DVD Receiver

HTS4750/93/98

Service
Service
Service

Service Manual

CLASS 1
LASER PRODUCT

MP3-CD PLAYBACK

DVD VIDEO

COMPACT disc DIGITAL VIDEO

COMPACT disc DIGITAL AUDIO

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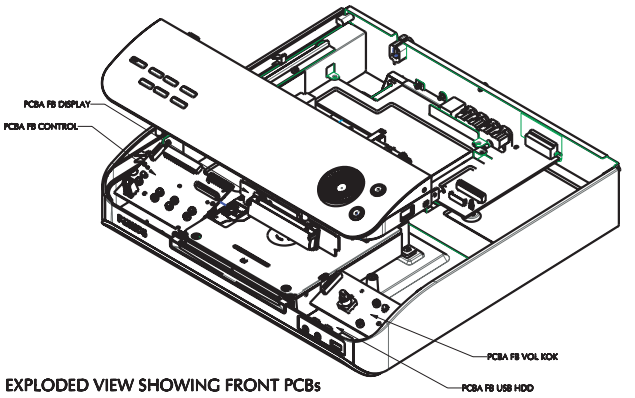
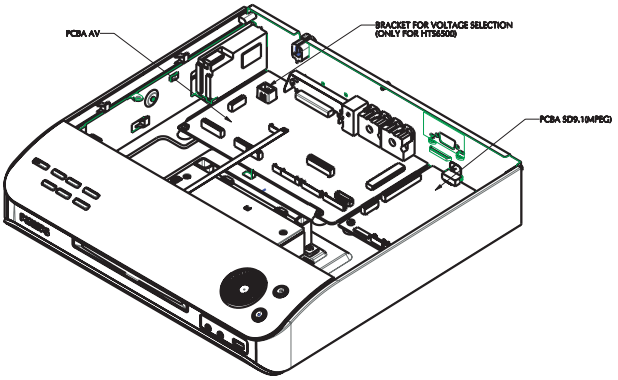
Version 1.0

PHILIPS

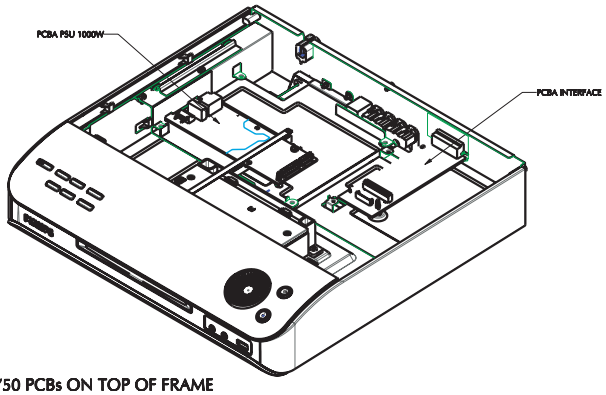
LOCATION OF PC BOARDS



EXPLODED VIEW SHOWING FRONT PCBs



HTS4550/4750/6500 PCBs ON THE LOWER LEVEL



HTS4550/4750 PCBs ON TOP OF FRAME

VERSION VARIATIONS:

Type /Versions: / Features &	HTS4750/93/98
Video (Yellow, Cinch)	x
Component Video, (Y/Pb/Pr) -P-scan	x
SCART (CVBS/RGB)	–
Digital In - Coaxial	x
TV In (Left/Right)	x
Auxiliary (Left/Right)	x
HDMI	x
Power / Amp(VGA)	x

1. Specifications

1.1 General:

Mains voltage	:	110-240V
Mains frequency	:	50/60Hz
Power consumption	:	< 80W at 1/8 P_{rated} < 1W Eco Standby Power
Dimension main unit	:	340 x 70 x 330mm

1.2 Tuner

FM

Tuning range	:	87.5-108MHz
Grid	:	50kHz
IF frequency	:	10.7MHz ± 25kHz
Aerial input	:	75Ω coaxial
Sensitivity at 26dB S/N	:	< 7µV
Selectivity at 59/300kHz bandwidth	:	> 25dB
IF rejection	:	> 60dB
Image rejection	:	> 25dB
Distortion at RF=1mV, dev. 75kHz	:	< 3%
-3dB Limiting point	:	8µV
Crosstalk at RF=1mV, dev. 67.5kHz	:	> 28dB

1.3 AMPLIFIER:

Total output power	:	6600W PMPO 550W RMS
L/R output power	:	1 x 70W type: 75W
Centre	:	1 x 95W type: 100W
Surround	:	1 x 70W type: 75W
Subwoofer	:	1 x 95W type: 100W
Frequency response ±3dB	:	150Hz-20kHz
Hum (Volume Minimum)	:	200nW
Residual noise (Volume Minimum)	:	40nW
Input sensitivity		
Aux In	:	1V ± 3dB at 39kΩ
Scart In	:	1V ± 3dB at 39kΩ

1.4 COMPACT DISC/VCD/DVD:

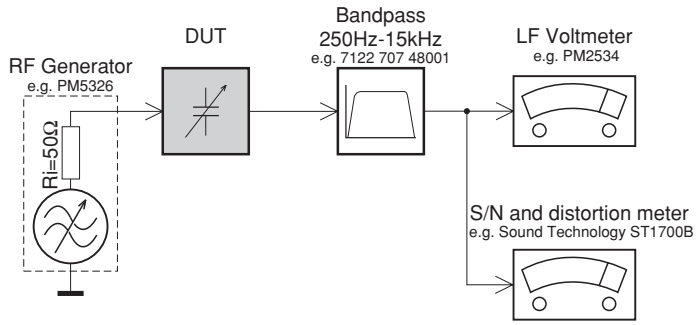
Video Decoding	:	MPEG-1/MPEG-2/ DivX 3/4/5/6, Ultra
Video DAC	:	12 Bits
Signal System	:	PAL / NTSC
Video Format	:	4:3 / 16:9
CVBS Out [1)]		
CVBS level	:	1.0 ± 0.1 V_{p-p}
Luminance S/N	:	>= 55dB
RGB/YUV Out [1)]		
Amplitude	:	0.7 ± 0.1 V_{p-p}
S/N	:	>= 60dB
S-Video Out [1)]		
Y level	:	1.0 ± 0.1 V_{p-p}
Y S/N	:	>= 60dB
C level (burst)	:	286 mV_{p-p} +1/-4dB (NTSC) 300 mV_{p-p} +1/-4dB (PAL)

[1)] Output terminals to be terminated with 75Ω

2. Measurements Setup, Service Aid & Lead Free Requirements

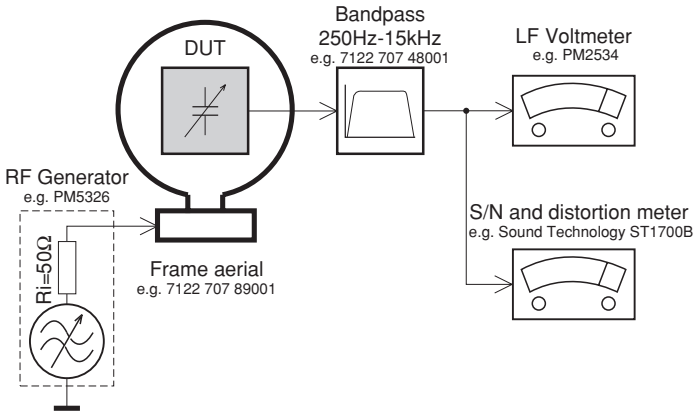
MEASUREMENT SETUP

Tuner FM



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

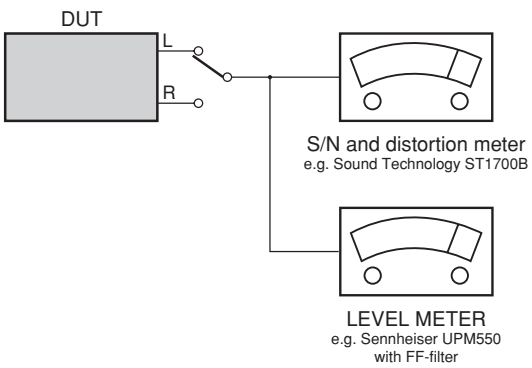
Tuner AM (MW,LW)



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

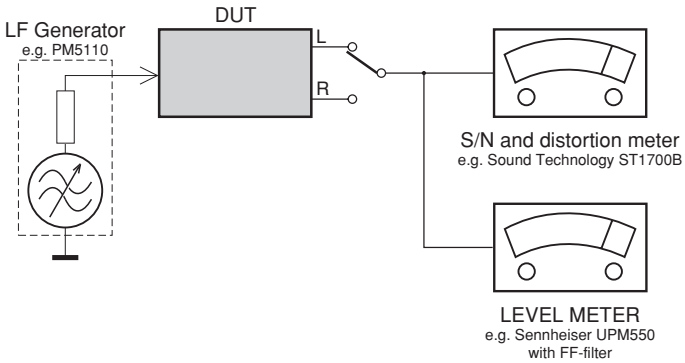
CD

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



Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071



SERVICE AIDS

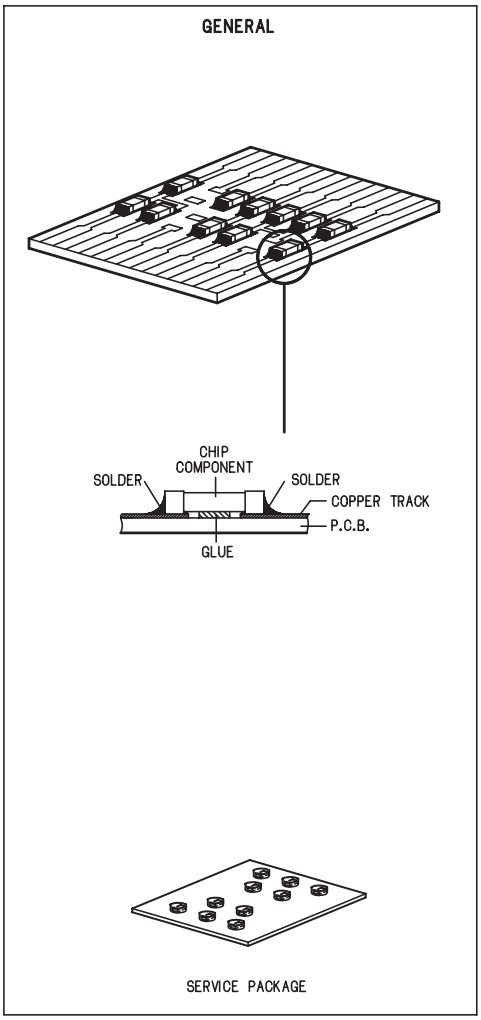
Service Tools:

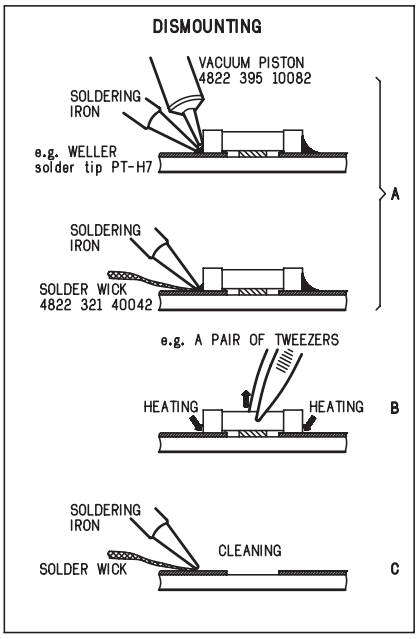
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6 - T20 ..... 4822 395 50145
Torx driver T10 extended 4822 395 50423

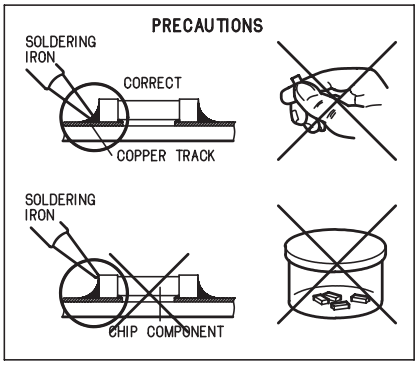
Compact Disc:

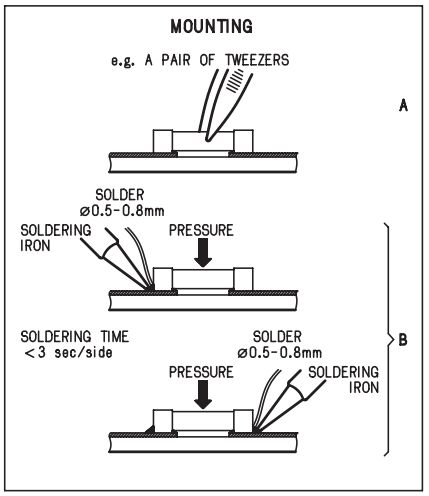
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in Test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

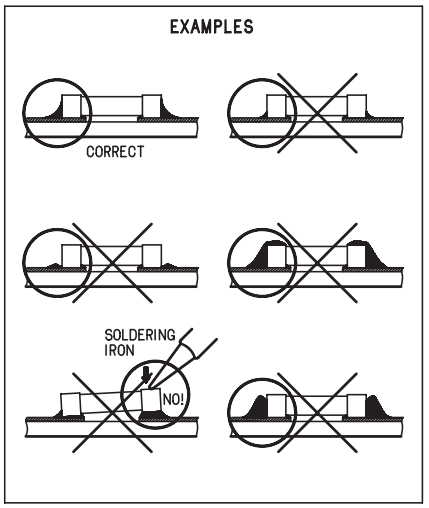
HANDLING CHIP COMPONENTS











ESD

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.

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 ditzelfde potentiaal.

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).
Unsorgfältige Behandlung im Reparaturfall kan 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.

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 braccialetto 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, extention 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 ⚠.

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 ⚠

F

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

Less composants de sécurité sont marqués ⚠

D

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

Sicherheitsbauteile sind durch das Symbol ⚠ 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.

Componenty di sicurezza sono marcati con ⚠

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.

CLASS 1
LASER PRODUCT

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 suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

F

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

2.1 Lead Free Requirements

Pb(Lead) Free Solder

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

INDENTIFICATION:

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 (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.

2.2 Service Hints

CAUTION

CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE DRIVE ELECTRONICS WHEN CONNECTING A NEW DRIVE.THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the defective loader :

1. Dismantling of the loader to access the ESD protection point if necessary.
2. **Solder the ESD protection point*.**
3. Disconnect flexfoil cable from the defective loader.
4. Put a paper clip on the flexfoil to short-circuit the contacts (fig.1)
5. Replace the defective loader with a new loader.
6. Remove paperclip from the flexfoil and connect it to the new loader.
7. Remove solder joint on the ESD protection point.

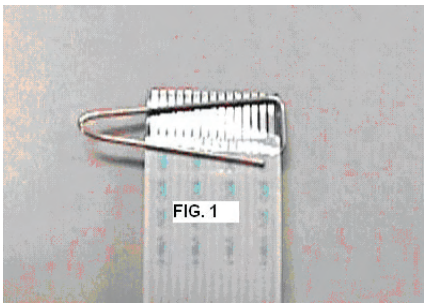
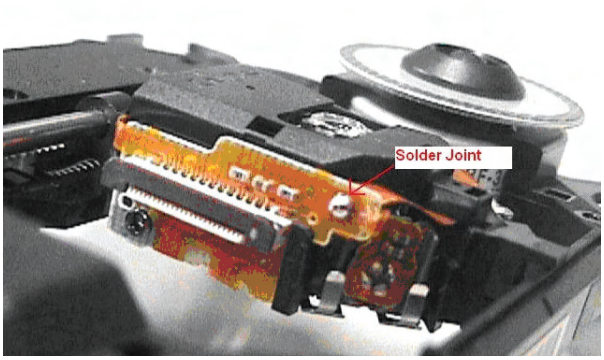


FIG. 1

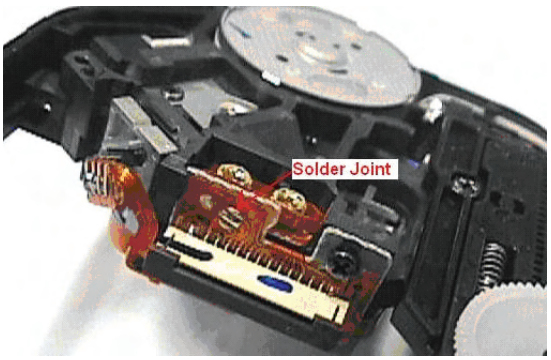
ATTENTION: The laser diode of this loader is protected against ESD by a solder joint which shortcircuits the laserdiode to ground. For proper functionality of the loader this solder joint must be remove **after** connection loader to the set.

Type 1



(ESD protection point is accessible from top of loader)

Type 2

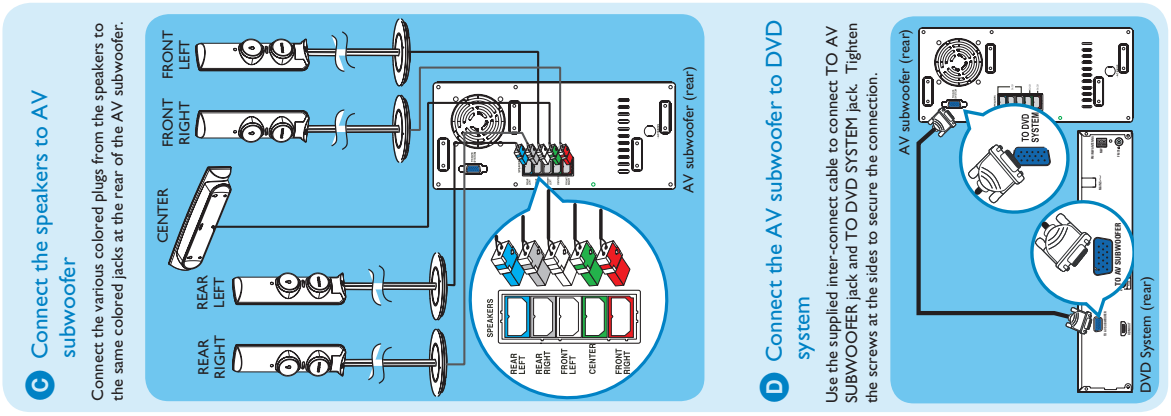


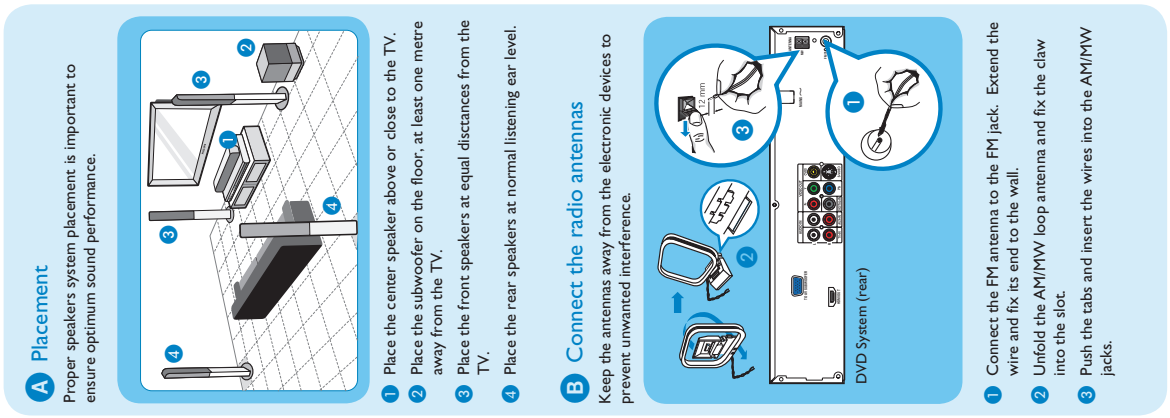
(ESD protection point is accessible from bottom of the loader)

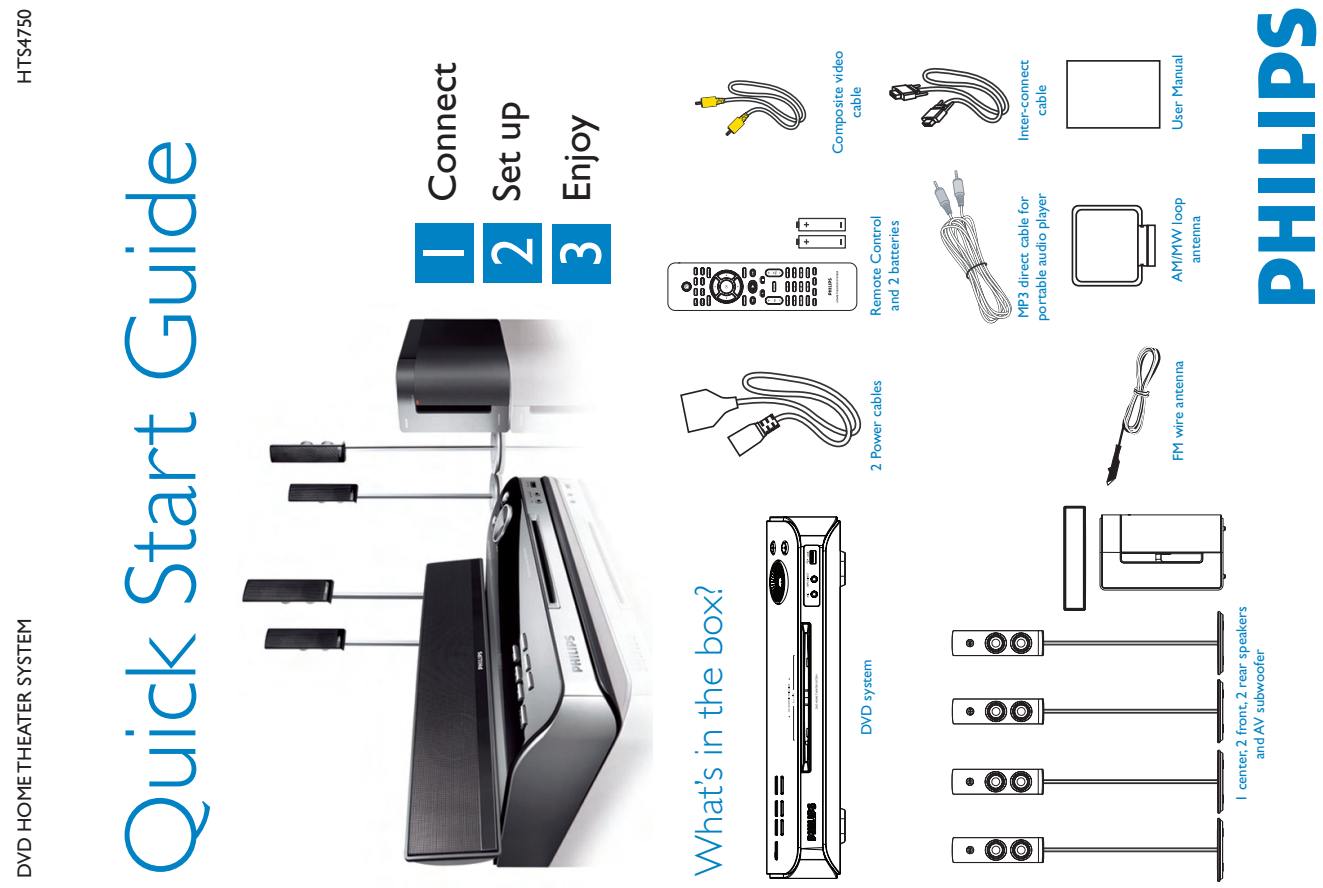
Only applicable for defective loader needed to be sent back to supplier for failure analysis and to support backcharging evidence.
This is also applicable for all partnership workshops.

3. Directions For Use

The following except of the Quick Use Guide serves as an introduction to the set.
The Complete Direction for the Use can be downloaded in different languages from the internet site of Philips Customer care Center:
www.p4c.philips.com

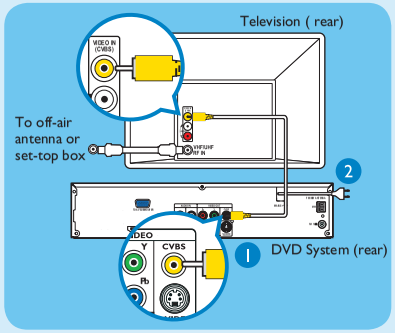






2 Set up

E Connect the DVD system to TV

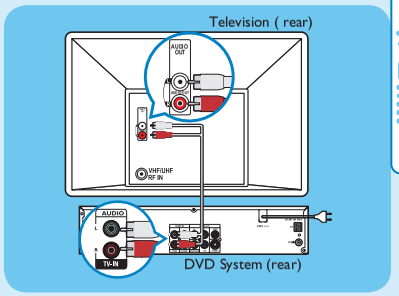


1. Use the supplied composite video cable to connect the CVBS jack on this DVD system to the VIDEO IN jack on your TV.
2. Plug in the power cables from the DVD system, AV subwoofer and TV to the AC power outlets.

Note It is important to connect the DVD system directly to your TV.

F Connect the audio from TV to DVD system (optional)

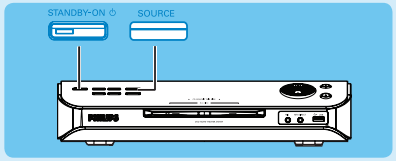
To hear the TV audio through this home theater system, use the red and white audio cables (not supplied) to connect the TV IN (R/L) jacks on this DVD system to the AUDIO output jacks on your TV.



Note Press **TV** on the remote control to get the sound output from the speakers system when watching the TV program.

A Finding the viewing channel

1. Press **STANDBY ON** on the DVD system.
2. Press **SOURCE** on the DVD system until "DISC" appears on the display panel.

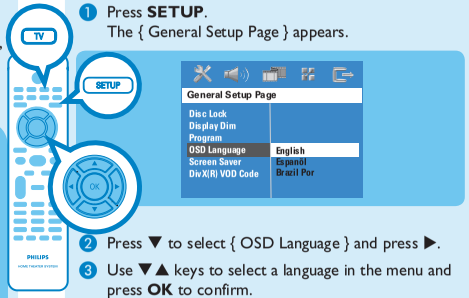


3. Turn on the TV. Use the TV's remote control to select the correct viewing channel for the DVD system.
   You should see the blue DVD background on the TV.

Note To search for the correct viewing channel, press the Channel Down button on the TV's remote control repeatedly (or AV, SELECT, button) until you see the blue DVD background.

B Select the display language on the screen

1. Press **SETUP**.
   The { General Setup Page } appears.



2. Press ▼ to select { OSD Language } and press ▶.
3. Use ▼▲ keys to select a language in the menu and press **OK** to confirm.
4. Press **SETUP** to exit.

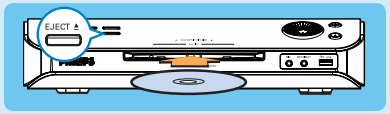
Note The language set here is only for the menus that are shown on the TV while operating this DVD system, not for the DVD disc menu.

There are various setup options (Audio Setup, Video Setup, Preference Setup) available on this DVD system. Refer to the user manual for more information.

3 Enjoy

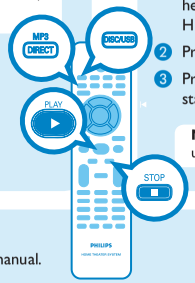
Start disc playback

1. Insert a disc into the disc slot with the disc label facing up.



2. Playback will start automatically.
3. If the disc menu appears, use ▼▲ keys to select an option in the menu and press **PLAY** ▶ to start playback.
4. Press **STOP** ■ to stop playback.
5. Press **EJECT** ⏏ to remove the disc.

Note When you press PLAY button again, the playback will resume from its last stopped point. To start playback from the beginning, you have to press STOP button two times to cancel the resume mode, then press PLAY button.



Playback from the USB

1. Insert your USB device into the USB port and wait for the message to appear on the screen.
2. Press **DISC/USB** to access the contents on your USB device.
3. Press **OK** to start playback.
4. To stop playback, press **DISC/USB** again to switch to 'DISC' mode. You can unplug your USB device now.

Playback from the portable audio/HDD player

1. Use the supplied MP3 direct cable to connect the headphone output jack on your portable audio/HDD player to the MP3 DIRECT jack.
2. Press **MP3 DIRECT** on the remote control.
3. Press PLAY on your portable audio/HDD player to start playback.

Note You can only control the playback features using your portable audio/HDD player.

Troubleshooting

For more troubleshooting tips, see the user manual.

No picture.
- Press DISC/USB button on the remote control.
- Check the connection to the TV and ensure the plugs are firmly in place.

No sound.
- Check the speaker connections and settings.
- Check the audio connections and press SOURCE button to select the correct input source.
- The center and rear speakers operate only in multi-channel surround mode. Press SURR button to select multi-channel surround output.

The DVD system does not work.
- Disconnect the power cord from the power outlet for a few minutes. Reconnect the power cord and try again.

Need help?

User Manual
See the user manual that cames with your Philips DVD System

Online
Go to www.philips.com/support

Be responsible
Respect copyrights

12 NC 3139 246 21361
www.philips.com

4. Dismantling Instructions

4.1 Dismantling of the Tray Cover

1) Loosen 5 screws and remove Panel Left (P129) & Panel Right (Pos 130) by sliding the panels forward as shown in Figure 1.

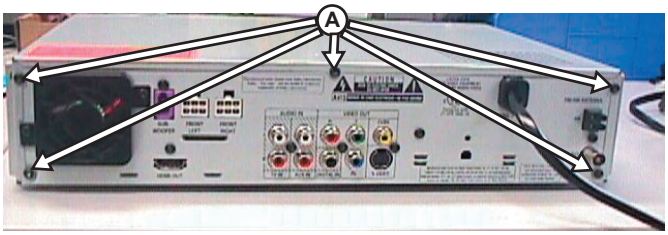


Figure 4-1

2) Loosen 1 screw each on the left & right side to remove the Cover Top as shown in Figure 4-2.

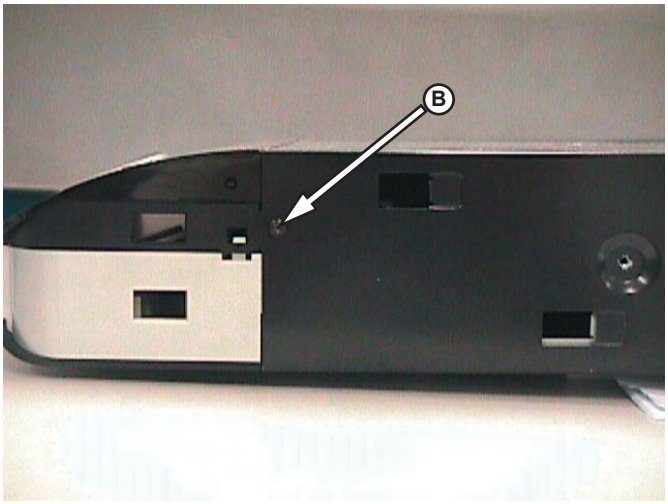


Figure 4-2

4.2 Dismantling of the Front Assy, Amplifier Board & DVD Loader.

1) Release 4 snap hooks to remove the Front Board.
   - 1 snap hook each on the left & right side
   - 2 snap hooks on the bottom side

2) Loosen 2 screws (See Figure 4-3) to remove the Cab Front Base (Pos 103).

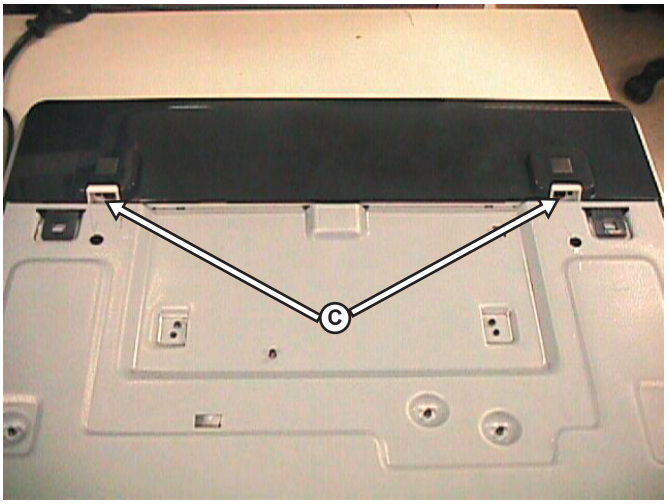


Figure 4 3

3) Loosen 4 screws (See Figure 4-4) to remove the Front Assy.

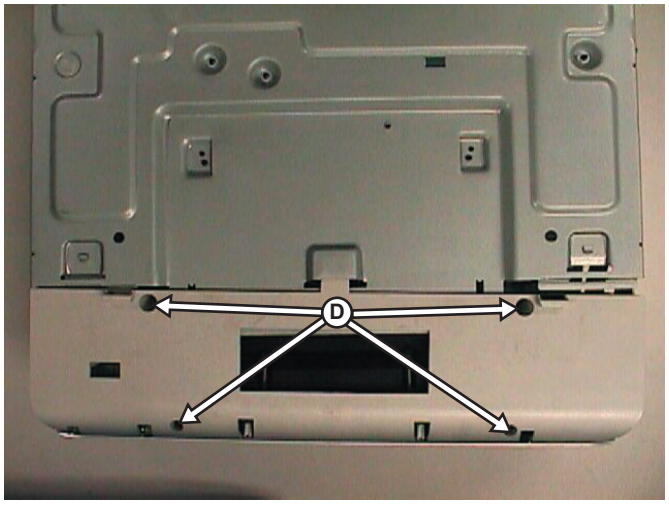


Figure 4-4

4) Loosen 4 screws (See Figure 4-5) to remove the DVD Loader.

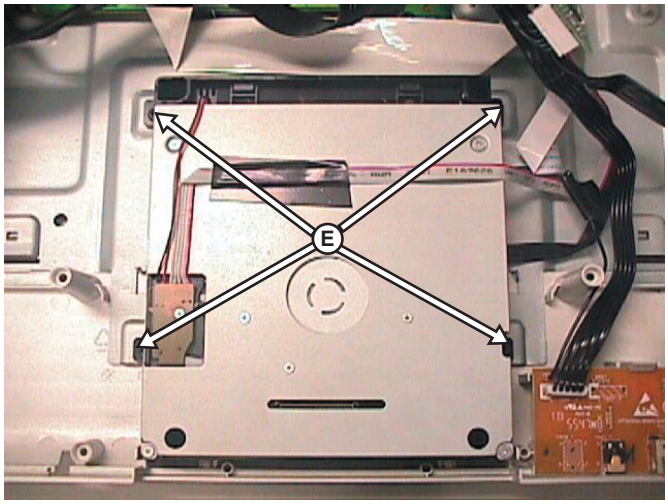


Figure 4 5

5) Loosen 2 screws (See Figure 4-6) to remove Interface Board.

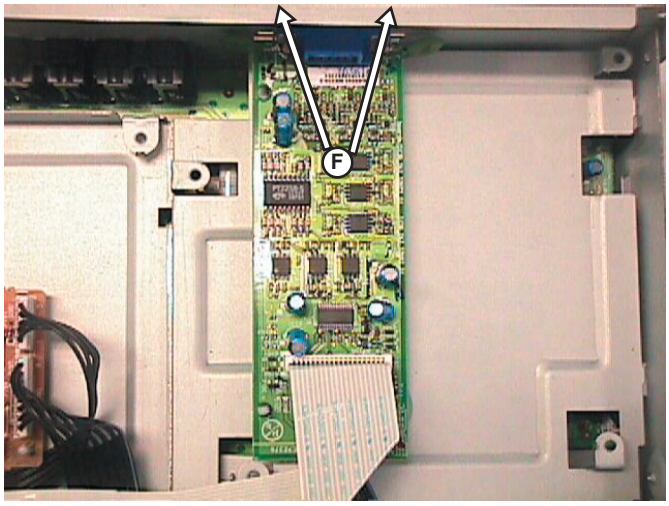


Figure 4-6

6) Loosen 2 screws (See Figure 4-7) to remove PSU Module.

