Service
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Service Manual

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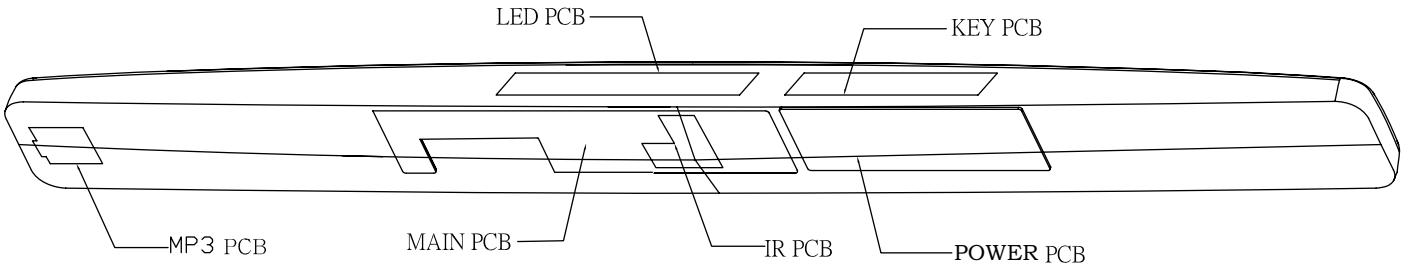
Published by RY-LYF 1123 AVM Service Audio Printed in The Netherlands Subject to modification

GB 3139 785 35541

Version 1.1

PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions / Features	HTS3111 /12	HTS3111 /05
Output Power - 100W	X	X
Voltage (110-240V)	X	X
AUX	X	X

REPAIR SCENARIO MATRIX:

Type/Versions / Board in used	HTS3111 /12	HTS3111 /05
Main+MP3+IR Board	C	C
Key Board	C	C
Power Board	C	C
LED Board	C	C

*Bd = Board Level Replacement
*C = Component Level Repair

SPECIFICATIONS

Amplifier

Total output power..... 100 W RMS (30%THD)
..... 75 W RMS (10% THD)
Frequency response..... 20 Hz-20 kHz /±3dB
Signal-to-noise ratio..... > 65 dB (CCIR) /(A-weighted)
Input sensitivity:
AUX ..... 1.0 V
MP3 LINK ..... 0.5 V

Audio

S/PDIF Digital audio input:
Coaxial..... IEC 60958-3
Optical ..... TOSLINK

Main Unit

Power supply ..... 110-240 V~; 50-60 Hz
Power consumption ..... 20 W
Standby power consumption ..... ≤ 1 W
Impedance..... 4 ohm woofer, 4 ohmtweeter
Speaker drivers ..... 65 mm (2.5”) woofer, 38mm (1.5”) tweeter
Frequency response..... 150 Hz ~ 20 kHz
Dimensions (WxHxD) ..... 945 x 93 x 58mm
Weight ..... 1.7 kg

Subwoofer

Impedance..... 3 ohm
Speaker drivers ..... 165 mm (6.5”) woofer
Frequency response..... 40 Hz-150 Hz
Dimensions (WxHxD) ..... 123 x 309 x 369mm
Weight ..... 3.81 kg
Cable length ..... 4 m

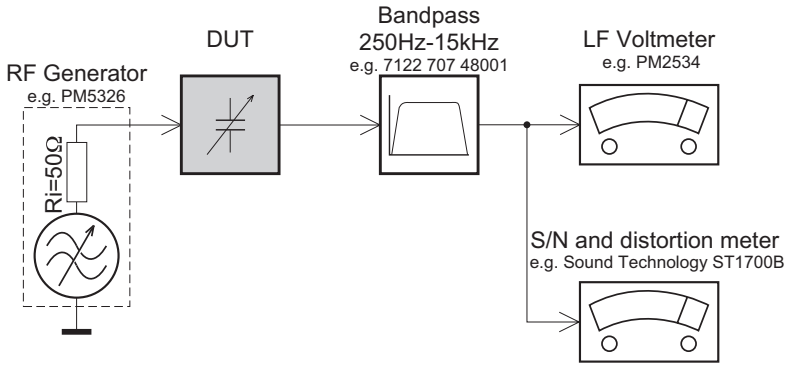
Wall Mount

Dimensions (WxHxD) ..... 260 x 40 x 15mm
Weight ..... 0.16 kg

Specifications subject to change without prior notice.

