

Service
Service
Service



Service Manual

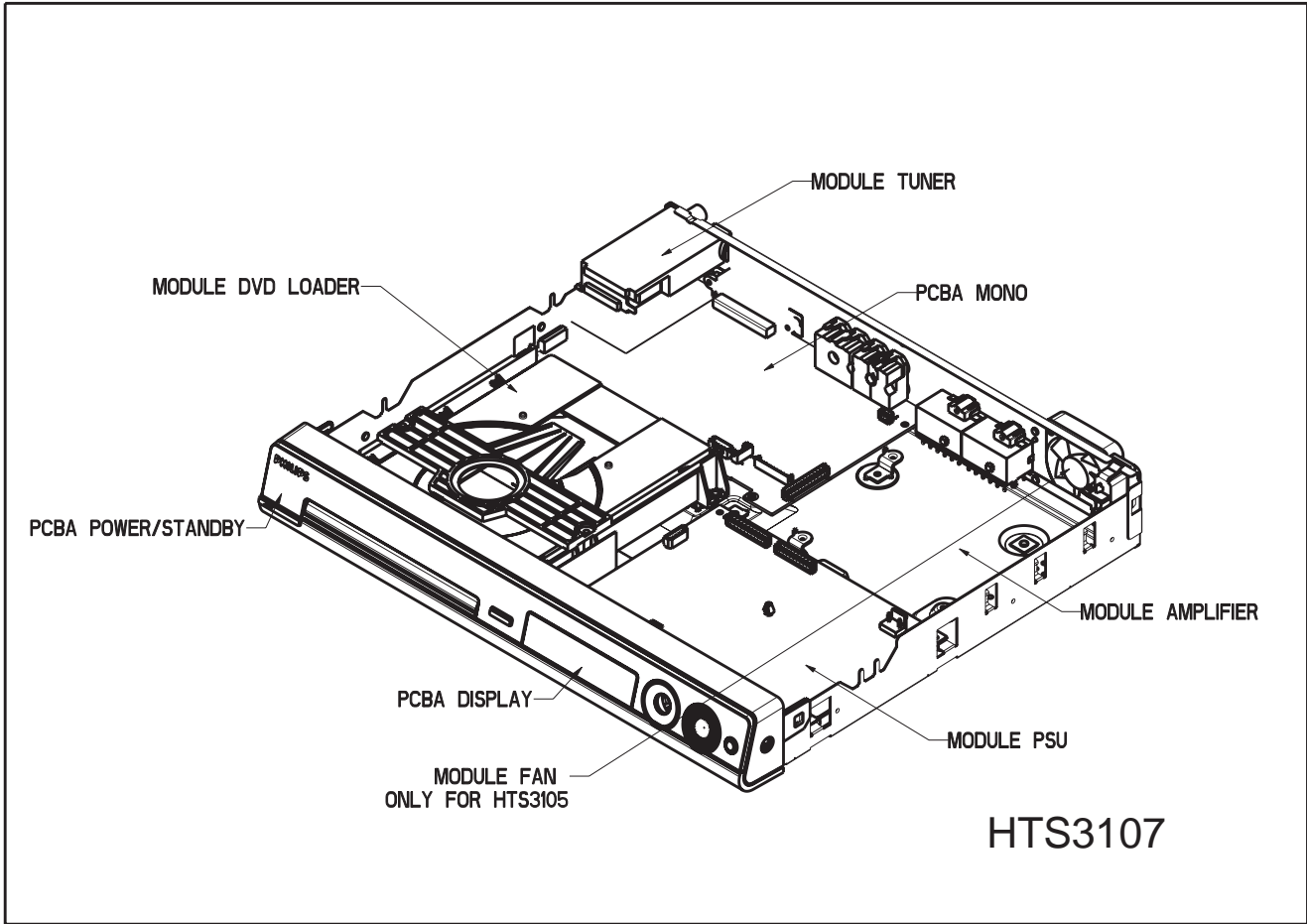


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LOCATION OF PC BOARDS



VERSION VARIATIONS:

Features &	Type /Versions:	HTS3107
Progressive Scan		x
Line-Out		x
TV-In		x
Aux-In		x
Y/Pb/Pr (YUV) Component Video Output		x
CVBS		x
SCART		—

1. Specifications

1.1 General:

Mains voltage	: 120V/230V
Mains frequency	: 50/60Hz
Power consumption	: 150W < 1W Eco standby power < 150W at 1/8 P _{rated} (For main unit)
Dimension main unit	: 435 x 55 x 328mm

1.2 Tuner FM

Tuning range	: 87.5-108MHz
Grid	: 50kHz 100kHz
IF frequency	: 10.7MHz ± 25kHz
Aerial input	: 75Ω coaxial
Sensitivity at 26dB S/N	: < 7μV
Selectivity at 600kHz 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
Crosstalk at RF=1mV, dev. 40kHz	: > 18dB

MW

Tuning range	: 531-1602kHz , 530-1700kHz
Grid	: 9kHz 10kHz
IF frequency	: 450kHz ± 1kHz
Aerial input	: Frame aerial
Sensitivity at 26dB S/N	: < 4.0mV/M
Selectivity at 18kHz bandwidth	: > 20dB
IF rejection	: > 45dB
Image rejection	: > 28dB
Distortion at RF=50mV, m=80%	: < 5%

1.3 AMPLIFIER:

Output power	
Front	: 100W RMS / channel
Rear	: 75W RMS / channel
Center	: 100W RMS
Subwoofer	: 150W RMS
Frequency response ±0.5dB	: 20Hz-20kHz
Hum (Volume Minimum)	: 200nW
Residual noise (Volume Minimum)	: 40nW

Input sensitivity	
Aux In	: 1V ± 3dB at 22kΩ
Scart In	: 0.5V ± 3dB at 22kΩ
Output sensitivity	
Line Out (Left/Right)	: 1V ± 2dB at 10kΩ
Scart Out (Left/Right)	: 1V ± 2dB at 10kΩ

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 ± 0.1V _{p-p}
Luminance S/N	: ≥ 60dB

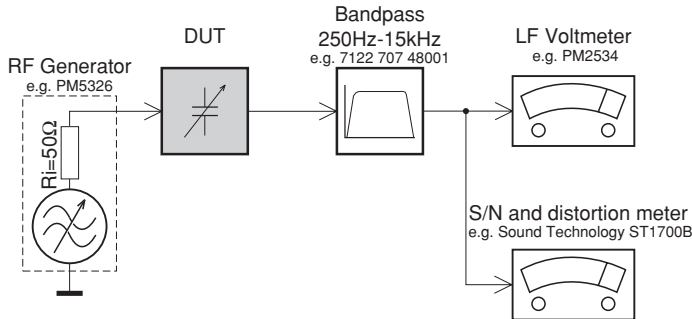
RGB/YUV Out ¹⁾	
Amplitude	: 1.0 ± 0.1V _{p-p}
S/N	: ≥ 60dB

¹⁾ Output terminals to be terminated with 75Ω

2. Measurements Setup, Service Aid & Lead Free Requirements

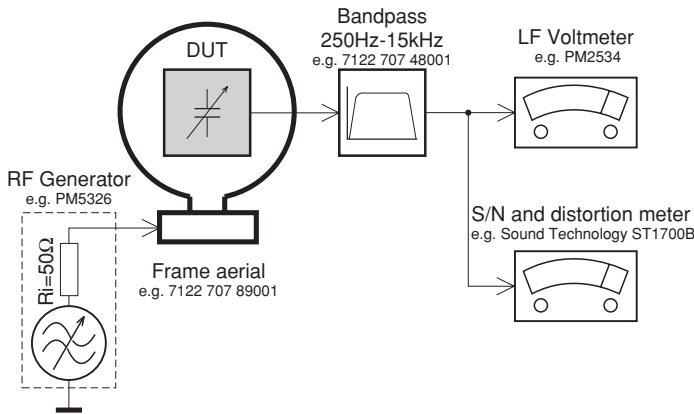
MEASUREMENT SETUP

Tuner FM



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

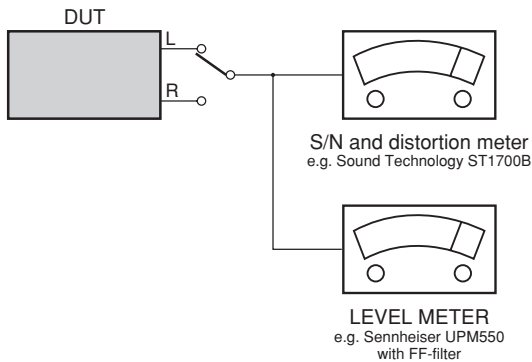
Tuner AM (MW,LW)



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).

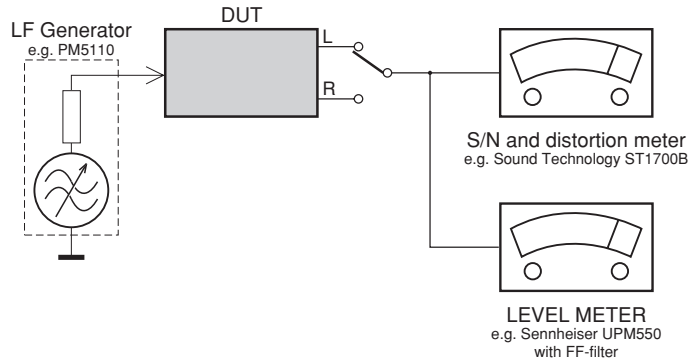
CD

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

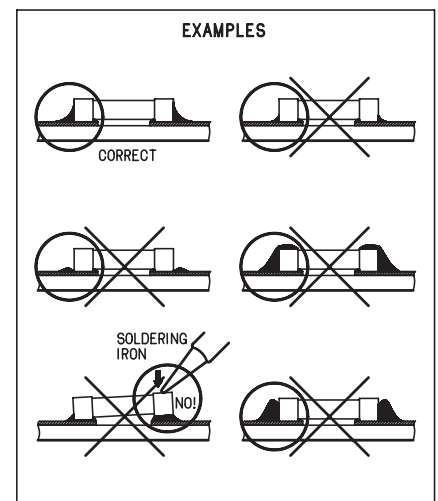
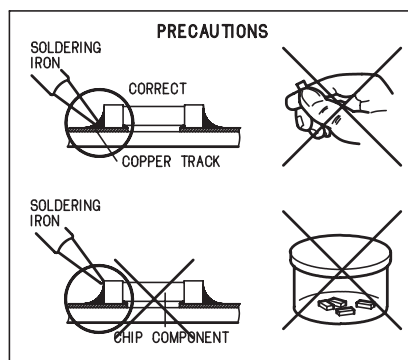
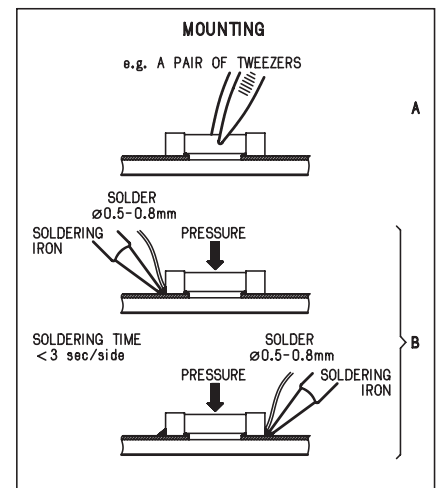
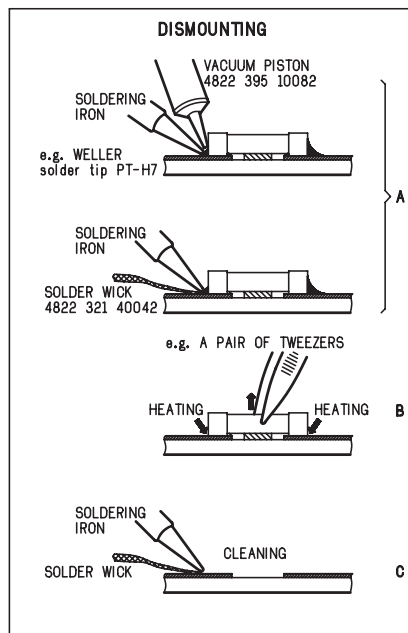
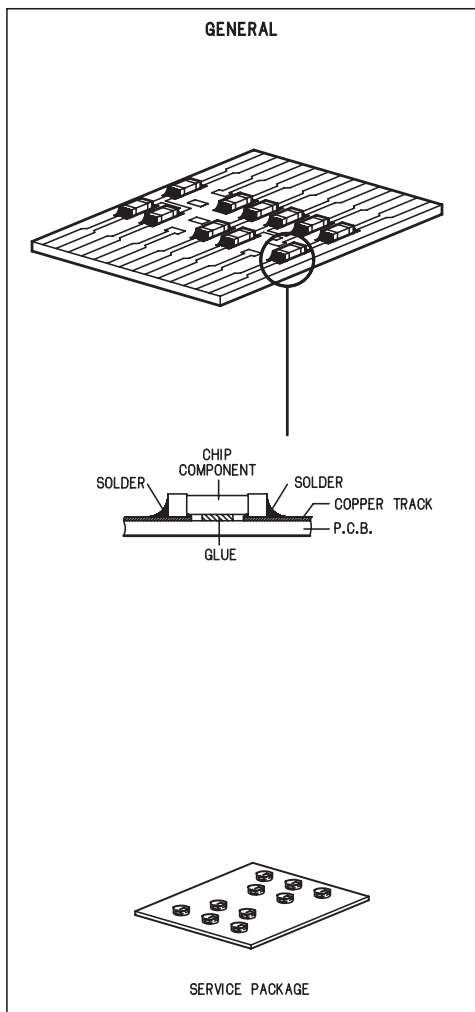
Service Tools:

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



(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD**(NL) WAARSCHUWING**

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

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

Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

(F) ATTENTION

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

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

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

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

(D) WARNUNG

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

Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.

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

Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

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

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

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

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

(GB) ESD PROTECTION EQUIPMENT:

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

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used

Safety components are marked by the symbol \triangle .

(NL)

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

De Veiligheidsonderdelen zijn aangeduid met het symbool \triangle .

(F)

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

Less composants de sécurité sont marqués \triangle .

(D)

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

Sicherheitsbauteile sind durch das Symbol \triangle markiert.

(I)

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

Componenti di sicurezza sono marcati con \triangle .

(GB)

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

**(GB) Warning !**

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

(S) Varning !

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

(SF) Varoitus !

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

(DK) Advarse !

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

(F)

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

2.1 Lead Free Requirements

Pb(Lead) Free Solder

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

IDENTIFICATION:



Regardless of special logo (not always indicated)

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

Important note: In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (lead/ 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
 - o To reach at least a solder-temperature of 400°C,
 - o To stabilize the adjusted temperature at the solder-tip
 - o 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.