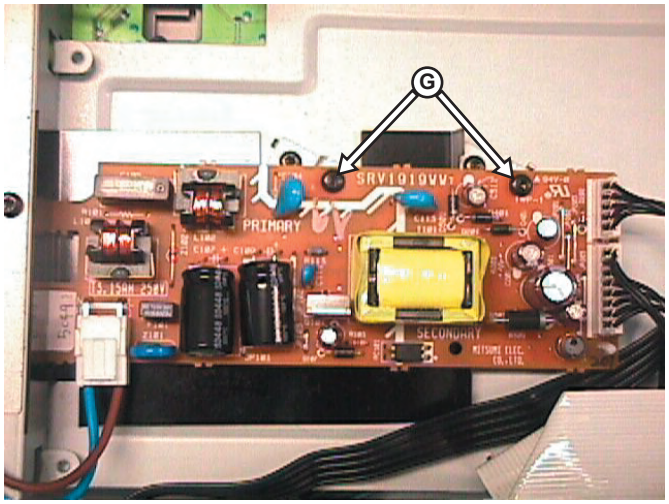


Figure 4-7

4.3 Dismantling of the PCBAS 9.1 Board, Tuner Module & AV Board.

1) Loosen 2 screws (See Figure 4-8 & Figure 4-9) to remove the Frame PSU (Pos 162).

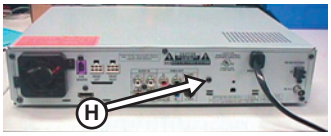


Figure 4-8

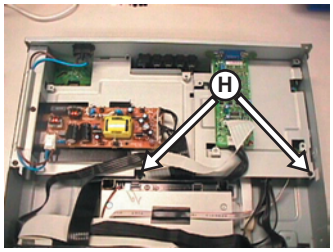


Figure 4-9

2) Loosen 1 screw (See Figure 4-10) to remove the Tuner Module.

Figure 4-10

3) Loosen 5 screws (See Figure 4-11 & Figure 4-12) to remove the AV Board.

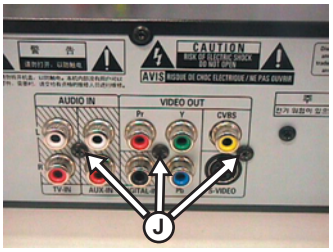


Figure 4-11

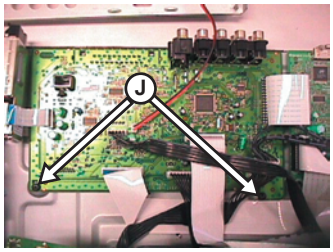


Figure 4-12

4) Loosen 2 screws (See Figure 4-13 & Figure 4-14) to remove PBCAS 9.1 Board.

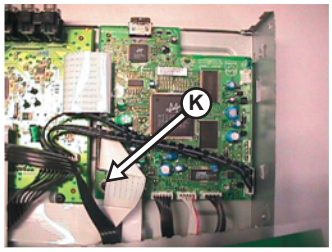


Figure 4-13

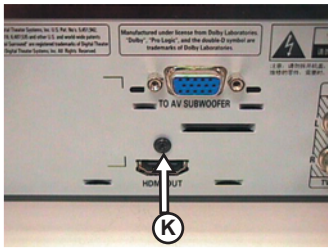


Figure 4-14

4.4 Service Position

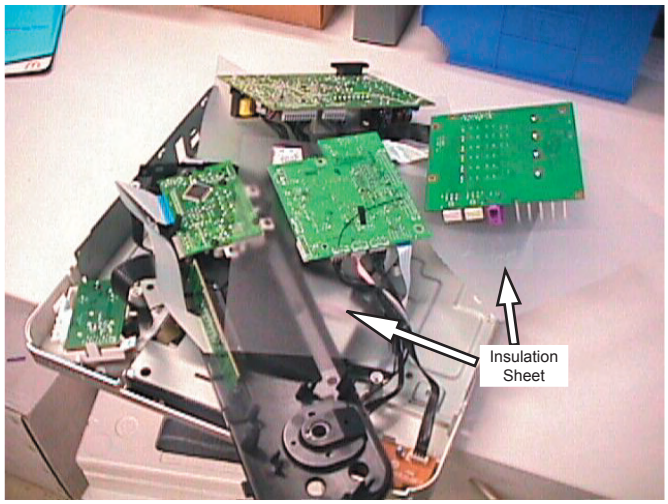
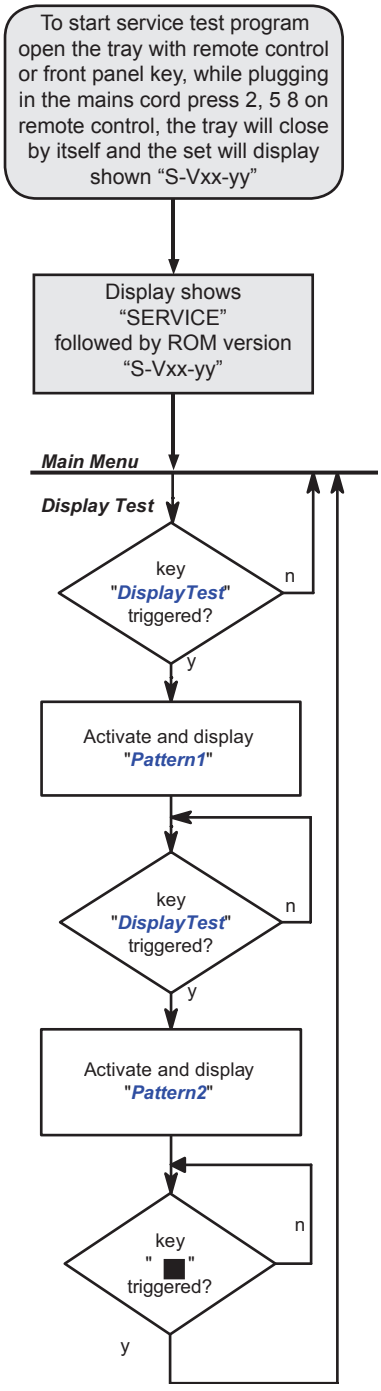


Figure 4-15

5. Service Test Program



S refers to Service Mode
V refers to Version
xx refers to Software version number of BEA (counting up from 01 to 99)
yy refers to Software version number of Front uP (counting up from 01 to 99)

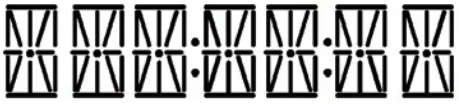
5.1 Display Test

Purpose:
This test is used to check the driving circuits, the display and whether there are any short-circuits, open-circuits or any other defects.

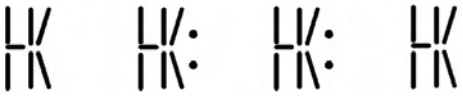
Player:

Following display patterns are used to test the display and its connections to µP.

Pattern 1: *Default: All display control pins are ON*
- to check the open-circuits



Pattern 2: *Alternate display control pins are on (Test Pattern: 0x55)*
- to check the short-circuits on Data port



Receiver:

Following display patterns are used to test the display and its connections to µP.

Pattern 1: *Default: All display control pins are ON*
- to check the open-circuits

Pattern 2: *Alternate display control pins are on (Test Pattern: 0x55)*
- to check the short-circuits on Data port

5.1.1 Reprogramming of DVD version Matrix

After repair, the customer setting and region code may be lost. Reprogramming will put the set back in the state in which it has left the factory, ie. with the default setting and the allowed region code.

Model	Region	Region Code	TV Type
HTS 4750/93	China	6	PAL
HTS 4750/98	APAC	3	PAL

To reprogram do as follows:
1) Power up the set and select DISC source.
2) Open tray by press “OPEN/CLOSE” button on the set or press and hold “STOP” button on the RC.
3) Press the following buttons on the Remote Control:
   <9> <9> <9> <9> <SUBTITLE> <2> .....for HTS 4750/93
   <9> <9> <9> <9> <SUBTITLE> <3> .....for HTS 4750/98
4) The display shows **‘YYYY-ZZ’** and the tray will close.
   YYYY = model number (eg. 8300, 8500, etc.)
   ZZ = slash stroke version (eg. 01, 69, etc.)

5.1.2 Procedure for check Software version

1) Power up the set and select DISC source.
2) Open tray by press “OPEN/CLOSE” button on the set or press and hold “STOP” button on the RC.
3) Press “DISPLAY” button on the Remote control.
4) The TV screen will shows:

   PPPP-Vxx YYYYY-ZZ
   SERVO: GGGGGGGG REG:DD

   PPPP = HTS 3300MKII
   xx = version number
   YYYYY = model # - 3300D
   ZZ = stroke version (12, 51, 05, 98, 55, 51K)
   GGGGGGGG = version for servo code

5.1.3 Burning of firmware

1. Unzip the zip-archive attached with this service information.
2. Start the CD burning software and create a new CD Project (Data disc) with the following settings:
   a. File System: ISO9660
   b. Format: MODE 2/XA
   c. Recording format: Single Session (Track at once), Finalized CD
3. Place the content of the zip-archive into the root directory of the new CD project.
4. Burn the data onto a blank CDR or CDRW.

Note:	ISO9660 is mandatory, UDF discs are not supported! The final CDROM must not contain any other data except the file from the zip-archive.

5.1.4 Procedure to upgrade the firmware

1. Power up the set and open tray.
2. Insert the prepared Upgrade CDROM and close the tray.
3. The set will display:

   LOAD -> MULTICH ->……. ->UPG END.
   The whole process takes less than 2 minutes.

Note: Do not press any button or interrupt the main supply upgrading process,Otherwise the set may become defective.

4. When the upgrade is completed, the tray will close automatic.
5. The tray will close and the set will go to Standby mode automatically when the upgrade process is completed.

5.1.5 Procedure to check the firmware version to confirm upgrading

1. Power up the set and open tray.
2. Press the <Menu Display> button on the Remote Control.
3. The firmware version will be displayed on the top left hand corner of the OSD.

5.1.6 Trade Mode

Trade mode is a feature that will block all set keys when enabled. It is for dealers to prevent customers fromremoving disc, changing source etc using the set keys.Rotary and Remote Control (RC) keys are still allowed inTrade mode.

To activate Trade Mode:

1) Power up the set and select DISC source.
2) Open tray by press “OPEN/CLOSE” button on the set or press and hold “STOP” button on the RC.
3) Then press buttons <2> <5> <9> on the RC.
4) The display shows **‘TRA ON’** and the tray will close.
Trade Mode is now enabled.

To deactivate Trade Mode:

1) Power up the set and select DISC source.
2) Open tray by press and hold “STOP”button on the RC.
3) Then press buttons <2> <5> <9> on the RC.
4) The display shows **‘TRA OFF’** and the tray will close.
Trade Mode is now disabled.

5.1.7 Procedure to change Tuner Grid (/98, /55 only)

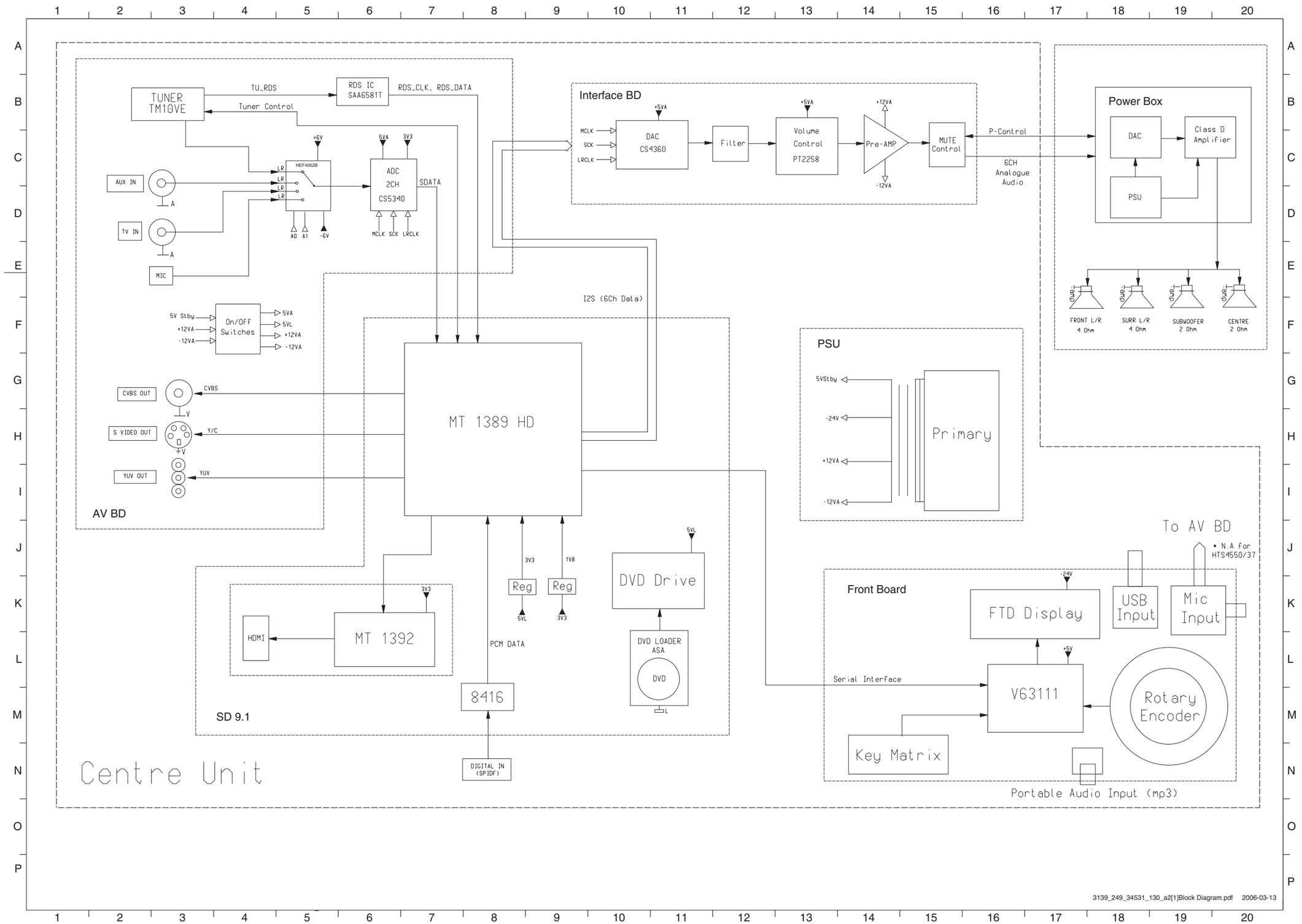
1. Press **SOURCE** to select “FM” or “MW”.
2. Press **STANDBY ON** to switch the DVD system to standby mode.
3. Press **STANDBY ON** again to turn on the DVD system and hold down |◄◄ button on the front panel.
   ➜ The display will show "GRID 9" or "GRID 10".

   Helpful Hint:
   – GRID 9 and GRID 10 indicate that the tuning grid is in step of 9 kHz and 10 kHz respectively.

Note: Repeating the same action will toggle back to its previous tuning grid setting.

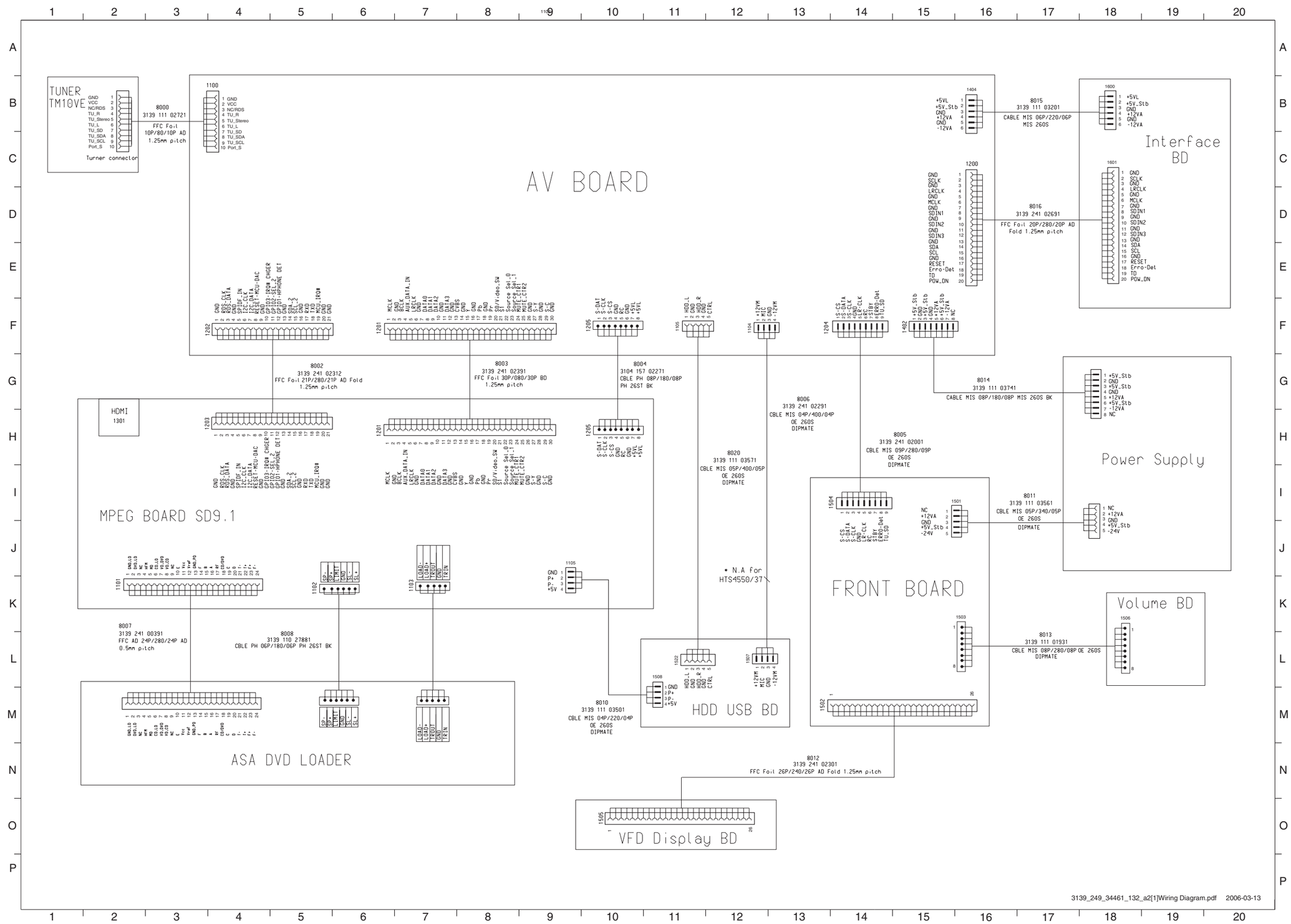
Notes:

Block Diagram

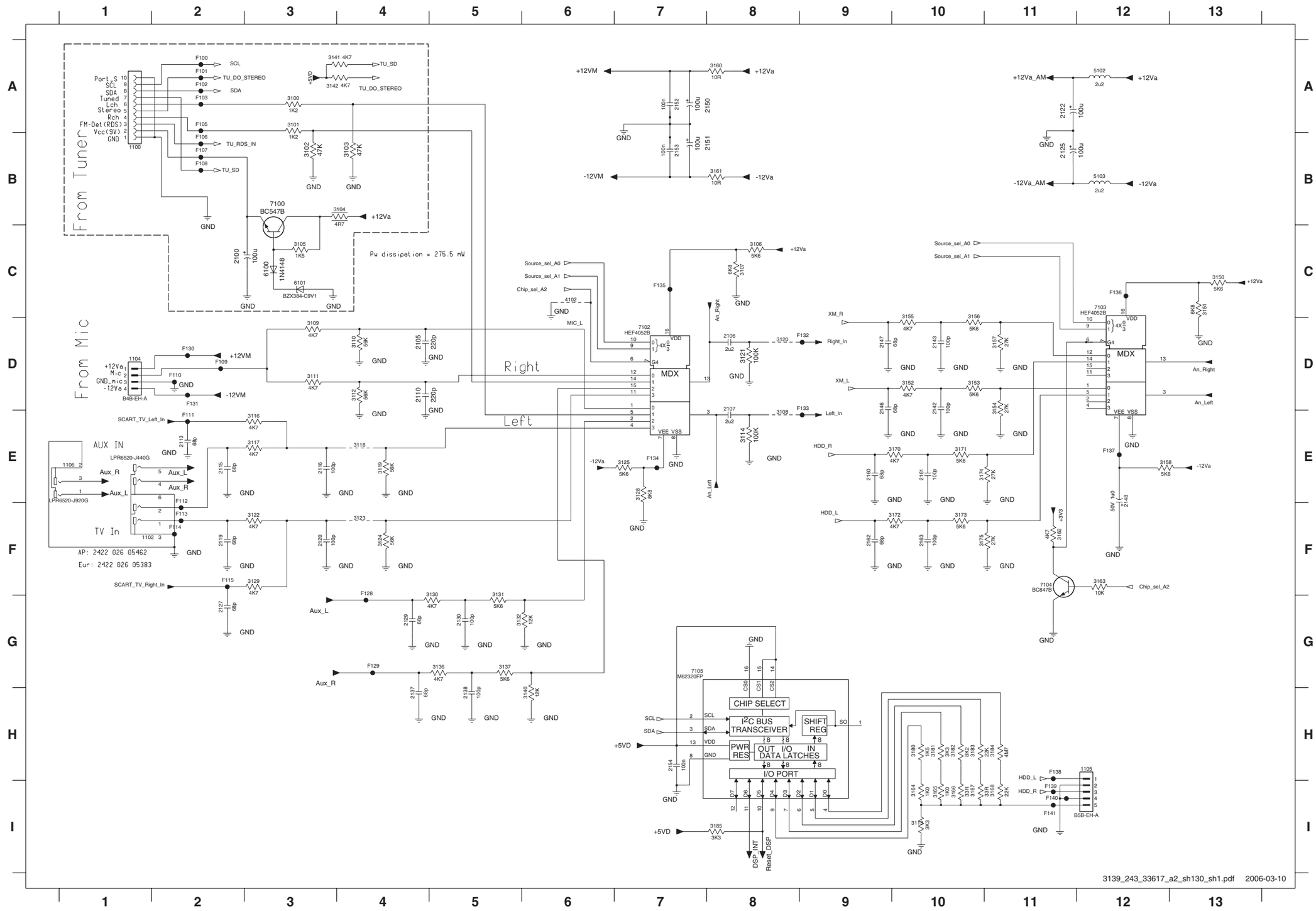


3139_249_34531_130_a2[1]Block Diagram.pdf 2006-03-13

Wiring Diagram

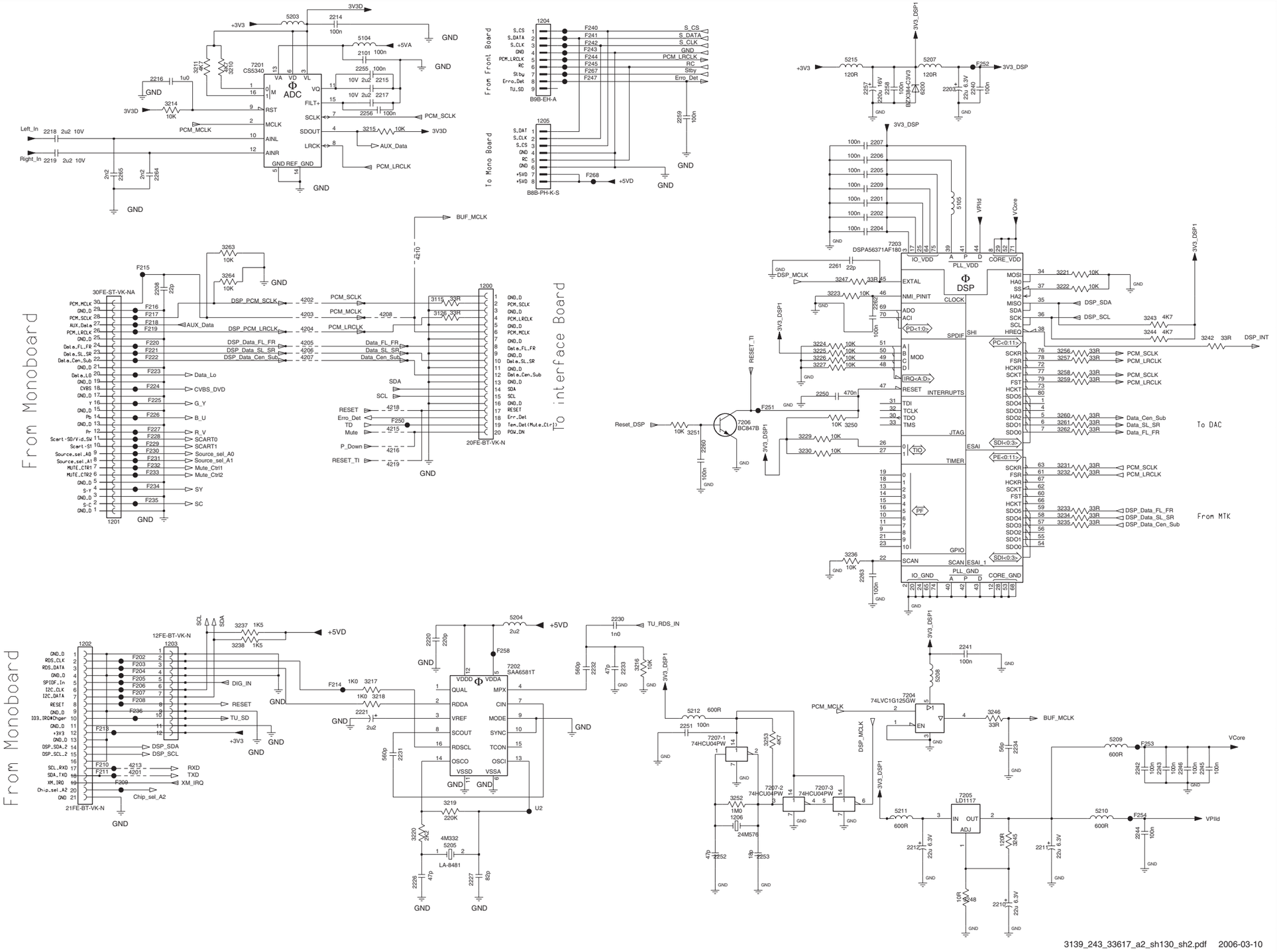


AV Board: Circuit Diagram (Part 1)



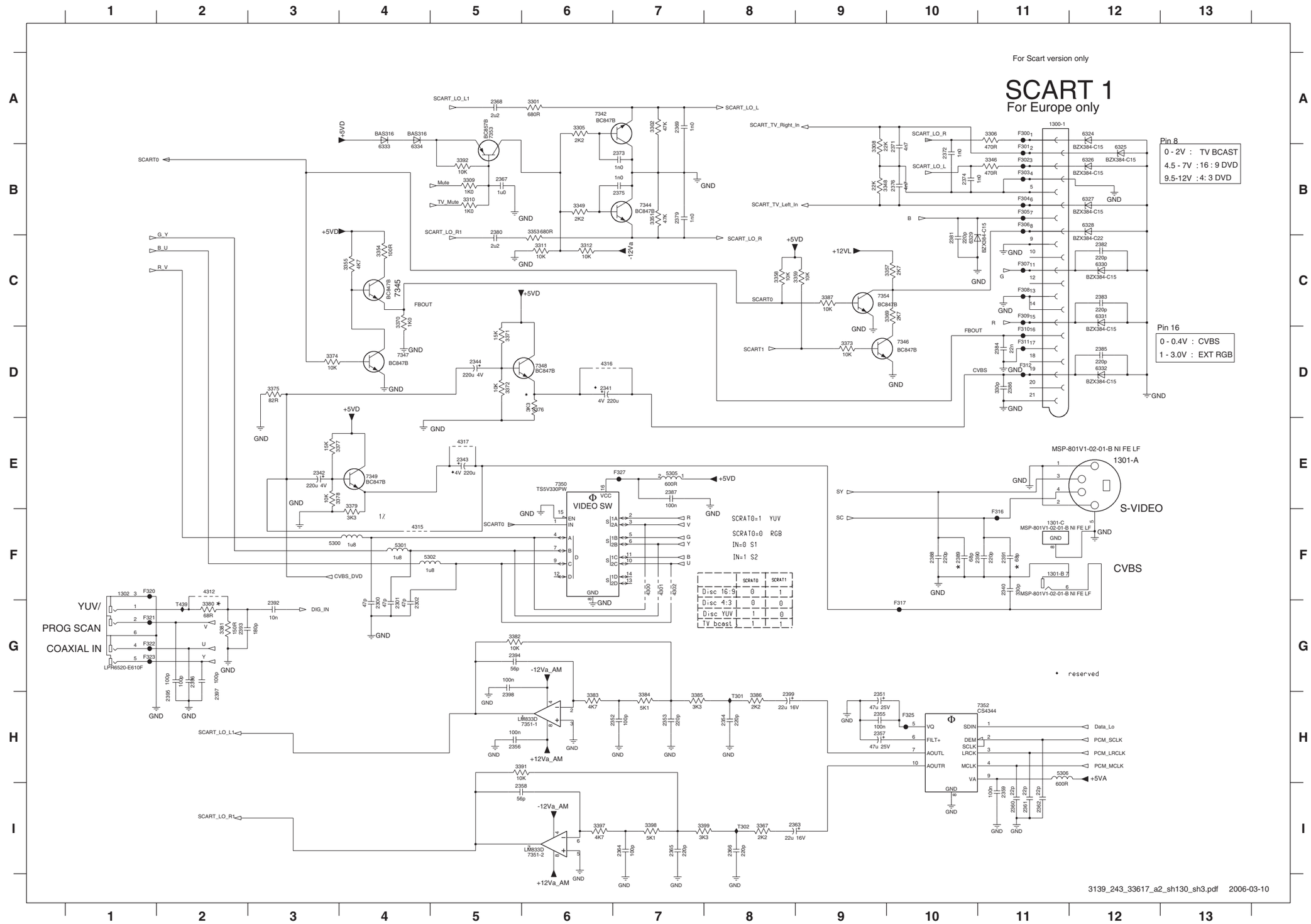
1100 B1	F100 A2
1102 F1	F101 A2
1104 D1	F102 A2
1105 H12	F103 A2
1106 E1	F105 A2
2100 C2	F106 B2
2105 D4	F107 B2
2106 D8	F108 B2
2107 E8	F109 D2
2110 D4	F110 D2
2113 E2	F111 E2
2115 E2	F112 E2
2116 E3	F113 F2
2119 F2	F114 F2
2120 F3	F115 F2
2122 A11	F128 F4
2125 B11	F129 G4
2127 G2	F130 D2
2129 G4	F131 D2
2130 G5	F132 D9
2137 H4	F133 D9
2138 H5	F134 E7
2142 D10	F135 C7
2143 D10	F136 C12
2146 D9	F137 E12
2147 D9	F138 H11
2148 E12	F139 I11
2150 A8	F140 I11
2151 B8	F141 I11
2152 A7	
2153 B7	
2154 H7	
2160 E9	
2161 E10	
2162 F9	
2163 F10	
3100 A3	
3101 A3	
3102 B3	
3103 B4	
3104 B4	
3105 C3	
3106 C8	
3107 C8	
3108 E8	
3109 D3	
3110 D4	
3111 D3	
3112 D4	
3113 I10	
3114 E8	
3116 E3	
3117 E3	
3118 E4	
3119 E4	
3120 D8	
3121 D8	
3122 F3	
3123 F4	
3124 F4	
3125 E7	
3128 E7	
3129 F3	
3130 G5	
3131 G5	
3132 G5	
3136 G5	
3137 G5	
3140 H6	
3141 A3	
3142 A3	
3150 C13	
3151 C13	
3152 D10	
3153 D10	
3154 D11	
3155 D10	
3156 D10	
3157 D11	
3158 E12	
3160 A8	
3161 B8	
3162 F11	
3163 F12	
3164 I10	
3165 I10	
3166 I10	
3167 I10	
3168 I11	
3170 E10	
3171 E10	
3172 F10	
3173 F10	
3174 E10	
3175 F10	
3180 H10	
3181 H10	
3182 H10	
3183 H10	
3184 H11	
3185 I8	
4102 C6	
5102 A12	
5103 B12	
6100 C3	
6101 C3	
7100 B3	
7102 D7	
7103 C12	
7104 F11	
7105 G7	

AV Board: Circuit Diagram (Part 2)