MEASUREMENT SETUP

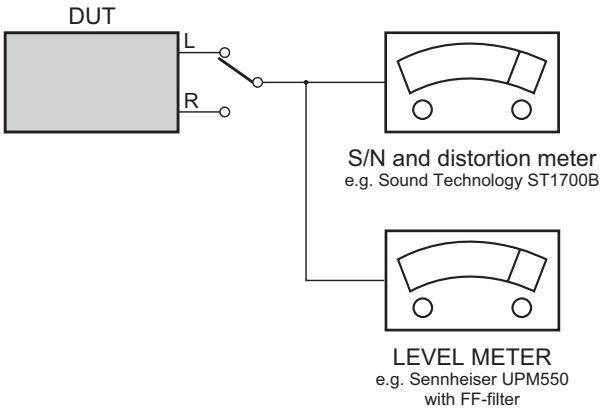
Tuner FM



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

CD

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



SERVICE AIDS

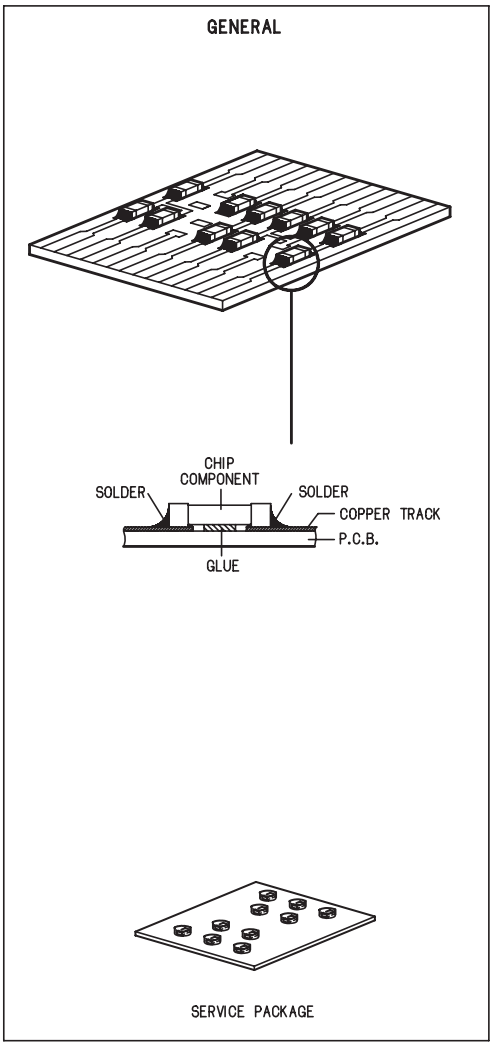
Service Tools:

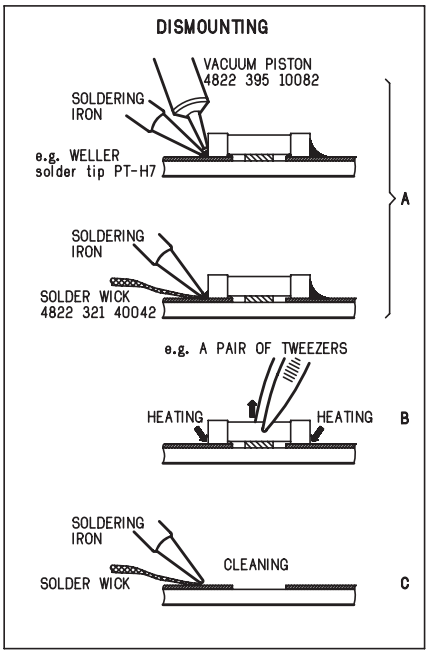
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 .....4822 395 50145
Torx driver T10 extended 4822 395 50423