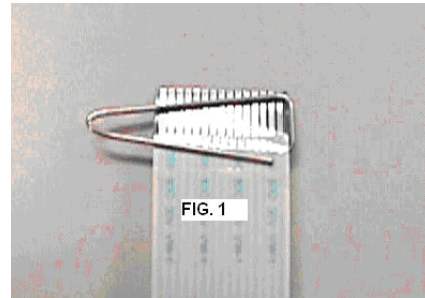
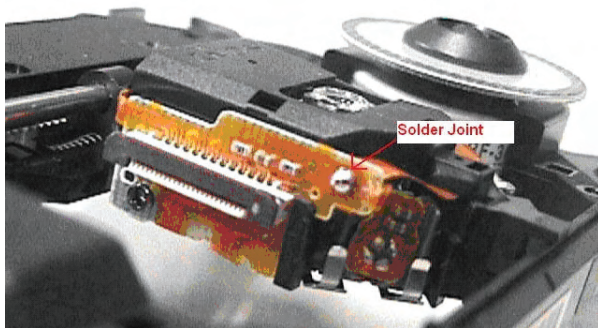


FIG. 1

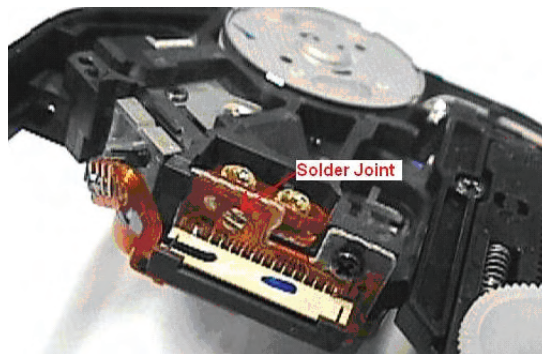
ATTENTION: The laser diode of this loader is protected against ESD by a solder joint which shortcircuits the laserdiode to ground. For proper functionality of the loader this solder joint must be remove **after** connection loader to the set.

Type 1



(ESD protection point is access ble 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.**

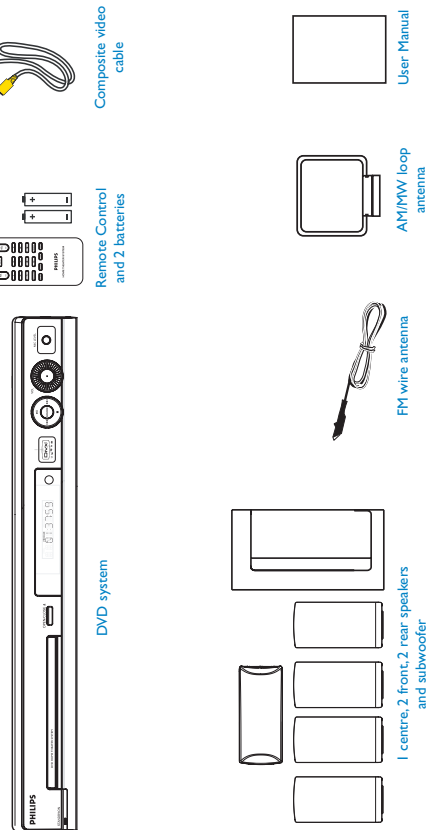
This is also applicable for all partnership workshops.

Quick Start Guide



- 1 Connect
- 2 Set up
- 3 Enjoy

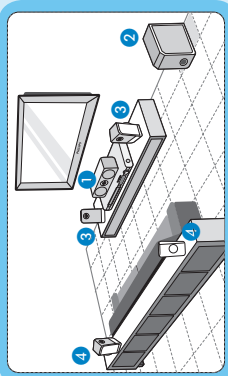
What's in the box?



1 Connect

A Placement

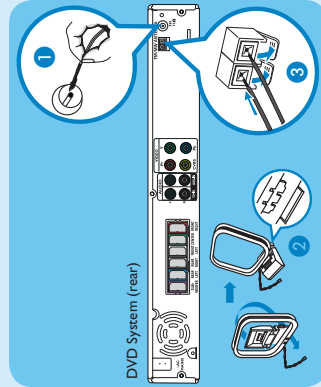
Proper speakers system placement is important to ensure optimum sound performance.



- 1 Place the centre speaker above or close to the TV.
- 2 Place the subwoofer on the floor, at least one metre away from the TV.
- 3 Place the front speakers at equal distances from the TV.
- 4 Place the rear speakers at normal listening ear level.

B Connect the radio antennas

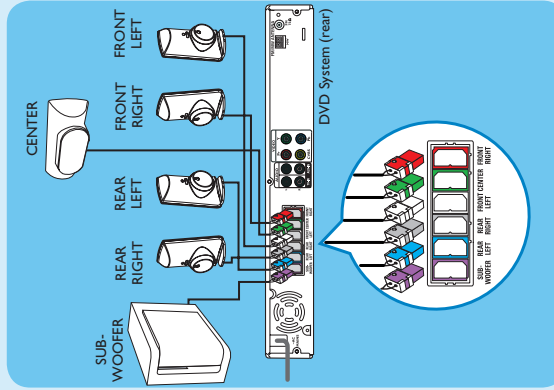
Keep the antennas away from the electronic devices to prevent unwanted interference.



- 1 Connect the FM antenna to the FM socket. Extend the wire and fix its end to the wall.
- 2 Unfold the AM/MW loop antenna and fix the claw into the slot.
- 3 Push the tabs and insert the wires into the AM/MW sockets.

C Connect the speakers and subwoofer

Connect the various coloured plugs from the speakers and subwoofer to the same coloured sockets at the rear of the DVD system.



3.Directions For Use

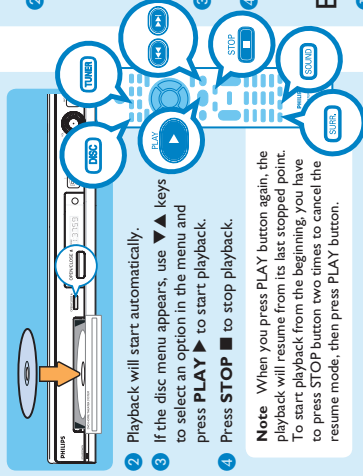
The following except of the Quick Use Guide serves as an introduction to the set.

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

3 Enjoy

Start disc playback

- 1 Press **OPEN CLOSE** to open the disc tray. Load a disc and close the disc tray.



- 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.

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.

Listen to radio

- 1 Press **TUNER**. The display panel will show "AUTO INSTALL PRESS PLAY".
- 2 Press **PLAY ▶** until "START ..." appears on the display panel. All the available radio stations with strong reception signal will be stored automatically.

Note This feature is only available for the first time setup. If you wish to reinstall all the radio stations, hold down the **PROGRAM** button on the remote control.

- 3 Once complete, use **◀▶** keys to select a preset radio station.
- 4 To delete a preset radio station, hold down **STOP ■** until "FM/MW X DELETED" appears.

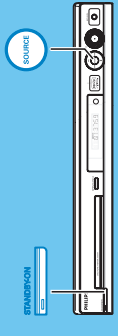
Experience surround sound

- 1 Press **SURR** to switch between stereo and multi-channel.
- 2 Press **SOUND** to select either **CONCERT**, **DRAMA**, **ACTION** or **SCH-FI** preset digital sound effects.

2 Set up

A Finding the viewing channel

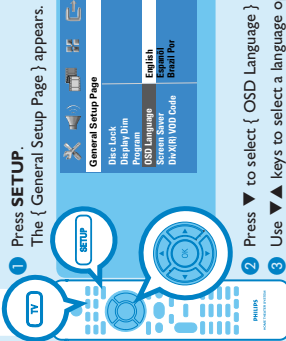
- 1 Press **STANDBY ON** on the DVD system.
- 2 Press **SOURCE** on the DVD system until "DISC" appears on the display panel.



- 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

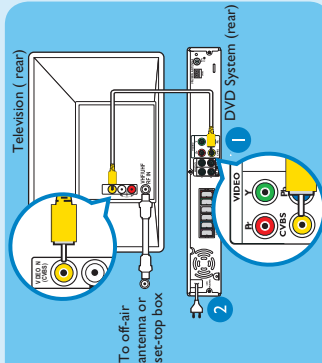


- 1 Press **SETUP**. The { General Setup Page } appears.
- 2 Press **▼** to select { OSD Language } and press **▶**.
- 3 Use **▼▲** keys to select a language option in the menu and press **OK** to confirm.
- 4 Press **SETUP** to exit.

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.

D Connect the DVD system to TV

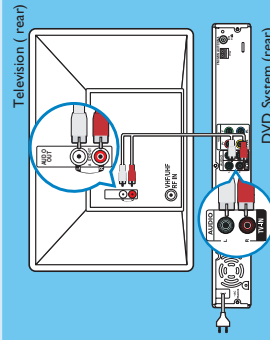


- 1 Use the supplied composite video cable to connect the CVBS socket on this DVD system to the VIDEO IN socket on your TV.
- 2 Plug in the power cable from the DVD system to an AC power outlet.

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

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

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



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

Troubleshooting

For more troubleshooting tips, see the user manual.

No picture.

- Press **DISC** button on the remote control.
- Check the connection to the TV and ensure the plugs are firmly in place.

No sound.

- Adjust the volume.
- Check the speaker connections and settings.
- Check the audio connections and press **SOURCE** button to select the correct input source.
- The centre 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 comes with your Philips DVD System

Online

Go to www.philips.com/support



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I2 NC 3139 245 22241
www.philips.com

4. Dismantling Instructions

4.1 Dismantling of the DVD Loader Tray Cover

- 1) Insert a minus screwdriver and push the lever in the direction as shown in Figure 4-1 to unlock the tray before sliding it out.



Figure 4-1

- 2) Remove the Tray Cover as shown in Figure 4-2

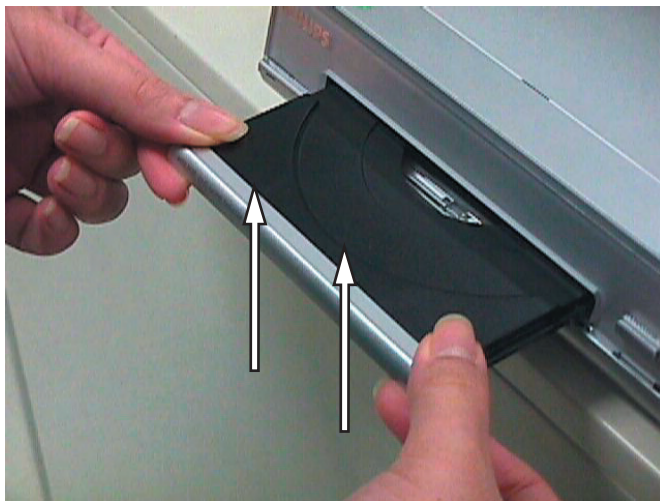


Figure 4-2

4.2 Dismantling of the Front Board, PSU Module & 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 4 screws A (See Figure 4-3) to remove the PSU Module.

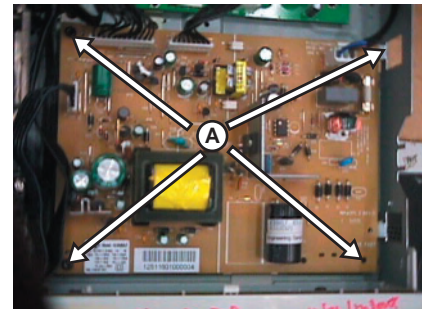


Figure 4 3

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

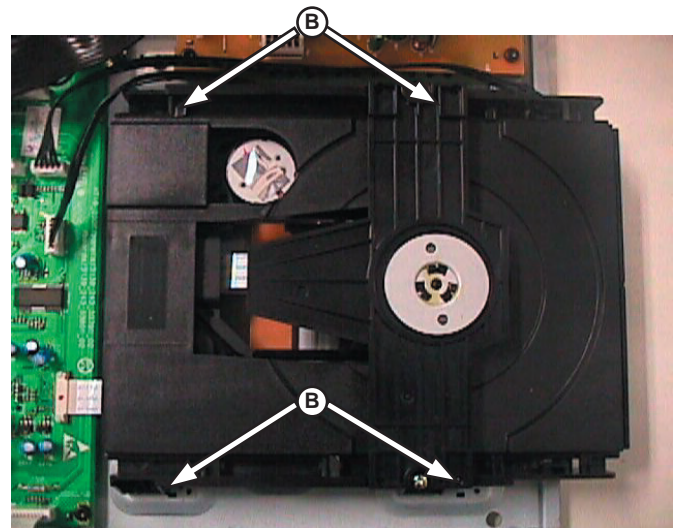


Figure 4-4

4.3 Dismantling of the Tuner Module & Mono Board.

- 1) Loosen 1 screw to remove the Tuner Module.
- 2) Loosen 2 screws D to remove the Mono Board.

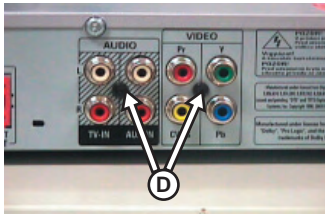


Figure 4-5 (AP)

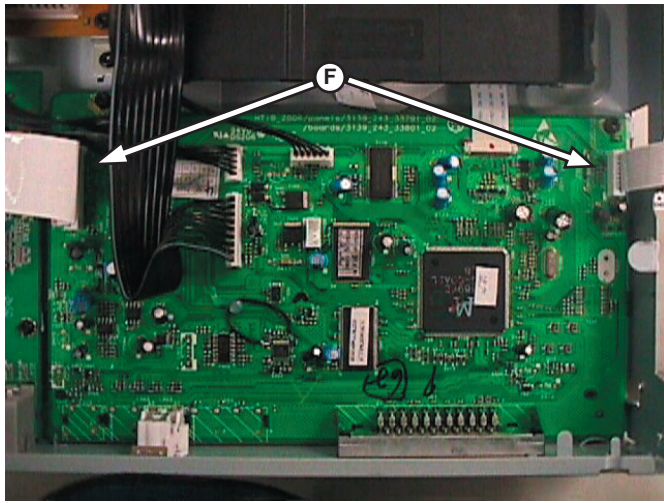


Figure 4-6

4.4 Dismantling of the Amp-module Board

- 1) Loosen 4 screws F and 2 screws G (See Figure 4-7 & Figure 4-8) to remove Amp-Module Board.