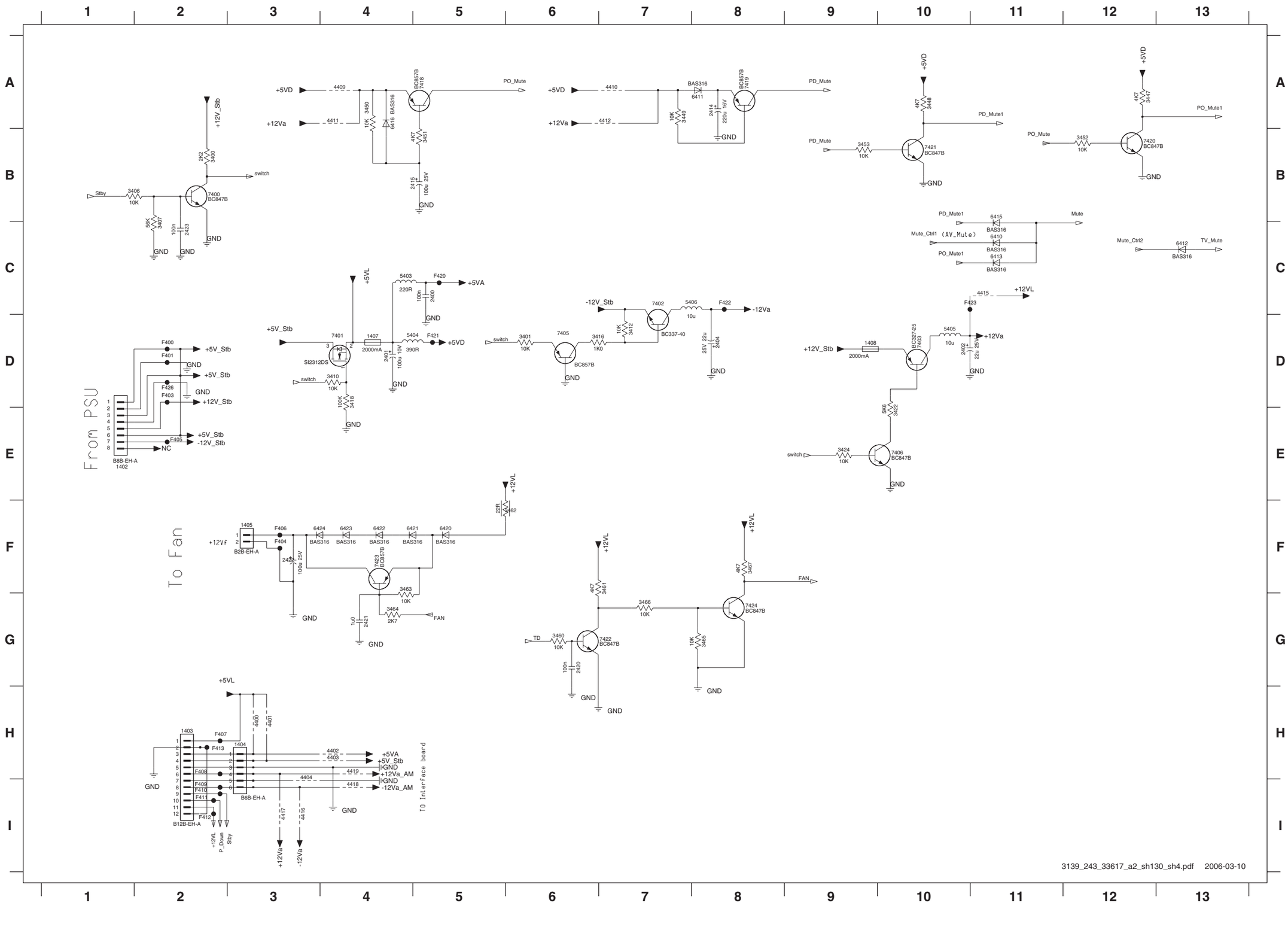
U2 H6	4215 E4	2209 B9	7201 A3
1200 C5	4216 E4	2210 I10	7202 G5
1201 E1	4218 D4	2211 I11	7203 C9
1202 G1	4219 E4	2212 I9	7204 G9
1203 G2	5104 A4	2214 A4	7205 H10
1204 A6	5105 B10	2215 A4	7206 D8
1205 A6	5203 A3	2216 A2	7207-1 H7
1206 H8	5204 F5	2217 A4	7207-2 H8
2101 A4	5205 I5	2218 B1	7207-3 H9
2201 B9	5207 A9	2219 B1	F202 G2
2202 B9	5208 G10	2220 G5	F203 G2
2203 A10	5209 H11	2221 G4	F204 G2
2204 B9	5210 H11	2226 I4	F205 G2
2205 B9	5211 H9	2227 I5	F206 G2
2206 B9	5212 G7	2230 F6	F207 G2
2207 B9	5215 A9	2231 H4	F208 G2
2208 C2	6200 A9	2232 G6	F209 H1
2209 B9	7201 A3	2233 G6	F210 H1
2210 I10	7202 G5	2234 H10	F211 H1
2211 I11	7203 C9	2240 A10	F213 H1
2212 I9	7204 G9	2241 G10	F214 G4
2214 A4	7205 H10	2242 H12	F215 C2
2215 A4	7206 D8	2243 H12	F216 C2
2216 A2	7207-1 H7	2244 I12	F217 C2
2217 A4	7207-2 H8	2245 H12	F218 C2
2218 B1	7207-3 H9	2246 H12	F219 D2
2219 B1	F202 G2	2250 D8	F220 D2
2220 G5	F203 G2	2251 G7	F221 D2
2221 G4	F204 G2	2252 I7	F222 D2
2226 I4	F205 G2	2253 I8	F223 D2
2227 I5	F206 G2	2255 A4	F224 D2
2230 F6	F207 G2	2256 A4	F225 D2
2231 H4	F208 G2	2257 A9	F226 D2
2232 G6	F209 H1	2258 A9	F227 E2
2233 G6	F210 H1	2259 A7	F228 E2
2234 H10	F211 H1	2260 E7	F229 E2
2240 A10	F213 H1	2261 C9	F230 E2
2241 G10	F214 G4	2262 C9	F231 E2
2242 H12	F215 C2	2263 F9	F232 E2
2243 H12	F216 C2	2264 B2	F233 E2
2244 I12	F217 C2	2265 B1	F234 E2
2245 H12	F218 C2	3115 C5	F235 E2
2246 H12	F219 D2	3126 C5	F236 G2
2250 D8	F220 D2	3210 A2	F240 A6
2251 G7	F221 D2	3211 A2	F241 A6
2252 I7	F222 D2	3214 A2	F242 A6
2253 I8	F223 D2	3215 B4	F243 A6
2255 A4	F224 D2	3216 G7	F244 A6
2256 A4	F225 D2	3217 G4	F245 A6
2257 A9	F226 D2	3218 G4	F247 A6
2258 A9	F227 E2	3219 H5	F250 D4
2259 A7	F228 E2	3220 I4	F251 D8
2260 E7	F229 E2	3221 C11	F252 A10
2261 C9	F230 E2	3222 C11	F253 H12
2262 C9	F231 E2	3223 C9	F254 H12
2263 F9	F232 E2	3224 D8	F258 G5
2264 B2	F233 E2	3225 D8	F267 A6
2265 B1	F234 E2	3226 D8	F268 B6
3115 C5	F235 E2	3227 D8	
3126 C5	F236 G2	3229 E8	
3210 A2	F240 A6	3230 E8	
3211 A2	F241 A6	3231 E11	
3214 A2	F242 A6	3232 E11	
3215 B4	F243 A6	3233 E11	
3216 G7	F244 A6	3234 E11	
3217 G4	F245 A6	3235 E11	
3218 G4	F247 A6	3236 F9	
3219 H5	F250 D4	3237 F3	
3220 I4	F251 D8	3238 G3	
3221 C11	F252 A10	3242 D12	
3222 C11	F253 H12	3243 C12	
3223 C9	F254 H12	3244 D12	
3224 D8	F258 G5	3245 I10	
3225 D8	F267 A6	3246 G10	
3226 D8	F268 B6	3247 C9	
3227 D8		3248 I10	
3229 E8		3250 D9	
3230 E8		3251 E7	
3231 E11		3252 H8	
3232 E11		3253 H8	
3233 E11		3256 D11	
3234 E11		3257 D11	
3235 E11		3258 D11	
3236 F9		3259 D11	
3237 F3		3260 D11	
3238 G3		3261 D11	
3242 D12		3262 E11	
3243 C12		4201 H2	
3244 D12		4202 C3	
3245 I10		4203 C3	
3246 G10		4204 D3	
3247 C9		4205 D3	
3248 I10		4206 D3	
3250 D9		4207 D3	
3251 E7		4208 C4	
3252 H8		4210 C4	
3253 H8		4213 H2	
3256 D11			
3257 D11			
3258 D11			
3259 D11			
3260 D11			
3261 D11			
3262 E11			
4201 H2			
4202 C3			
4203 C3			
4204 D3			
4205 D3			
4206 D3			
4207 D3			
4208 C4			
4210 C4			
4213 H2			

AV Board: Circuit Diagram (Part 3)

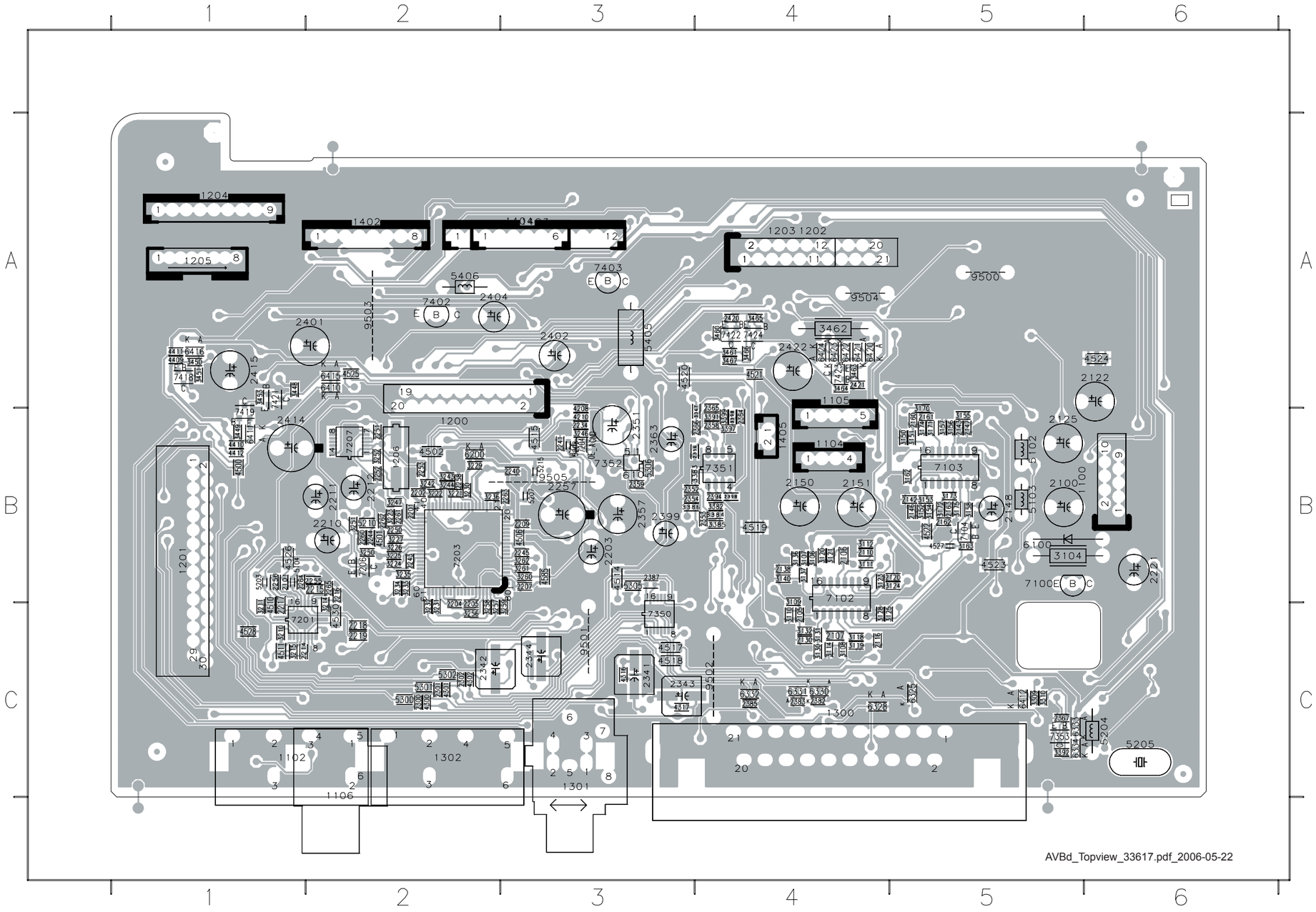


1300-1 A11
1301-A E12
1301-B F11
1301-C F11
1302 F1
2300 G4
2301 G4
2302 G4
2340 F11
2341 D6
2342 E3
2343 E5
2344 D5
2351 H9
2352 H7
2353 H7
2354 H8
2355 H9
2356 H5
2357 H9
2358 I5
2359 I11
2360 I11
2361 I11
2362 I11
2363 I8
2364 I7
2365 I7
2366 I8
2367 B5
2368 A5
2369 A7
2371 B10
2372 B10
2373 B7
2374 B10
2375 B7
2376 B10
2379 B7
2380 B5
2381 C10
2382 C12
2383 C12
2384 D11
2385 D12
2386 D11
2387 E7
2388 F10
2389 F10
2390 F11
2391 F11
2392 G3
2393 G2
2394 G5
2395 H2
2396 G2
2397 H2
2398 H5
2399 H8
3301 A6
3302 A7
3305 A6
3306 A11
3308 B9
3309 B5
3310 B5
3311 C6
3312 C6
3346 B11
3348 B9
3349 B5
3351 B7
3353 B6
3354 C4
3355 C4
3357 C10
3358 C8
3359 C9
3367 I8
3369 C10
3370 C4
3371 D5
3372 D5
3373 D9
3374 D3
3375 D3
3376 D6
3377 E3
3378 E3
3379 E4
3380 G2
3381 G2
3382 G5
3383 H6
3384 H7
3385 H7
3386 H8
3387 C9
3391 H5
3392 B5
3397 I6
3398 I7
3399 I7
4300 F7
4301 F7
4302 F7
4312 F2
4315 F4
4316 D6
4317 E5
5300 F3
5301 F4
5302 F4
5305 E7
5306 H11
6324 A12
6325 B12
6326 B12
6327 B12
6328 B12
6329 C10
6330 C12
6331 C12
6332 D12
6333 B4
6334 B4
7342 A6
7344 B7
7345 C4
7346 D10
7347 D4
7348 D6
7349 E4
7350 E6
7351-1 H6
7351-2 I6
7352 H10
7353 A5
7354 C9
F300 A11
F301 B11
F302 B11
F303 B11
F304 B11
F305 B11
F306 B11
F307 C11
F308 C11
F309 C11
F310 D11
F311 D11
F312 D11
F316 F11
F317 G10
F320 F1
F321 G1
F322 G1
F323 G1
F325 H10
F327 E7
T301 H8
T302 I8
T439 G2

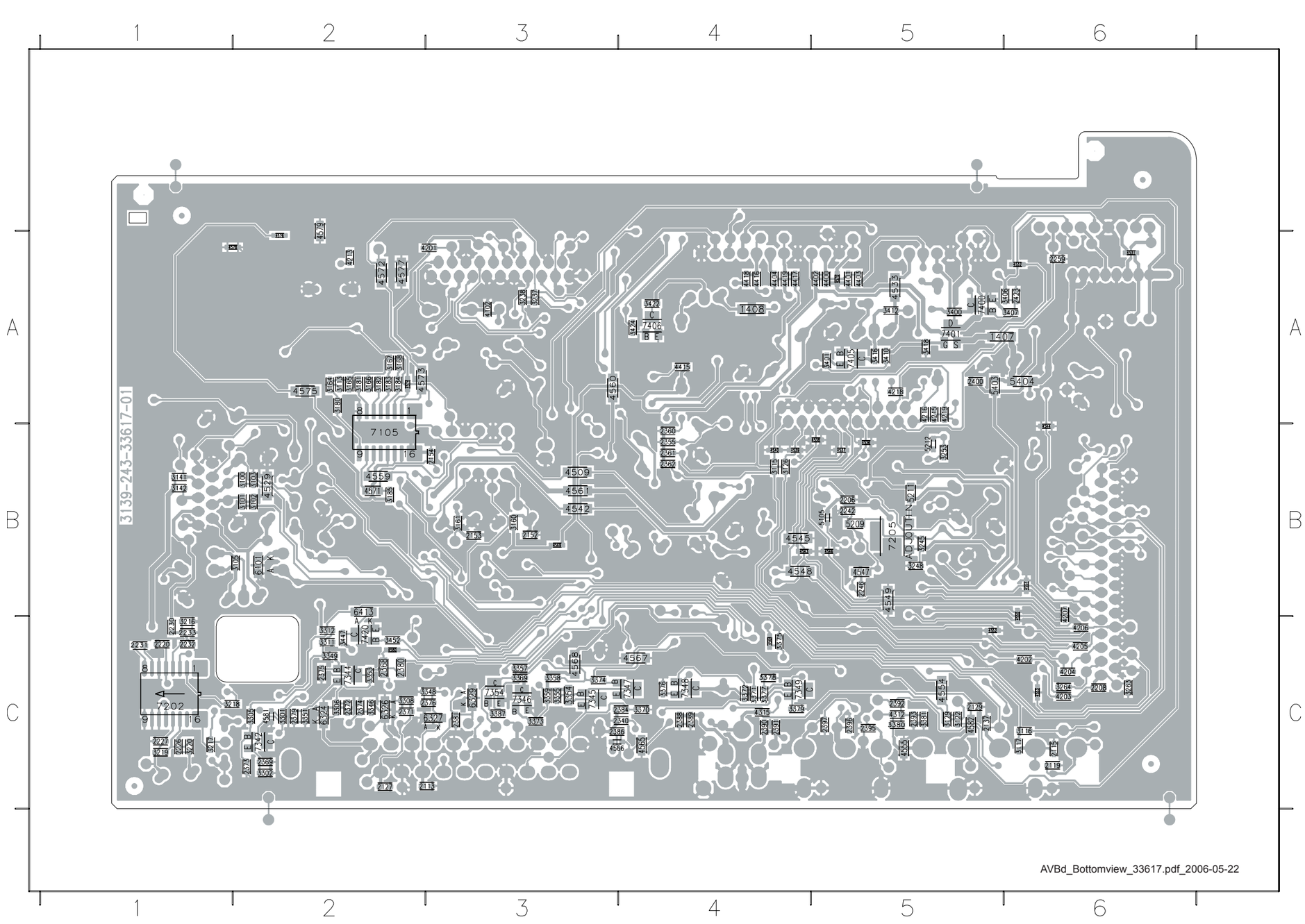
AV Board: Circuit Diagram (Part 4)



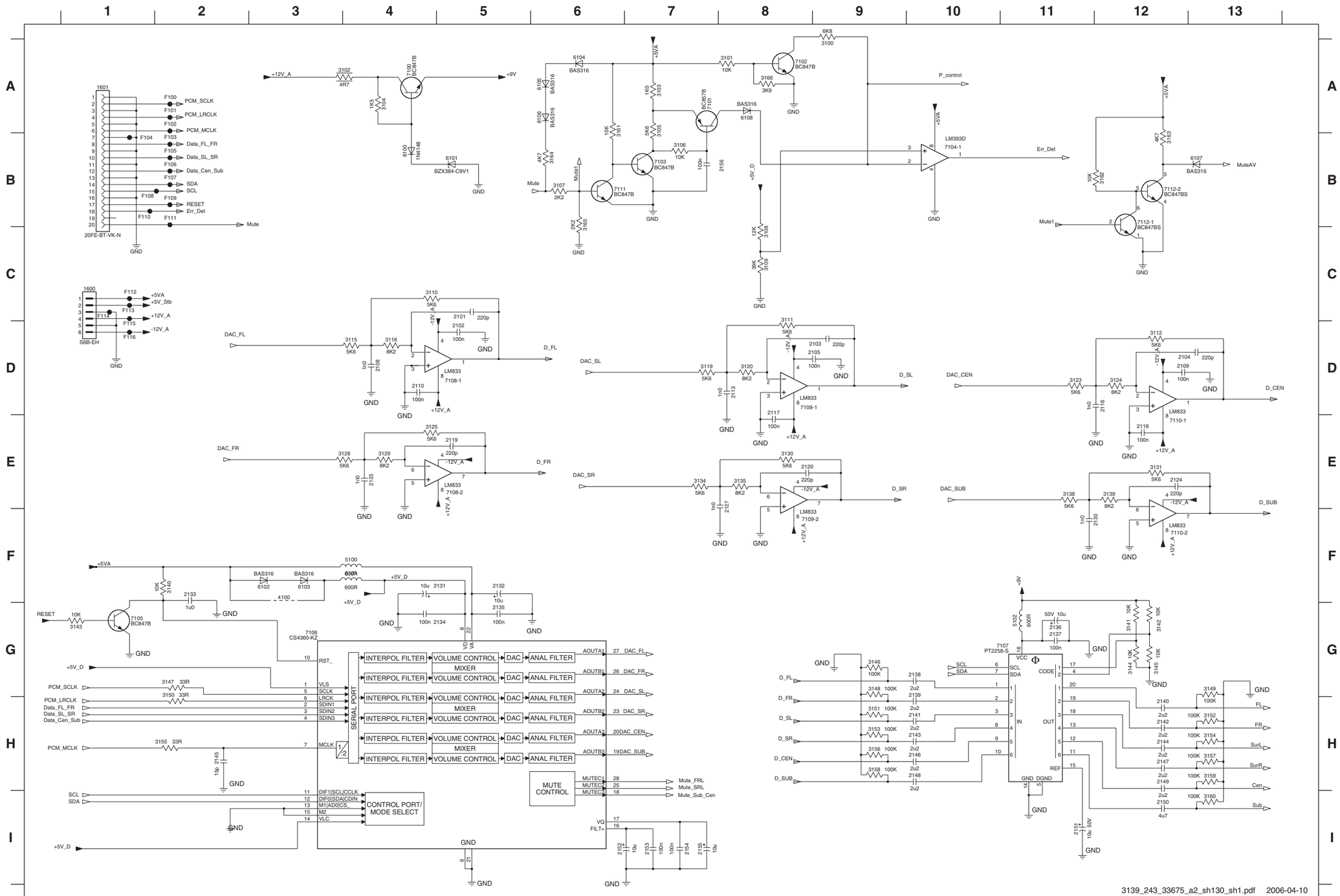
Layout: AV Board (Topview)



Layout: AV Board (Bottom view)

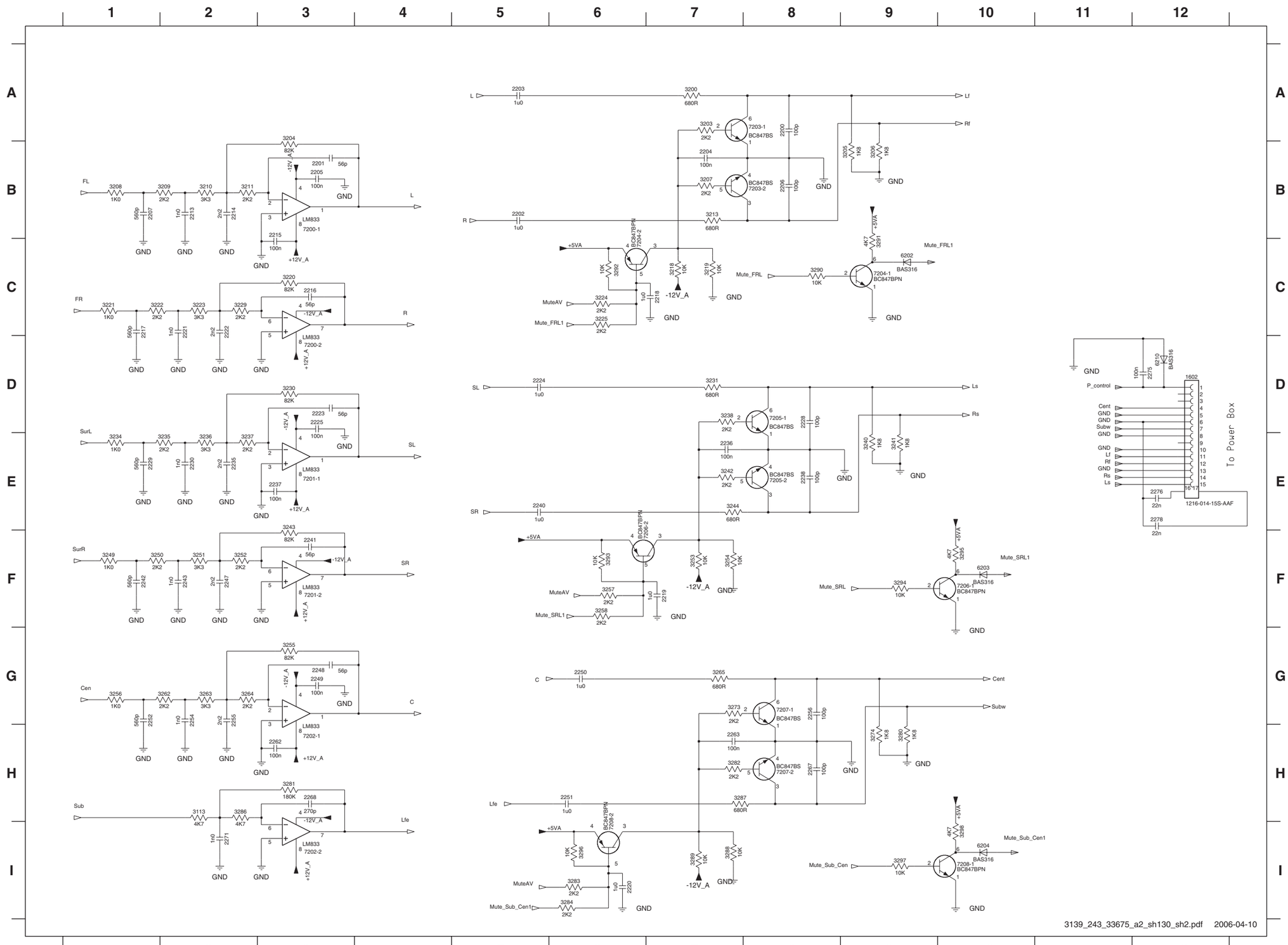


AV Interface Board: Circuit Diagram (Part 1)



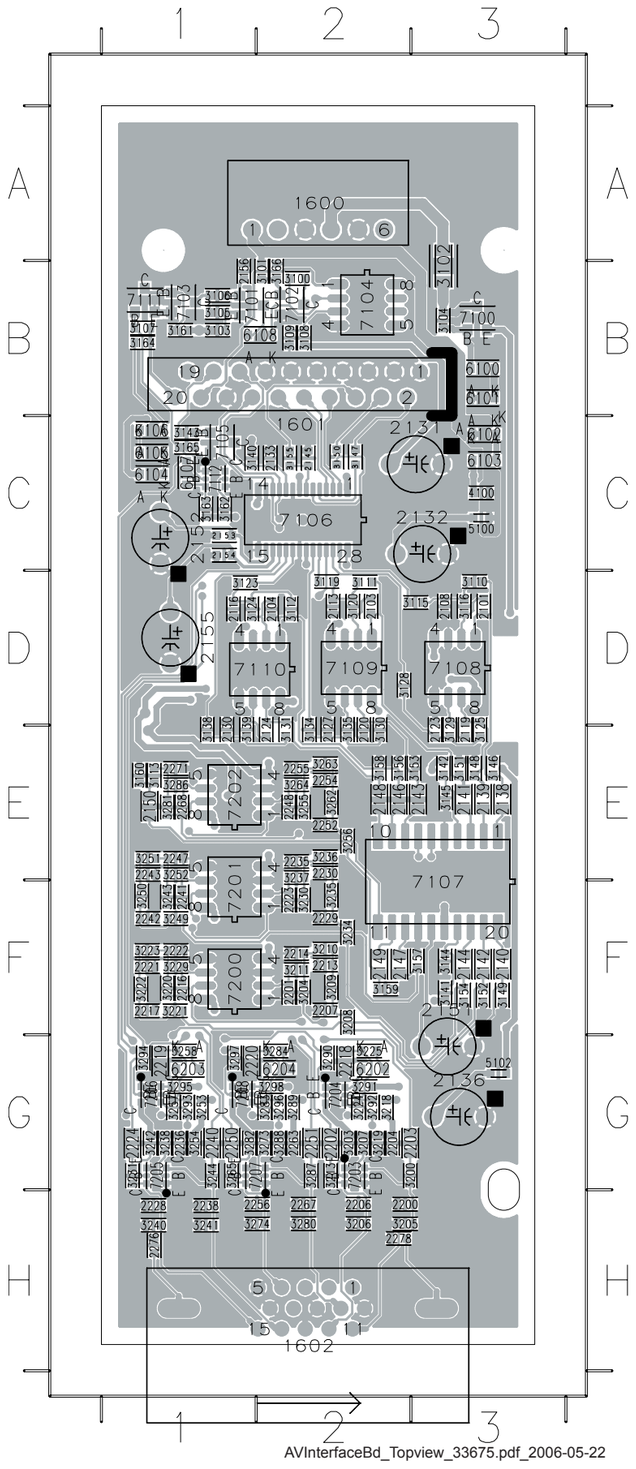
1600 C1
1601 A1
2101 C5
2102 D5
2103 D9
2104 D12
2105 D9
2108 D4
2109 D12
2110 D4
2113 D8
2116 D12
2117 D8
2118 E12
2119 E5
2120 E8
2123 E4
2124 E12
2127 E8
2130 F11
2131 F5
2132 F5
2133 F2
2134 G5
2135 G5
2136 G11
2137 G11
2138 G10
2139 G10
2140 H12
2141 H10
2142 H12
2143 H10
2144 H12
2145 H2
2146 H10
2147 H12
2148 H10
2149 H12
2150 I12
2151 I11
2152 I6
2153 I7
2154 I7
2155 I7
2156 B8
3100 A9
3101 A8
3102 A4
3103 A7
3104 A4
3105 A7
3106 B7
3107 B6
3108 C8
3109 C8
3110 C4
3111 D8
3112 D12
3115 D4
3116 D4
3119 D7
3120 D8
3123 D11
3124 D12
3125 E4
3128 E4
3129 E4
3130 E8
3131 E12
3134 E7
3135 E8
3138 E11
3139 E12
3140 F2
3141 G12
3142 G12
3143 G1
3144 G12
3145 G12
3146 G9
3147 G2
3148 G9
3149 G13
3150 G2
3151 H9
3152 H13
3153 H9
3154 H13
3155 H2
3156 H9
3157 H13
3158 H9
3159 H13
3160 I13
3161 A6
3162 B12
3163 B12
3164 B6
3165 B6
3166 A8
4100 F3
5100 F4
5101 F4
5102 G11
6100 B4
6101 B5
6102 F3
6103 F3
6104 A6
6105 A6
6106 A6
6107 B13
6108 A8
7100 A4
7101 A7
7102 A8
7103 B7
7104-1 B10
7105 G1
7106 G3
7107 G11
7108-1 D5
7108-2 E5
7109-1 D8
7109-2 F8
7110-1 E12
7110-2 F12
7111 B6
7112-1 B12
7112-2 B12
F100 A2
F101 A2
F102 A2
F103 B2
F104 B1
F105 B2
F106 B2
F107 B2
F108 B1
F109 B2
F110 B1
F111 B2
F112 C1
F113 C1
F114 C1
F115 D1
F116 D1

AV Interface Board: Circuit Diagram (Part 2)



1602 D12
2200 A8
2201 B3
2202 B5
2203 A5
2204 B7
2205 B3
2206 B8
2207 B1
2213 B2
2214 B2
2215 B3
2216 C3
2217 C1
2218 C7
2219 F7
2220 I6
2221 C2
2222 C2
2223 D3
2224 D5
2225 D3
2228 D8
2229 E1
2230 E2
2235 E2
2236 E7
2237 E3
2238 E8
2240 E5
2241 F3
2242 F1
2243 F2
2247 F2
2248 G3
2249 G3
2250 G6
2251 H6
2252 G1
2254 G2
2255 G2
2256 G8
2262 H3
2263 H7
2267 H8
2268 H3
2271 I2
2275 D12
2276 E12
2278 E12
3113 H2
3200 A7
3203 A7
3204 A3
3205 B9
3206 B9
3207 B7
3208 B1
3209 B2
3210 B2
3211 B2
3213 B7
3218 C7
3219 C7
3220 C3
3221 C1
3222 C1
3223 C2
3224 C6
3225 C6
3229 C2
3230 D3
3231 D7
3234 E1
3235 E2
3236 E2
3237 E2
3238 D7
3240 E9
3241 E9
3242 E7
3243 E3
3244 E7
3249 F1
3250 F1
3251 F2
3252 F2
3253 F7
3254 F7
3255 G3
3256 G1
3257 F6
3258 F6
3262 G2
3263 G2
3264 G2
3265 G7
3273 G7
3274 H9
3280 H9
3281 H3
3282 H7
3283 I6
3284 I6
3286 H2
3287 H7
3288 I7
3289 I7
3290 C8
3291 C9
3292 C6
3293 F6
3294 F9
3295 F10
3296 I6
3297 I9
3298 I10
6202 C9
6203 F10
6204 I10
6210 D12
7200-1 B3
7200-2 D3
7201-1 E3
7201-2 F3
7202-1 H3
7202-2 I3
7203-1 A8
7203-2 B8
7204-1 C9
7204-2 C6
7205-1 D8
7205-2 E8
7206-1 F10
7206-2 F6
7207-1 G8
7207-2 H8
7208-1 I10
7208-2 I6

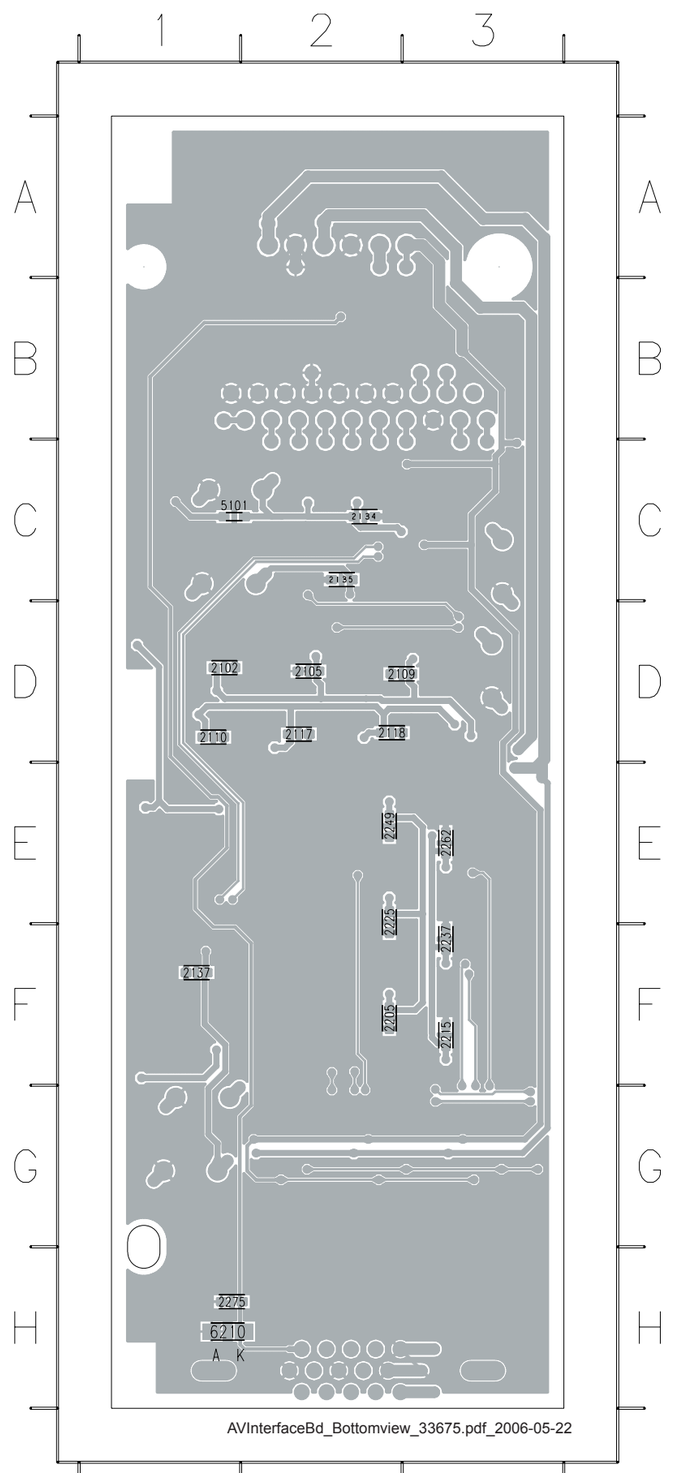
Layout: AV Interface Board (Topview)



