUT - BOTTOM VIEW

7-4

7-4

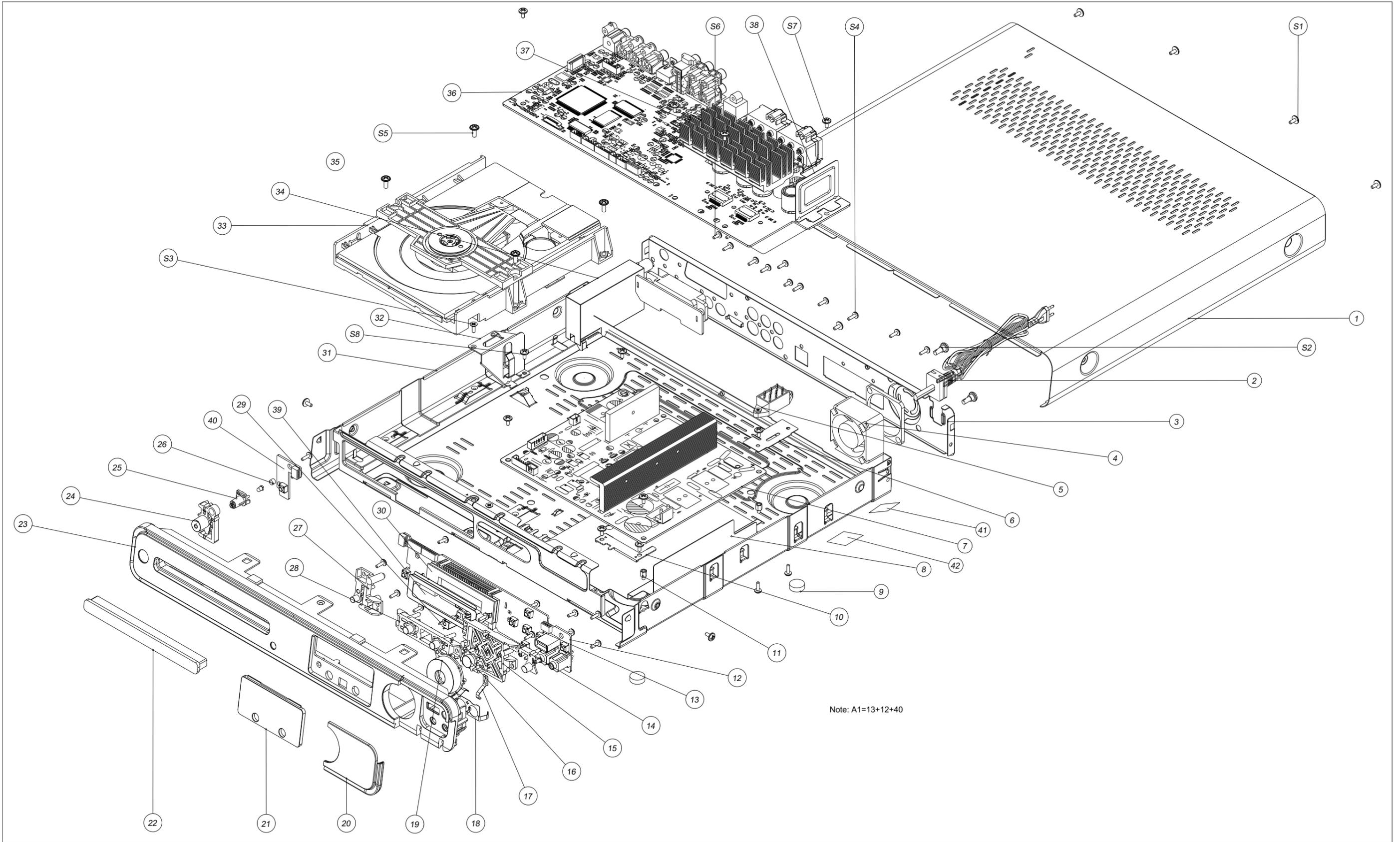


|       |    |       |    |
|-------|----|-------|----|
| C910  | A3 | R903  | D4 |
| C913  | A3 | R904  | D4 |
| C914  | A3 | R905  | D4 |
| C924  | A2 | R906  | A2 |
| C925  | A2 | R907  | A2 |
| C926  | A2 | R908  | A3 |
| C927  | B1 | R909  | C1 |
| C928  | B1 | R911  | C1 |
| C929  | B1 | R915  | A4 |
| C930  | B1 | R916  | B4 |
| C931  | A2 | R917  | A4 |
| C932  | B2 | R918  | A4 |
| C933  | B2 | R920  | B3 |
| C934  | B2 | R922  | A2 |
| C935  | B2 | R925  | A1 |
| C936  | C2 | R926  | C2 |
| C937  | A2 | R927  | A2 |
| C938  | B2 | R928  | A2 |
| C942  | A3 | R929  | A2 |
| C943  | C3 | R933  | A3 |
| C944  | C3 | R935  | A3 |
| C946  | D2 | R936  | A3 |
| C947  | B2 | R937  | B3 |
| C948  | B1 | R938  | B2 |
| C949  | D1 | R939  | B2 |
| C950  | C2 | R942  | B3 |
| C951  | D3 | R946  | B3 |
| C954  | A1 | R947  | A1 |
| C955  | B1 | R950  | C3 |
| C956  | B1 | R954  | A2 |
| C957  | C1 | R955  | A2 |
| C958  | D1 | R956  | A2 |
| C964  | B1 | R957  | A1 |
| C967  | B2 | R958  | A1 |
| C972  | C1 | R959  | A1 |
| C977  | A3 | R960  | C1 |
| C980  | B1 | R961  | C1 |
| C981  | B1 | R962  | B1 |
| C982  | A2 | R963  | B2 |
| C983  | A2 | R965  | B2 |
| C984  | A2 | R969  | B2 |
| C985  | A3 | R970  | B2 |
| C992  | B2 | R971  | C2 |
| C993  | B2 | R972  | C2 |
| D902  | B3 | R973  | C2 |
| D903  | A3 | R974  | C1 |
| D905  | C3 | R976  | C1 |
| D906  | C3 | R977  | A1 |
| D909  | C2 | R978  | A1 |
| D910  | C2 | R979  | B1 |
| D911  | C2 | R983  | A3 |
| D912  | C2 | R985  | A1 |
| D914  | C1 | R986  | C1 |
| D916  | B3 | R987  | A2 |
| D928  | C1 | ZD902 | B3 |
| D929  | A3 | ZD903 | C3 |
| IC901 | A3 | ZD905 | C2 |
| Q905  | A1 | ZD907 | B1 |
| Q915  | A1 | ZD908 | C2 |
| Q916  | A2 | ZD909 | C2 |
| R901  | A3 | ZD910 | C1 |
| R902  | D4 |       |    |

MECHANICAL EXPLODED VIEW

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**MECHANICAL PART LIST**

| Loc.        | Part No.     | Description                 |
|-------------|--------------|-----------------------------|
| <b>MAIN</b> |              |                             |
| 1           | 996510013764 | TOP COVER SECC              |
| 2           | 996510001252 | PWR CORD                    |
| 3           | 996510013765 | REAR COVER SECC             |
| 4           | 996510012461 | FAN DC                      |