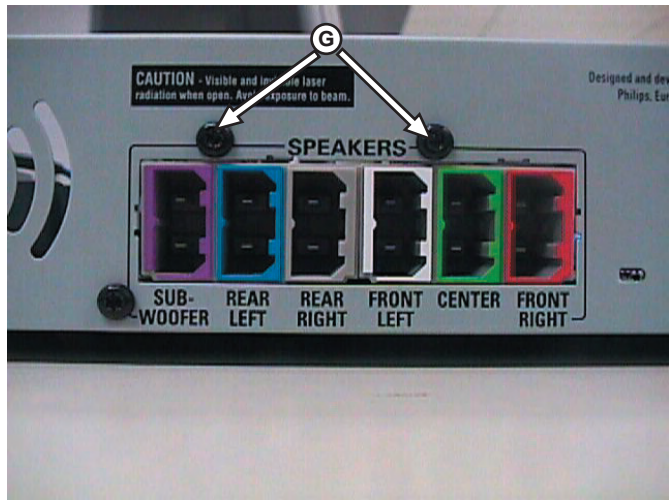


Figure 4-7

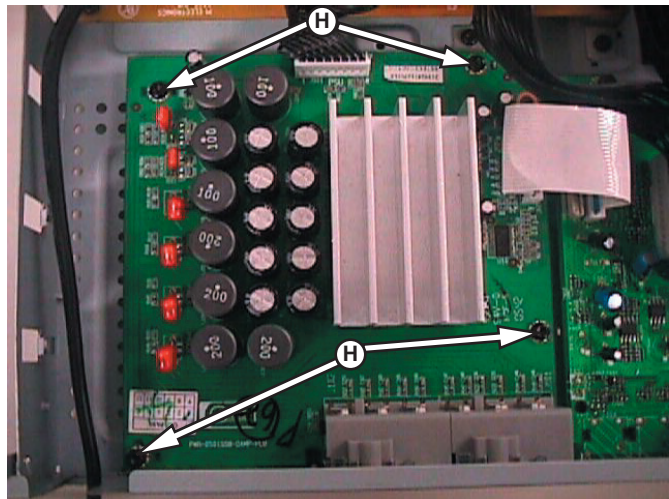
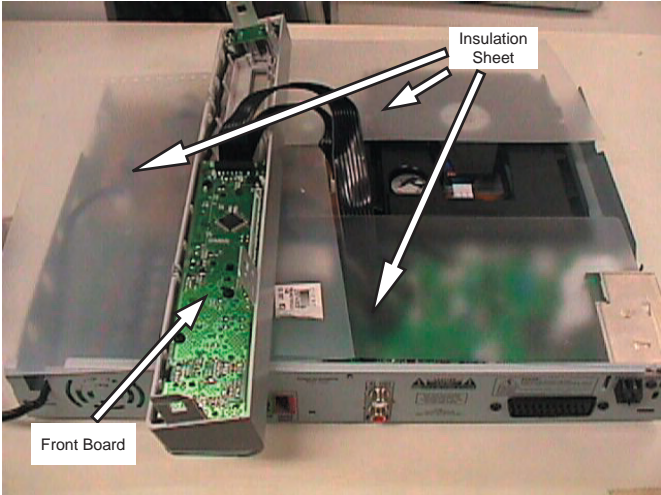
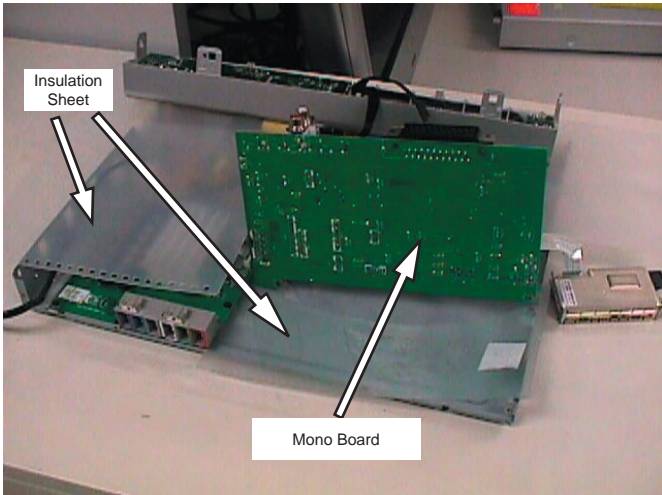


Figure 4-8

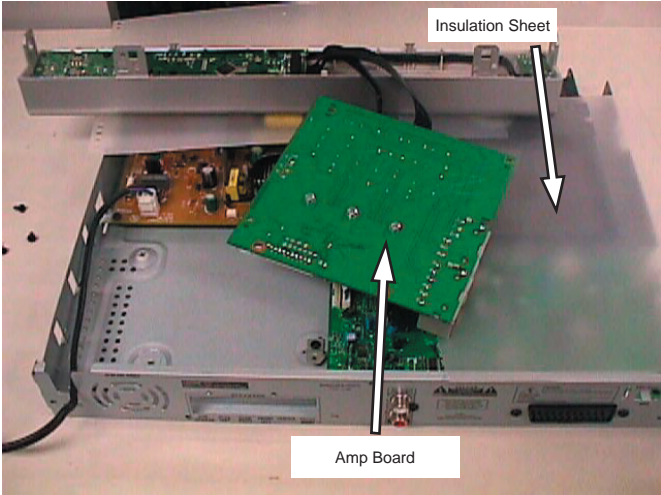
3.4 Service Positions



Service Position - Front Board



Service Position - Mono Board



Service Position -Amp-Board

5. Service Test Program

To start service test program open the tray with remote control or front panel key, while plugging in the mains cord press 2, 5 8 on remote control, the tray will close by itself and the set will display shown "S-Vxx-yy"

Display shows "SERVICE" followed by ROM version "S-Vxx-yy"

Main Menu

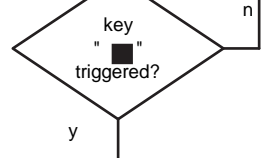
Display Test



Activate and display "Pattern1"



Activate and display "Pattern2"



- 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)

4.1 Display Test

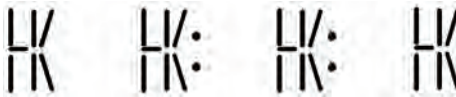
Purpose:
 This test is used to check the driving circuits, the display and whether there are any short-circuits, open-circuits or any other defects.

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



4.1.1 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 3107/55	Latam	4	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> <AUDIO> <5>for HTS 3107/55
- 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.)

4.1.2 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

4.1.3 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 CDRW must not contain any other data except the file from the zip-archive.

4.1.4 Procedure to upgrade the firmware

1. Power up the set and open tray.
2. Insert the prepared Upgrade CDRW 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.

4.1.5 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.

4.1.6 Trade Mode

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

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

- 1 Press **SOURCE** to select "FM" or "TV".
- 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".

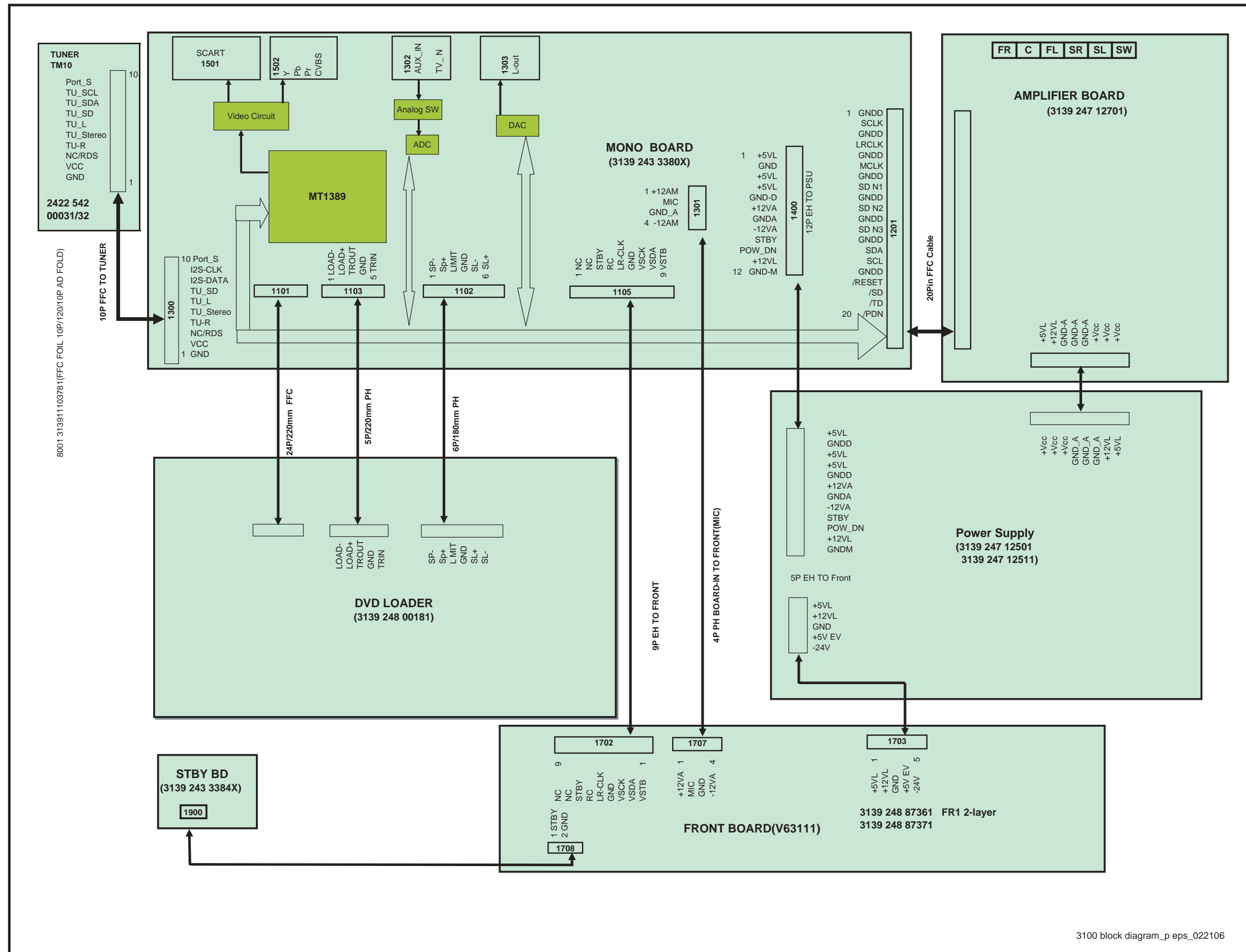
Helpful Hint:

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

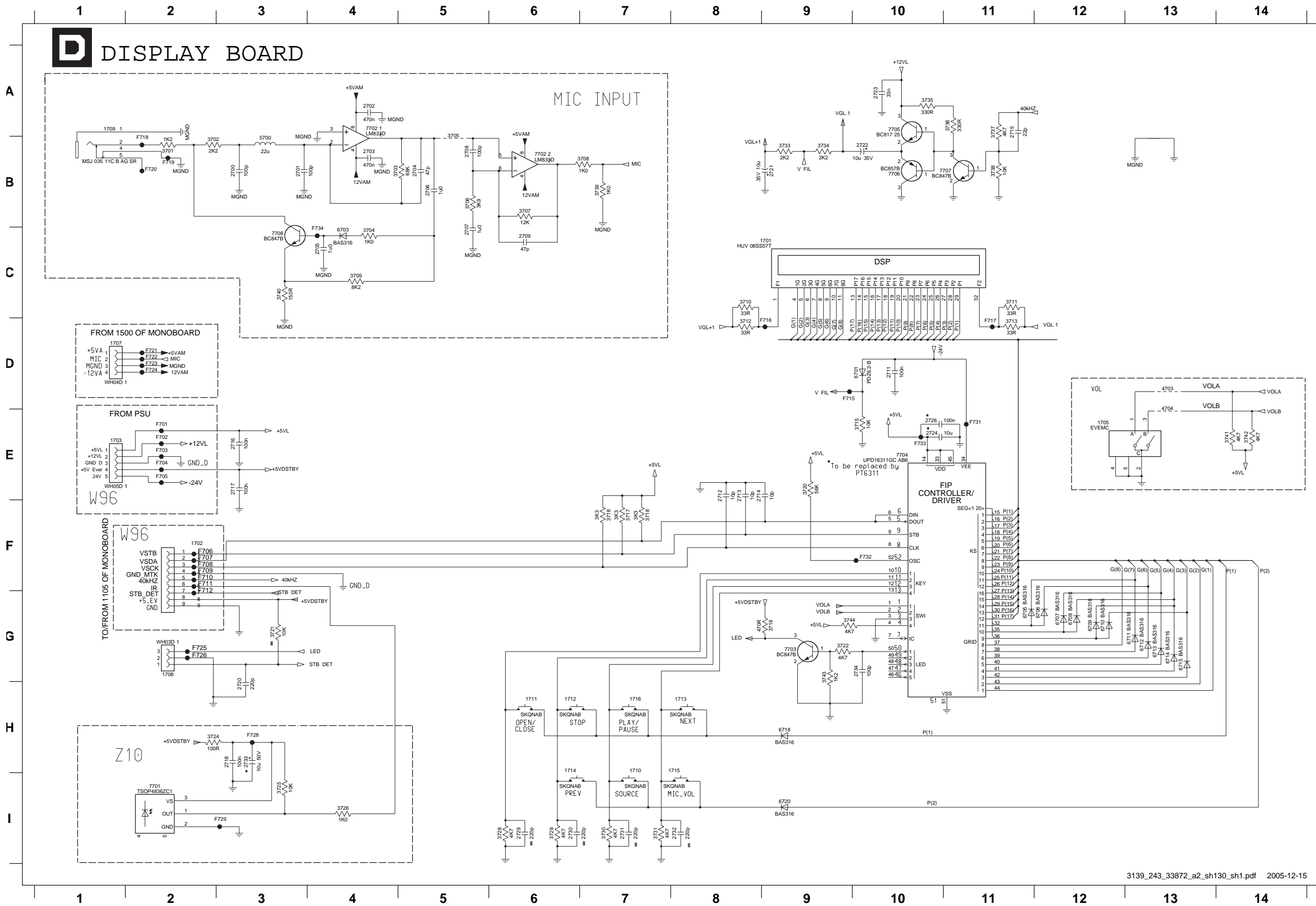
Note: Repeating the same action will toggle back to its previous tuning grid setting.

Notes:

Block Diagram

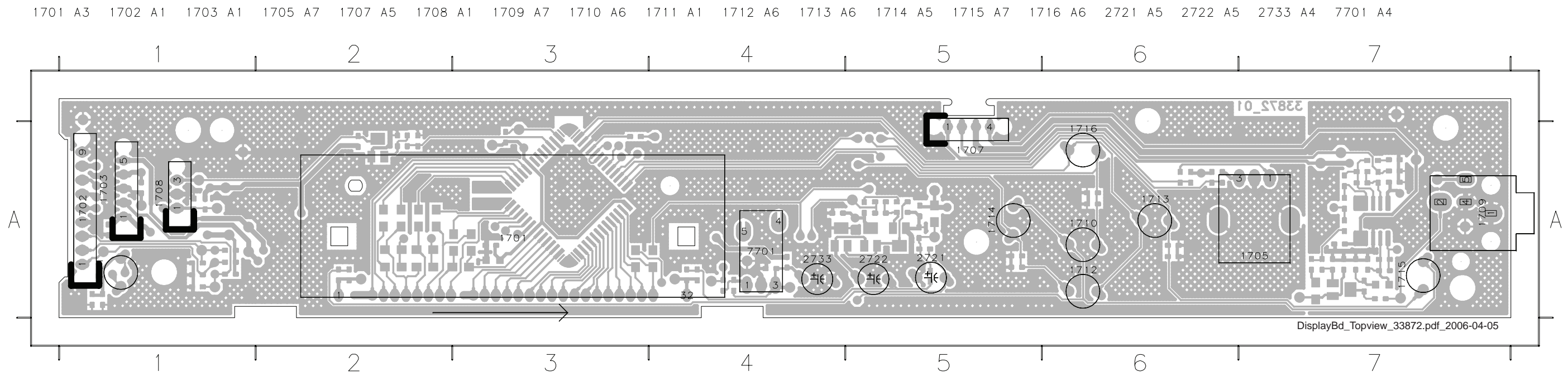


Front: Display



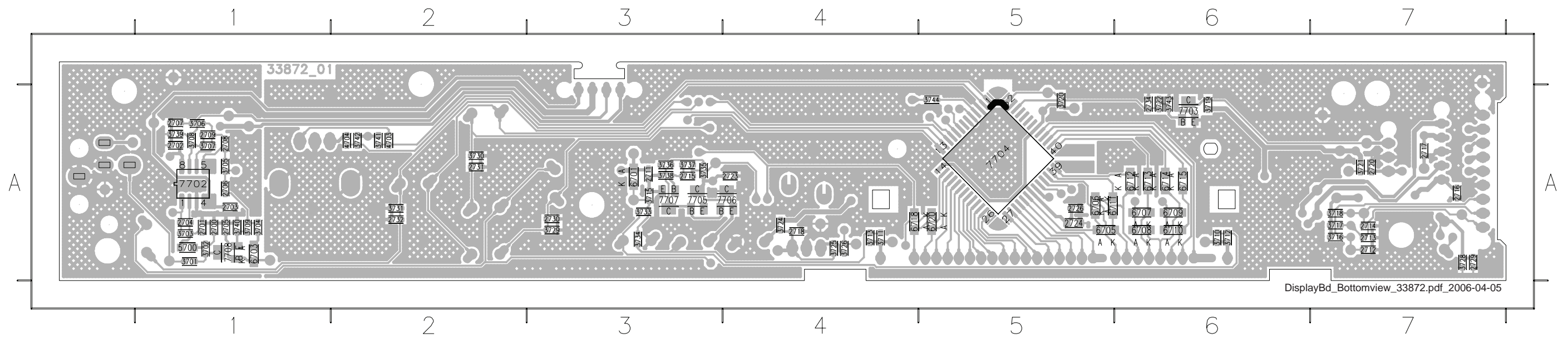
- 1701 C9
- 1702 F2
- 1703 E1
- 1705 E12
- 1707 D1
- 1708 G2
- 1709 A1
- 1710 H7
- 1711 F2
- 1712 H6
- 1715 D9
- 1716 H7
- 1718 H8
- 1719 B2
- 1720 B3
- 1721 D2
- 1722 D2
- 1723 D2
- 1724 D2
- 1725 G2
- 1726 G2
- 1727 C5
- 1728 H3
- 1729 C6
- 1731 E11
- 1732 E8
- 1733 E10
- 1734 C4
- F704 E2
- F705 E2
- F706 F2
- F707 F2
- F708 F2
- F709 F2
- F710 F2
- F711 F2
- F712 G2
- F715 D9
- F716 H7
- F717 D11
- F718 B2
- F719 B2
- F720 B2
- F721 D2
- F722 D2
- F723 D2
- F724 D2
- F725 G2
- F726 G2
- F728 H3
- F729 I3
- F731 E11
- F732 F10
- F733 E10
- F734 C4