1600	A2	2263	G2	3219	G2	7105	C1
1601	C2	2267	H2	3220	F1	7106	C2
1602	H2	2268	E1	3221	F1	7107	F3
2101	D3	2271	E1	3222	F1	7108	D3
2103	D2	2276	H1	3223	F1	7109	D2
2104	D2	2278	H2	3224	G2	7110	D2
2108	D3	3100	B2	3225	G2	7111	B1
2113	D2	3101	B2	3229	F1	7112	C1
2116	D1	3102	B3	3230	F2	7200	F1
2119	E3	3103	B1	3231	G1	7201	F1
2120	E2	3104	B3	3234	F2	7202	E1
2123	E3	3105	B1	3235	F2	7203	G2
2124	E2	3106	B1	3236	E2	7204	G2
2127	E2	3107	B1	3237	E2	7205	G1
2130	E1	3108	B2	3238	G1	7206	G1
2131	C3	3109	B2	3240	H1	7207	G1
2132	C3	3110	D3	3241	H1	7208	G1
2133	C2	3111	D2	3242	G1		
2136	G3	3112	D2	3243	F1		
2138	E3	3113	E1	3244	G1		
2139	E3	3115	D3	3249	F1		
2140	E3	3116	D3	3250	F1		
2141	E3	3119	D2	3251	E1		
2142	F3	3120	D2	3252	E1		
2143	E3	3123	D1	3253	G1		
2144	F3	3124	D1	3254	G1		
2145	C2	3125	E3	3255	E2		
2146	F2	3128	D2	3256	F2		
2147	F2	3129	E3	3257	G1		
2148	E2	3130	E2	3258	G1		
2149	F2	3131	E2	3262	F2		
2150	E1	3134	E2	3263	F2		
2151	F3	3135	E2	3264	E2		
2152	C1	3138	E1	3265	G1		
2153	C1	3139	E1	3273	G2		
2154	C1	3140	C1	3274	H2		
2155	D1	3141	E3	3280	H2		
2156	B1	3142	E3	3281	E1		
2200	H2	3143	C1	3282	G1		
2201	F2	3144	E3	3283	G2		
2202	G2	3145	E3	3284	G2		
2203	G2	3146	E3	3286	E1		
2204	G2	3147	C2	3287	G2		
2206	H2	3148	E3	3288	G2		
2207	F2	3149	E3	3289	G2		
2213	F2	3150	C2	3290	G2		
2214	F2	3151	E3	3291	G2		
2216	F1	3152	E3	3292	G2		
2217	F1	3153	E3	3293	G1		
2218	G2	3154	E3	3294	G1		
2219	G1	3155	C2	3295	G1		
2220	G1	3156	E2	3296	G2		
2221	F1	3157	E3	3297	G1		
2222	F1	3158	E2	3298	G2		
2223	F2	3159	F2	4100	C3		
2224	G1	3160	E1	5100	C3		
2228	H1	3161	B1	5102	G3		
2229	F2	3162	C1	6100	B3		
2230	E2	3163	C1	6101	B3		
2235	E2	3164	B1	6102	C3		
2236	G1	3165	C1	6103	C3		
2238	H1	3166	B2	6104	C1		
2240	G1	3200	G2	6105	C1		
2241	F1	3203	G2	6106	C1		
2242	F1	3204	F2	6107	C1		
2243	E1	3205	H2	6108	B2		
2247	E1	3206	H2	6202	G2		
2248	E2	3207	G2	6203	G1		
2250	G1	3208	F2	6204	G2		
2251	G2	3209	F2	7100	B3		
2252	E2	3210	F2	7101	B1		
2254	E2	3211	F2	7102	B2		
2255	E2	3213	G2	7103	B1		
2256	H2	3218	G2	7104	B2		

AVInterfaceBd_Topview_33675.pdf_2006-05-22

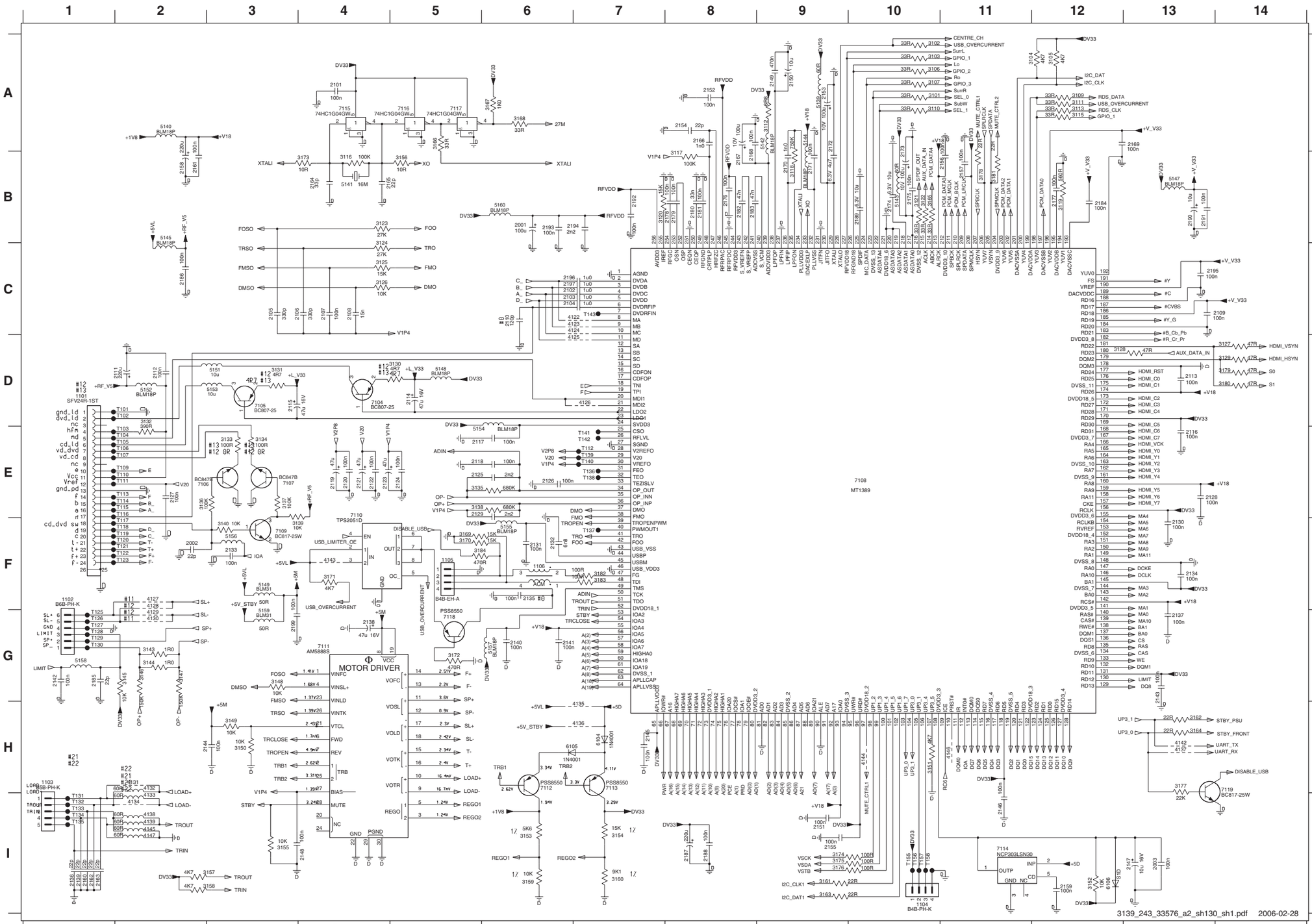
Layout: AV Interface Board (Bottom view)



2102	D1
2105	D2
2109	D2
2110	D1
2117	D2
2118	D2
2134	C2
2135	C2
2137	F1
2205	F2
2215	F3
2225	E2
2237	F3
2249	E2
2262	E3
2275	H1
5101	C1
6210	H1

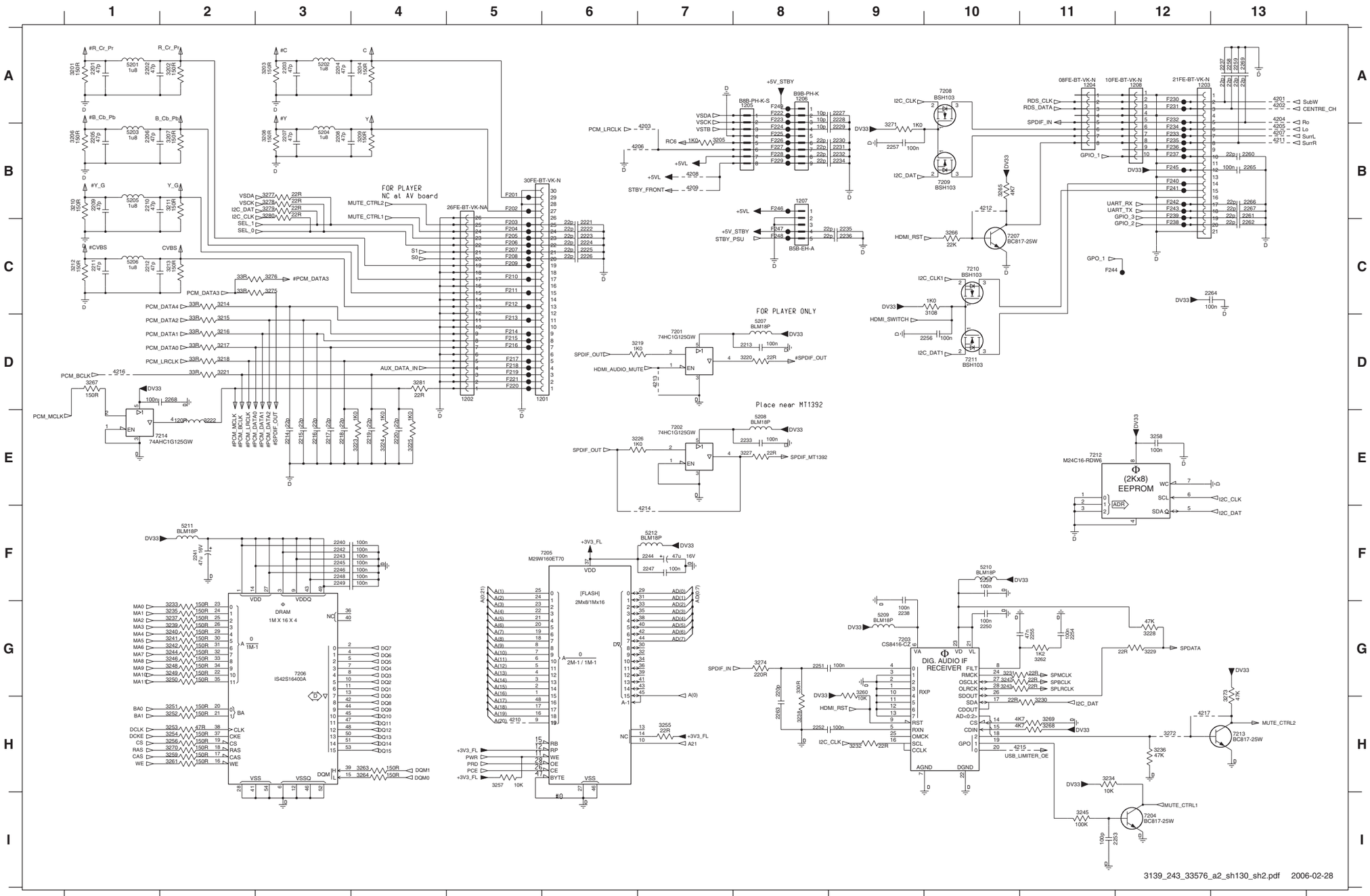
AVInterfaceBd_Bottomview_33675.pdf_2006-05-22

PCBA 9.1: Circuit Diagram (Part 1)



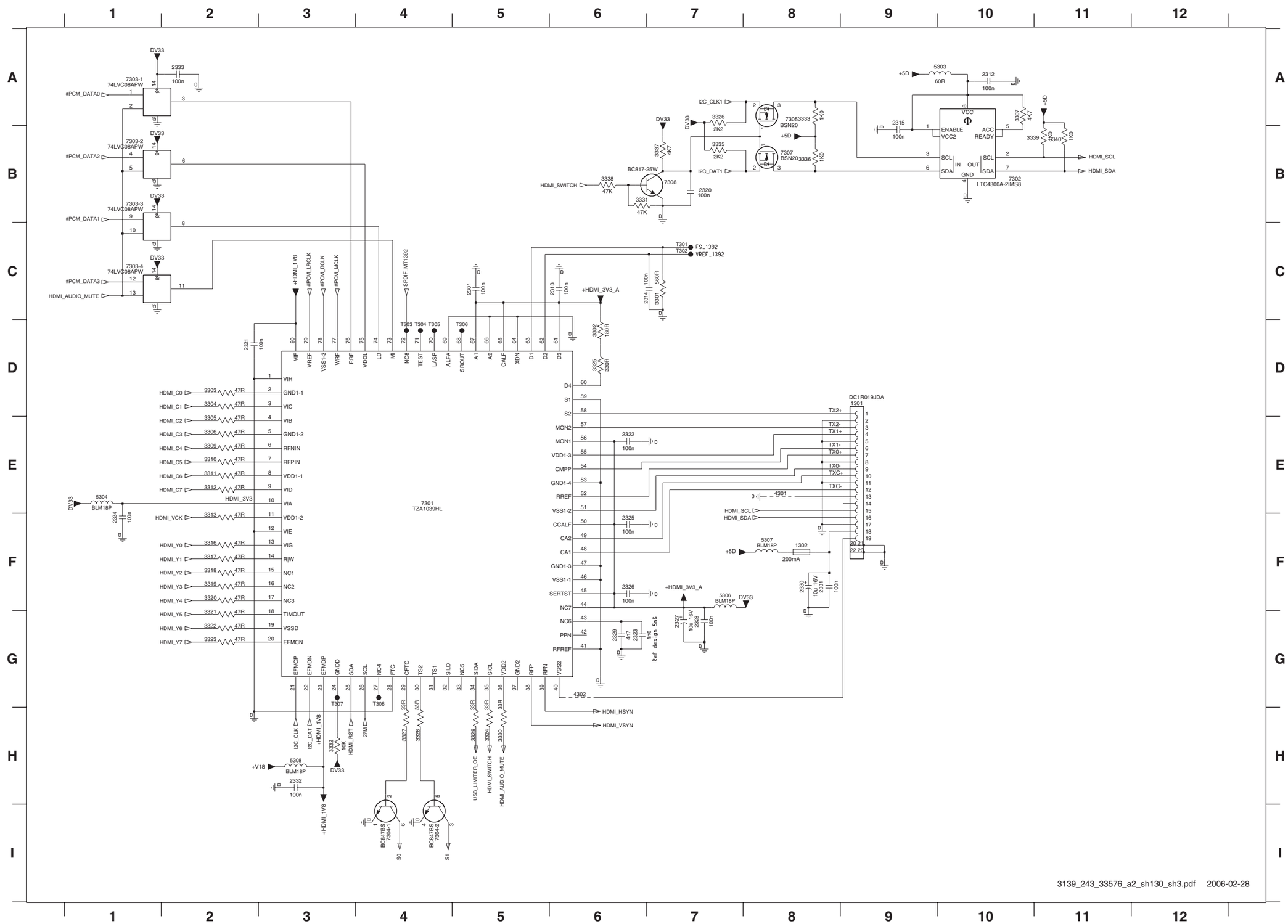
1101 D1	3111 A12	6105 H6	
1102 F1	3112 A9	6106 I12	
1103 H1	3113 A12	7104 D4	
1104 I10	3115 A12	7105 D3	
1105 F5	3116 B4	7106 E2	
1106 F6	3117 B8	7107 E3	
2001 B6	3118 B9	7108 E10	
2002 F2	3119 B12	7109 F3	
2003 I13	3120 B7	7110 E4	
2101 A4	3121 B10	7111 G4	
2102 C6	3122 B10	7112 H6	
2103 C6	3123 B4	7113 H7	
2104 C6	3124 C4	7114 I11	
2105 C3	3125 C4	7115 A4	
2106 C4	3126 C4	7116 A5	
2107 C4	3127 D14	7117 A5	
2108 C4	3128 D12	7118 G5	
2109 C14	3129 D14	7119 H14	
2110 C6	3130 D5	7120 D2	
2111 D2	3131 D3	T102 D2	
2112 D2	3132 D2	T103 E2	
2113 D13	3133 E3	T104 E2	
2114 D5	3134 E3	T105 E2	
2115 D3	3135 E5	T106 E2	
2116 E13	3136 E2	T107 E2	
2117 E5	3137 E3	T109 E2	
2118 E5	3138 E5	T110 E2	
2119 E4	3139 F3	T111 E2	
2120 E4	3140 F3	T112 E7	
2121 E4	3143 G2	T113 E2	
2122 E4	3144 G2	T114 E2	
2123 E4	3145 G2	T115 E2	
2124 E5	3146 G2	T116 E2	
2125 E5	3147 G3	T117 F2	
2126 E6	3148 G3	T118 F2	
2127 E2	3149 H3	T119 F2	
2128 E13	3150 H3	T120 F2	
2129 E5	3151 H10	T121 F2	
2130 F13	3152 I12	T122 F2	
2131 F6	3153 I6	T123 F2	
2132 F6	3154 I7	T125 G1	
2133 F3	3155 I3	T126 G1	
2134 F13	3156 B5	T127 G1	
2135 F6	3157 I3	T128 G1	
2136 I1	3158 I3	T129 G1	
2137 G13	3159 I6	T130 G1	
2138 G4	3160 I7	T131 I1	
2139 I1	3161 I9	T132 I1	
2140 G6	3162 H13	T133 I1	
2141 G6	3163 I9	T134 I1	
2142 G1	3164 H13	T135 I1	
2143 G13	3165 B10	T136 E7	
2144 H3	3166 A5	T137 F7	
2145 H7	3167 A6	T138 E7	
2146 I11	3168 A6	T139 E7	
2147 I13	3169 F5	T140 E7	
2148 I4	3170 F5	T141 E7	
2149 A9	3171 F4	T142 E7	
2150 A9	3172 G5	T143 C7	
2151 I9	3173 B4	T155 I10	
2152 A8	3174 I9	T156 I10	
2153 A9	3175 I9	T157 I10	
2154 A8	3176 I9	T158 I10	
2155 I9	3177 H13		
2156 B10	3178 B11		
2157 B11	3179 D14		
2158 B2	3180 D14		
2159 I12	3181 B11		
2160 I1	3182 F7		
2161 B2	3183 F7		
2162 I1	3184 F5		
2163 I1	4122 C7		
2164 B4	4123 C7		
2165 B5	4124 C7		
2166 A8	4125 D7		
2167 B8	4126 D7		
2168 B8	4127 F2		
2169 A13	4128 F2		
2170 B9	4129 G2		
2171 B9	4130 G2		
2172 A9	4131 H2		
2173 B10	4132 H2		
2174 B10	4133 I2		
2175 B10	4134 I2		
2176 B8	4135 H7		
2177 B12	4136 H7		
2178 B8	4137 H13		
2179 B8	4138 I2		
2180 B8	4139 I2		
2181 B8	4142 H13		
2182 B8	4143 F4		
2183 B8	4144 H10		
2184 B12	4145 I2		
2185 G1	4146 H11		
2186 C2	4147 I2		
2187 I8	5139 A9		
2188 I8	5140 A2		
2189 B10	5141 B4		
2190 B13	5142 A9		
2191 B13	5143 B10		
2192 B7	5144 A9		
2193 B6	5145 B2		
2194 B6	5147 B13		
2195 C13	5148 D5		
2196 C6	5149 F3		
2197 C6	5151 D3		
2199 G3	5152 D2		
3101 A10	5153 D3		
3102 A10	5154 E5		
3103 A10	5155 F6		
3104 A12	5156 F3		
3105 A12	5157 G6		
3106 A10	5158 G1		
3107 A10	5159 G3		
3109 A12	5160 B6		
3110 A10	6104 H7		

PCBA 9.1: Circuit Diagram (Part 2)



1201 D6	3231 G10	F215 D5	
1202 D5	3232 H9	F216 D5	
1203 A12	3233 G2	F217 D5	
1204 A11	3234 H11	F218 D5	
1205 A8	3235 G2	F219 D5	
1206 A8	3236 H12	F220 D5	
1207 B8	3237 G2	F221 D5	
1208 A12	3238 H8	F222 A8	
2201 A1	3239 G2	F223 A8	
2202 A1	3240 G2	F224 B8	
2203 A3	3241 G2	F225 B8	
2204 A3	3242 G2	F226 B8	
2205 B1	3243 G10	F227 B8	
2206 B1	3244 G2	F228 B8	
2207 B3	3245 I11	F229 B8	
2208 B3	3246 G2	F230 A12	
2209 B1	3247 G10	F231 A12	
2210 B1	3248 G2	F232 A12	
2211 C1	3249 G2	F233 B12	
2212 C1	3250 G2	F234 B12	
2213 D8	3251 H2	F235 B12	
2214 E3	3252 H2	F236 B12	
2215 E3	3253 H2	F237 B12	
2216 E3	3254 H2	F238 C12	
2217 E3	3255 H7	F239 B12	
2218 E3	3256 H2	F240 B12	
2219 E4	3257 H5	F241 B12	
2220 E4	3258 E12	F242 B12	
2221 C6	3259 H2	F243 B12	
2222 C6	3260 G9	F244 C11	
2223 C6	3261 H2	F245 B12	
2224 C6	3262 G11	F246 B8	
2225 C6	3263 H4	F247 C8	
2226 C6	3264 H4	F248 C8	
2227 A9	3265 B10	F249 A8	
2228 A9	3266 C10		
2229 B9	3267 D1		
2230 B9	3268 H11		
2231 B9	3269 H11		
2232 B9	3270 H2		
2233 E8	3271 A9		
2234 B9	3272 H12		
2235 C9	3273 G13		
2236 C9	3274 G8		
2237 A13	3275 C3		
2238 G9	3276 C3		
2239 F10	3277 B3		
2240 F3	3278 B3		
2241 F2	3279 B3		
2242 F3	3280 B3		
2243 F3	3281 D4		
2244 F7	4201 A13		
2245 F3	4202 A13		
2246 F3	4203 B7		
2247 F7	4204 A13		
2248 F3	4205 B13		
2249 F3	4206 B7		
2250 G10	4207 B13		
2251 G8	4208 B7		
2252 H8	4209 B7		
2253 I11	4210 H5		
2254 G11	4211 B13		
2255 G11	4212 B10		
2256 D10	4213 D7		
2257 B9	4214 F7		
2258 A13	4215 H11		
2259 A13	4216 D1		
2260 B13	4217 H12		
2261 B13	5201 A1		
2262 C13	5202 A3		
2263 H8	5203 B1		
2264 C13	5204 B3		
2265 B13	5205 B1		
2266 B13	5206 C1		
2267 B13	5207 D8		
2268 D2	5208 E8		
2269 A13	5209 G9		
3108 C10	5210 F10		
3201 A1	5211 F2		
3202 A2	5212 F7		
3203 A3	7201 D7		
3204 A4	7202 E7		
3205 B7	7203 G9		
3206 B1	7204 I12		
3207 B2	7205 F5		
3208 B3	7206 G3		
3209 B4	7207 C10		
3210 B1	7208 A10		
3211 B2	7209 B10		
3212 C1	7210 C10		
3213 C2	7211 D10		
3214 C2	7212 E11		
3215 D2	7213 H13		
3216 D2	7214 E2		
3217 D2	F201 B5		
3218 D2	F202 B5		
3219 D7	F203 C5		
3220 D8	F204 C5		
3221 D2	F205 C5		
3222 E2	F206 C5		
3223 E4	F207 C5		
3224 E4	F208 C5		
3225 E4	F209 C5		
3226 E7	F210 C5		
3227 E8	F211 C5		
3228 G12	F212 C5		
3229 G12	F213 D5		
3230 H11	F214 D5		

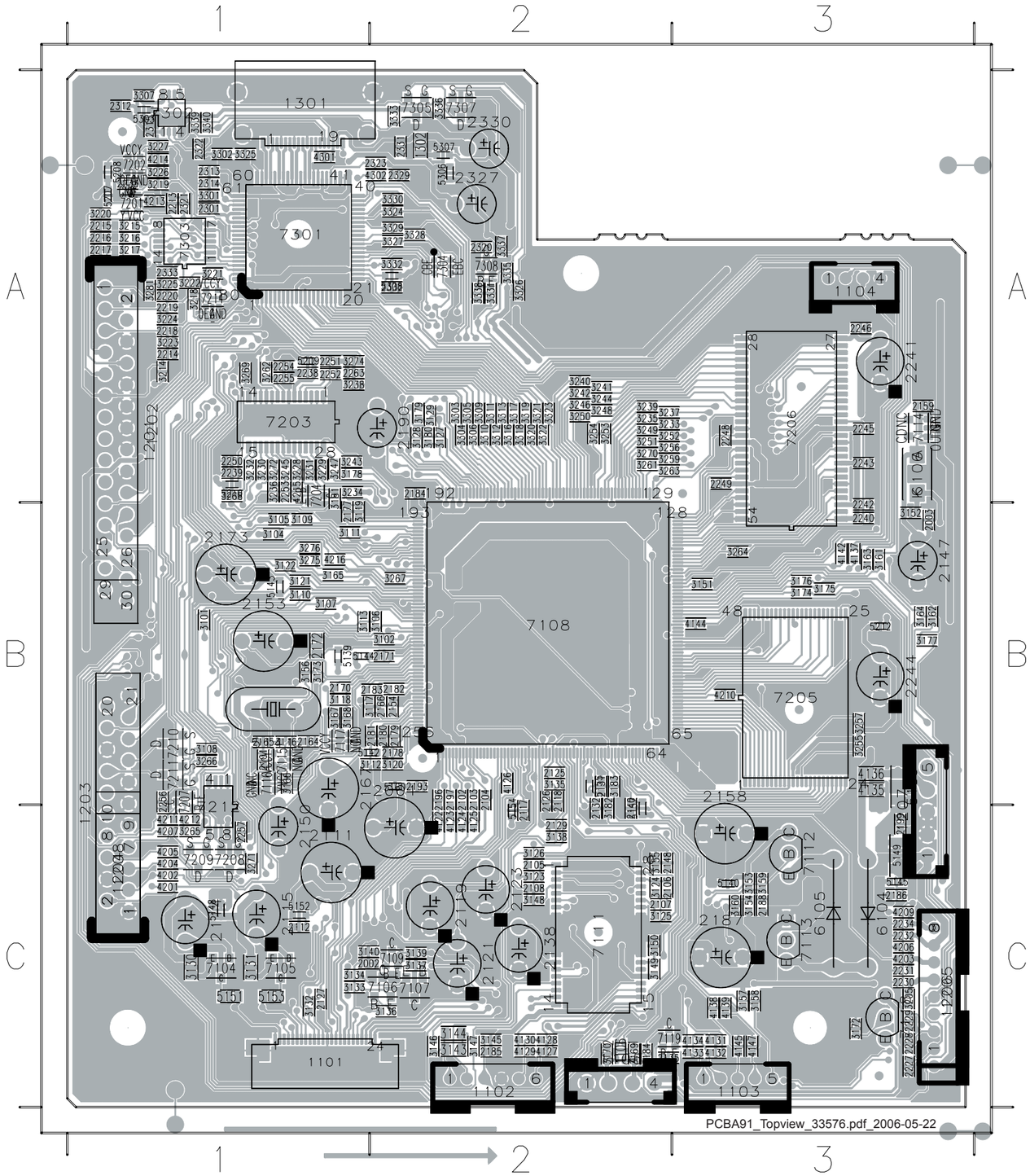
PCBA 9.1: Circuit Diagram (Part 3)



3139_243_33576_a2_sh130_sh3.pdf 2006-02-28

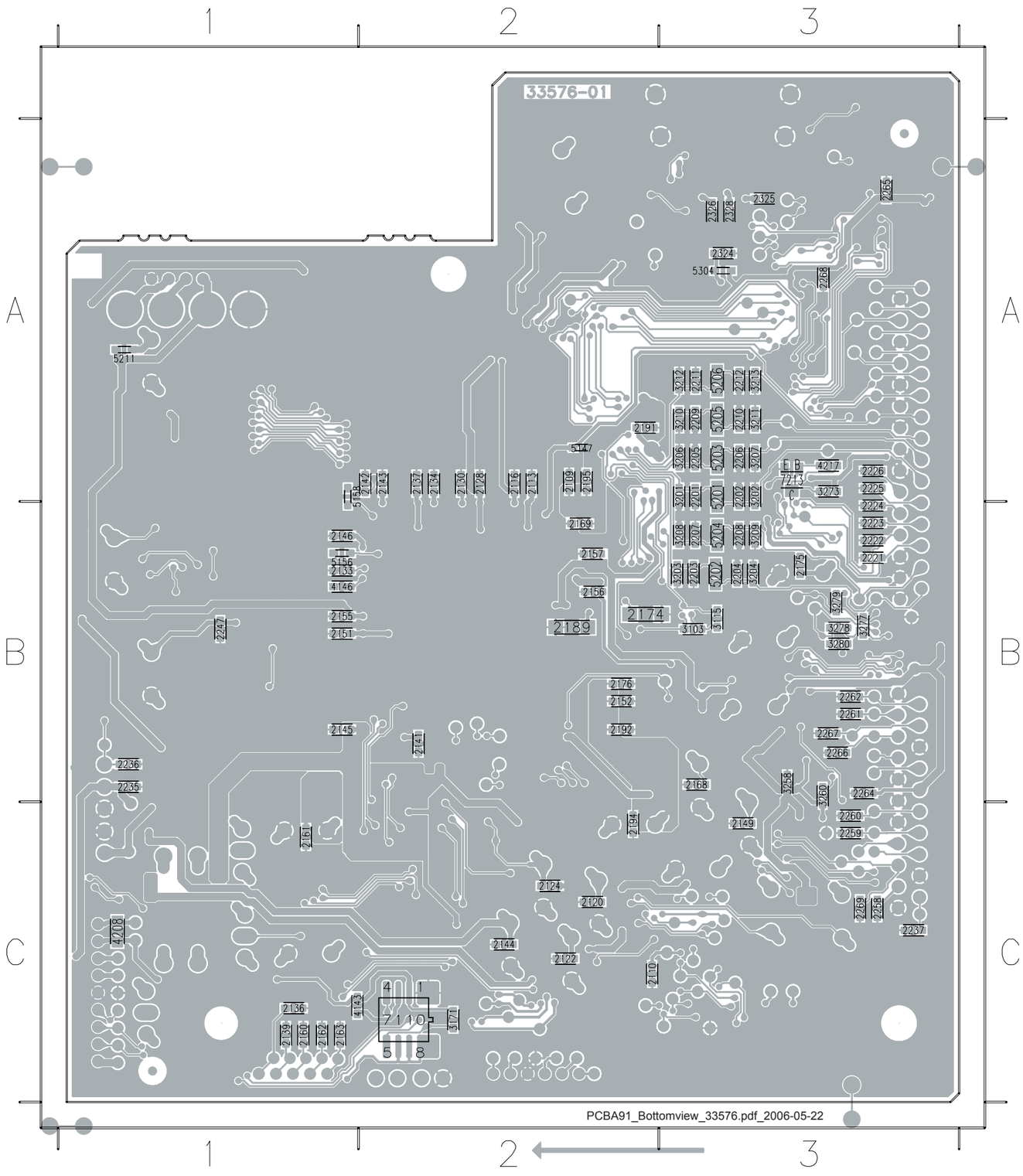
1301 D9
1302 F8
2301 C5
2312 A10
2313 C6
2314 C7
2315 A9
2320 B7
2321 D2
2322 E6
2323 G6
2324 F1
2325 F6
2326 F6
2327 G7
2328 G7
2329 G6
2330 F8
2331 F8
2332 H3
2333 A2
3301 C7
3302 D6
3303 D2
3304 D2
3305 E2
3306 E2
3307 A10
3309 E2
3310 E2
3311 E2
3312 E2
3313 F2
3316 F2
3317 F2
3318 F2
3319 F2
3320 F2
3321 G2
3322 G2
3323 G2
3324 H5
3325 D6
3326 A7
3327 H4
3328 H4
3329 H5
3330 H5
3331 B6
3332 H3
3333 A8
3335 B7
3336 B8
3337 B7
3338 B6
3339 B10
3340 B11
4301 E8
4302 G6
5303 A10
5304 E1
5306 F7
5307 F8
5308 H3
7301 E4
7302 B10
7303-1 A1
7303-2 B1
7303-3 B1
7303-4 C1
7304-1 I4
7304-2 I4
7305 A8
7307 B8
7308 B7
T301 C7
T302 C7
T303 D4
T304 D4
T305 D4
T306 D5
T307 G3
T308 G4

Layout: PCBA 9.1 (Topview)



1101 C1	2179 B2	2330 A2	3164 B3	3255 B3	4128 C2	7104 C1
1102 C2	2180 B2	2331 A2	3165 B1	3256 A2	4129 C2	7105 C1
1103 C3	2181 B2	2332 A2	3166 B1	3257 B3	4130 C2	7106 C2
1104 A3	2182 B2	2333 A1	3167 B1	3259 A2	4131 C3	7107 C2
1105 C2	2183 B2	3101 B1	3168 B1	3261 A2	4132 C3	7108 B2
1106 C2	2184 A2	3102 B2	3169 C2	3262 A1	4133 C3	7109 C2
1201 A1	2185 C2	3104 B1	3170 C2	3263 A2	4134 C3	7111 C2
1202 A1	2186 C3	3105 B1	3172 C3	3264 B3	4135 B3	7112 C3
1203 B1	2187 C3	3106 B2	3173 B1	3265 C1	4136 B3	7113 C3
1204 C1	2188 C3	3107 B1	3174 B3	3266 B1	4137 B3	7114 A3
1205 C3	2190 A2	3108 B1	3175 B3	3267 B2	4138 C3	7115 B1
1206 C3	2193 B2	3109 B1	3176 B3	3268 A1	4139 C3	7116 B1
1207 C3	2196 B2	3110 B1	3177 B3	3269 A1	4142 B3	7117 B1
1208 C1	2197 B2	3111 B1	3178 A1	3270 A2	4144 B3	7118 C3
1301 A1	2199 C3	3112 B2	3179 A2	3271 C1	4145 C3	7119 C2
1302 A2	2213 A1	3113 B1	3180 A2	3272 A1	4147 C3	7201 A1
2001 B2	2214 A1	3116 B1	3181 A1	3274 A1	4201 C1	7202 A1
2002 C1	2215 A1	3117 B1	3182 C2	3275 B1	4202 C1	7203 A1
2003 B3	2216 A1	3118 B1	3183 B2	3276 B1	4203 C3	7204 A1
2101 B1	2217 A1	3119 B1	3184 C2	3281 A1	4204 C1	7205 B3
2102 B2	2218 A1	3120 B2	3205 C3	3301 A1	4205 C1	7206 A3
2103 B2	2219 A1	3121 B1	3214 A1	3302 A1	4206 C3	7207 B1
2104 B2	2220 A1	3122 B1	3215 A1	3303 A2	4207 C1	7208 C1
2105 C2	2227 C3	3123 C2	3216 A1	3304 A2	4209 C3	7209 C1
2106 C2	2228 C3	3124 C2	3217 A1	3305 A2	4210 B3	7210 B1
2107 C2	2229 C3	3125 C2	3218 A1	3306 A2	4211 C1	7211 B1
2108 C2	2230 C3	3126 C2	3219 A1	3307 A1	4212 C1	7212 C1
2111 C1	2231 C3	3127 A2	3220 A1	3309 A2	4213 A1	7214 A1
2112 C1	2232 C3	3128 A2	3221 A1	3310 A2	4214 A1	7301 A1
2114 C1	2233 A1	3129 A2	3222 A1	3311 A2	4215 A1	7302 A1
2115 C1	2234 C3	3130 C1	3223 A1	3312 A2	4216 B1	7303 A1
2117 C2	2238 A1	3131 C1	3224 A1	3313 A2	4301 A1	7304 A2
2118 B2	2239 A1	3132 C1	3225 A1	3316 A2	4302 A2	7305 A2
2119 C2	2240 B3	3133 C1	3226 A1	3317 A2	5139 B1	7307 A2
2121 C2	2241 A3	3134 C1	3227 A1	3318 A2	5140 C3	7308 A2
2123 C2	2242 B3	3135 B2	3228 A1	3319 A2	5141 B1	
2125 B2	2243 A3	3136 C2	3229 A1	3320 A2	5142 B1	
2126 B2	2244 B3	3137 C2	3230 A1	3321 A2	5143 B1	
2127 C1	2245 A3	3138 C2	3231 A1	3322 A2	5144 B1	
2129 C2	2246 A3	3139 C2	3232 A1	3323 A2	5145 C3	
2131 B2	2248 A3	3140 C1	3233 A2	3324 A2	5148 C1	
2132 C2	2249 A3	3143 C2	3234 A1	3325 A1	5149 C3	
2135 C2	2250 A1	3144 C2	3235 A2	3326 A2	5151 C1	
2138 C2	2251 A1	3145 C2	3236 A1	3327 A2	5152 C1	
2140 C2	2252 A1	3146 C2	3237 A2	3328 A2	5153 C1	
2147 B3	2253 A1	3147 C2	3238 A1	3329 A2	5154 C2	
2148 C2	2254 A1	3148 C2	3239 A2	3330 A2	5155 B2	
2150 C1	2255 A1	3149 C2	3240 A2	3331 A2	5157 C2	
2153 B1	2256 B1	3150 C2	3241 A2	3332 A2	5159 B3	
2154 B2	2257 C1	3151 B3	3242 A2	3333 A2	5160 B2	
2158 B3	2263 A1	3152 B3	3243 A1	3335 A2	5207 A1	
2159 A3	2301 A1	3153 C3	3244 A2	3336 A2	5208 A1	
2164 B1	2312 A1	3154 C3	3245 A1	3337 A2	5209 A1	
2165 B1	2313 A1	3155 C2	3246 A2	3338 A2	5210 A1	
2166 B2	2314 A1	3156 B1	3247 A1	3339 A1	5212 B3	
2167 B1	2315 A1	3157 C3	3248 A2	3340 A1	5303 A1	
2170 B1	2320 A2	3158 C3	3249 A2	4122 C2	5306 A2	
2171 B2	2321 A1	3159 C3	3250 A2	4123 C2	5307 A2	
2172 B1	2322 A1	3160 C3	3251 A2	4124 C2	5308 A2	
2173 B1	2323 A2	3161 B3	3252 A2	4125 C2	6104 C3	
2177 B1	2327 A2	3162 B3	3253 A2	4126 B2	6105 C3	
2178 B2	2329 A2	3163 B3	3254 A2	4127 C2	6106 A3	