| 7           | 996510015624 | POWER PCB ASSY              |
| 8           | 996510011276 | POWER PCB PLATE PVC         |
| 9           | 996510011288 | RUBBER FOOT                 |
| 15          | 996510011285 | FUNCTION BUTTON BASE ABS    |
| 16          | 996510011284 | SOURCE BUTTON ABS           |
| 19          | 996510011282 | FUNCTION BUTTON ABS         |
| 20          | 996510011287 | CONNECTORS COVER            |
| 21          | 996510011286 | VFD LENS PMMA               |
| 22          | 996510013762 | DVD DOOR ABS                |
| 23          | 996510013763 | FRONT PANEL                 |
| 24          | 996510011280 | POWER BUTTON ABS            |
| 25          | 996510010840 | STANDBY LENS                |
| 27          | 996510011281 | EJECT BUTTON ABS            |
| 28          | 996510011283 | VOLUME BUTTON ABS           |
| 31          | 996510013766 | BOTTOM COVER SECC           |
| 33          | 996510010819 | DVD LOADER                  |
| 34          | 996510010825 | TUNER                       |
| 36          | 996510015625 | MAIN+SCART PCB ASSY         |
| 42          | 996510011277 | PVC SHEET-SMALL             |
| A1          | 996510015626 | VFD+JACK+STANDBY ASSY       |
| DOCK        | 996510010855 | SIMPLE IPOD DOCK            |
| FM          | 994000002731 | FM ANTENNA 1500MM           |
| RC          | 996510010856 | REMOTE CONTROL              |
| V1          | 996510000673 | FFC CABLE 10P 100MM P1.25MM |
| V1          | 996510007429 | FFCCBLE 10P100mm            |
| V3          | 996510007319 | FFC CABLE 24P 200MM         |
| V3          | 996510013767 | FFC CABLE 24P               |
| VIDEO       | 996500013058 | RCA CABLE 2P 1.2M           |

**SPEAKER**

|       |              |                           |
|-------|--------------|---------------------------|
| RFC   | 996510001599 | RUBBER FOOT -CENTER SPK   |
| RFFR  | 996510001601 | RUBBER FOOT - FRONT SPK   |
| RFS   | 996510010854 | RUBBER FOOT -CENTER       |
| SPKC  | 996510013768 | SPEAKER BOX -CENTER       |
| SPKFL | 996510013769 | SPEAKER BOX - FRONT LEFT  |
| SPKFR | 996510013770 | SPEAKER BOX - FRONT RIGHT |
| SPKRL | 996510013771 | SPEAKER BOX - REAR LEFT   |
| SPKRR | 996510013772 | SPEAKER BOX - REAR RIGHT  |
| SUBW  | 996510013773 | SUBWOOFER                 |

# REVISION LIST

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Version 1.0  
\*Initial release

Version 1.1  
\*Mechanical Part List updated