Front: Display (topview)

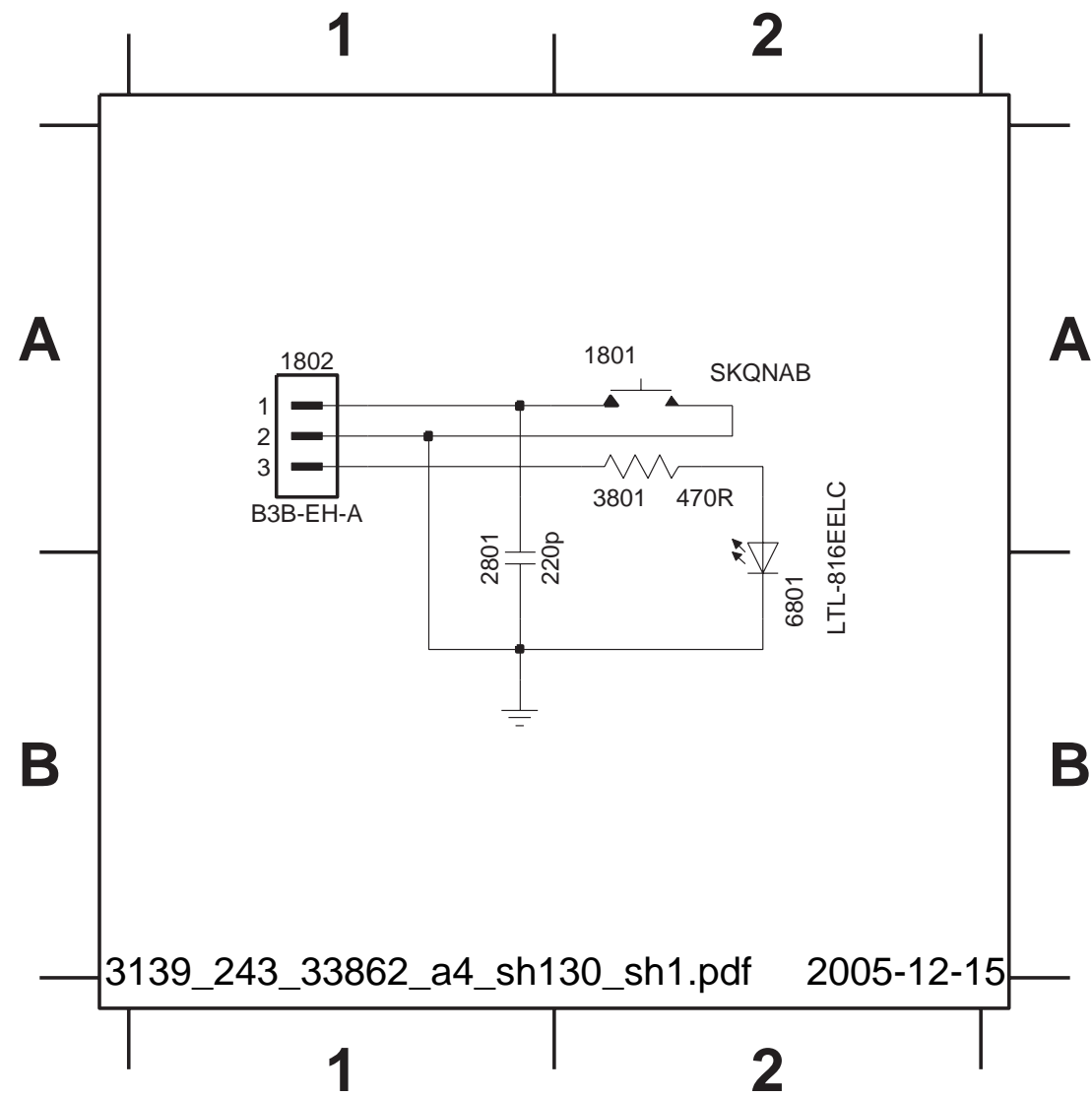


Front: Display (Bottom view)

2700	A1	2705	A1	2711	A3	2716	A7	2724	A5	2732	A2	3704	A1	3709	A1	3715	A3	3720	A5	3726	A4	3733	A3	3738	A3	3743	A6	6701	A3	6708	A6	6713	A6	7702	A1	7707	A3
2701	A1	2706	A1	2712	A7	2717	A7	2726	A5	2734	A6	3705	A1	3710	A6	3717	A7	3721	A7	3727	A7	3734	A3	3739	A1	3744	A6	6703	A1	6709	A6	6714	A6	7703	A6	7708	A1
2702	A1	2707	A1	2713	A7	2718	A4	2729	A7	2730	A1	3706	A1	3711	A4	3718	A7	3722	A6	3728	A3	3735	A3	3740	A1	4703	A2	6705	A5	6710	A6	6715	A6	7704	A5		
2703	A1	2708	A1	2714	A7	2720	A7	2730	A3	2731	A1	3707	A1	3712	A6	3719	A7	3723	A4	3729	A3	3736	A3	3741	A2	4704	A2	6706	A5	6711	A5	6716	A4	7705	A5		
2704	A1	2709	A1	2715	A3	2723	A4	2731	A2	2731	A1	3708	A1	3713	A4	3719	A6	3725	A4	3731	A2	3737	A3	3742	A2	5700	A1	6707	A6	6712	A6	6720	A5	7706	A4		

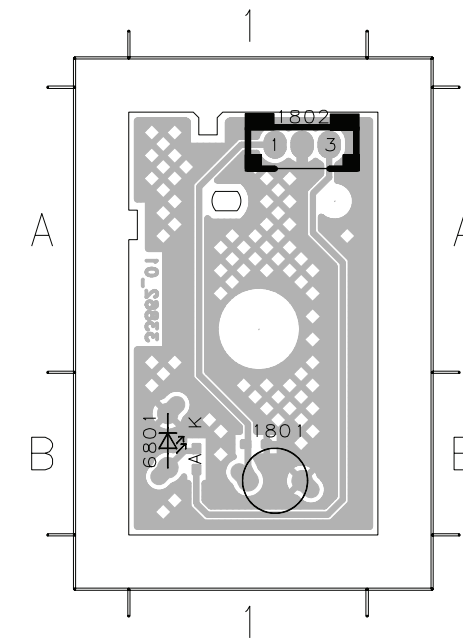


Front: Standby



- 1801 A2
- 1802 A1
- 2801 B1
- 3801 A2
- 6801 B2

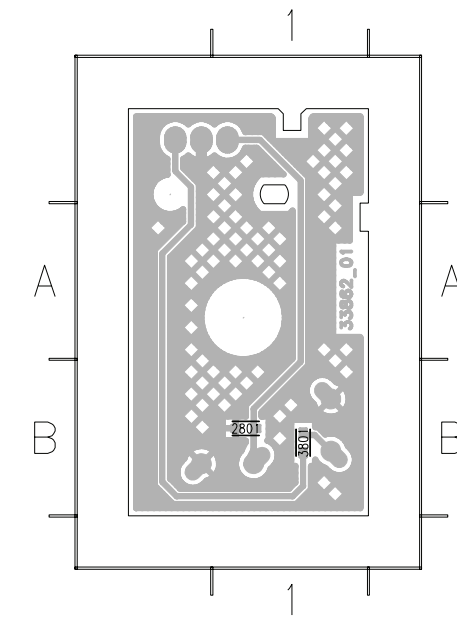
Front: Standby (Top View)



StandbyBoard_Topview_33862.pdf_2006-04-05

- 1801 B1
- 1802 A1
- 6801 B1

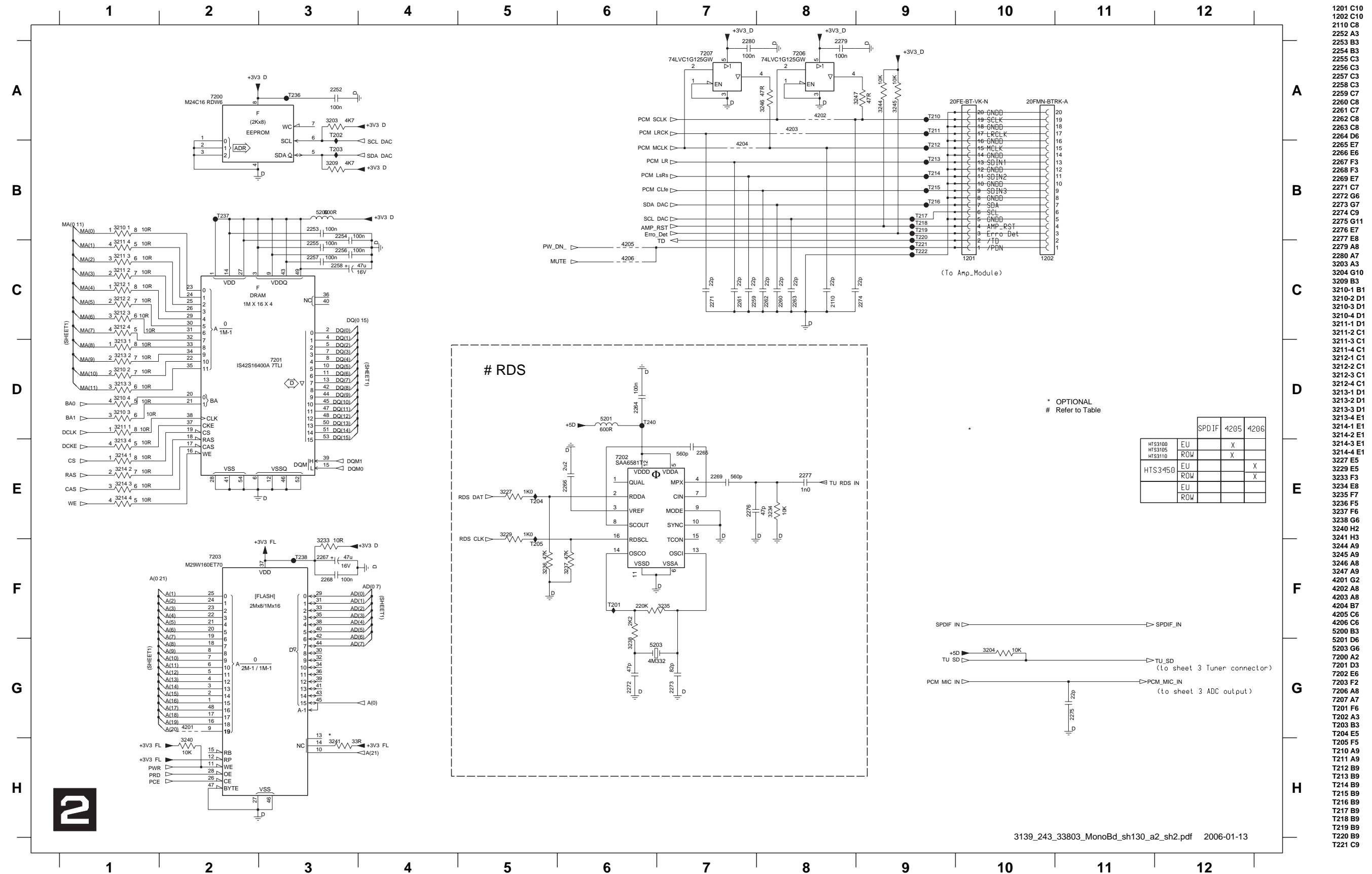
Front: Standby (Bottom View)