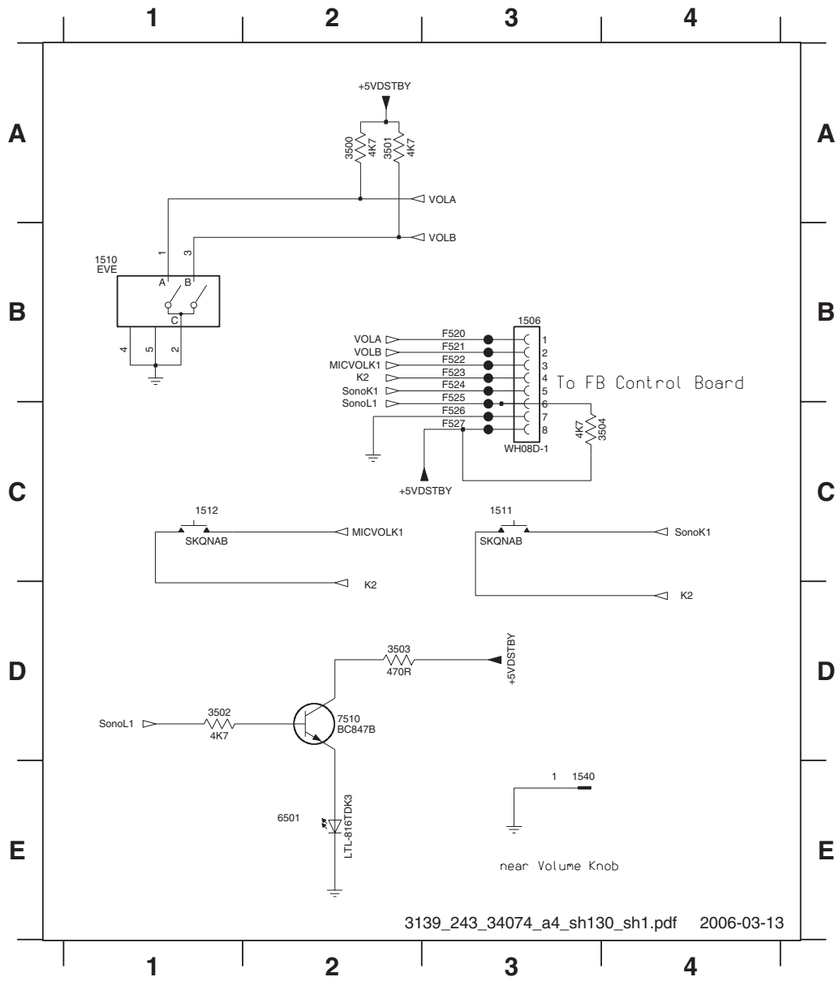
Layout: PCBA 9.1 (Bottom view)



2109	A2	2258	C3
2110	C2	2259	C3
2113	A2	2260	C3
2116	A2	2261	B3
2120	C2	2262	B3
2122	C2	2264	B3
2124	C2	2265	A3
2128	A2	2266	B3
2130	A2	2267	B3
2133	B1	2268	A3
2134	A2	2269	C3
2136	C1	2324	A3
2137	A2	2325	A3
2139	C1	2326	A3
2141	B2	2328	A3
2142	A2	3103	B3
2143	A2	3115	B3
2144	C2	3171	C2
2145	B1	3201	A3
2146	B1	3202	A3
2149	C3	3203	B3
2151	B1	3204	B3
2152	B2	3206	A3
2155	B1	3207	A3
2156	B2	3208	B3
2157	B2	3209	B3
2160	C1	3210	A3
2161	C1	3211	A3
2162	C1	3212	A3
2163	C1	3213	A3
2168	B3	3258	B3
2169	B2	3260	B3
2174	B2	3273	A3
2175	B3	3277	B3
2176	B2	3278	B3
2189	B2	3279	B3
2191	A2	3280	B3
2192	B2	4143	C1
2194	C2	4146	B1
2195	A2	4208	C1
2201	A3	4217	A3
2202	A3	5147	A2
2203	B3	5156	B1
2204	B3	5158	A1
2205	A3	5201	A3
2206	A3	5202	B3
2207	B3	5203	A3
2208	B3	5204	B3
2209	A3	5205	A3
2210	A3	5206	A3
2211	A3	5211	A1
2212	A3	5304	A3
2221	B3	7110	C2
2222	B3	7213	A3
2223	B3		
2224	B3		
2225	A3		
2226	A3		
2235	B1		
2236	B1		
2237	C3		
2247	B1		

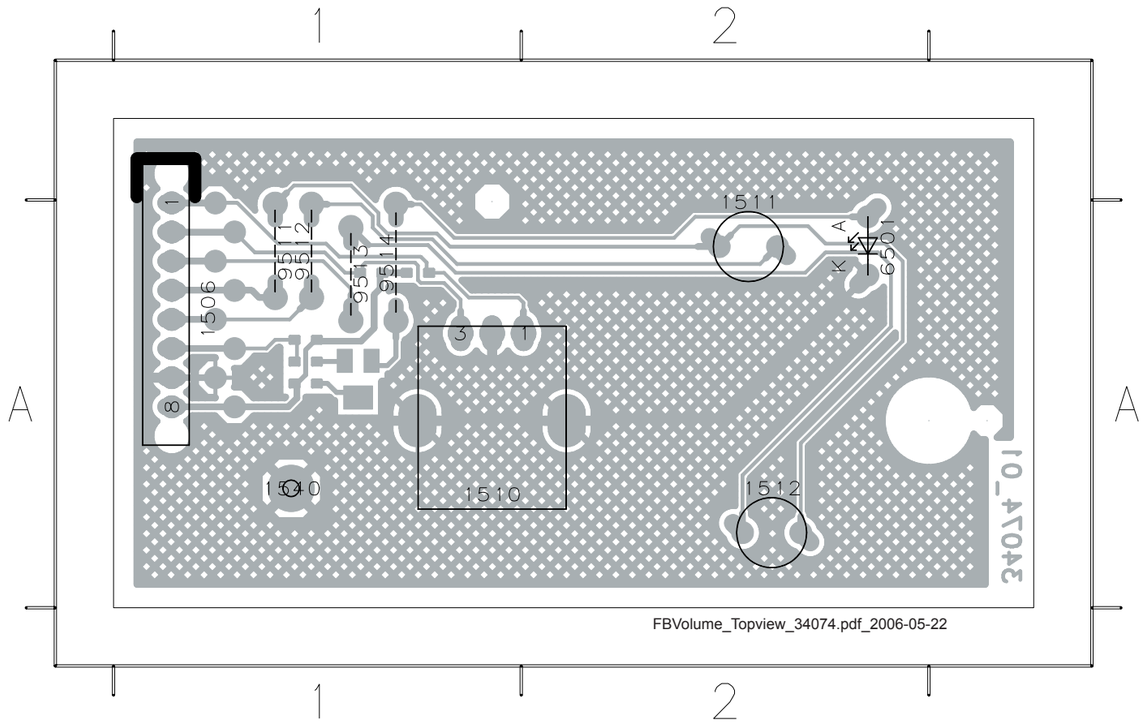
FB Volume: Circuit Diagram

1506 B3 1511 C3 1540 E3 3501 A2 3503 D2 6501 E2 F520 B3 F522 B3 F524 B3 F526 C3
1510 B1 1512 C1 3500 A2 3502 D1 3504 C3 7510 D2 F521 B3 F523 B3 F525 B3 F527 C3



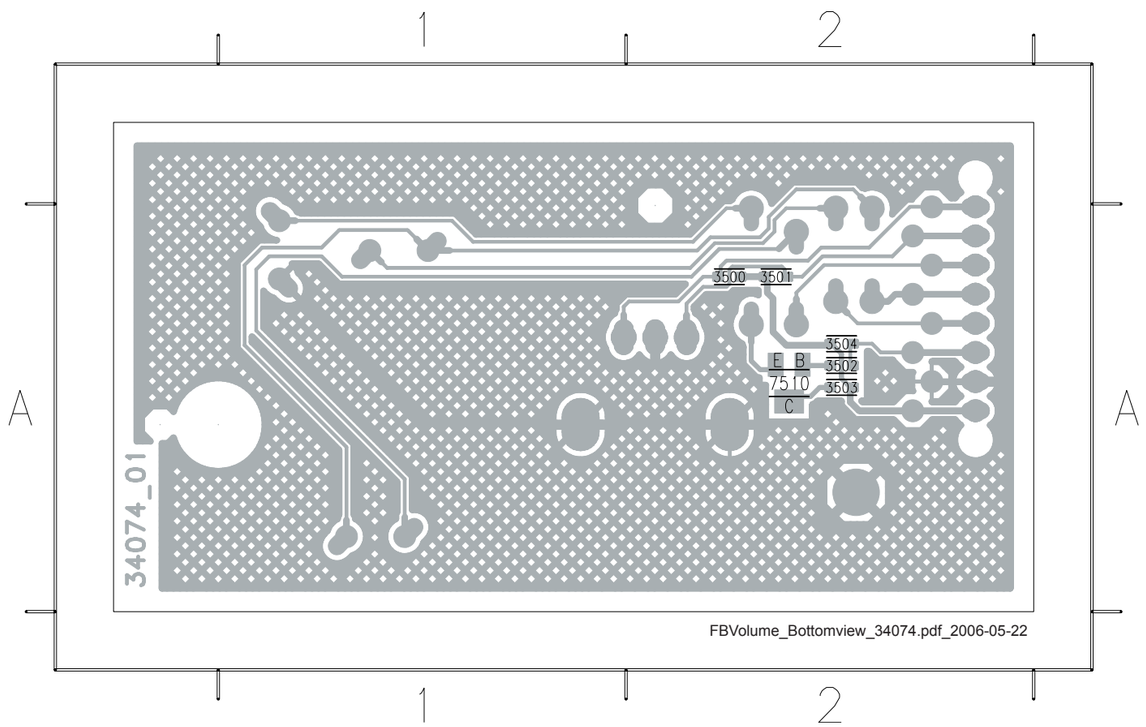
Layout: FB Volume(Top view)

1506 A1
1510 A1
1511 A2
1512 A2
1540 A1
6501 A2
9511 A1
9512 A1
9513 A1
9514 A1

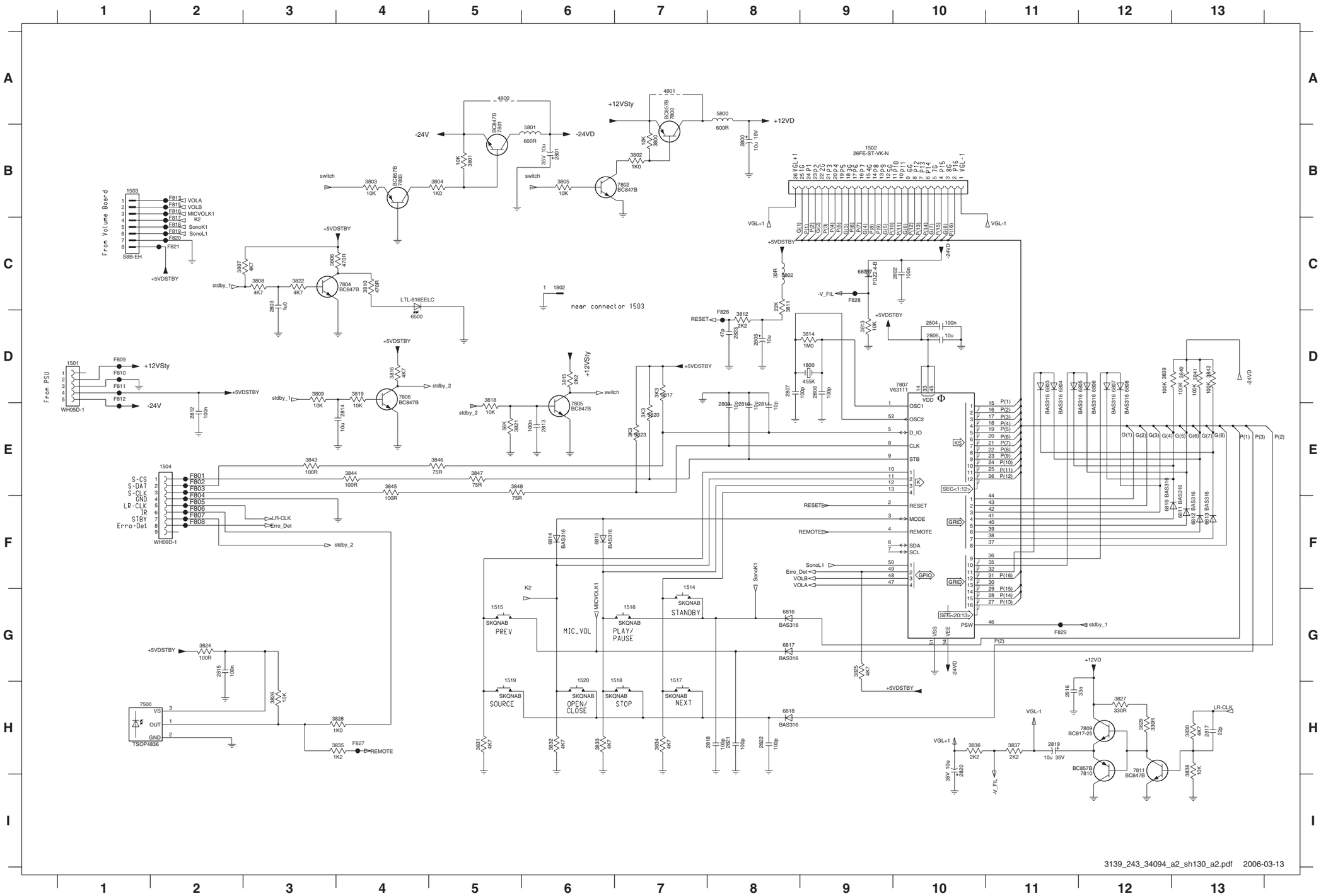


Layout: FB Volume(Bottom view)

3500 A2
3501 A2
3502 A2
3503 A2
3504 A2
7510 A2



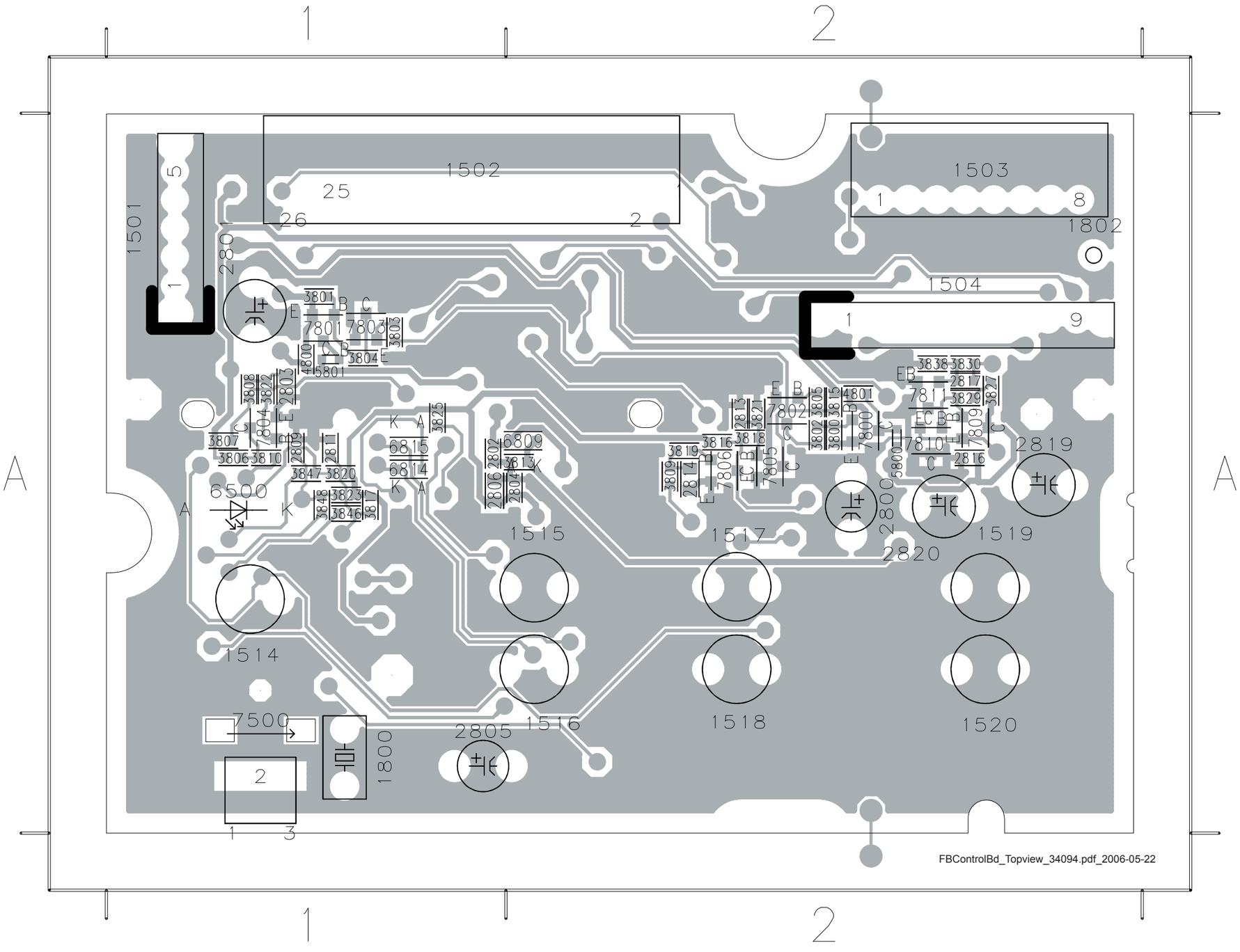
FB Control Board: Circuit Diagram



1501 D1
1502 B9
1503 B1
1504 E2
1514 G7
1515 G5
1516 G7
1517 H7
1518 H7
1519 H5
1520 H6
1800 D9
1802 C6
2800 B8
2801 B6
2802 C10
2803 C3
2804 D10
2805 D8
2806 D10
2807 D8
2808 D9
2809 E8
2810 E8
2811 E8
2812 E2
2813 E6
2814 E4
2815 G2
2816 H11
2817 H13
2818 H8
2819 H11
2820 H10
2821 H8
2822 H8
2823 D8
3800 B7
3801 B5
3802 B7
3803 B4
3804 B5
3805 B6
3806 C3
3807 C2
3808 C3
3809 D3
3810 C4
3811 C8
3812 D8
3813 D9
3814 D9
3815 D6
3816 D4
3817 D7
3818 D5
3819 D4
3820 E7
3821 E5
3822 C3
3823 E7
3824 G2
3825 G9
3826 H3
3827 H12
3828 H4
3829 H12
3830 H13
3831 H5
3832 H6
3833 H6
3834 H7
3835 H4
3836 H10
3837 H11
3838 H13
3839 D12
3840 D13
3841 D13
3842 D13
3843 E3
3844 E4
3845 E4
3846 E5
3847 E5
3848 E5
4800 A5
4801 A7
5800 A8
5801 B6
5802 C8
6500 D4
6803 D11
6804 D11
6805 D11
6806 D12
6807 D12
6808 D12
6809 C9
6810 F12
6811 F13
6812 F13
6813 F13
6814 F6
6815 F6
6816 G8
6817 G8
6818 H8
7500 H1

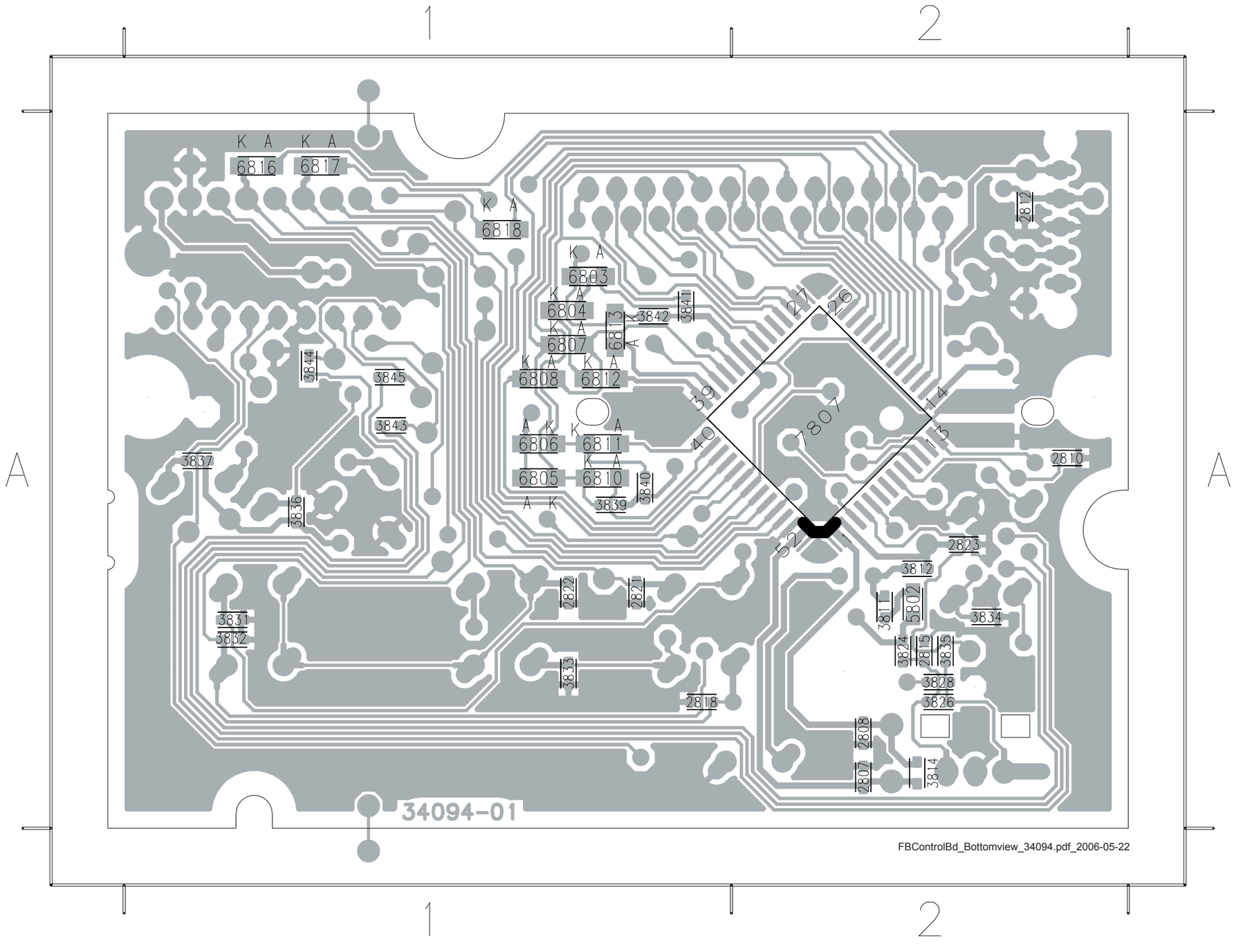
7800 A7
7801 B5
7802 B7
7803 B4
7804 C4
7805 E6
7806 D4
7807 D10
7809 H12
7810 H12
7811 H12
F801 E2
F802 E2
F803 E2
F804 F2
F805 F2
F806 F2
F807 F2
F808 F2
F809 D1
F810 D1
F811 D1
F812 D1
F813 B2
F815 B2
F816 B2
F817 C2
F818 C2
F819 C2
F820 C2
F821 C2
F826 D8
F827 H4
F828 C9
F829 G11

Layout: FB Control Board (Top view)



1501	A1	3818	A2
1502	A1	3819	A2
1503	A2	3820	A1
1504	A2	3821	A2
1514	A1	3822	A1
1515	A2	3823	A1
1516	A2	3825	A1
1517	A2	3827	A2
1518	A2	3829	A2
1519	A2	3830	A2
1520	A2	3838	A2
1800	A1	3846	A1
1802	A2	3847	A1
2800	A2	3848	A1
2801	A1	4800	A1
2802	A1	4801	A2
2803	A1	5800	A2
2804	A2	5801	A1
2805	A1	6500	A1
2806	A1	6809	A2
2809	A1	6814	A1
2811	A1	6815	A1
2813	A2	7500	A1
2814	A2	7800	A2
2816	A2	7801	A1
2817	A2	7802	A2
2819	A2	7803	A1
2820	A2	7804	A1
3800	A2	7805	A2
3801	A1	7806	A2
3802	A2	7809	A2
3803	A1	7810	A2
3804	A1	7811	A2
3805	A2		
3806	A1		
3807	A1		
3808	A1		
3809	A2		
3810	A1		
3813	A2		
3815	A2		
3816	A2		
3817	A1		

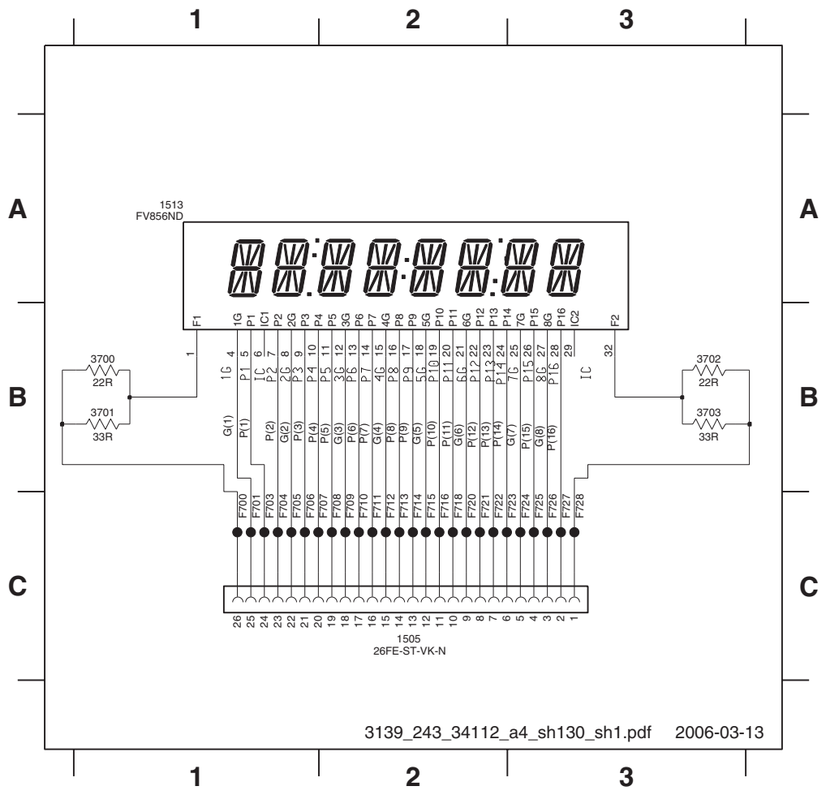
Layout: FB Control Board (Bottom view)



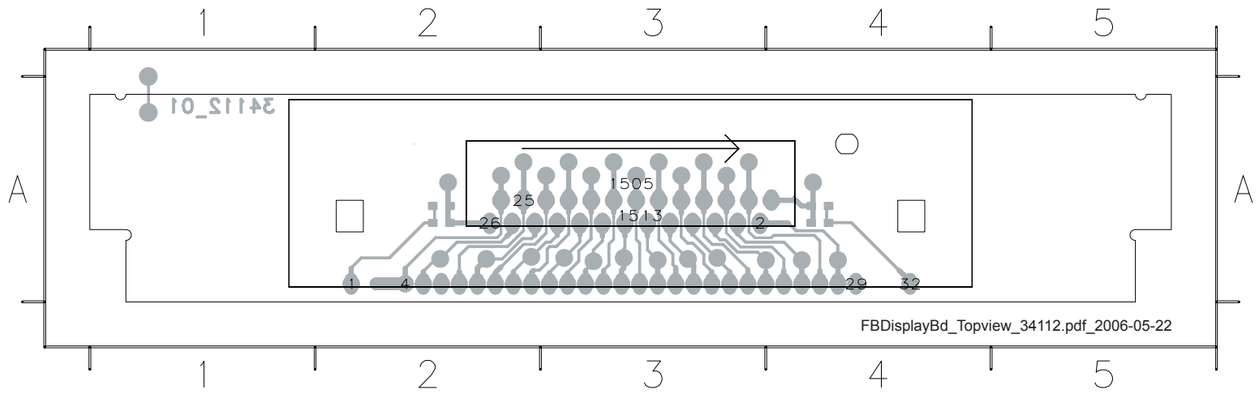
2807	A2	7807	A2
2808	A2		
2810	A2		
2812	A2		
2815	A2		
2818	A1		
2821	A1		
2822	A1		
2823	A2		
3811	A2		
3812	A2		
3814	A2		
3824	A2		
3826	A2		
3828	A2		
3831	A1		
3832	A1		
3833	A1		
3834	A2		
3835	A2		
3836	A1		
3837	A1		
3839	A1		
3840	A1		
3841	A1		
3842	A1		
3843	A1		
3844	A1		
3845	A1		
5802	A2		
6803	A1		
6804	A1		
6805	A1		
6806	A1		
6807	A1		
6808	A1		
6810	A1		
6811	A1		
6812	A1		
6813	A1		
6816	A1		
6817	A1		
6818	A1		

FB Display Board: Circuit Diagram

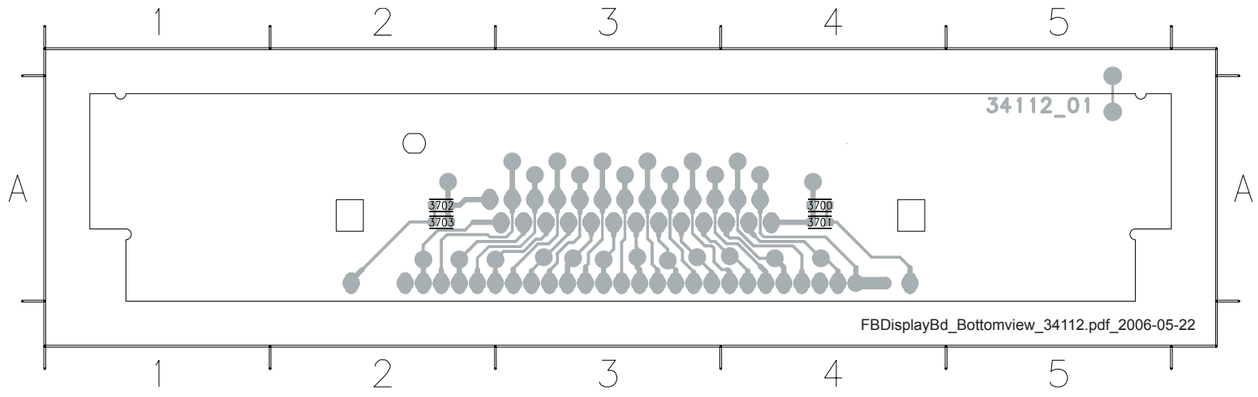
1505 C2	3702 B3	F703 C1	F707 C2	F711 C2	F715 C2	F721 C2	F725 C3
1513 A1	3703 B3	F704 C1	F708 C2	F712 C2	F716 C2	F722 C2	F726 C3
3700 B1	F700 C1	F705 C1	F709 C2	F713 C2	F718 C2	F723 C3	F727 C3
3701 B1	F701 C1	F706 C1	F710 C2	F714 C2	F720 C2	F724 C3	F728 C3



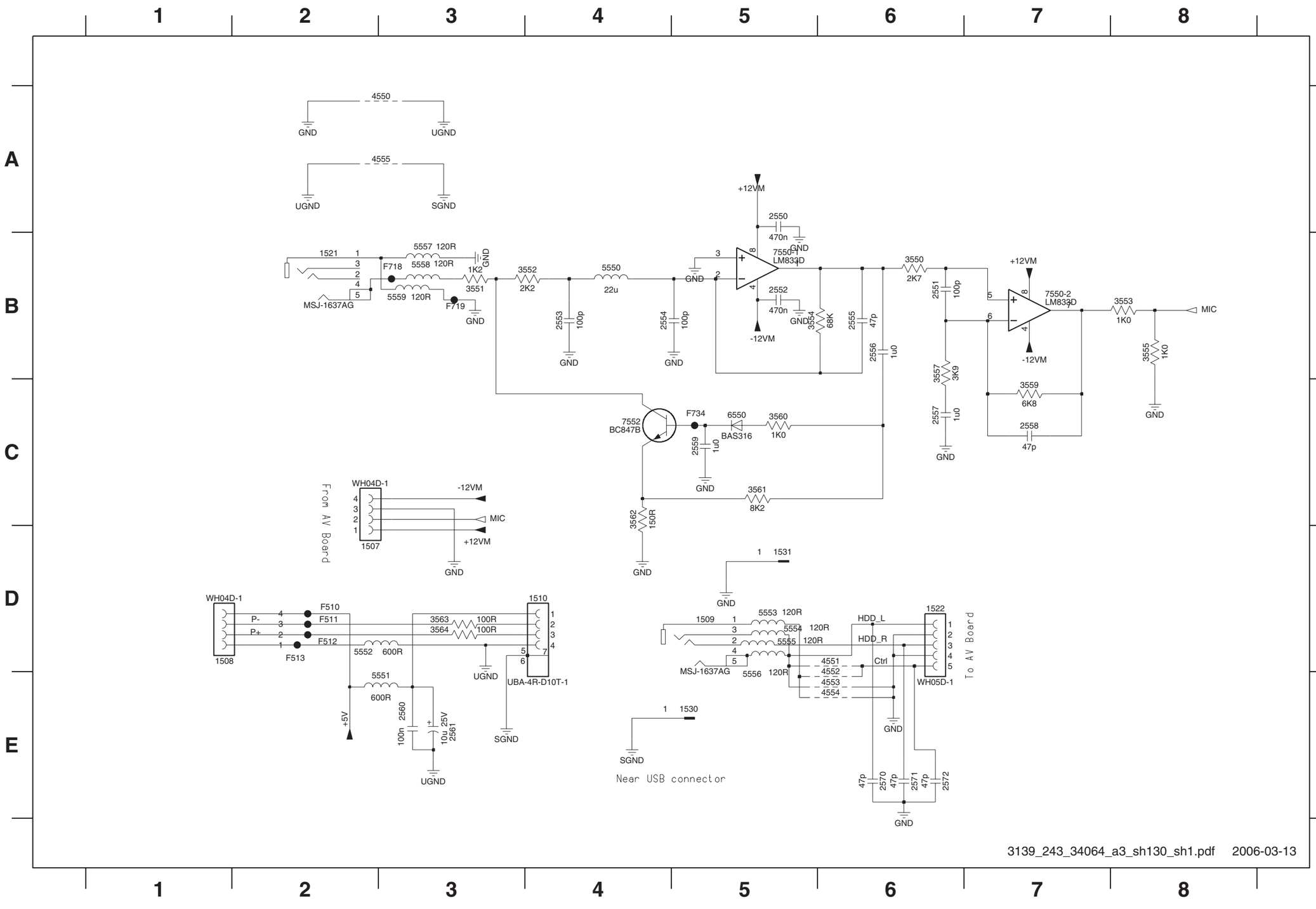
Layout: FB Display Board(Top view)