StandbyBoard_Bottomview_33862.pdf_2006-04-05

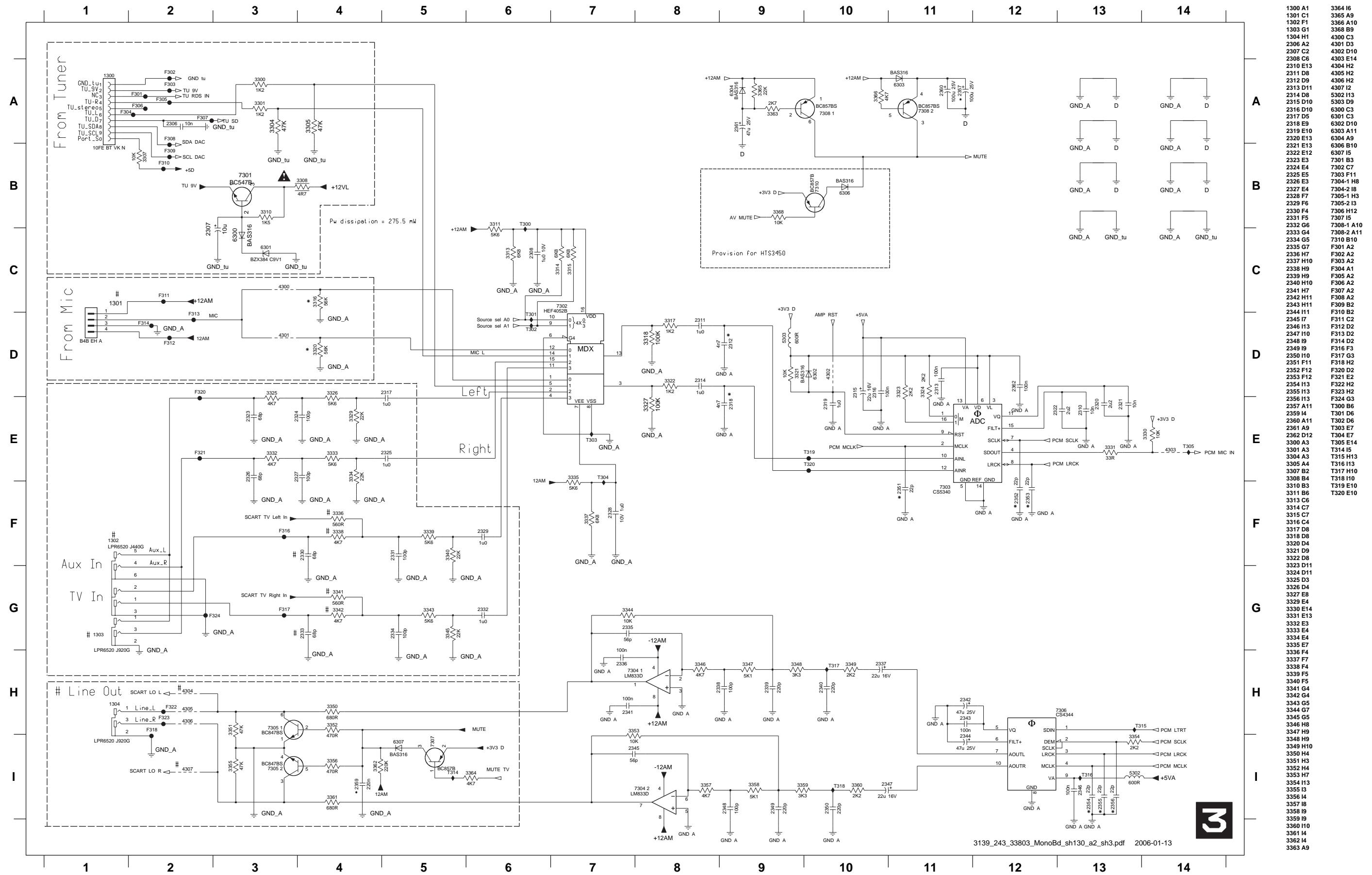
- 2801 B1
- 3801 B1

Mono Board: Circuit Diagram (Part 2)



- 1201 C10
- 1202 C10
- 2110 C8
- 2252 A3
- 2253 B3
- 2254 B3
- 2255 C3
- 2256 C3
- 2257 C3
- 2258 C3
- 2259 C7
- 2260 C8
- 2261 C7
- 2262 C8
- 2263 C8
- 2264 D6
- 2265 E7
- 2266 E6
- 2267 F3
- 2268 F3
- 2269 E7
- 2271 C7
- 2272 G6
- 2273 G7
- 2274 C9
- 2275 G11
- 2276 E7
- 2277 E8
- 2279 A8
- 2280 A7
- 3203 A3
- 3204 G10
- 3209 B3
- 3210-1 B1
- 3210-2 D1
- 3210-3 D1
- 3210-4 D1
- 3211-1 D1
- 3211-2 C1
- 3211-3 C1
- 3211-4 C1
- 3212-1 C1
- 3212-2 C1
- 3212-3 C1
- 3212-4 C1
- 3213-1 D1
- 3213-2 D1
- 3213-3 D1
- 3213-4 E1
- 3214-1 E1
- 3214-2 E1
- 3214-3 E1
- 3214-4 E1
- 3227 E5
- 3229 E5
- 3233 F3
- 3234 E8
- 3235 F7
- 3236 F5
- 3237 F6
- 3238 G6
- 3240 H2
- 3241 H3
- 3244 A9
- 3245 A9
- 3246 A8
- 3247 A9
- 4201 G2
- 4202 A8
- 4203 A8
- 4204 B7
- 4205 C6
- 4206 C6
- 5200 B3
- 5201 D6
- 5203 G6
- 7200 A2
- 7201 D3
- 7202 E6
- 7203 F2
- 7206 A8
- 7207 A7
- T201 F6
- T202 A3
- T203 B3
- T204 E5
- T205 F5
- T210 A9
- T211 A9
- T212 B9
- T213 B9
- T214 B9
- T215 B9
- T216 B9
- T217 B9
- T218 B9
- T219 B9
- T220 B9
- T221 C9
- T222 C9
- T236 A3
- T237 B2
- T238 F2
- T240 D6

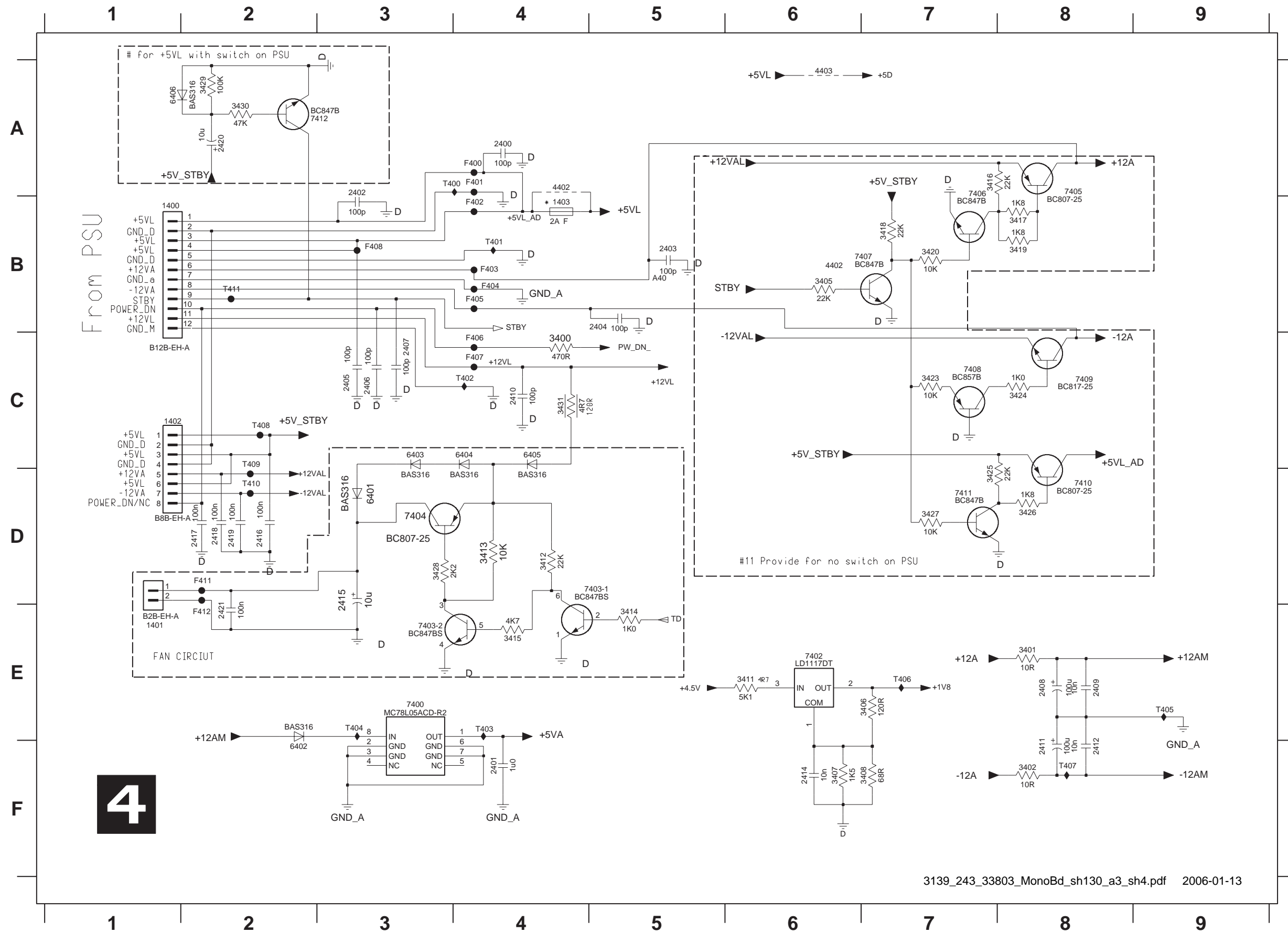
Mono Board: Circuit Diagram (Part 3)



- 1300 A1
- 1301 C1
- 1302 F1
- 1303 G1
- 1304 H1
- 2306 A2
- 2307 C2
- 2308 C6
- 2310 E13
- 2311 D8
- 2312 D9
- 2313 D11
- 2314 D8
- 2315 D10
- 2316 D10
- 2317 D5
- 2318 E9
- 2319 E10
- 2320 E13
- 2321 E13
- 2322 E12
- 2323 E3
- 2324 E4
- 2325 E5
- 2326 E3
- 2327 E4
- 2328 F7
- 2329 F6
- 2330 F4
- 2331 F5
- 2332 G6
- 2333 G4
- 2334 G5
- 2335 G7
- 2336 H7
- 2337 H10
- 2338 H9
- 2339 H9
- 2340 H10
- 2341 H7
- 2342 H11
- 2343 H11
- 2344 I11
- 2345 I7
- 2346 I13
- 2347 I10
- 2348 I9
- 2349 I9
- 2350 I10
- 2351 F11
- 2352 F12
- 2353 F12
- 2354 I13
- 2355 I13
- 2356 I13
- 2357 A11
- 2359 I4
- 2360 A11
- 2361 A9
- 2362 D12
- 3300 A3
- 3301 A3
- 3304 A3
- 3305 A4
- 3307 B2
- 3308 B4
- 3310 B3
- 3311 B6
- 3313 C6
- 3314 C7
- 3315 C7
- 3316 C4
- 3317 D8
- 3318 D8
- 3320 D4
- 3321 D9
- 3322 D8
- 3323 D11
- 3324 D11
- 3325 D3
- 3326 D4
- 3327 E8
- 3329 E4
- 3330 E14
- 3331 E13
- 3332 E3
- 3333 E4
- 3334 E4
- 3335 E7
- 3336 F4
- 3337 F7
- 3338 F4
- 3339 F5
- 3340 F5
- 3341 G4
- 3342 G4
- 3343 G5
- 3344 G7
- 3345 G5
- 3346 H8
- 3347 H9
- 3348 H9
- 3349 H10
- 3350 H4
- 3351 H3
- 3352 H4
- 3353 H7
- 3354 I13
- 3355 I3
- 3356 I4
- 3357 I8
- 3358 I9
- 3359 I9
- 3360 I10
- 3361 I4
- 3362 I4
- 3363 A9
- 3364 I6
- 3365 A9
- 3366 A10
- 3368 B9
- 4300 C3
- 4301 D3
- 4302 D10
- 4303 E14
- 4304 H2
- 4305 H2
- 4306 H2
- 4307 I2
- 5302 I13
- 5303 D9
- 6300 C3
- 6301 C3
- 6302 D10
- 6303 A11
- 6304 A9
- 6306 B10
- 6307 I5
- 7301 B3
- 7302 C7
- 7303 F11
- 7304-1 H8
- 7304-2 I8
- 7305-1 H3
- 7305-2 I3
- 7306 H12
- 7307 I5
- 7308-1 A10
- 7308-2 A11
- F301 A2
- F302 A2
- F303 A2
- F304 A1
- F305 A2
- F306 A2
- F307 A2
- F308 A2
- F309 B2
- F310 B2
- F311 C2
- F312 D2
- F313 D2
- F314 D2
- F316 F3
- F317 G3
- F318 H2
- F320 D2
- F321 E2
- F322 H2
- F323 H2
- F324 G3
- T300 B6
- T301 D6
- T302 D6
- T303 E7
- T304 E7
- T305 E14
- T314 I5
- T315 H13
- T316 H13
- T317 H10
- T318 H10
- T319 E10
- T320 E10

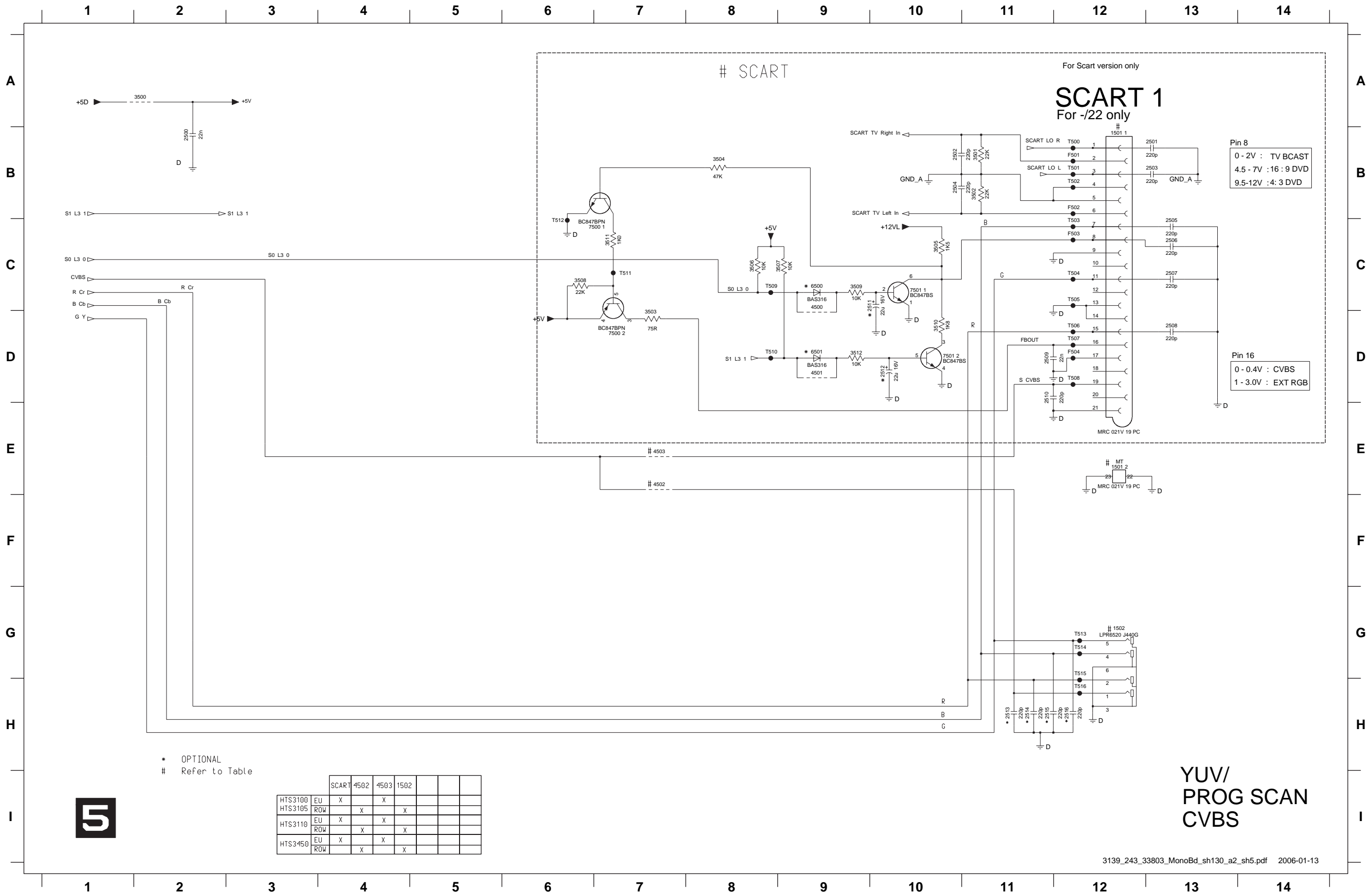


Mono Board: Circuit Diagram (Part 4)



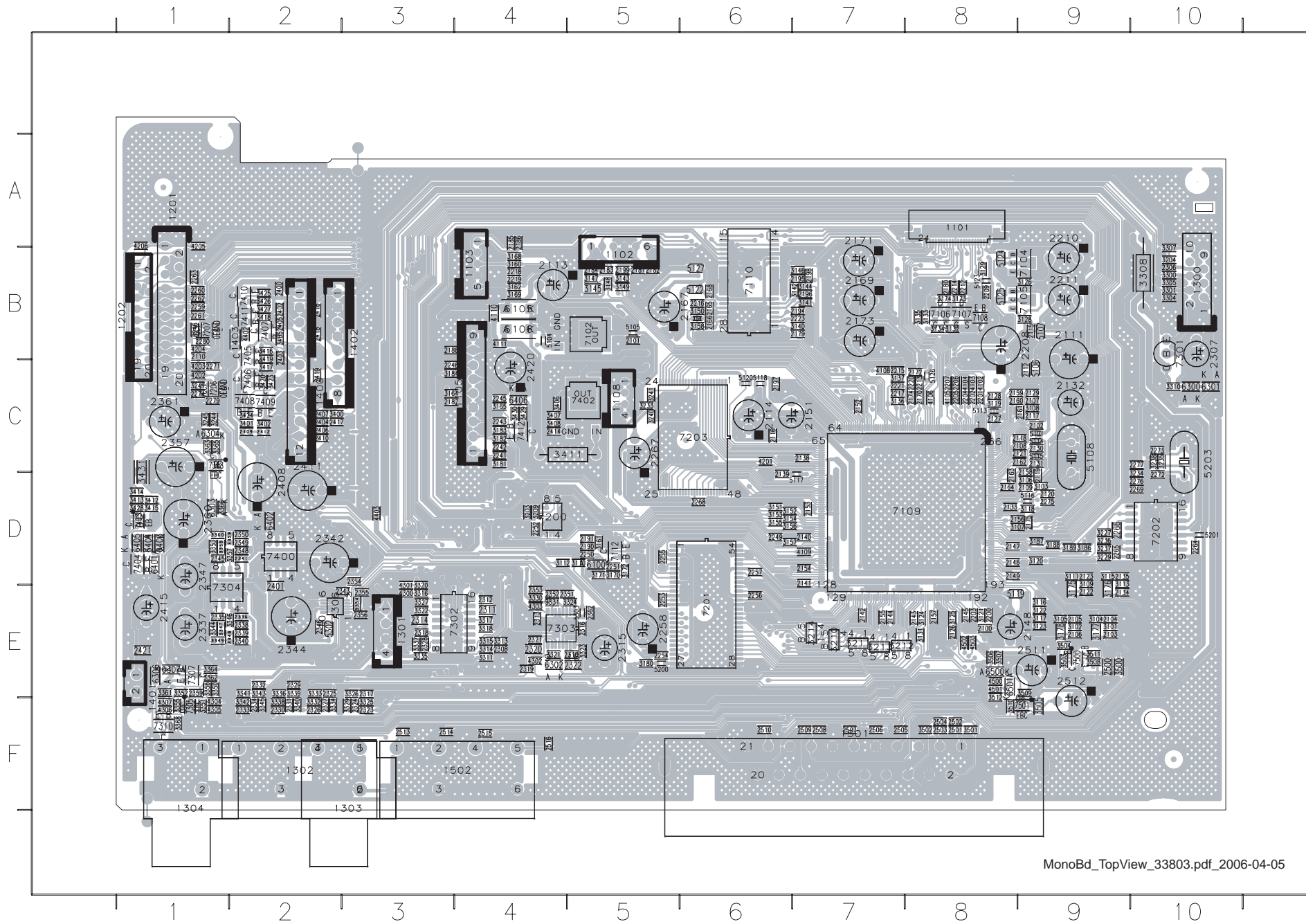
- 1400 B1
- 1401 E1
- 1402 C1
- 1403 B4
- 2400 A4
- 2401 F4
- 2402 A3
- 2403 B5
- 2404 B5
- 2405 C3
- 2406 C3
- 2407 C3
- 2408 E8
- 2409 E8
- 2410 C4
- 2411 F8
- 2412 F8
- 2414 F6
- 2415 D3
- 2416 D2
- 2417 D2
- 2418 D2
- 2419 D2
- 2420 A2
- 2421 E2
- 3400 C4
- 3401 E8
- 3402 F8
- 3405 B6
- 3406 E7
- 3407 F6
- 3408 F7
- 3411 E6
- 3412 D4
- 3413 D4
- 3414 E5
- 3415 E4
- 3416 A7
- 3417 B8
- 3418 B7
- 3419 B8
- 3420 B7
- 3423 C7
- 3424 C8
- 3425 D7
- 3426 D8
- 3427 D7
- 3428 D3
- 3429 A2
- 3430 A2
- 3431 C4
- 4402 A4
- 4403 A6
- 6401 D3
- 6402 F2
- 6403 C3
- 6404 C4
- 6405 C4
- 6406 A1
- 7400 E3
- 7402 E6
- 7403-1 D5
- 7403-1 E3
- 7404 D3
- 7405 A8
- 7406 A7
- 7407 B6
- 7408 C7
- 7409 C8
- 7410 D8
- 7411 D7
- 7412 A2
- F400 A4
- F401 A4
- F402 B4
- F403 B4
- F404 B4
- F405 B4
- F406 B4
- F407 B4
- F408 B3
- F409 B3
- F410 D2
- F411 D2
- F412 E2
- F413 D2
- F414 D2
- F415 D2
- F416 D2
- F417 D2
- F418 D2
- F419 D2
- F420 A2
- F421 E2
- F422 A2
- F423 C7
- F424 C8
- F425 D7
- F426 D8
- F427 D7
- F428 D3
- F429 A2
- F430 A2
- F431 C4
- F432 A2
- F433 C4
- F434 B3
- F435 D2
- F436 A2
- F437 B3
- F438 B3
- F439 B3
- F440 B3
- F441 B3
- F442 B3
- F443 B3
- F444 B3
- F445 B3
- F446 B3
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- F451 B3
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- T473 D
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- T477 D
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- T482 D
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- T499 D
- T500 D

Mono Board: Circuit Diagram (Part 5)



- 1501-1 B12
- 1501-2 E12
- 1502 G12
- 2500 B2
- 2501 B13
- 2502 B10
- 2503 B13
- 2504 B10
- 2505 C13
- 2506 C13
- 2507 C13
- 2508 D13
- 2509 D11
- 2510 D11
- 2511 C10
- 2512 D10
- 2513 H11
- 2514 H11
- 2515 H11
- 2516 H12
- 3500 A2
- 3501 B11
- 3502 B11
- 3503 C7
- 3504 B8
- 3505 C10
- 3506 C8
- 3507 C9
- 3508 C6
- 3509 C9
- 3510 D10
- 3511 C7
- 3512 D9
- 4500 C9
- 4501 D9
- 4502 E7
- 4503 E7
- 6500 C9
- 6501 D9
- 7500-1 C7
- 7500-2 D7
- 7501-1 C10
- 7501-2 D10
- F501 B12
- F502 B12
- F503 C12
- F504 D12
- T500 B12
- T501 B12
- T502 B12
- T503 C12
- T504 C12
- T505 C12
- T506 D12
- T507 D12
- T508 D12
- T509 C8
- T510 D8
- T511 C7
- T512 C6
- T513 G12
- T514 G12
- T515 G12
- T516 H12

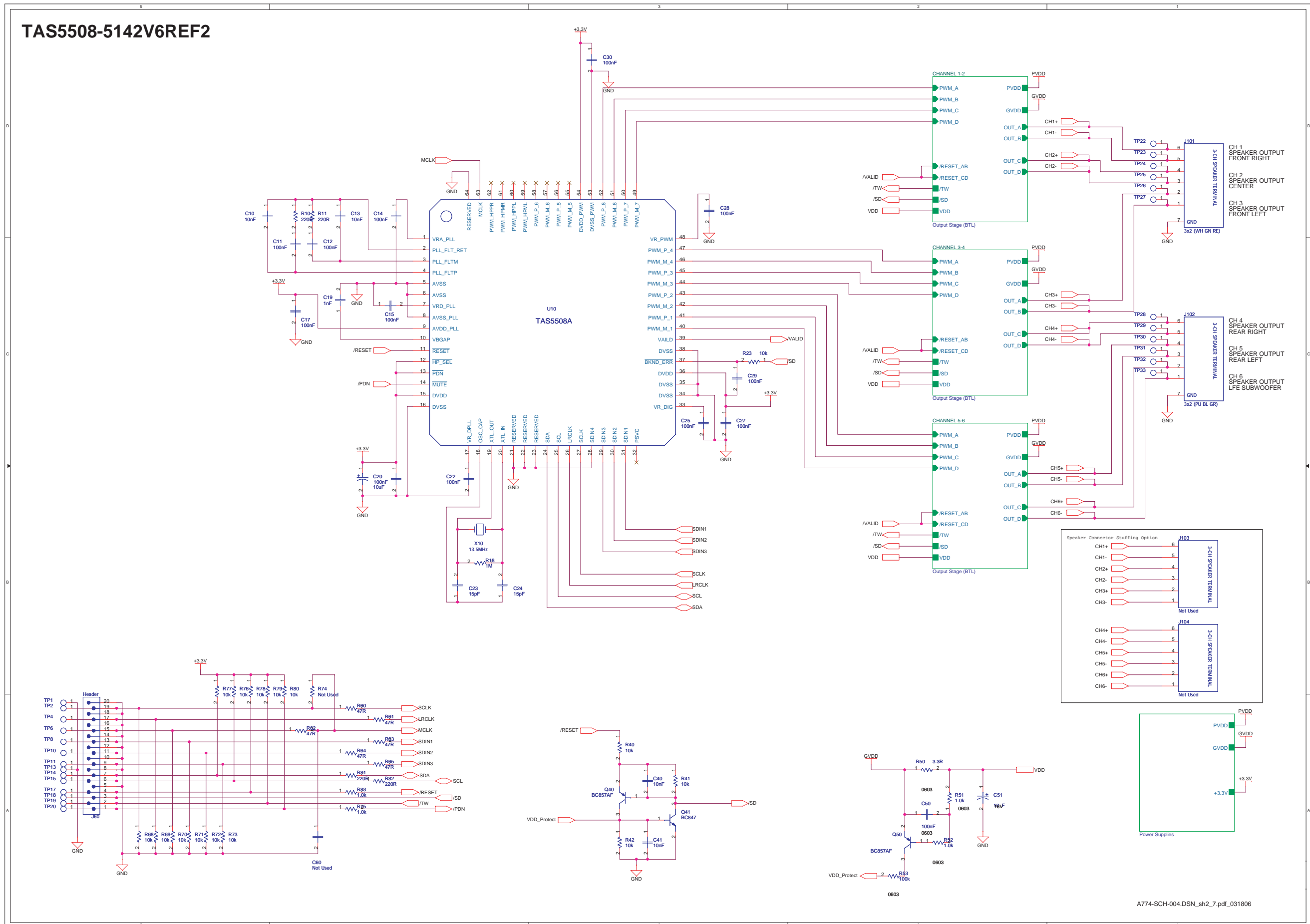
Layout: Mono Board (Topview)



Legend for component symbols and values:

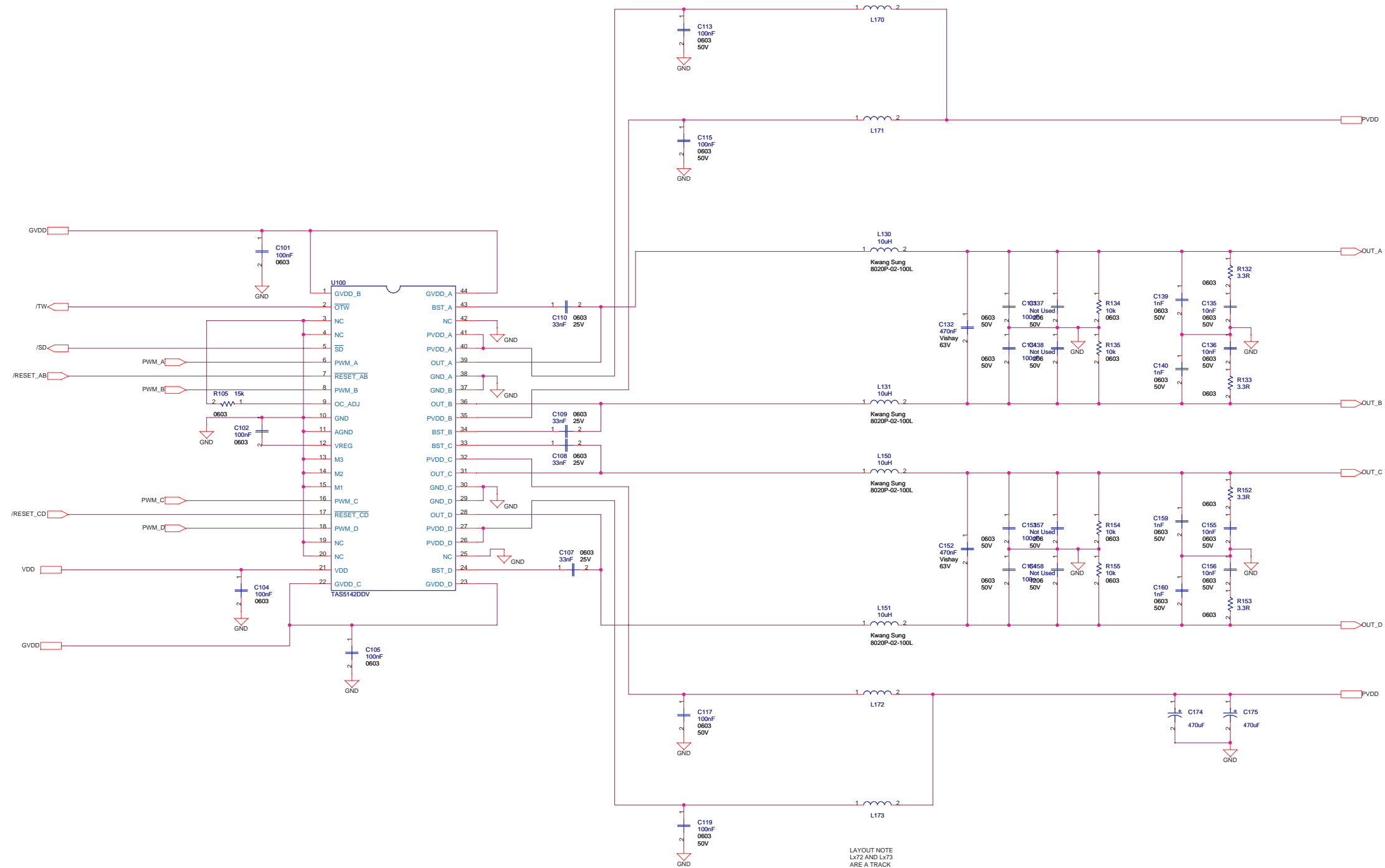
1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120
1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140
1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160
1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180
1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220
1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240
1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260
1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280
1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300
1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320
1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340
1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360
1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380
1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400
1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420
1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440
1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460
1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480
1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500