Layout: FB Display Board(Bottom view)



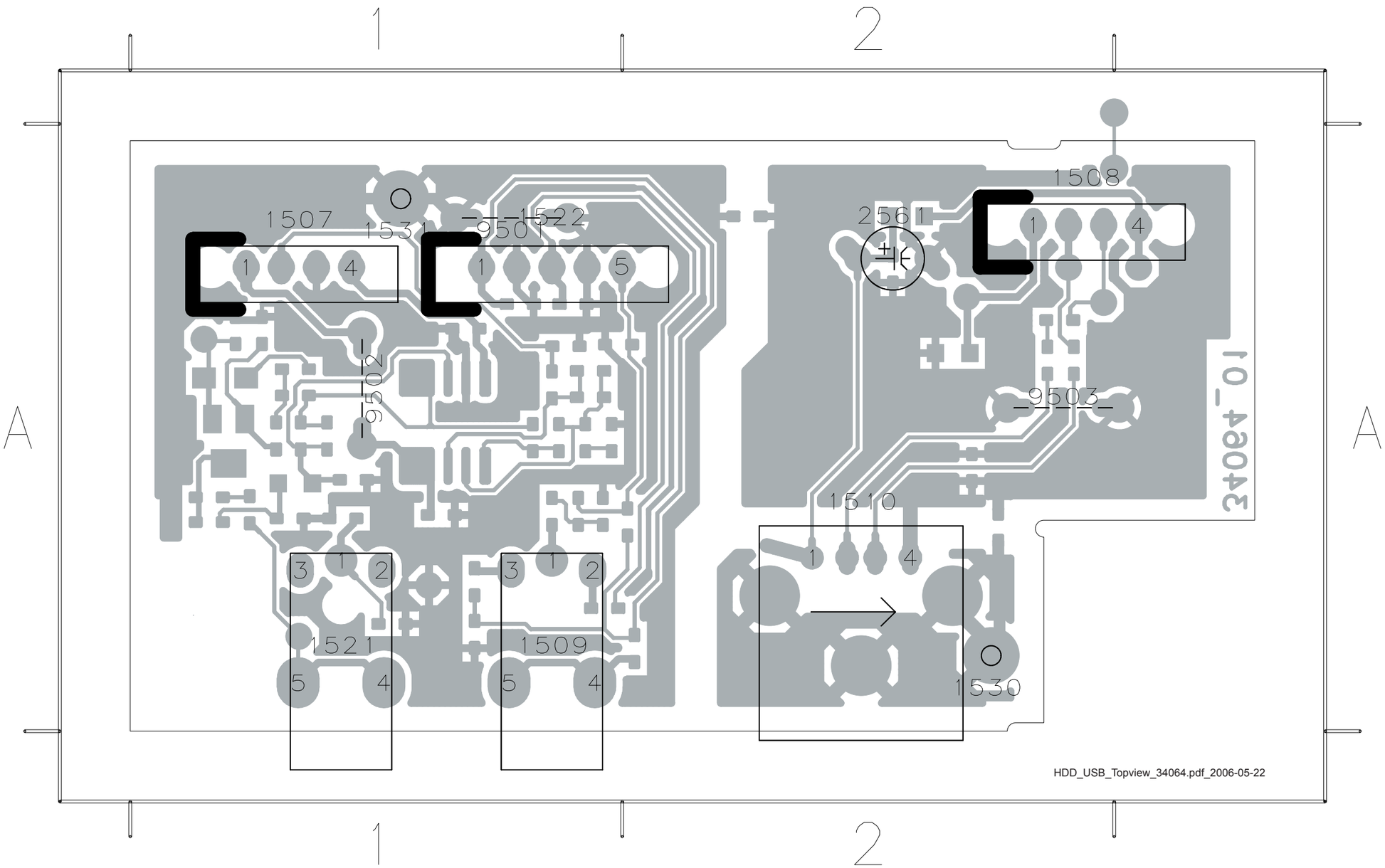
HDD USB: Circuit Diagram



3139_243_34064_a3_sh130_sh1.pdf 2006-03-13

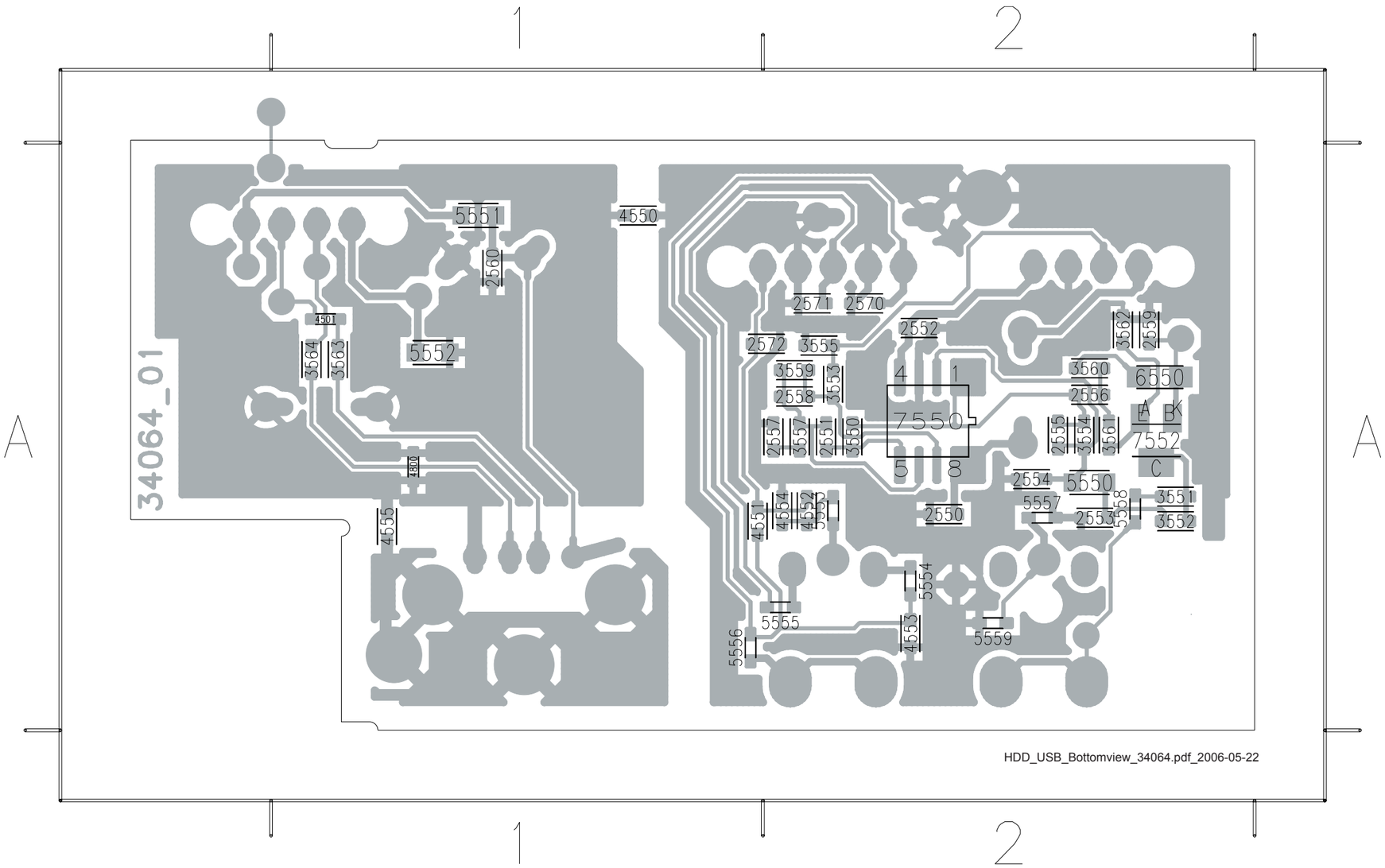
1507 D2
1508 D1
1509 D5
1510 D4
1521 B2
1522 D6
1530 E5
1531 D5
2550 A5
2551 B6
2552 B5
2553 B4
2554 B4
2555 B6
2556 B6
2557 C6
2558 C7
2559 C5
2560 E3
2561 E3
2570 E6
2571 E6
2572 E6
3550 B6
3551 B3
3552 B4
3553 B8
3554 B5
3555 B8
3557 B6
3559 C7
3560 C5
3561 C5
3562 C4
3563 D3
3564 D3
4550 A3
4551 D6
4552 E6
4553 E6
4554 E6
4555 A3
5550 B4
5551 E3
5552 D2
5553 D5
5554 D5
5555 D5
5556 E5
5557 B3
5558 B3
5559 B3
6550 C5
7550-1 B5
7550-2 B7
7552 C4
F510 D2
F511 D2
F512 D2
F513 D2
F718 B3
F719 B3
F734 C5

Layout: HDD USB (Top view)



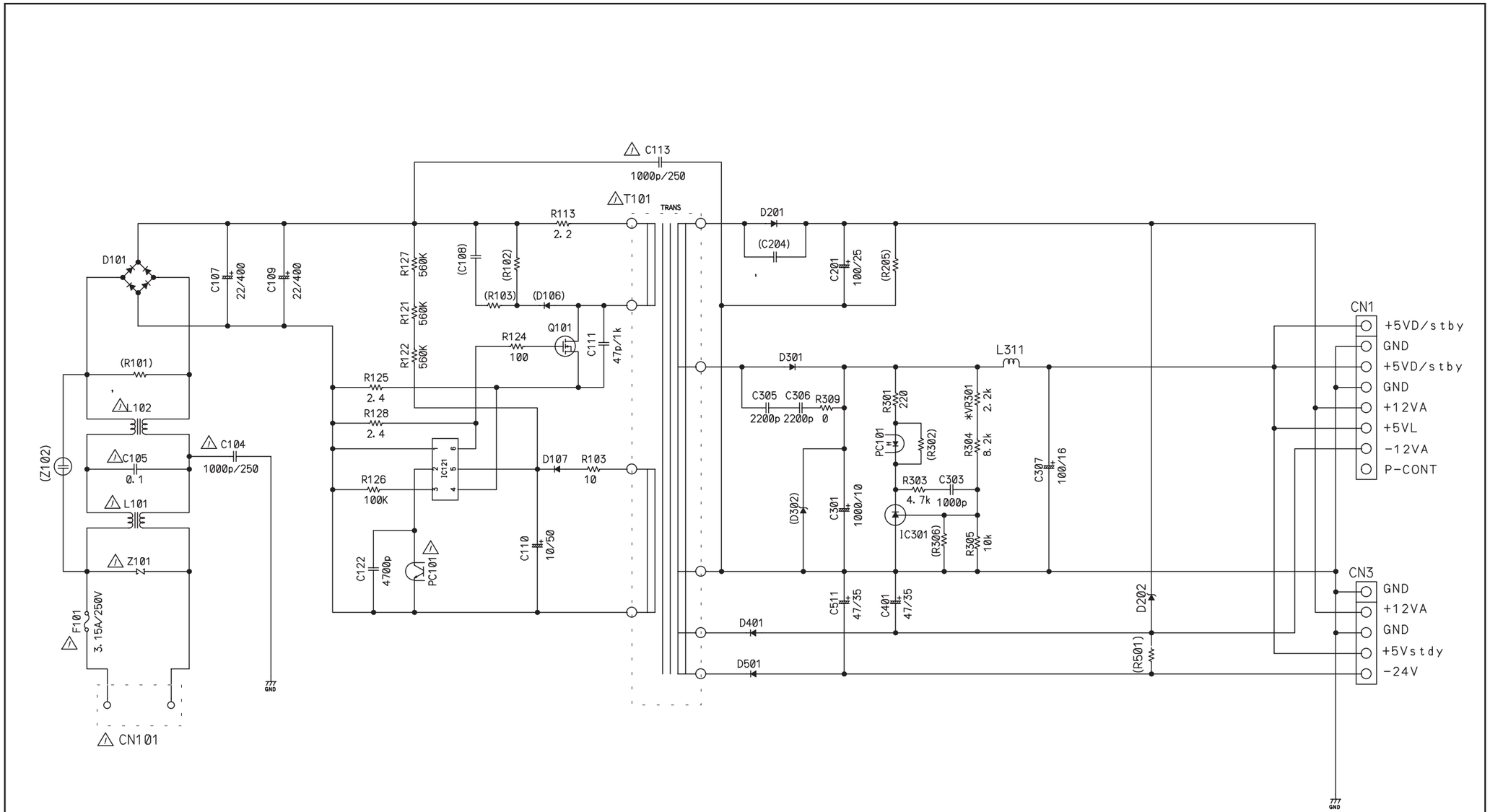
1507	A1
1508	A2
1509	A1
1510	A2
1521	A1
1522	A1
1530	A2
1531	A1
2561	A2
9501	A1
9502	A1
9503	A2

Layout: HDD USB (Bottom view)



2550	A2	4553	A2
2551	A2	4554	A2
2552	A2	4555	A1
2553	A2	4800	A1
2554	A2	5550	A2
2555	A2	5551	A1
2556	A2	5552	A1
2557	A2	5553	A2
2558	A2	5554	A2
2559	A2	5555	A2
2560	A1	5556	A1
2570	A2	5557	A2
2571	A2	5558	A2
2572	A2	5559	A2
3550	A2	6550	A2
3551	A2	7550	A2
3552	A2	7552	A2
3553	A2		
3554	A2		
3555	A2		
3557	A2		
3559	A2		
3560	A2		
3561	A2		
3562	A2		
3563	A1		
3564	A1		
4501	A1		
4550	A1		
4551	A1		
4552	A2		

For Information Only: PSU Module



D101	D1UBA80
D107	PR1003, RGP10D
IC121	SG6848
Q101	FQI2N80
PC101	LTV-817M, PC123, PS2561

D201, D401	PR1003, RI103
D202	MTZ30, MA4300
D301	SB560,
D501	PR1005, RL105
IC301	TL431, MM1431A

PSU06P15-srv1919ww-Circuit.pdf 2006-04-25

MODEL	SRV1919WW	CIRCUIT DIAGRAM	
		SYM. GROUP NO. R-68	DWG. NO. 1919 △

Notes:

8. Exploded View of the Set

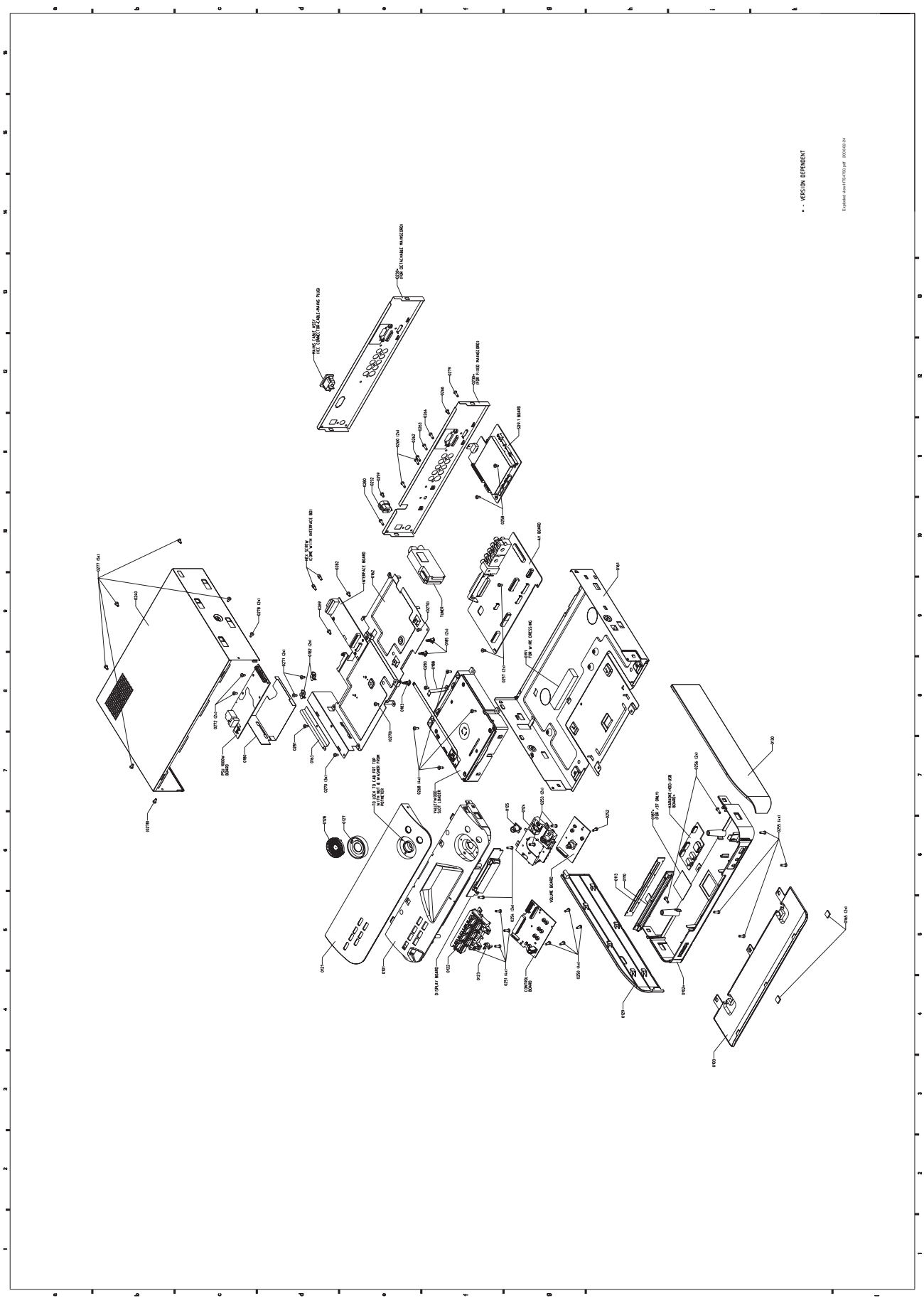


Figure 8-1

HTS4750

MISCELLANEOUS

0337	2422 076 00546		FM AERIAL 24AWG BK B
0338	2422 549 45386		ANT AM LOOP LAN-011 B
0341	2422 549 00902		REMOTE CONTR HTS4550-USB-KOK B
0345	2422 070 98257	⚠	MAINSCORD CHN 2A5 1M5 DET 2P B /93 ONLY
0345	2422 070 98151	⚠	MAINSCORD EUR 1M5 BK B /98 ONLY
0347	2422 076 00831		CBLE CINCH 1M5 CINCH 1P YE B
0353	2422 076 00654		CBLE HD-SUB15P 3M HD-SUB 15P B
0354	2422 076 00791		CBLE PHONE 1M0 PHONE 3P WH B
1010	3139 248 00321		LOADER ASSY VALLY-SONY HTS4550 /98 ONLY
1020	2422 542 00032		TUN A F ENG06806QRF USA B
1030	3139 247 12551	⚠	PSU 06P15 WR SRV1919WW MIT
1050	3139 248 87351		PCBAS AV-INTERFACE BD HTS4550
1061	3139 248 87302		PCBAS AV BOARD HTS4550
1070	3139 248 87991		PCBAS PAN VOL_KOK_USB HTS4550
1111	3139 248 87821		PCBAS FB CONTROL BD HTS4550
1121	3139 248 87832		PCBAS FB DISPLAY HTS4550
1130	3139 248 50501		PCBAS 9.1 HTS4550/4750
8000	3139 111 02721		FFC FOIL 10P/080/10P AD
8002	3139 241 02311		FFC FOIL 21P/280/21P AD FOLD
8003	3139 241 02391		FFC FOIL 30P/080/30P BD
8012	3139 241 02301		FFC FOIL 26P/240/26P AD FOLD
8016	3139 241 02691		FFC FOIL 20P/280/20P AD FOLD
P001	3141 079 36331		FRAME PSU ASSY HTS4550
P002	3141 079 36371		FRONT CAB ASSY HTS4750
P003	3141 079 36341		FRT CAB BASE ASSY HTS6500/37

LOADER ASSY VALLY-SONY HTS4550 (HTS4750/93 only)

1011	2422 549 00967	DVD LOADER MODULE VSH-L33D B
1012	2422 549 00629	DVD MECHANISM KHM-313AAA Y
1016	3139 243 20531	CUTSHEET LOADER FFC HTS4550
8008	3139 110 27881	CBLE PH 06P/180/06P PH 26ST BK

SUBWOOF ASSY HTS4750E NON-US

9965 000 38136	SW4750 SPK BOX
9965 000 28375	RUBBER FOOT

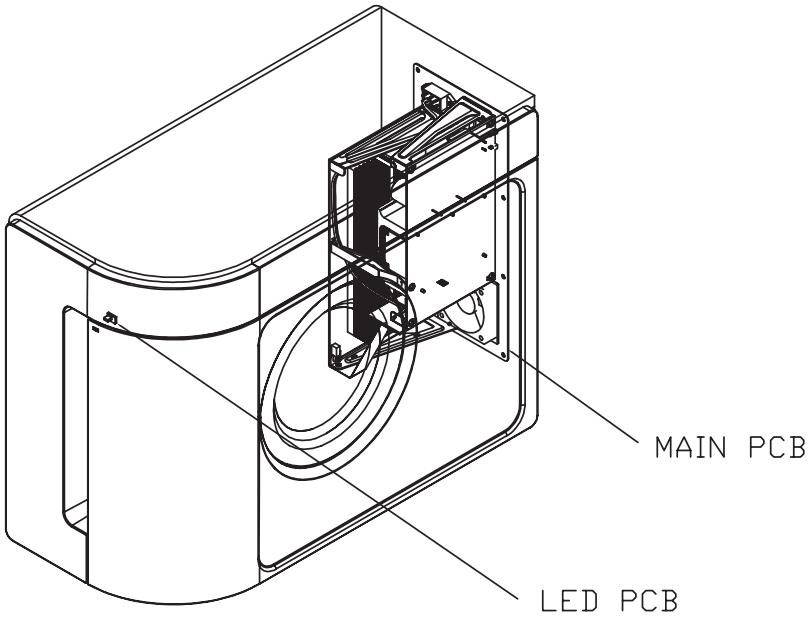
BOX SPK ASSY CENTER CS4750 P

9965 000 37433	SPEAKER BOX CENTER
9965 000 34995	RUBBER FOOT 39.5LX5.5WX2T
9965 000 34994	CABLE A'SSY 5.2M GREEN SMK S

SPK SATS ASSY/STAND HTS4750 P

9965 000 37434	SPEAKER BOX FRONT-L
9965 000 37435	SPEAKER BOX FRONT-R
9965 000 37436	SPEAKER BOX REAR-L
9965 000 37437	SPEAKER BOX REAR-R
9965 000 34987	CABLE A'SSY 5.2M WHITE SMK
9965 000 34988	CABLE A'SSY 5.2M RED SMK
9965 000 34989	CABLE A'SSY 5.2M BLUE SMK
9965 000 34990	CABLE A'SSY 5.2M GREY SMK
9965 000 36536	RUBBER FOOT

LOCATION OF PC BOARDS

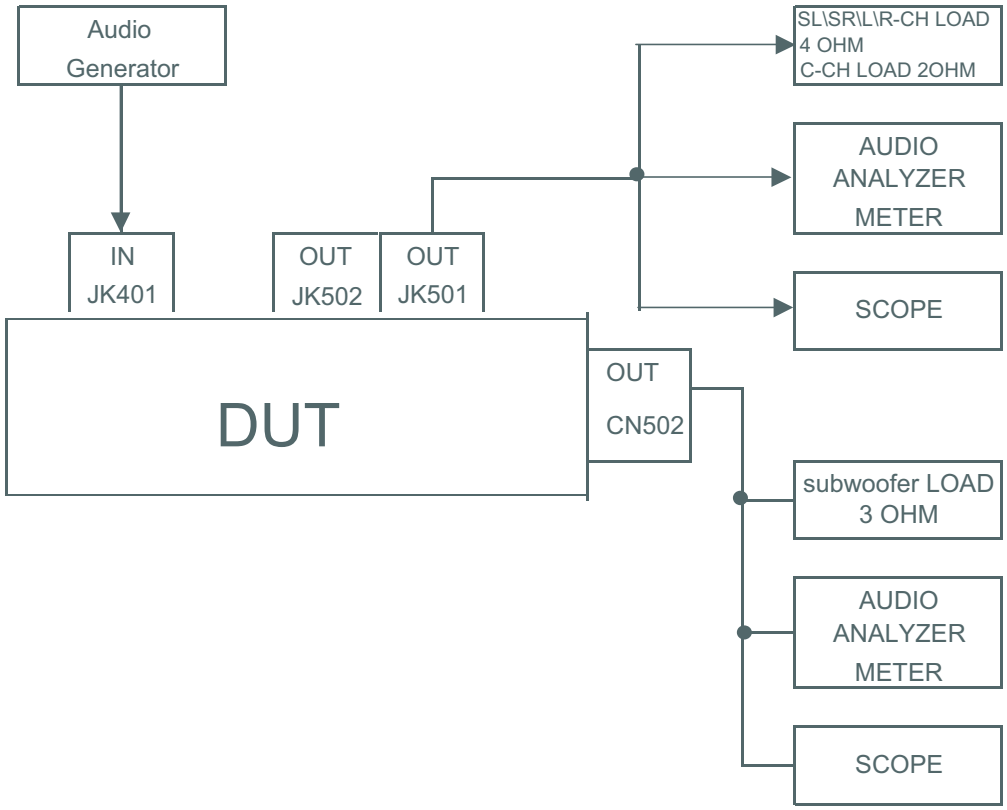


SPECIFICATIONS

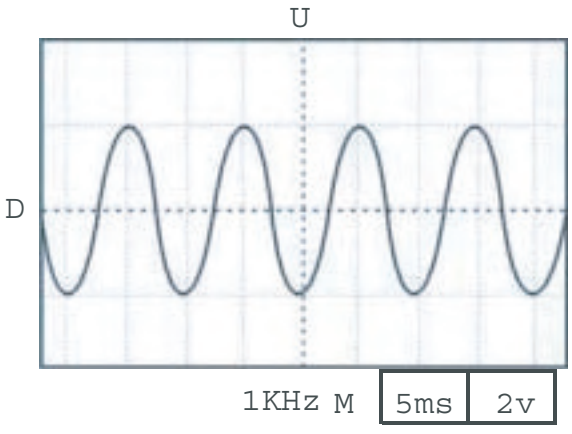
SUBWOOFER

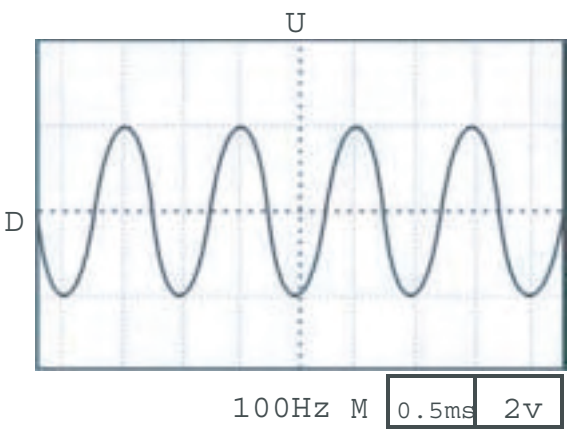
subwoofer(not magnetically shielded design)	8"
output power	250W(2 OHM DIN)
THD (Total Hatmonic Distortion)	0.1%
Reproduction Frequency Response	30~180HZ
Phase Switch	NO
Input sensitivity(Subwoofer In)	2.6vrms
AC Power	127V/240V 60HZ/50HZ
Power Consumption	0.5W
Dimensions (lxWxh)	470mmx220mmx360mm
Weight	8.8kg

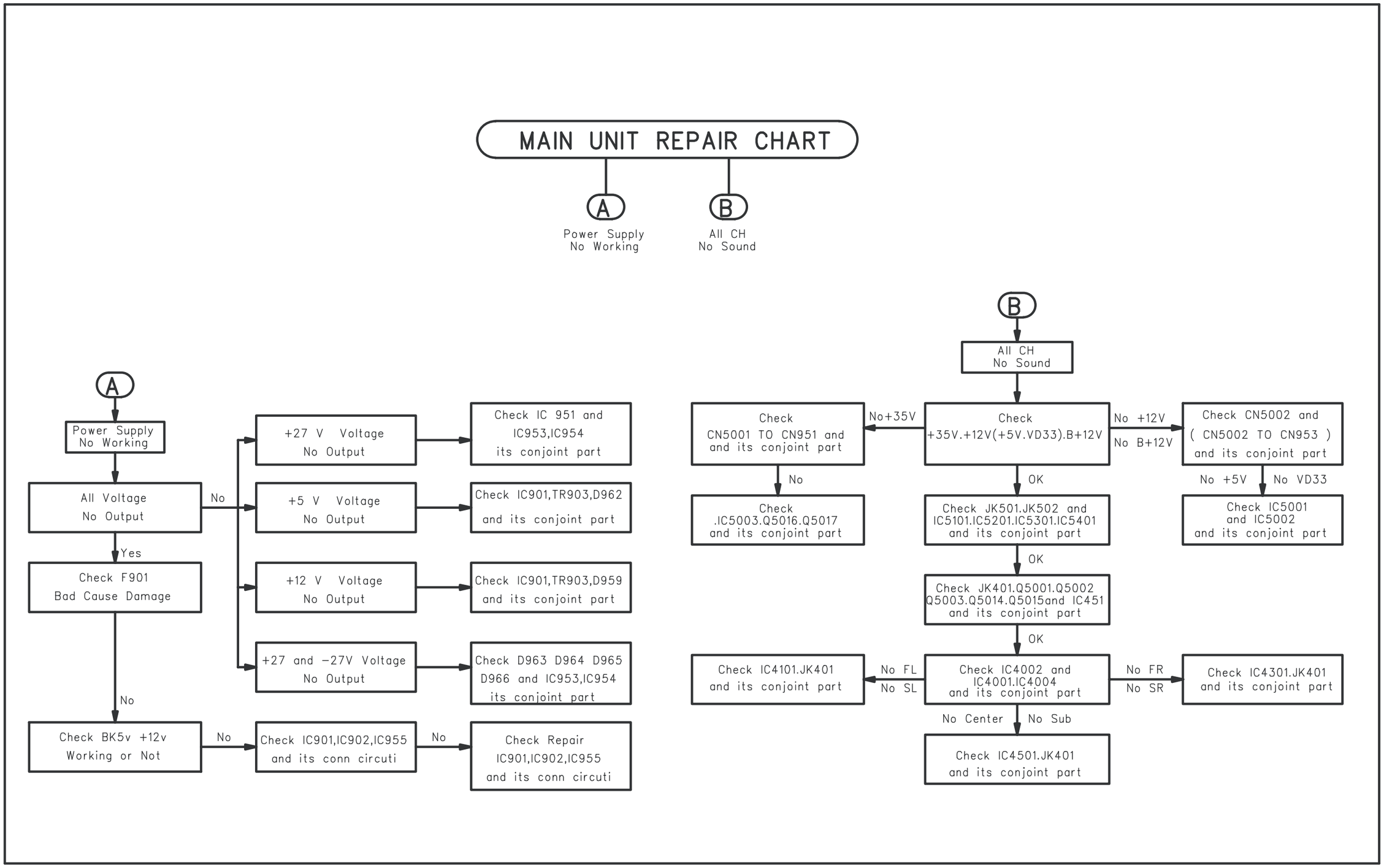
MEASUREMENT SETUP



Audio test signal






MAIN UNIT REPAIR CHART
A
Power Supply
No Working
B
All CH
No Sound
A
Power Supply
No Working
All Voltage
No Output
No
Yes
Check F901
Bad Cause Damage
No
Check BK5v +12v
Working or Not
No
Check IC901,IC902,IC955
and its conn circuti
No
Check Repair
IC901,IC902,IC955
and its conn circuti
+27 V Voltage
No Output
Check IC 951 and
IC953,IC954
its conjoint part
+5 V Voltage
No Output
Check IC901,TR903,D962
and its conjoint part
+12 V Voltage
No Output
Check IC901,TR903,D959
and its conjoint part
+27 and −27V Voltage
No Output
Check D963 D964 D965
D966 and IC953,IC954
its conjoint part
B
All CH
No Sound
Check
+35V.+12V(+5V.VD33).B+12V
No+35V
Check
CN5001 TO CN951 and
and its conjoint part
No
Check
.IC5003.Q5016.Q5017
and its conjoint part
No +12V
No B+12V
Check CN5002 and
(CN5002 TO CN953)
and its conjoint part
No +5V
No VD33
Check IC5001
and IC5002
and its conjoint part
OK
Check JK501.JK502 and
IC5101.IC5201.IC5301.IC5401
and its conjoint part
OK
Check JK401.Q5001.Q5002
Q5003.Q5014.Q5015and IC451
and its conjoint part
OK
Check IC4002 and
IC4001.IC4004
and its conjoint part
No FL
No SL
Check IC4101.JK401
and its conjoint part
No FR
No SR
Check IC4301.JK401
and its conjoint part
No Center
No Sub
Check IC4501.JK401
and its conjoint part

Notes:

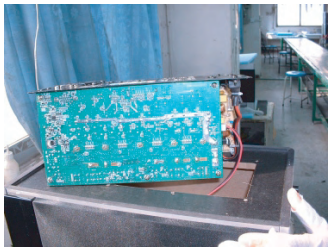
DISASSEMBLY INSTRUCTIONS

Dismantling the Grill Base & Speaker Driver

Dismantling the Amplifer

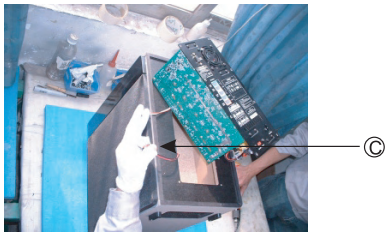
1. Place the Subwoofer Box as shown in the picture 1 and loosen 8 screws A to remove.
   Caution: Take care the surface when loosing screws.

2. Drag the Amplifer out from the box which the wire is all still connected.
   Caution: Do not break the bundle of wires to the front.