For information only (Amp Board)



For information only (Amp Board)

POWER OUTPUT STAGE (BTL)



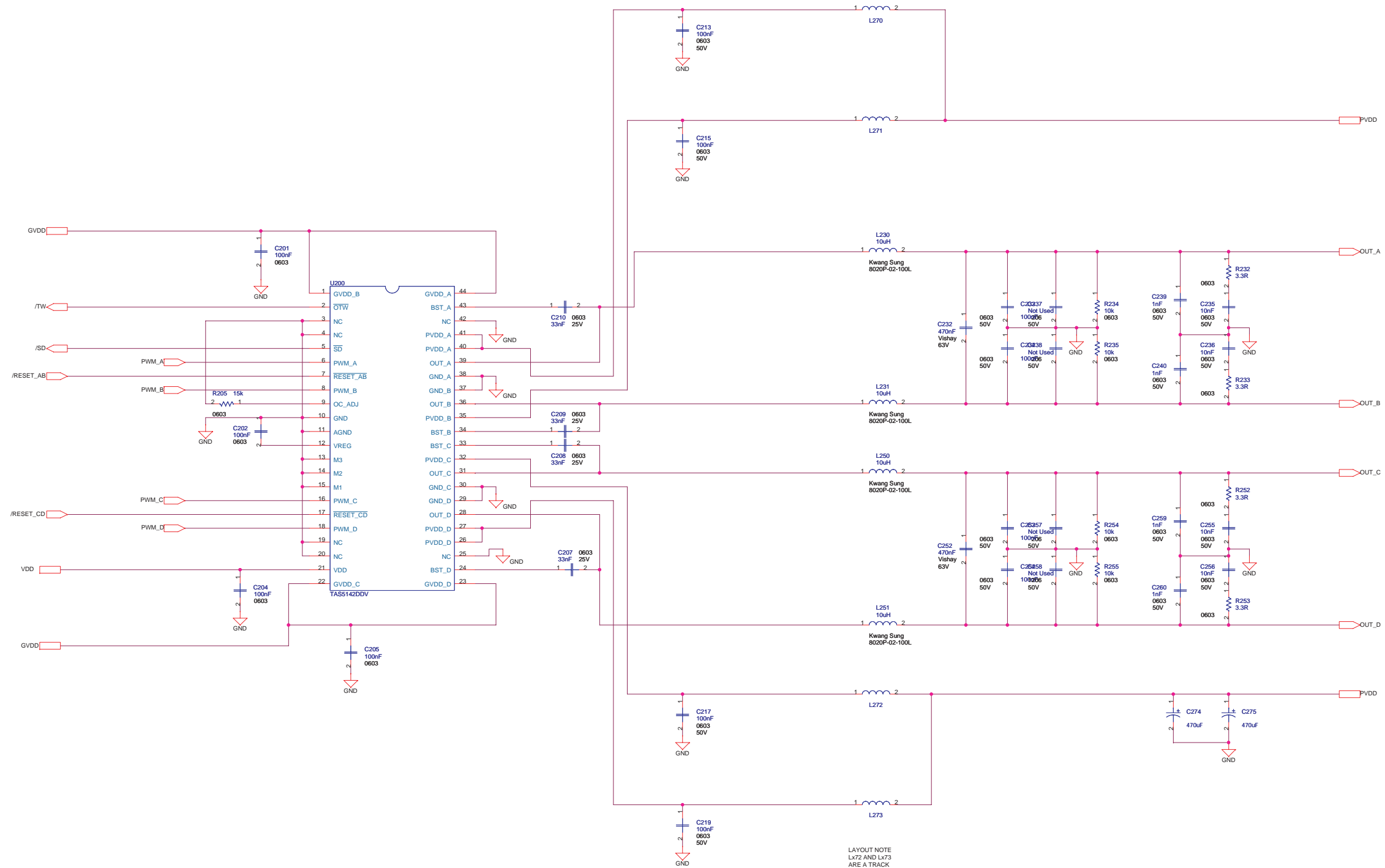
LAYOUT NOTE
Lx72 AND Lx73
ARE A TRACK
IN THE PCB.
W TBD MM
L TBD MM

Mode Table

M2	M1	Type	Description
L	L	2x2BTL	FuI Protection, 2N+2 mode
L	H	2x2BTL	No OLP - Latching Shutdown, 2N + 2, No Pulse Stretcher
H	L	2x2BTL	FuI Protection, 1N + 2 mode
H	H	1x2BTL	FuI Protection, 1N + 2 mode (PBTL)

For information only (Amp Board)

POWER OUTPUT STAGE (BTL)



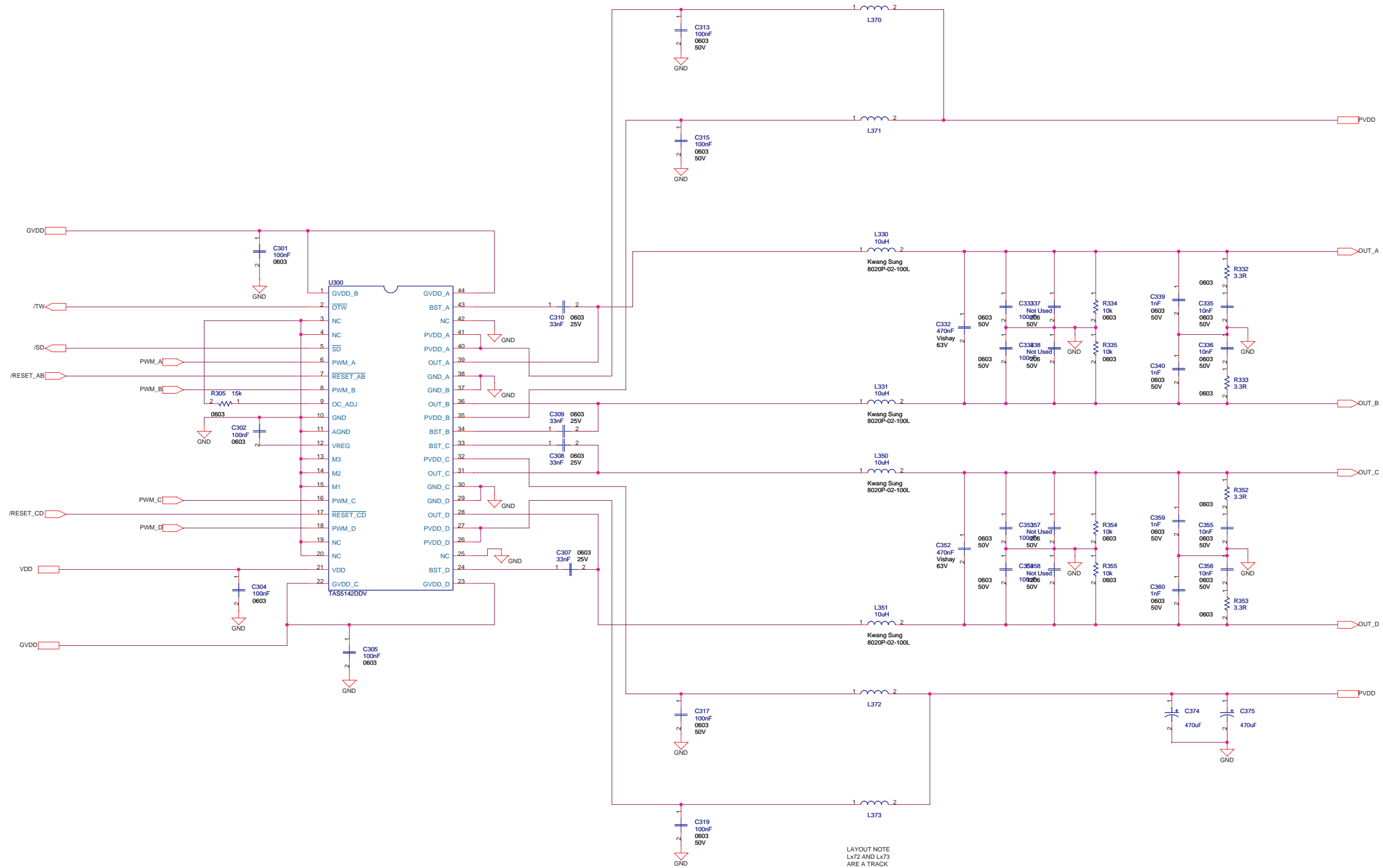
LAYOUT NOTE
Lx72 AND Lx73
ARE A TRACK
IN THE PCB
W TBD MM
L TBD MM

Mode Table

M2	M1	Type	Description
L	L	2xBLT	Full Protection, 2N+2 mode
L	H	2xBLT	No OLP - Latching Shutdown, 2N + 2, No Pulse Stretcher
H	L	2xBLT	Full Protection, 1N + 2 mode
H	H	1xPBLT	Full Protection, 1N + 2 mode (PBLT)

For information only (Amp Board)

POWER OUTPUT STAGE (BTL)

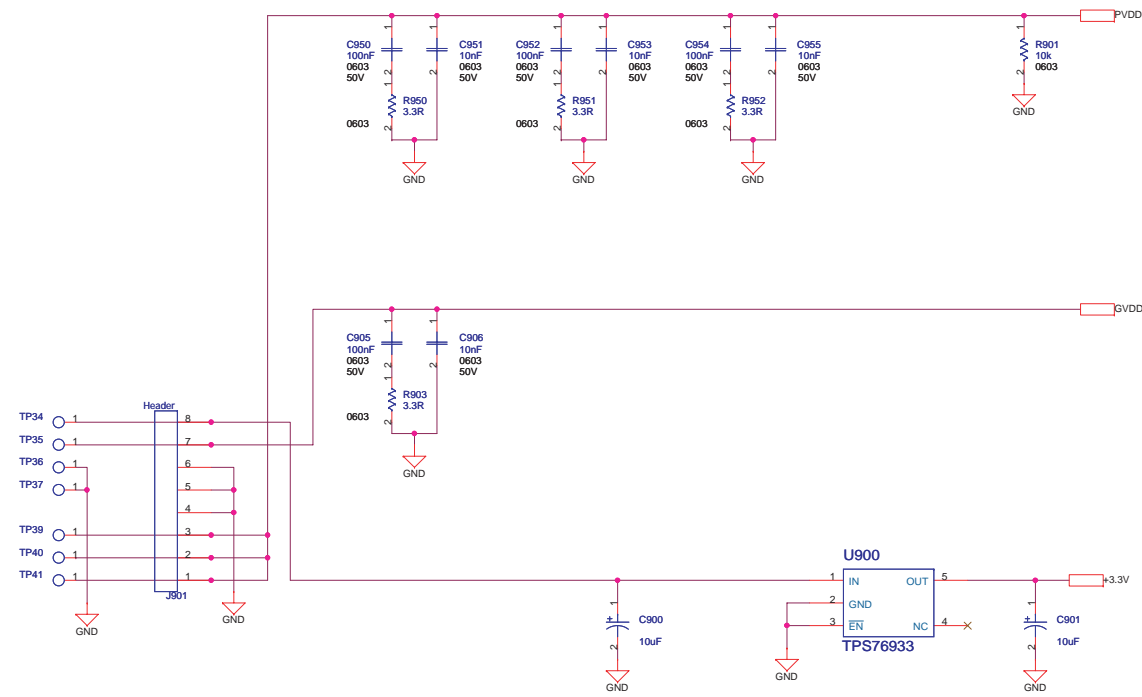


LAYOUT NOTE
Lx72 AND Lx73
ARE A TRACK
IN THE PCB.
W TBD MM
L TBD MM

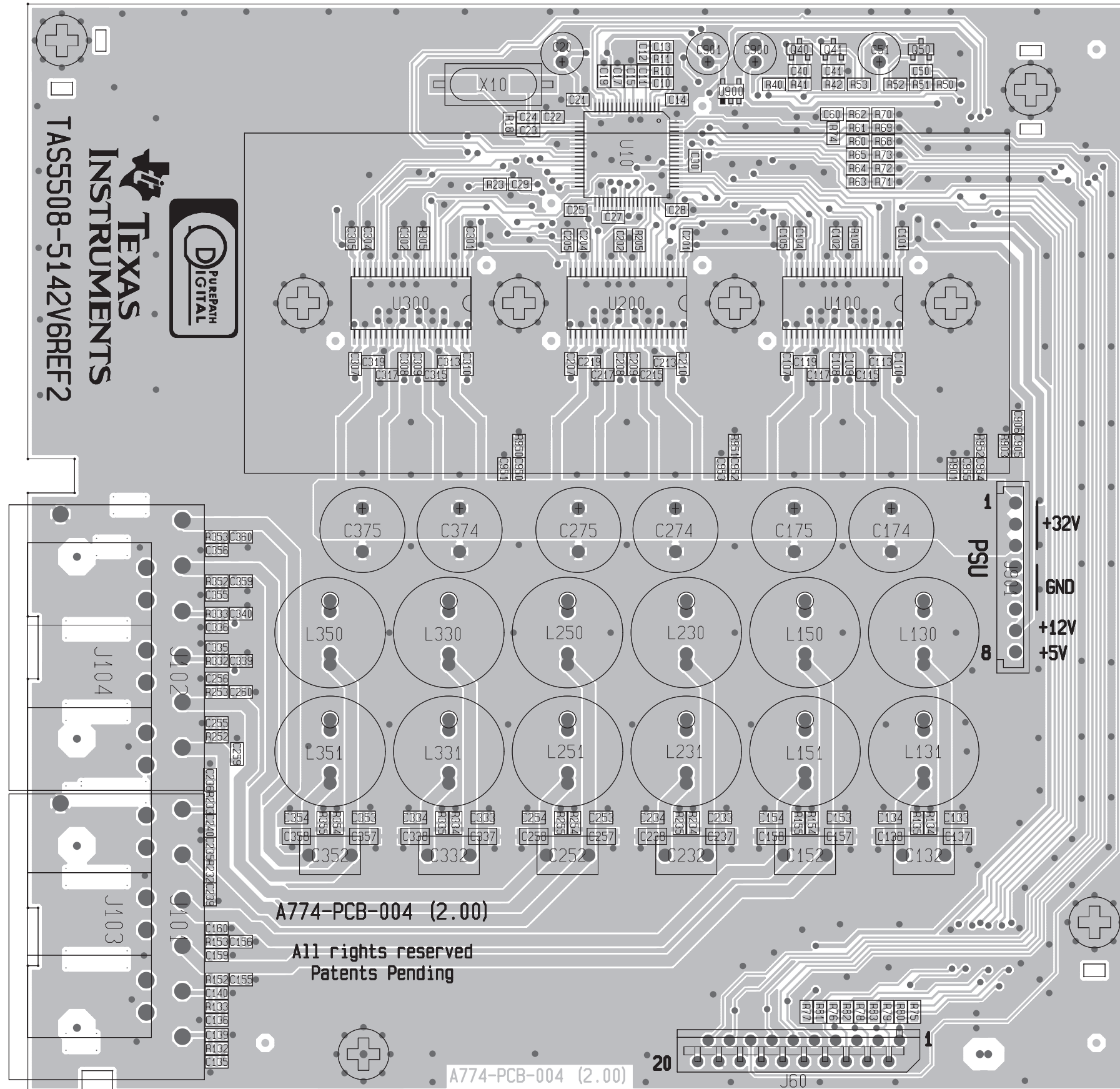
Mode Table

M2	M1	Type	Description
L	L	2x-BTL	Full Protection, 2N+2 mode
L	H	2x-BTL	No OLP - Latching Shutdown, 2N + 2, No Pulse Stretcher
H	L	2x-BTL	Full Protection, 1N + 2 mode
H	H	1x-PBTL	Full Protection, 1N + 2 mode (PBTL)