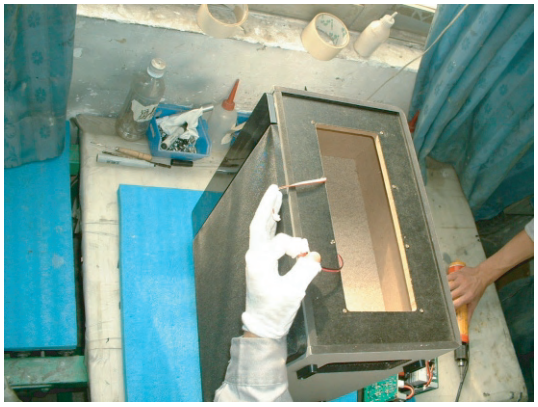


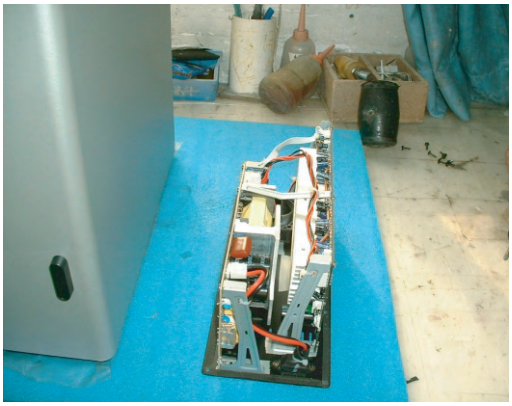
3. Place the Subwoofer as shown in the picture 2 and disconnect the item B(which connect with the LEDPCB) from amplifer.
   Caution: Do not break the bundle of wires to the front.

3. Place the Subwoofer as shown in the picture 2 and disconnect the item C(which connect with the Speaker) from amplifer.
   Caution: Do not break the bundle of wires to the front.

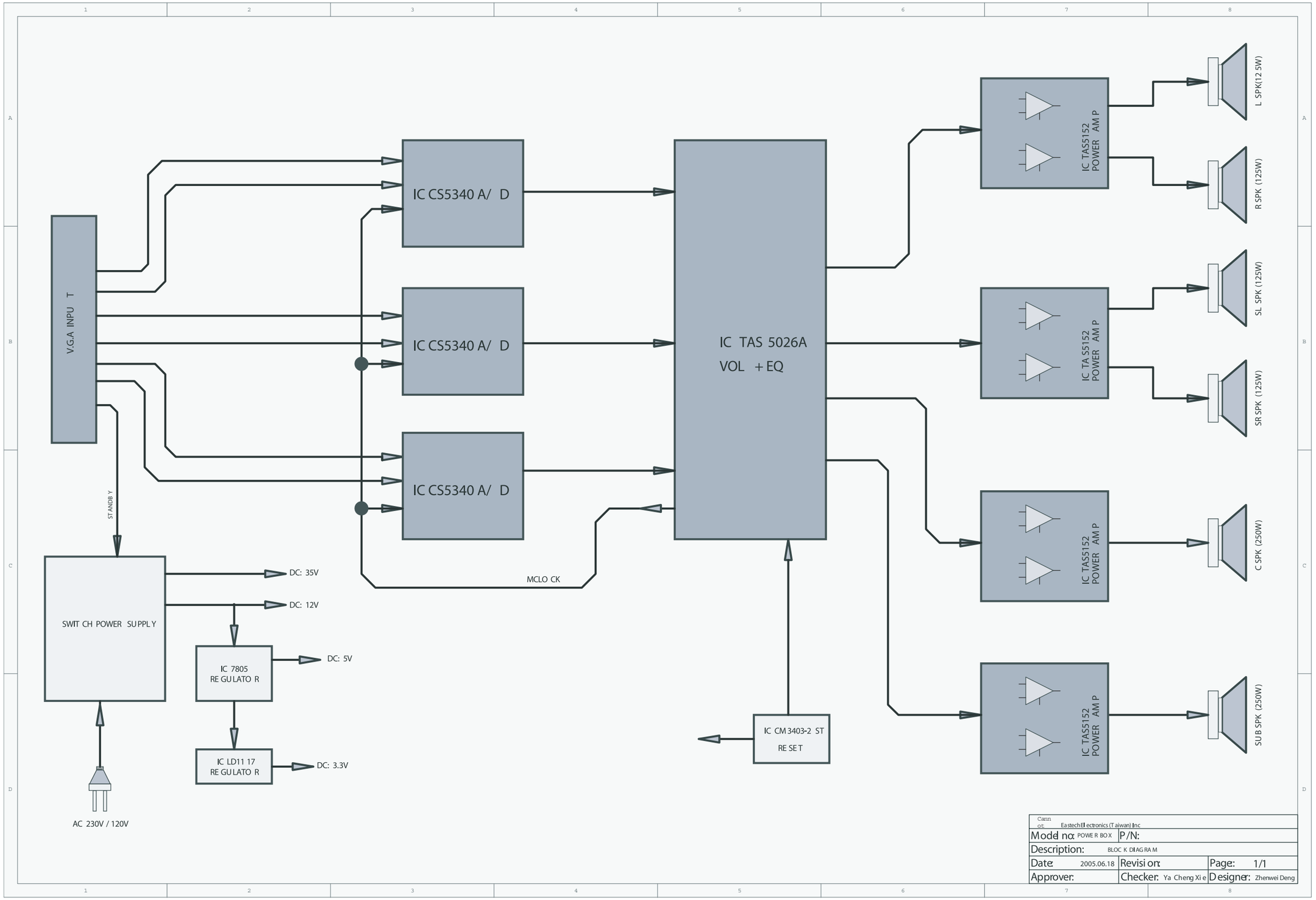


SERVICE POSITION



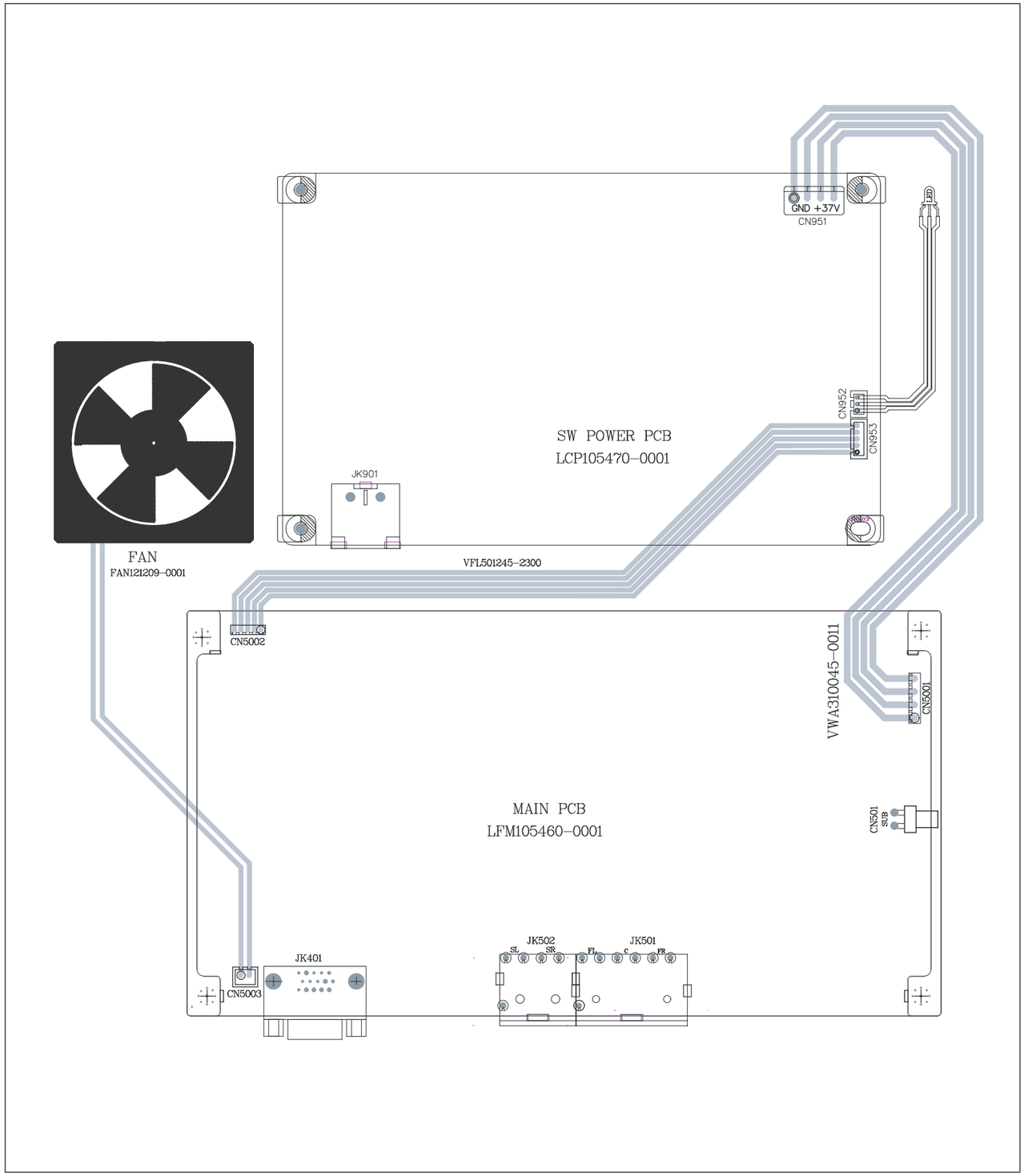


BLOCK DIAGRAM



Cann ot	EastechEl ectronics (T aiwan) Inc		
Model no: POWE R BO X		P/N:	
Description:	BLOC K DIAG RA M		
Date: 2005.06.18		Revisi on:	Page: 1/1
Approver:		Checker: Ya Cheng Xi e	Designer: Zhenwei Deng

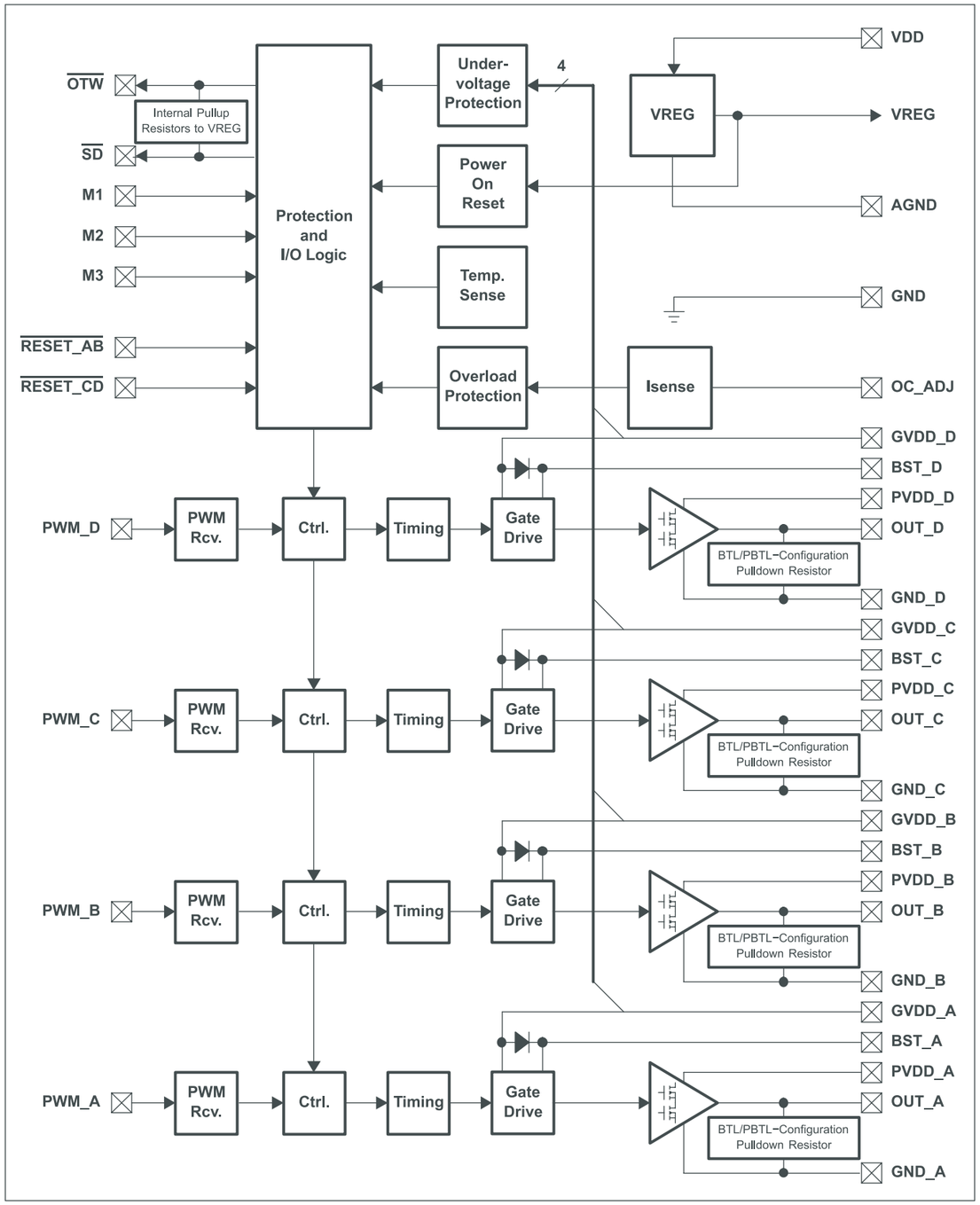
WIRING DIRGRAM



MAIN BOARD

TABLE OF CONTENTS

TAS5152 INTERNAL IC DIAGRAM



PCB VOLTAGE

IC5301(TAS5152DKDR)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	11.3	3	2.1	1.6	3.2	0.5	1.1	0	0	3.2	0	3.2	3.2	0.3	3.2

PIN NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
VOLTAGE	0.3	11.36	11.3	11.3	29	36	18.5	0	0	18.5	37	29	29	37	18.4

PIN NO.	31	32	33	34	35	36									
VOLTAGE	0	0	18.4	30.9	29	11.3									

IC5101(TAS5152DKDR)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	11.4	3	2.1	1.5	3.3	0.5	1.1	0	0	3.3	0	3.2	0	0.3	3.2

PIN NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
VOLTAGE	0.3	11.35	11.3	11.3	29	36	18.4	0	0	18.5	36.9	29	29	37	18.6

PIN NO.	31	32	33	34	35	36									
VOLTAGE	0	0	18.6	37	29	11.4									

IC5201(TAS5152DKDR)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	11.3	3	2.2	1.4	3.2	0.5	1.1	0	0	3.2	0	3.2	0	0.3	3.2

PIN NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
VOLTAGE	0.3	11.36	11.3	11.3	29	36	18.4	0	0	18.4	36.9	29	29	37	18.6

PIN NO.	31	32	33	34	35	36									
VOLTAGE	0	0	18.6	37	29	11.3									

IC5401(TAS5152DKDR)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	11.4	3	7.2	1.4	3.2	0.5	1.1	0	0	3.3	0	3.2	3.2	0.3	3.2

PIN NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
VOLTAGE	0.3	11.35	11.3	11.3	29	36	18.5	0	0	18.4	36.9	29	29	37	18.6

PIN NO.	31	32	33	34	35	36									
VOLTAGE	0	0	18.6	37	29	11.3									

IC4101(CS5340-CZ)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	3.9	0	3.3	1.3	0	4.9	1.5	1.6	4	2.4	2.4	2.4	4.9	0	4.9

PIN NO.	16		
VOLTAGE	3.8		

IC4301(CS5340-CZ)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	0	1	3.3	1.2	0	4.9	1.5	1.6	4	2.4	2.4	2.4	4.9	0	0

PIN NO.	16		
VOLTAGE	0		

IC4501(CS5340-CZ)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	3.9	0	3.3	1.3	0	4.8	1.5	1.6	4	2.4	2.5	2.5	4.9	0	4.9

PIN NO.	16		
VOLTAGE	3.8		

IC5003(AZ4558AM-E1)

PIN NO.	1	2	3	4	5	6	7	8
VOLTAGE	12	1.9	4.2	0	1.9	2.7	1.4	12.8

IC4002(SN74LVC2G04DBV)

PIN NO.	1	2	3	4	5	6		
VOLTAGE	1.5	0	1.3	1.5	3.2	1.3		

IC4001(TAS5026APAG)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VOLTAGE	3.2	0	3.2	0	0	1.6	1.6	3.2	1.6	1.6	3.2	1.6	1.6	3.2	0

PIN NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
VOLTAGE	0	3.2	0	0	3.2	0	1.6	1.6	3.2	1.6	3.2	1.6	1.6	0	3.2

PIN NO.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
VOLTAGE	0	0	0	0	0	0	0	0	0	3.1	1.6	1.5	0.6	1.2	1.2

PIN NO.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
VOLTAGE	1.2	3.1	0	0	0	0	0	3.2	3.2	3.2	2.2	4	1.6	0	0

PIN NO.	61	62	63	64	
VOLTAGE	0	2.2	3.2	0	

IC4004(AZ809NSTR-E1)

PIN NO.	1	2	3
VOLTAGE	0	4.8	4

Q5003(KTC3875-Y)

PIN NO.	1	2	3
VOLTAGE	0	3.2	0

Q5001(2SA812)

PIN NO.	1	2	3
VOLTAGE	3.2	0	0.7

Q5002(2SC1623)

PIN NO.	1	2	3
VOLTAGE	0.5	0.1	0

Q5007(KTC3875-Y)

PIN NO.	1	2	3
VOLTAGE	0.1	11.3	0

Q5021(KTC3875-Y)

PIN NO.	1	2	3
VOLTAGE	1.3	10.1	0.7

Q5014(2SA812)

PIN NO.	1	2	3
VOLTAGE	5.6	0	5.6

Q5005(KTC38755-Y)

PIN NO.	1	2	3
VOLTAGE	0	11.3	0

Q5006(2SA812)

PIN NO.	1	2	3
VOLTAGE	11.3	0	11.3

Q5008(KTC3875-Y)

PIN NO.	1	2	3
VOLTAGE	0	11.3	2.5

Q5004(2SA812)

PIN NO.	1	2	3
VOLTAGE	11.2	0	11.3

Q5009(2SC1623)

PIN NO.	1	2	3
VOLTAGE	0.6	5.5	0

Q5017(KTC38755-Y)

PIN NO.	1	2	3
VOLTAGE	0.6	0	0

Q5011(KTC38755-Y)

PIN NO.	1	2	3
VOLTAGE	0.6	0	0.6

IC5002(AP1117)

PIN NO.	1	2	3
VOLTAGE	0	3.3	5

Q5016(2SA812)

PIN NO.	1	2	3
VOLTAGE	4.1	4.8	4.8

Q5015(KTC38755-Y)

PIN NO.	1	2	3
VOLTAGE	0.2	5.6	0

Q5013(KTC38755-Y)

PIN NO.	1	2	3
VOLTAGE	2.8	11.3	2.3

Q5020(2SA812)

PIN NO.	1	2	3
VOLTAGE	2.9	1.2	0

Q5022(KTC38755-Y)

PIN NO.	1	2	3
VOLTAGE	0.6	0	0

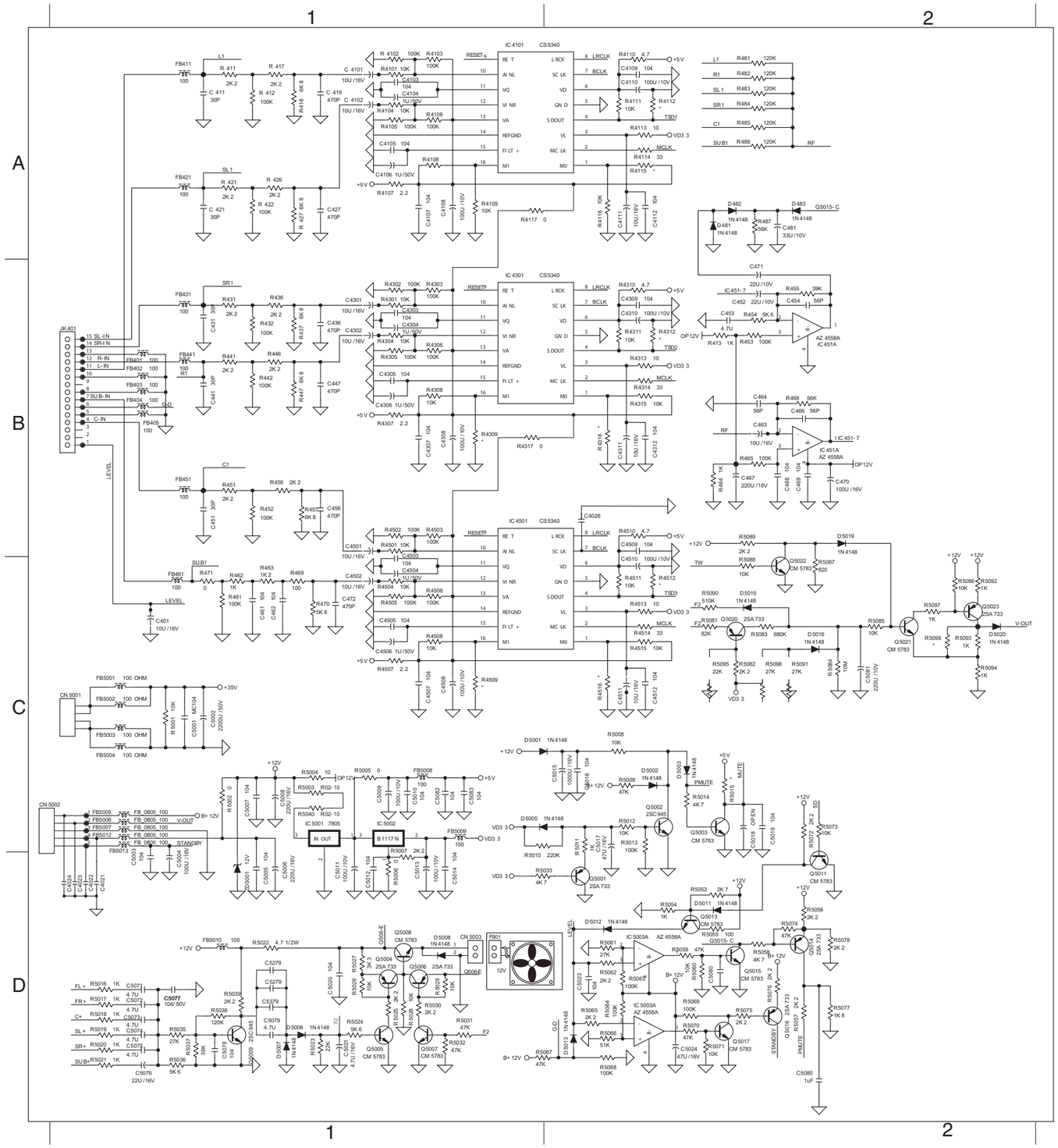
Q5001(2SA812)

PIN NO.	1	2	3
VOLTAGE	7.5	0	5

Q5023(2SA812)

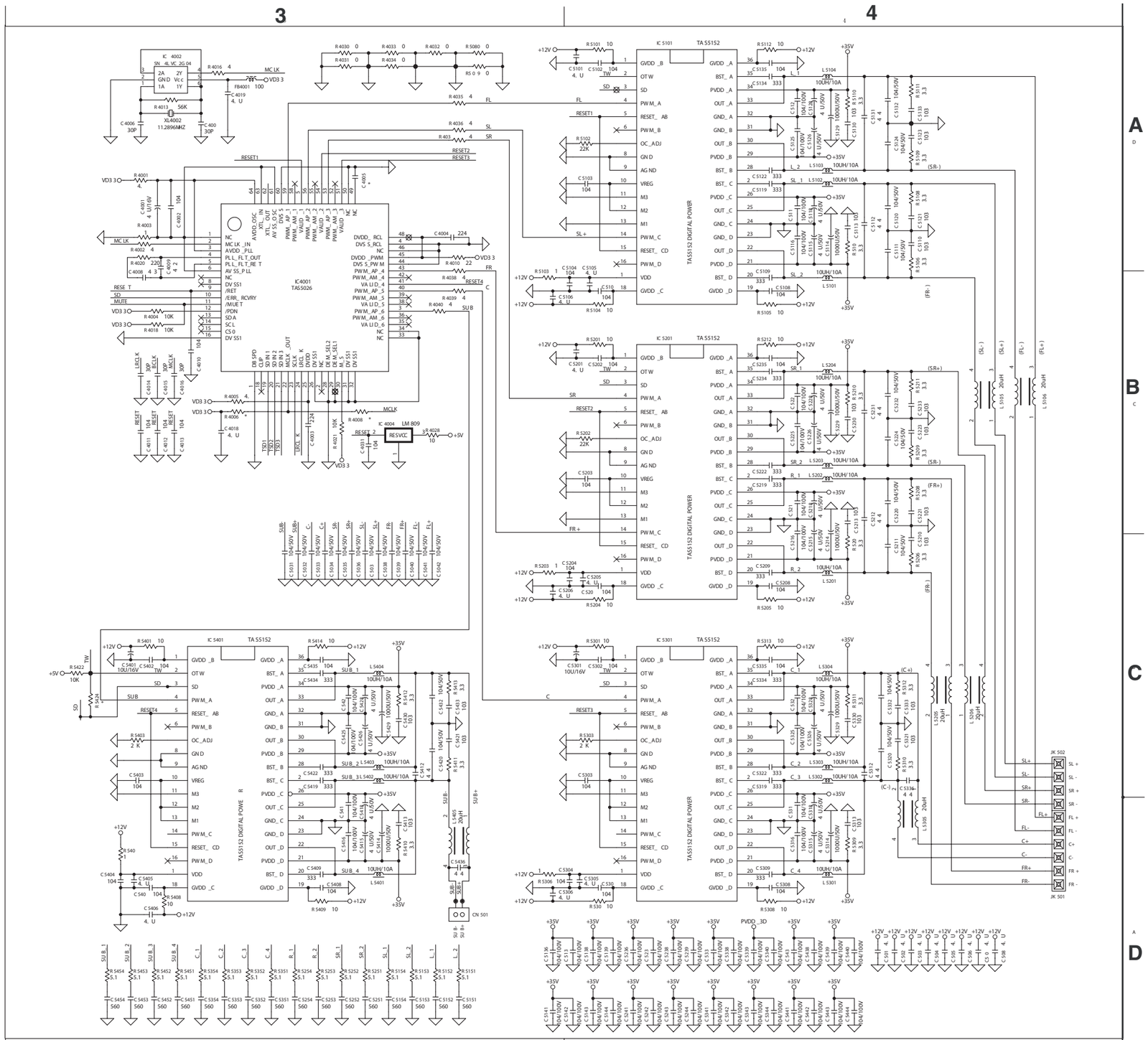
PIN NO.	1	2	3
VOLTAGE	10.1	1.4	10.7

MAIN PCB CIRCUIT DIAGRAM-LEFT



C401	C1	C5008	C1	FB5012	C1	R436	B1	R5030	D1
C4021	C1	C5009	C1	FB5013	C1	R437	B1	R5031	D1
C4022	C1	C5010	C1	FN501	D1	R441	B1	R5032	D1
C4023	C1	C5011	D1	IC3003	D2	R442	B1	R5033	D1
C4024	C1	C5012	D1	IC4101	A1	R446	B1	R5035	D1
C4026	B6	C5013	D1	IC4301	B1	R447	B1	R5036	D1
C4101	A1	C5014	D1	IC4501	B1	R4501	B1	R5037	D1
C4102	A1	C5015	C2	IC451	B2	R4502	B1	R5038	D1
C4103	A1	C5016	C2	IC5001	C1	R4503	B1	R5039	D1
C4104	A1	C5017	C2	IC5002	C1	R4504	C1	R5040	C1
C4105	A1	C5018	C2	IC5003	D2	R4505	C1	R5053	D2
C4106	A1	C5019	C2	JK401	B1	R4506	C1	R5054	D2
C4107	A1	C5020	D1	Q5001	D2	R4507	C1	R5055	D2
C4108	A1	C5021	D1	Q5002	C2	R4508	C1	R5056	D2
C4109	A2	C5023	D2	Q5003	C2	R4509	C1	R5057	D2
C411	A1	C5024	D2	Q5004	D1	R451	B1	R5058	D2
C4110	A2	C5071	D1	Q5005	D1	R4510	B2	R5059	D2
C4111	A2	C5072	D1	Q5006	D1	R4511	C2	R5060	D2
C4112	A2	C5073	D1	Q5007	D1	R4512	C2	R5061	D2
C416	A1	C5074	D1	Q5008	D1	R4513	C2	R5062	D2
C421	A1	C5075	D1	Q5009	D1	R4514	C2	R5063	D2
C427	A1	C5076	D1	Q5011	D2	R4515	C2	R5064	D2
C4301	B1	C5077	D1	Q5013	D2	R4516	C2	R5065	D2
C4302	B1	C5078	D1	Q5014	D2	R452	B1	R5066	D2
C4303	B1	C5079	D1	Q5015	D2	R453	B2	R5067	D2
C4304	B1	C5080	D2	Q5016	D2	R454	B2	R5068	D2
C4305	B1	C5081	C2	Q5017	D2	R455	B2	R5069	D2
C4306	B1	C5082	C1	Q5020	C2	R456	B1	R5070	D2
C4307	B1	C5083	C1	Q5021	C2	R457	B1	R5071	D2
C4308	B1	C5179	D1	Q5022	B2	R461	C1	R5072	C2
C4309	B2	C5279	D1	Q5023	C2	R462	C1	R5073	C2
C431	B1	C5379	D1	R4101	A1	R463	C1	R5074	D2
C4310	B2	CN5001	C1	R4102	A1	R464	B2	R5075	D2
C4311	B2	CN5001	C1	R4103	A1	R465	B2	R5076	D2
C4312	B2	CN5002	C1	R4104	A1	R468	B2	R5077	D2
C436	B1	CN5003	D1	R4105	A1	R469	C1	R5078	D2
C441	B1	D482	A2	R4106	A1	R470	C1	R5080	D2
C447	B1	D483	A2	R4107	A1	R471	C1	R5081	C2
C4501	B1	D5001	C1	R4108	A1	R481	A2	R5082	C2
C4502	C1	D5002	C2	R4109	A1	R482	A2	R5083	C2
C4503	B1	D5003	C2	R411	A1	R483	A2	R5084	C2
C4504	C1	D5005	C1	R4110	A2	R484	A2	R5085	C2
C4505	C1	D5006	D1	R4111	A2	R485	A2	R5086	C2
C4506	C1	D5007	D1	R4113	A2	R486	A2	R5087	B2
C4507	C1	D5008	D1	R4114	A2	R487	A2	R5088	B2
C4508	C1	D5011	D2	R4115	A2	R5001	C1	R5089	B2
C4509	B2	D5012	D2	R4116	A2	R5002	C1	R5090	C2
C451	B1	D5013	D2	R4117	A1	R5003	C1	R5091	C2
C4510	B2	D5015	C2	R412	A1	R5004	C1	R5092	C2
C4511	C2	D5016	C2	R413	B2	R5005	C1	R5093	C2
C4512	C2	D5019	B2	R417	A1	R5006	D1	R5094	C2
C452	B2	D5020	C2	R418	A1	R5007	C1	R5095	C2
C453	B2	F901	D1	R421	A1	R5008	C2	R5096	C2
C454	B2	FB401	B1	R422	A1	R5009	C2	R5097	C2
C456	B1	FB402	B1	R426	A1	R5010	C2	R5098	C2
C461	C1	FB403	B1	R427	A1	R5011	C2	D5001	D1
C462	C1	FB404	B1	R4301	B1	R5012	C2		
C463	B2	FB405	B1	R4302	B1	R5013	C2		
C464	B2	FB411	A1	R4303	B1	R5014	C2		
C466	B2	FB421	A1	R4304	B1	R5015	C2		
C467	B2	FB431	B1	R4305	B1	R5016	D1		
C468	B2	FB441	B1	R4306	B1	R5017	D1		
C469	B2	FB451	B1	R4307	B1	R5018	D1		
C470	B2	FB461	C1	R4308	B1	R5019	D1		
C471	A2	FB5001	C1	R4309	B1	R5020	D1		
C472	C1	FB5002	C1	R431	B1	R5021	D1		
C481	A2	FB5003	C1	R4310	B2	R5022	D1		
C5001	C1	FB5004	C1	R4311	B2	R5023	D1		
C5002	C1	FB5005	C1	R4313	B2	R5024	D1		
C5003	D1	FB5006	C1	R4314	B2	R5025	D1		
C5004	D1	FB5007	C1	R4315	B2	R5026	D1		
C5005	D1	FB5008	C1	R4316	B2	R5027	D1		
C5006	D1	FB5009	C1	R4317	B1	R5028	D1		
C5007	C1	FB5010	D1	R432	B1	R5029	D1		

MAIN PCB CIRCUIT DIAGRAM- RIGHT



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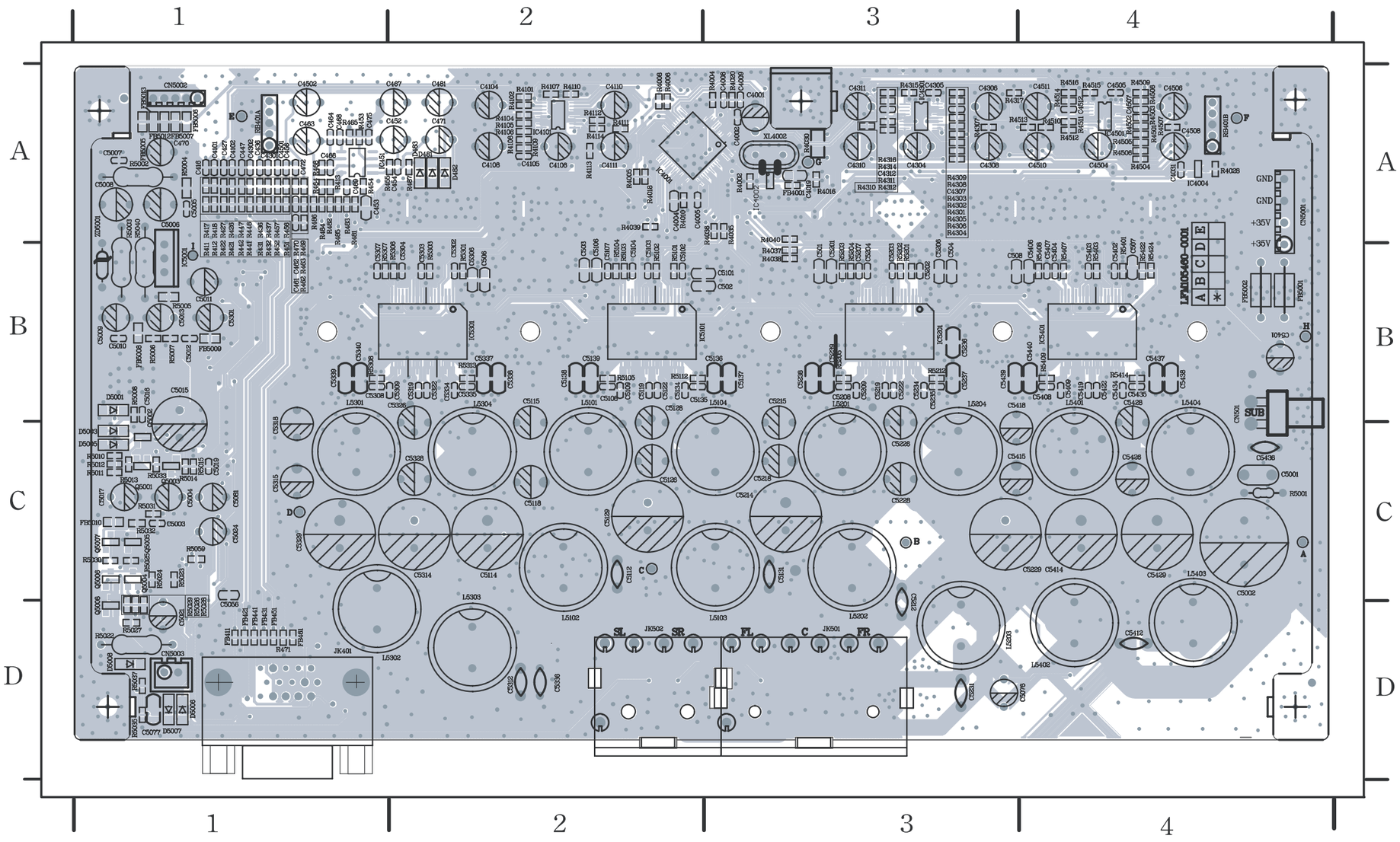
C4001	A3	C5144	D4	C5334	C4	L5103	A4	R5308	D4
C4002	A3	C5151	D3	C5335	C4	L5104	A4	R5309	D4
C4003	B3	C5152	D3	C5336	C4	L5105	B4	R5310	C4
C4004	A3	C5153	D3	C5337	D4	L5106	B4	R5311	C4
C4005	A3	C5154	D3	C5338	D4	L5201	C4	R5312	C4
C4006	A3	C5201	B4	C5339	D4	L5202	B4	R5313	C4
C4007	A3	C5202	B4	C5340	D4	L5203	B4	R5351	D3
C4008	B3	C5203	B4	C5341	D4	L5204	B4	R5352	D3
C4009	A3	C5204	C4	C5342	D4	L5205	C4	R5353	D3
C4010	B3	C5205	C4	C5343	D4	L5206	C4	R5354	D3
C4011	B3	C5206	C4	C5344	D4	L5301	D4	R5401	C3
C4012	B3	C5207	C4	C5351	D3	L5302	C4	R5403	C3
C4013	B3	C5208	C4	C5352	D3	L5303	C4	R5407	D3
C4014	B3	C5209	C4	C5353	D3	L5304	C4	R5408	D3
C4015	B3	C5210	C4	C5354	D3	L5305	D4	R5409	D3
C4016	B3	C5211	C4	C5401	C3	L5401	D3	R5410	D3
C4018	B3	C5212	B4	C5401	D3	L5402	D3	R5411	C3
C4019	A3	C5213	B4	C5402	C3	L5403	C3	R5412	C3
C4031	B3	C5214	C4	C5402	C3	R4001	A3	R5413	C3
C501	D4	C5215	C4	C5403	C3	R4002	A3	R5414	C3
C502	D4	C5216	C4	C5403	C3	R4003	A3	R5422	C3
C503	D4	C5217	B4	C5404	C3	R4004	B3	R5424	C3
C5031	C3	C5218	B4	C5404	D3	R4005	B3	R5451	D3
C5032	C3	C5219	B4	C5405	D3	R4006	B3	R5452	D3
C5033	C3	C5220	B4	C5405	D3	R4008	B3	R5453	D3
C5034	C3	C5221	B4	C5406	D3	R4010	A3	R5454	D3
C5035	C3	C5222	B4	C5407	D3	R4013	A3	XL4002	A3
C5036	C3	C5223	B4	C5408	D3	R4016	A3		
C5037	C3	C5224	B4	C5408	D3	R4018	B3		
C5038	C3	C5225	B4	C5409	D3	R4020	A3		
C5039	C3	C5226	B4	C5412	C3	R4021	B3		
C504	D4	C5227	B4	C5413	D3	R4028	B3		
C5040	C3	C5228	B4	C5414	D3	R4030	A3		
C5041	C3	C5229	B4	C5415	D3	R4031	A3		
C5042	C3	C5230	B4	C5416	D3	R4032	A3		
C505	D4	C5231	B4	C5417	D3	R4033	A3		
C506	D4	C5232	B4	C5418	D3	R4034	A3		
C507	D4	C5233	B4	C5419	C3	R4035	A3		
C508	D4	C5234	B4	C5420	C3	R4036	A3		
C5101	A4	C5235	B4	C5421	C3	R4037	A3		
C5102	A4	C5236	D4	C5422	C3	R4038	B3		
C5103	A4	C5237	D4	C5425	C3	R4039	B3		
C5104	A4	C5238	D4	C5426	C3	R4040	B3		
C5105	A4	C5239	D4	C5427	C3	R5079	A3		
C5106	B4	C5241	D4	C5428	C3	R5080	A3		
C5107	B4	C5242	D4	C5429	C3	R5101	A4		
C5108	B4	C5243	D4	C5430	C3	R5102	A4		
C5109	A4	C5244	D4	C5432	C3	R5103	B3		
C5110	A4	C5251	D3	C5433	C3	R5104	B4		
C5111	A4	C5252	D3	C5434	C3	R5105	B4		
C5112	A4	C5253	D3	C5435	C3	R5106	A4		
C5113	A4	C5254	D3	C5436	D3	R5107	A4		
C5114	A4	C5301	C4	C5437	D4	R5109	A4		
C5115	A4	C5302	C4	C5438	D4	R5110	A4		
C5116	A4	C5303	C4	C5439	D4	R5111	A4		
C5117	A4	C5304	D3	C5440	D4	R5112	A4		
C5118	A4	C5305	D4	C5441	D4	R5151	D3		
C5119	A4	C5306	D4	C5442	D4	R5152	D3		
C5120	A4	C5307	D4	C5443	D4	R5153	D3		
C5121	A4	C5308	D4	C5444	D4	R5154	D3		
C5122	A4	C5309	D4	C5451	D3	R5201	B4		
C5123	A4	C5312	C4	C5452	D3	R5202	B4		
C5124	A4	C5312	C4	C5453	D3	R5203	C3		
C5125	A4	C5313	D4	C5454	D3	R5203	C4		
C5126	A4	C5314	D4	C5806	D3	R5204	C4		
C5127	A4	C5315	D4	CN501	D3	R5205	C4		
C5128	A4	C5316	D4	FB4001	A3	R5206	C4		
C5129	A4	C5317	D4	IC4001	B3	R5207	C4		
C5130	A4	C5318	D4	IC4002	A3	R5208	B4		
C5131	A4	C5319	C4	IC4004	B3	R5209	B4		
C5132	A4	C5320	C4	IC4006	A3	R5210	B4		
C5133	A4	C5321	C4	IC4007	A3	R5211	B4		
C5134	A4	C5322	C4	IC4013	A3	R5212	B4		
C5135	A4	C5325	C4	IC5101	A4	R5251	D3		
C5136	D3	C5326	C4	IC5201	B4	R5252	D3		
C5137	D3	C5327	C4	IC5301	C4	R5253	D3		
C5138	D4	C5328	C4	IC5401	C3	R5254	D3		
C5139	D4	C5329	C4	JK501	D4	R5301	C4		
C5141	D3	C5330	C4	JK502	C4	R5303	C4		
C5142	D3	C5332	C4	L5101	B4	R5306	D3		

MAIN PCB TOP LAYOUT VIEW

C4003	A4	C4109	A4	C5037	D4	C5111	C4	C5154	C4	C5243	C3	C5343	C6	C5442	C2	FB404	D6	4033	D3	5055	C7	5075	C7	5095	C7	5251	B3
C4006	A4	C411	D7	C5038	D4	C5113	D5	C5179	D7	C5244	B3	C5344	C6	C5443	C2	FB405	D6	4034	D3	5056	C7	5076	C7	5096	C7	5252	B3
C4007	A4	C4112	A5	C5039	D3	C5116	B4	C5205	B3	C5251	B3	C5351	C6	C5444	C2	IC5002	B7	4103	A5	5057	C6	5077	C6	5097	C6	5253	B3
C4010	A4	C421	D7	C5040	D3	C5117	B4	C5210	C3	C5252	B3	C5352	B6	C5451	C2	IC5003	C7	4115	A5	5058	C6	5078	C7	5098	B7	5254	B3
C4011	A3	C4303	A3	C5041	D4	C5120	D5	C5211	C3	C5253	B3	C5353	C6	C5452	C1	Q5009	D7	4116	A5	5060	C6	5079	C2	5106	C5	5309	C6
C4012	A2	C4309	A3	C5042	D4	C5121	D5	C5213	C3	C5254	C3	C5354	C5	C5452	C2	Q5011	B7	4313	A3	5061	C7	5080	C2	5107	C5	5310	D6
C4013	A5	C431	D6	C505	B6	C5123	D4	C5216	B3	C5279	D7	C5363	C6	C5453	D1	Q5013	C7	461	D6	5062	C7	5081	C7	5108	C5	5311	C6
C4014	A4	C441	D7	C5069	A3	C5124	D4	C5217	B3	C5305	B6	C5379	D7	C5454	C1	Q5014	C7	5009	C7	5063	C6	5082	C7	5109	D4	5312	D5
C4015	A4	C4503	A2	C5071	D4	C5125	B4	C5218	B3	C5312	D6	C5405	B2	C5918	B6	Q5015	D7	5016	D4	5064	D7	5083	C7	5110	C4	5351	C6
C4016	A4	C4509	A2	C5072	D3	C5127	B4	C5220	D3	C5313	C6	C5413	C2	D5002	B7	Q5016	C7	5017	D3	5065	D7	5084	B7	5111	C4	5352	B6
C4017	A3	C451	D6	C5073	D3	C5130	C4	C5221	C3	C5316	B6	C5416	B2	D5011	C7	Q5017	D7	5018	D3	5066	D7	5085	B7	5151	B4	5353	C5
C4018	A2	C5014	B7	C5074	D4	C5132	C4	C5223	D3	C5317	B6	C5417	B2	D5012	D7	Q5020	C7	5018	D3	5067	C6	5086	C7	5152	C5	5354	C5
C4018	A4	C5020	D7	C5075	D4	C5133	C4	C5224	D2	C5320	D6	C5420	C2	D5013	D6	Q5021	B7	5019	D4	5068	D6	5087	C7	5153	B4	5410	C2
C4021	A7	C5023	D7	C5078	D7	C5141	B4	C5225	B3	C5325	B5	C5421	C2	D5015	C7	Q5022	B6	5020	D4	5068	C7	5088	B7	5154	C4	5411	C2
C4022	A7	C5031	B1	C5079	D7	C5142	C4	C5227	B3	C5327	B6	C5425	B2	D5016	C7	Q5023	B6	5021	D2	5069	C7	5089	C7	5206	C3	5412	C1
C4023	A7	C5032	C1	C5080	D7	C5143	C5	C5230	C2	C5330	C6	C5427	B2	D5019	B6	4001	A4	5036	D7	5070	D7	5090	C7	5207	C3	5413	C1
C4024	A7	C5033	D3	C5082	A4	C5144	B5	C5232	C2	C5332	D5	C5430	C1	D5020	B6	4003	A4	5038	D7	5071	D7	5091	C7	5208	C3	5451	B2
C4026	A2	C5034	D3	C5083	A3	C5151	B5	C5233	C2	C5333	D5	C5432	C1	FB401	D6	4013	A4	5039	D7	5072	C7	5092	C7	5209	D3	5452	B2
C4103	A5	C5035	D4	C5105	B4	C5152	C4	C5241	C3	C5341	C6	C5433	C1	FB402	D7	4031	A3	5053	C7	5073	B7	5093	B6	5210	C2	5453	D2
C4107	A5	C5036	D4	C5110	C5	C5153	B4	C5242	C3	C5342	B5	C5441	B2	FB403	D6	4032	A4	5054	C7	5074	C6	5094	B7	5211	C2	5454	C1



MAIN PCB BOTTOM LAYOUT VIEW

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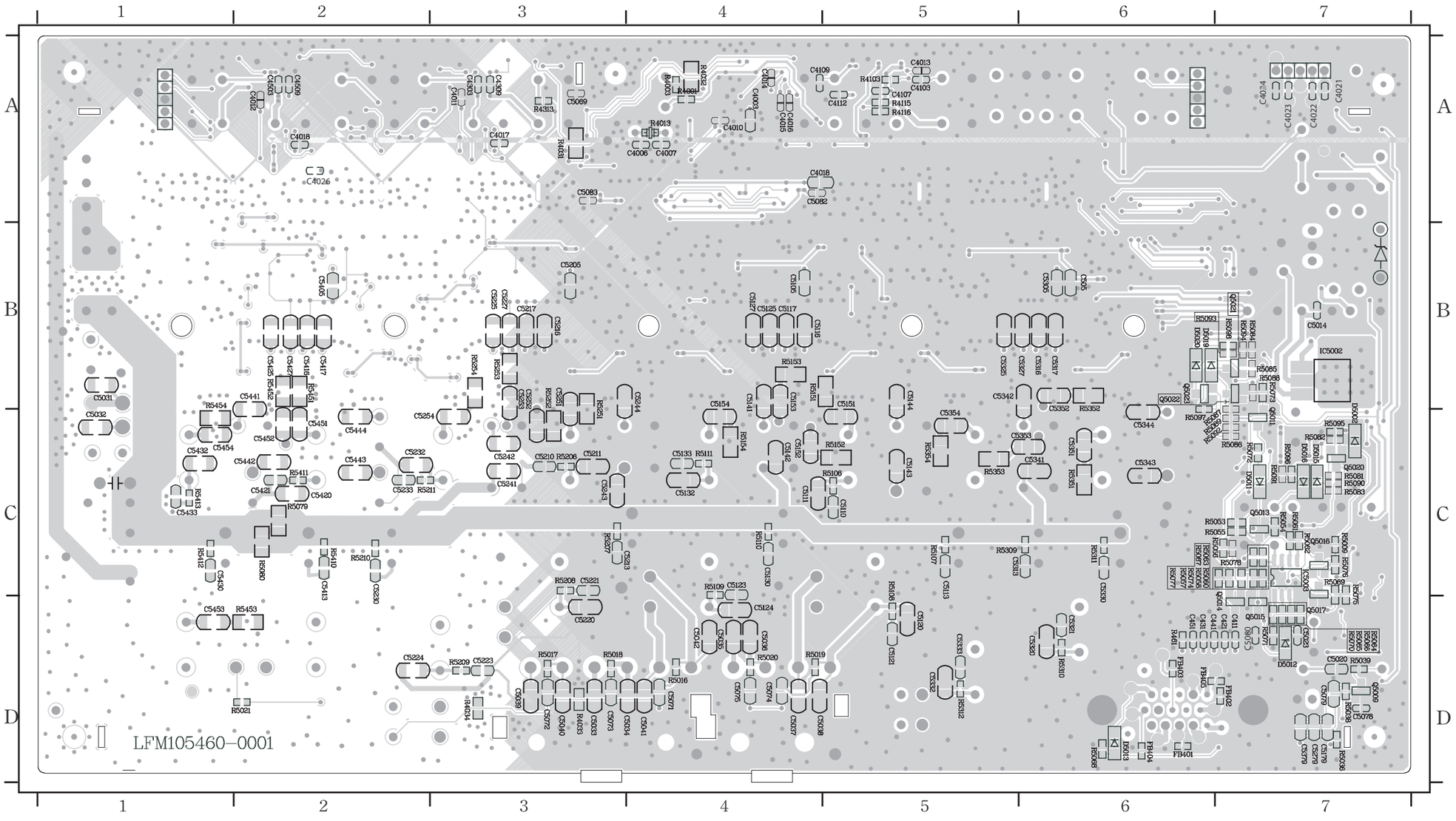
C4006	A4	C411	D7	C5038	D4	C5113	D5	C5179	D7	C5244	B3	C5344	C6	C5443	C2	FB405	D6	R4034	D3	R5056	C7	R5076	C7	R5096	C7	R5252	B3
C4007	A4	C4112	A5	C5039	D3	C5116	B4	C5205	B3	C5251	B3	C5351	C6	C5444	C2	IC5002	B7	R4103	A5	R5057	C6	R5077	C6	R5097	C6	R5253	B3
C4010	A4	C421	D7	C5040	D3	C5117	B4	C5210	C3	C5252	B3	C5352	B6	C5451	C2	IC5003	C7	R4115	A5	R5058	C6	R5078	C7	R5098	B7	R5254	B3
C4011	A3	C4303	A3	C5041	D4	C5120	D5	C5211	C3	C5253	B3	C5353	C6	C5452	C1	Q5009	D7	R4116	A5	R5060	C6	R5079	C2	R5106	C5	R5309	C6
C4012	A2	C4309	A3	C5042	D4	C5121	D5	C5213	C3	C5254	C3	C5354	C5	C5452	C2	Q5011	B7	R4313	A3	R5061	C7	R5080	C2	R5107	C5	R5310	D6
C4013	A5	C431	D6	C505	B6	C5123	D4	C5216	B3	C5279	D7	C5363	C6	C5453	D1	Q5013	C7	R461	D6	R5062	C7	R5081	C7	R5108	C5	R5311	C6
C4014	A4	C441	D7	C5069	A3	C5124	D4	C5217	B3	C5305	B6	C5379	D7	C5454	C1	Q5014	C7	R5009	C7	R5063	C6	R5082	C7	R5109	D4	R5312	D5
C4015	A4	C4503	A2	C5071	D4	C5125	B4	C5218	B3	C5312	D6	C5405	B2	C5918	B6	Q5015	D7	R5016	D4	R5064	D7	R5083	C7	R5110	C4	R5351	C6
C4016	A4	C4509	A2	C5072	D3	C5127	B4	C5220	D3	C5313	C6	C5413	C2	D5002	B7	Q5016	C7	R5017	D3	R5065	D7	R5084	B7	R5111	C4	R5352	B6
C4017	A3	C451	D6	C5073	D3	C5130	C4	C5221	C3	C5316	B6	C5416	B2	D5011	C7	Q5017	D7	R5018	D3	R5066	D7	R5085	B7	R5151	B4	R5353	C5
C4018	A2	C5014	B7	C5074	D4	C5132	C4	C5223	D3	C5317	B6	C5417	B2	D5012	D7	Q5020	C7	R5018	D3	R5067	C6	R5086	C7	R5152	C5	R5354	C5
C4018	A4	C5020	D7	C5075	D4	C5133	C4	C5224	D2	C5320	D6	C5420	C2	D5013	D6	Q5021	B7	R5019	D4	R5068	D6	R5087	C7	R5153	B4	R5410	C2
C4021	A7	C5023	D7	C5078	D7	C5141	B4	C5225	B3	C5325	B5	C5421	C2	D5015	C7	Q5022	B6	R5020	D4	R5068	C7	R5088	B7	R5154	C4	R5411	C2
C4022	A7	C5031	B1	C5079	D7	C5142	C4	C5227	B3	C5327	B6	C5425	B2	D5016	C7	Q5023	B6	R5021	D2	R5069	C7	R5089	C7	R5206	C3	R5412	C1
C4023	A7	C5032	C1	C5080	D7	C5143	C5	C5230	C2	C5330	C6	C5427	B2	D5019	B6	R4001	A4	R5036	D7	R5070	D7	R5090	C7	R5207	C3	R5413	C1
C4024	A7	C5033	D3	C5082	A4	C5144	B5	C5232	C2	C5332	D5	C5430	C1	D5020	B6	R4003	A4	R5038	D7	R5071	D7	R5091	C7	R5208	C3	R5451	B2
C4026	A2	C5034	D3	C5083	A3	C5151	B5	C5233	C2	C5333	D5	C5432	C1	FB401	D6	R4013	A4	R5039	D7	R5072	C7	R5092	C7	R5209	D3	R5452	B2
C4103	A5	C5035	D4	C5105	B4	C5152	C4	C5241	C3	C5341	C6	C5433	C1	FB402	D7	R4031	A3	R5053	C7	R5073	B7	R5093	B6	R5210	C2	R5453	D2
C4107	A5	C5036	D4	C5110	C5	C5153	B4	C5242	C3	C5342	B5	C5441	B2	FB403	D6	R4032	A4	R5054	C7	R5074	C6	R5094	B7	R5211	C2	R5454	C1



POWER BOARD

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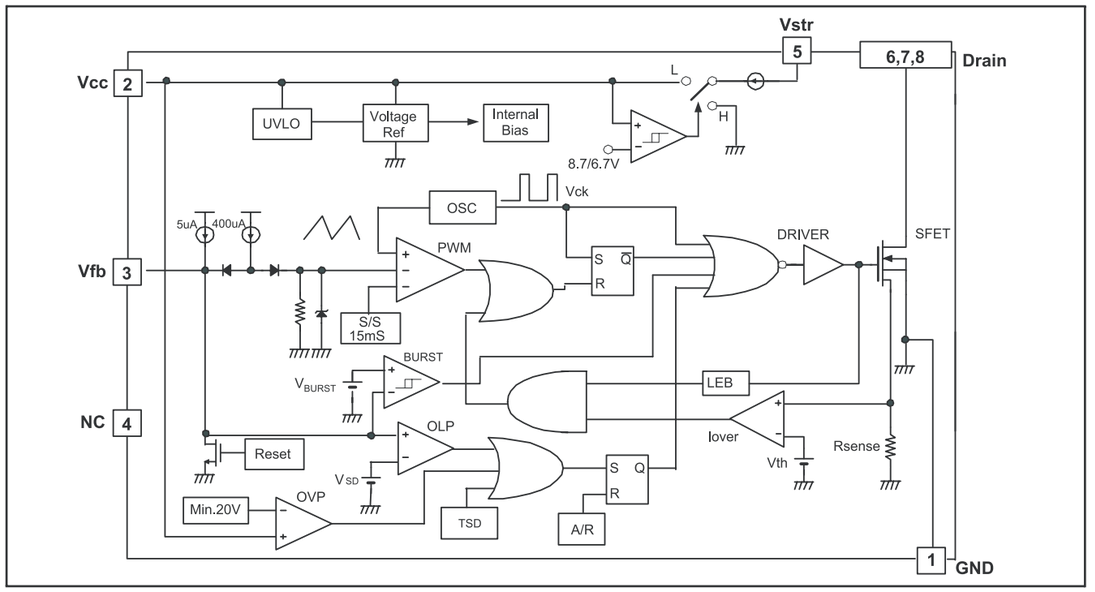
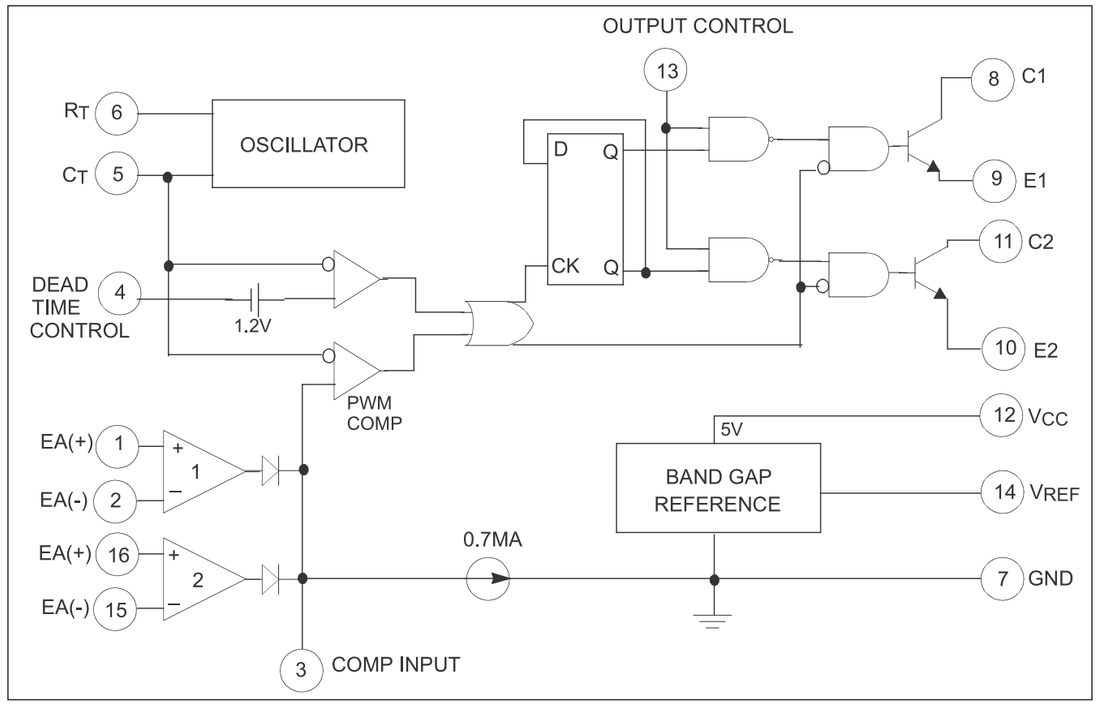
FSDM311 INTERNAL IC DIAGRAM



KA7500C INTERNAL IC DIAGRAM



PCB VOLTAGE

IC951(KA7500C)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VOLTAGE	5	4.9	3	0.6	1.5	3.4	0	12	1.1	1.1	12	12	4.9	5	4.9	0

IC953(NJM45008)

PIN NO.	1	2	3	4	5	6	7	8
VOLTAGE	1.3	4.9	0.7	0	1.1	1.2	1.2	12.2

IC901(OPTICAL SENSOR 4P)

PIN NO.	1	2	3	4
VOLTAGE	12.4	11.4	0	0

Q959(2SC945P)

PIN NO.	1	2	3
VOLTAGE	0.7	0	0

Q960(2SC945P)

PIN NO.	1	2	3
VOLTAGE	0.7	0	0

Q956(2SA952)

PIN NO.	1	2	3
VOLTAGE	12	12.6	12.8

Q951(2SB772 P/Q)

PIN NO.	1	2	3
VOLTAGE	0.7	0	0.7

IC952(AZ431AZ-A)

PIN NO.	1	2	3
VOLTAGE	2.4	0	11.4

Q952(2SB772P/Q)

PIN NO.	1	2	3
VOLTAGE	0.7	0	0.7

IC902(FSDM331) only for 37

PIN NO.	1	2	3	4	5	6	7	8
VOLTAGE	0	12	0.7	0.1	296	323	323	323

Q960(2SC945P)

PIN NO.	1	2	3
VOLTAGE	0	37	0

Q902(FQP12N60C) only for 37

PIN NO.	1	2	3
VOLTAGE	0	163	0

Q901(FQP12N60C) only for 37

PIN NO.	1	2	3
VOLTAGE	161	320	162

IC902(FSDM311) only for 01

PIN NO.	1	2	3	4	5	6	7	8
VOLTAGE	0	11.5	0.7	0.1	267	286	286	286

Q901(FQP12N60C) only for 01

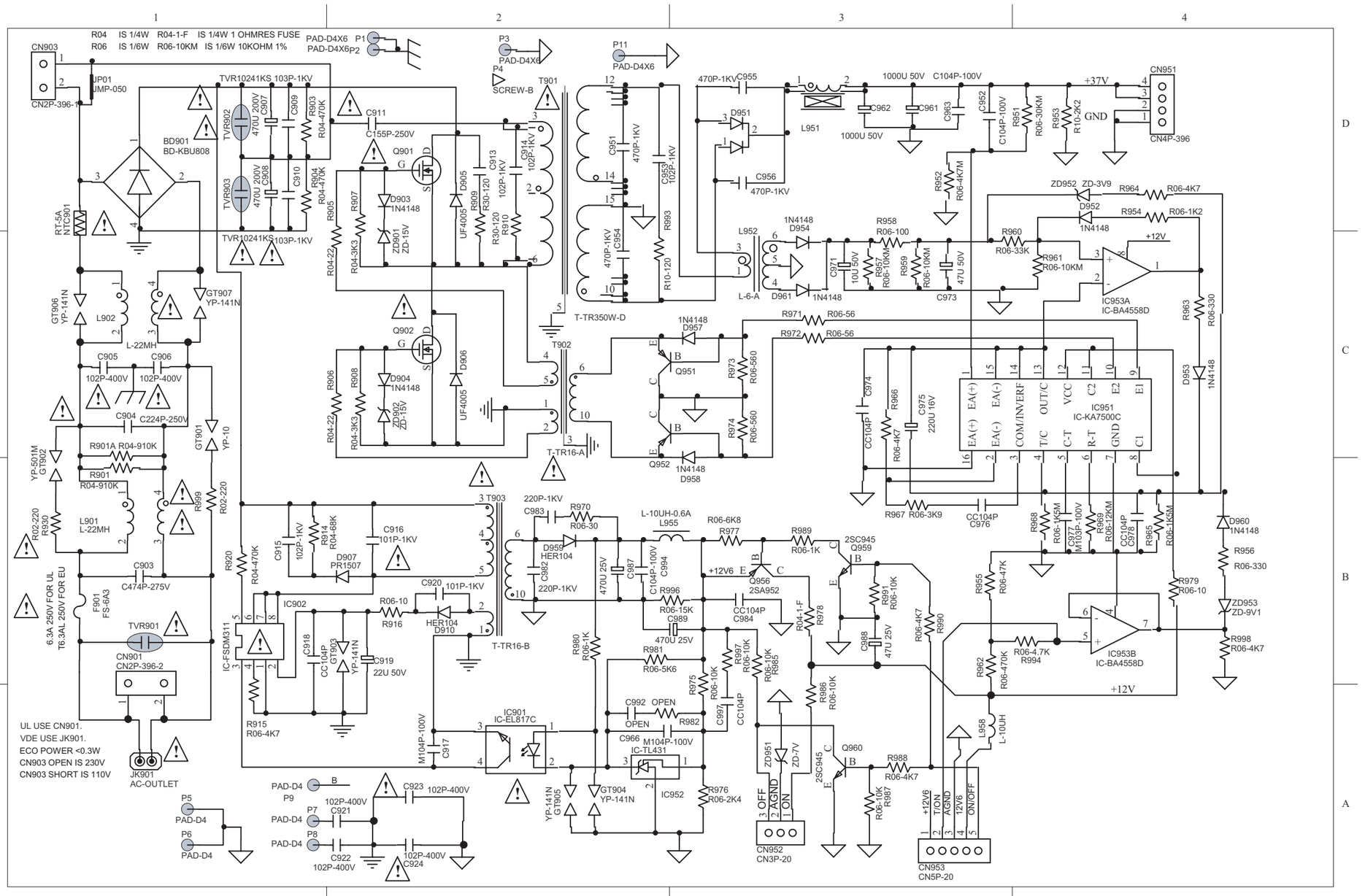
PIN NO.	1	2	3
VOLTAGE	142	287	144

Q902((FQP12N60C) only for 01

PIN NO.	1	2	3
VOLTAGE	0	144	0

CIRCUIT DIAGRAM - POWER PCB

BD901	A1	C914	A2	C952	A5	C974	B4	C994	C4	D910	B3	FB902	A1	IC951	B4	JP14	B4	L952	A4	Q902	B2	R907	B3	R953	B4	R965	B4	R978	C4	R994	C5	ZD902	B3
C901	C1	C915	C3	C952	C4	C975	B4	C997	C4	D951	B5	FB903	C2	IC953	C5	JP15	B4	L955	C4	Q951	B4	R908	B3	R954	C5	R966	B4	R979	C4	R996	B5	ZD951	B5
C903	C1	C916	C3	C953	A4	C976	B4	CN901	C1	D952	C5	FB904	B2	JK901	C1	JP16	C4	L958	B5	Q952	B4	R909	B2	R955	C5	R967	B4	R980	C4	R997	C4	ZD952	C5
C904	B1	C917	C2	C954	B4	C977	B4	CN903	A2	D953	C5	GT901	B2	JP01	A1	JP17	C4	NTC901	A1	Q956	C4	R910	A2	R956	C5	R969	B4	R981	C4	R998	B5	ZD953	B5
C905	A1	C918	C2	C955	B5	C978	C4	CN951	A5	D954	A4	GT902	B1	JP02	B1	JP18	C4	P1	C1	Q959	C5	R914	C3	R957	A4	R970	C4	R982	C4	R999	C2		
C906	A2	C919	C2	C956	B5	C982	C4	CN952	B5	D957	C4	GT903	C2	JP05	B2	JP19	C5	P11	A4	Q960	B5	R915	C2	R958	A4	R971	B4	R985	B5	T901	A3		
C906	B1	C920	C3	C961	A5	C983	C4	CN953	C5	D958	B4	GT904	C4	JP08	C3	JP20	C5	P3	A5	Q989	C5	R916	C2	R959	A5	R972	B4	R986	B5	T902	B3		
C907	B2	C921	A2	C962	A5	C984	C4	D903	B3	D959	C4	GT905	C3	JP09	C3	JP21	C5	P4	C5	R901	B1	R920	C2	R960	C5	R973	C4	R987	B5	T903	C3		
C909	A2	C922	C2	C963	A5	C987	C4	D904	B3	D960	C5	GT906	A1	JP10	C3	JP22	C5	P5	A5	R903	A2	R930	B1	R961	C5	R974	B4	R988	B5	TVR901	C1		
C910	A2	C923	B3	C966	C4	C988	B5	D905	B3	D961	A4	GT907	A2	JP11	B3	L901	B2	P7	A3	R904	B2	R951	A5	R962	C5	R975	C4	R989	C5	TVR902	B2		
C911	A2	C924	B3	C971	A4	C989	C4	D906	A2	F901	B1	IC901	C3	JP12	B4	L902	A2	P9	B3	R905	B3	R952	A5	R963	C5	R976	C4	R990	C5	TVR903	B2		
C913	B2	C951	A4	C973	B5	C992	C4	D907	C3	FB901	A1	IC902	C2	JP13	B4	L951	A5	Q901	B2	R906	B3	R953	A5	R964	C5	R977	C4	R991	C5	ZD901	B3		



PCB LAYOUT - POWER PCB

BD901	D1	C911	D2	C922	A2	C961	D3	C978	B4	CN903	D1	D951	D3	GT901	C1	IC952	A3	NTC901	P7
C 962	D3	C913	D2	C923	A2	C963	D3	C982	B2	CN951	D4	D952	D4	GT902	C1	IC953	C4	Q901	C1
C903	B1	C914	D2	C924	A2	C966	A2	C983	B2	CN952	A3	D953	C4	GT903	B2	IC953	B4	Q902	D3
C904	C1	C915	B1	C945	A3	C971	C3	C984	B3	CN953	A3	D954	C3	GT904	A2	JK901	A1	Q951	B2
C905	C1	C916	B2	C951	D2	C973	C3	C987	B2	D903	D2	D957	C3	GT905	A2	JP01	P1	Q952	A3
C906	C1	C917	A2	C952	D3	C974	C3	C988	B3	D904	C2	D958	B3	GT906	C1	L901	P11	Q956	D1
C907	D1	C918	B1	C953	D2	C975	C3	C989	B3	D905	D2	D959	B2	GT907	C1	L902	P3	Q959	D2
C908	D1	C919	B2	C954	C2	C976	B3	C992	A2	D906	C2	D960	B4	IC901	A2	L951	P4	Q960	D2
C909	D1	C920	B2	C955	D3	C977	B4	C994	B2	D907	B2	D961	C3	IC902	B1	L955	P5	R901	D2
C910	D1	C921	A2	C956	D3	C977	A3	CN901	B1	D910	B2	F901	B1	IC951	C4	L958	P6	R903	D2

R904	A1	R920	B3	R959	D2	R969	B3	R979	B4	R991	A3	TVR901	A3						
R905	A1	R930	A3	R960	B1	R970	B4	R980	C3	R993	A3	TVR902	A3						
R906	A1	R951	C1	R961	A1	R971	C3	R981	B3	R994	B3	TVR903	B3						
R907	A1	R952	D1	R962	B2	R972	C3	R982	B4	R996	B3	ZD901	B3						
R908	A1	R953	D1	R963	B1	R973	C3	R985	B4	R997	B4	ZD902	B3						
R909	D2	R954	D2	R964	B1	R974	C4	R986	B2	R998	B2	ZD951	C2						
R910	C2	R955	C2	R965	D4	R975	C4	R987	C3	R999	B2	ZD952	B4						
R914	C3	R956	D2	R966	D3	R976	B3	R988	C3	T901	A3	ZD953	B2						
R915	C2	R957	C2	R967	D4	R977	C4	R989	C3	T902	B3								
R916	B3	R958	D2	R968	D4	R978	D4	R990	C3	T903	A3