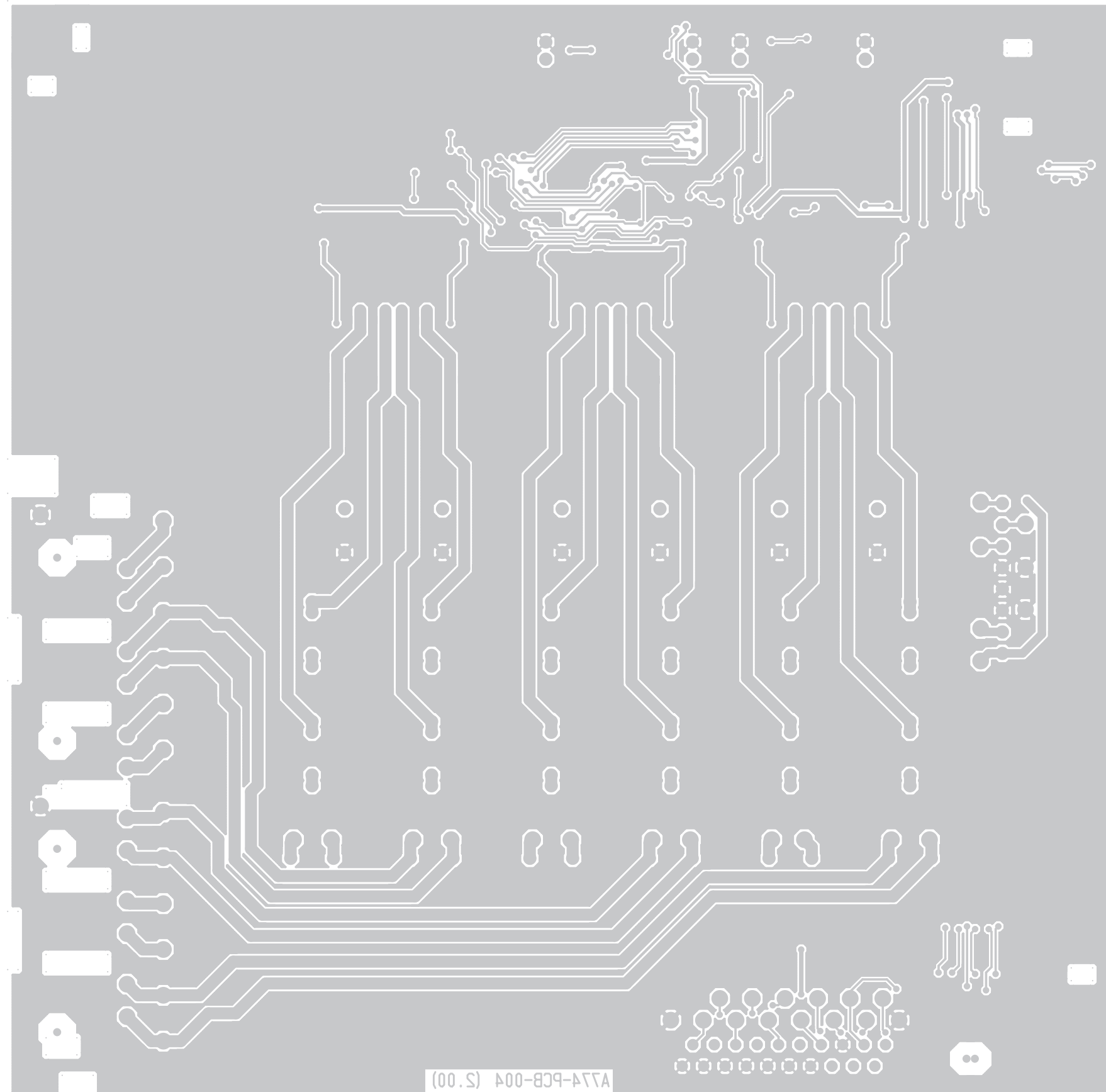
POWER SUPPLIES



Amp Board Layout : Topview



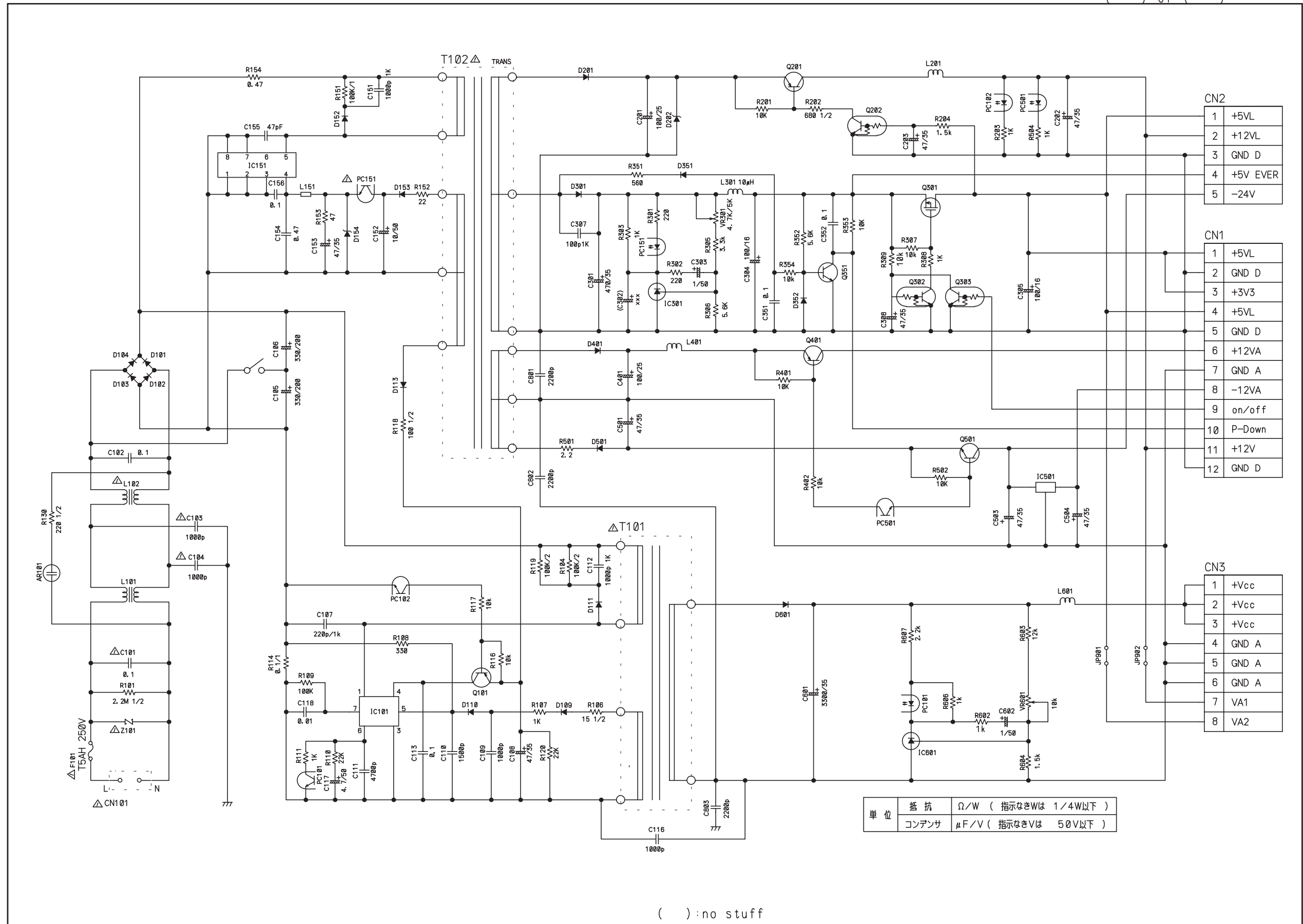
Amp Board Layout : Bottomview



A774-PCB-004 (S.00)

PSU Circuit Diagram (For information only)

() of ()



CN2

1	+5VL
2	+12VL
3	GND D
4	+5V EVER
5	-24V

CN1

1	+5VL
2	GND D
3	+3V3
4	+5VL
5	GND D
6	+12VA
7	GND A
8	-12VA
9	on/off
10	P-Down
11	+12V
12	GND D

CN3

1	+Vcc
2	+Vcc
3	+Vcc
4	GND A
5	GND A
6	GND A
7	VA1
8	VA2

単位	抵抗	Ω/W (指示なきWは 1/4W以下)
	コンデンサ	μF/V (指示なきVは 50V以下)

():no stuff

9. Exploded View of the Set

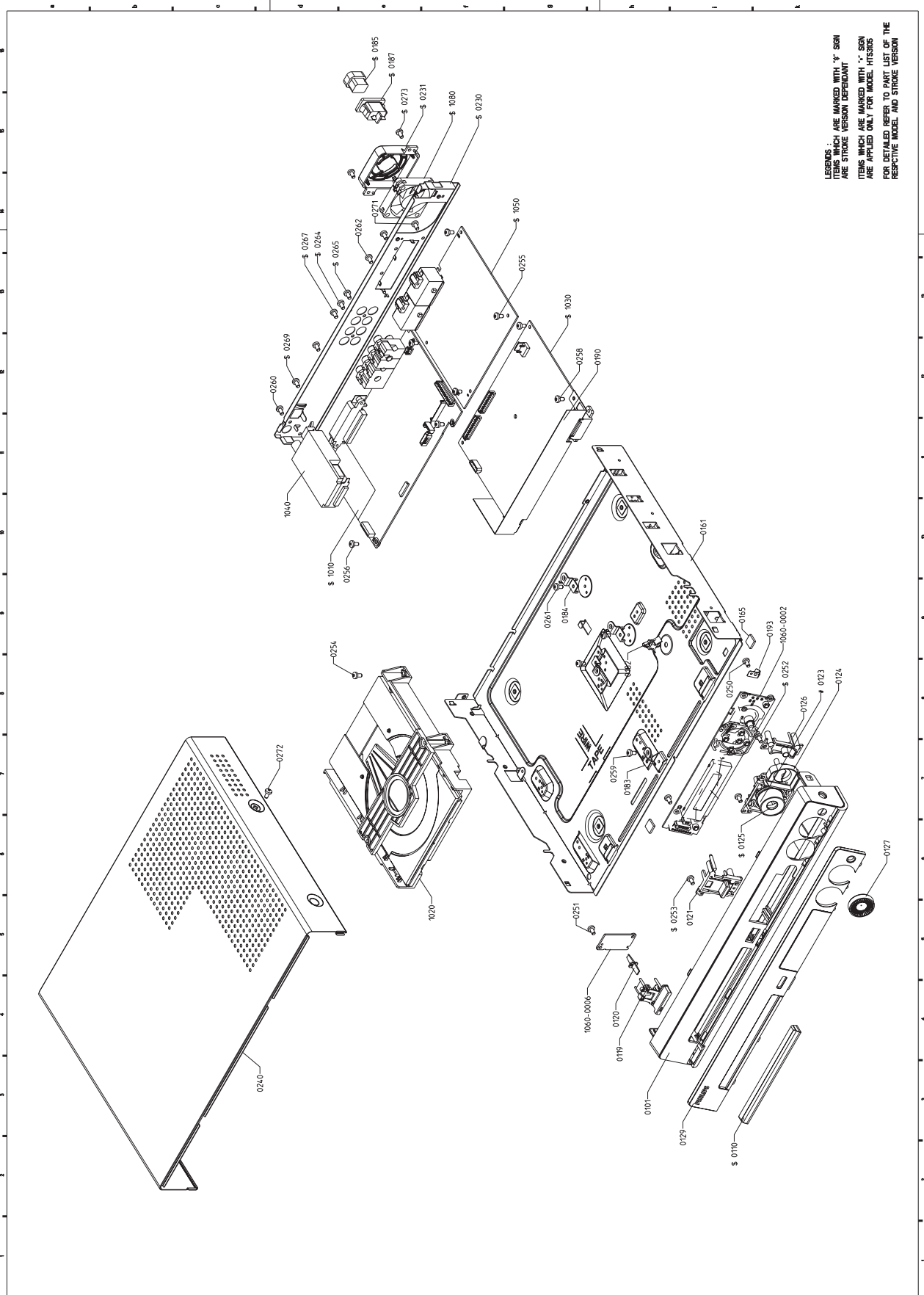


Figure 9-1

HTS3107/55**MISCELLANEOUS**

0110	3139 244 12101	COVER CD TRAY HTS3107/55
0185	4822 532 60948	BUSH
0231	3139 244 11011	COVER FAN HTS3105
0331	2422 076 00546	FM AERIAL 24AWG BK B
0332	2422 549 45386	ANT AM LOOP LAN-011 B
0332	2422 549 45813	ANT AM LOOP 039S20014 B
0333	2422 549 00901	REMOTE CONTR HTS3100-KOK B
0336	2422 070 00026 △	MAINSCORD BRZ 10A 1M85 VH B
0337	3139 128 73010	MAINS PLUG ADAPTER
0340	2422 076 00662	CBLE CINCH 1M7 CINCH 1P YE B
1010	3139 248 87711	PCBAS MONO HTS3110 ROW
1030	3139 247 12721	MODULE PSU 06T400M WR
1040	2422 542 00032	TUN A F ENG06806QRF USA B
1050	3139 247 12251	MODULE AMP-05-02 500W
1060	3139 248 87671	PCBAS FRONT HTS3110 ROW
1080	2822 031 00048	FAN 12VDC 0.5W 3700RPM B
8001	3139 241 01381	FFC FOIL10P/120/10P AD FOLD
8005	3139 241 02011	FFC FOIL 20P/140/20P AD
P001	3141 079 36151	FRAME ASSY HTS3110/75
P002	3141 079 36671	FRONT CAB ASSY HTS3107/55

LOADER ASSY WXD8829 KHM313 RX

0151	2422 549 00493	DVD LOADER WXD-8829(Y) B
0152	2422 549 00629	DVD MECHANISM KHM-313AAA Y
1101	3139 241 00341	FFC FOIL 24P/220/24P AD 0.5MMP

BOX SPK ASSY SW-3107 P

9965 000 38109	SW3107 SUBWOOFER BOX
9965 000 34997	RUBBER FOOT SW
9965 000 34998	CABLE A'SSY 5.3M PURPLE SMK

BOX SPK ASSY CS-3107 P

9965 000 38110	SPEAKER BOX CENTER
9965 000 34994	CABLE A'SSY 5.2M GREEN SMK S
9965 000 34995	RUBBER FOOT 39.5LX5.5WX2T
9965 000 38111	SPEAKER BOX FRONT-L
9965 000 38112	SPEAKER BOX FRONT-R
9965 000 38113	SPEAKER BOX REAR-L
9965 000 38114	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 34991	RUBBER FOOT 58.5LX5.5WX3T
9965 000 34992	RUBBER FOOT 24LX6WX1T (L)