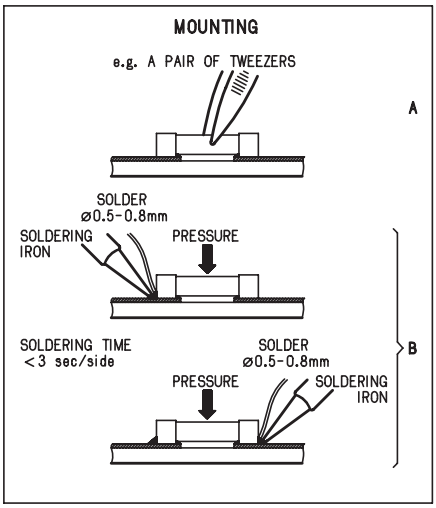
Compact Disc:

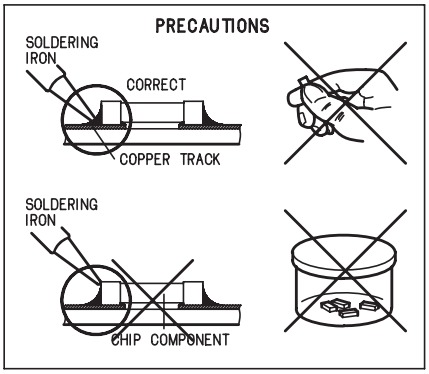
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

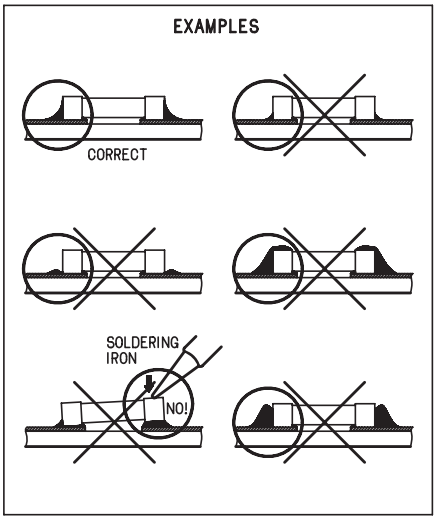
HANDLING CHIP COMPONENTS











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, estention 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 symbol ⚠ .

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.

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".

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 - 1

REPAIR INSTRUCTIONS

hts3111 REPAIR INSTRUCTION

MAIN UNIT REPAIR CHART

- A — All functions are not working
- B — All functions have no sound
- C — Aux In has no sound
- D — MP3 In has no sound
- E — coaxial /optical input has no sound

A — All functions are not working

- Check all cables of system are loose or bad insert
  - YES → Re-insert and fix the cable
  - NO ↓
- Standby led of panel whether is light
  - NO → check output of BK3V3 on the top of power board
  - YES ↓
- Check IC505 of main board and their conjoint parts

B — All functions have no sound

- check pin29 and pin9 of CN501(on the top of main pcb) whether are +30.4V and +12V
  - NO → Check switch power and the conjoint parts
  - YES ↓
- check pin1of C609 (on the top of main pcb) whether is +3.3V
  - NO → check IC501 of main pcb and their conjoint parts whether are ok
  - YES ↓
- check IC507, IC508 of MAIN PCB and their conjoint parts whether are OK

C — Aux In has no sound

- check pin1 and pin7 of IC504(on the top of main pcb) output whether are ok
  - NO → check pin8 of IC504(on the top of main pcb) output whether is +12V and their conjoint parts whether are OK
  - YES ↓
- check pin5 and pin13 of IC506(on the top of main pcb)output whether are 5V and 3.3V
  - NO → check IC501 and FB508 of main pcb whether are OK
  - YES ↓
- check IC506 of main pcb and their conjoint parts whether are OK

D — MP3 In has no sound

- check MP3 music output is ok check mp3 jack connect is ok check mp3 jack cable and CN508 connect of mian pcb is ok
  - NO → Keep CN508 of main board has Music input
  - YES ↓
- check pin4 and pin11 of IC501 on the top of main pcb whether have music input
  - NO → check from CN503 to IC510 conjoint parts
  - YES ↓
- check IC510 of main pcb is OK

E — coaxial /optical input has no sound

- check C526 is ok check pin1 of C650 is 3.3V, check C540 is ok
  - NO → check their conjoint parts of JK501 and JK303
  - YES ↓
- check pin3 and pin 22 of IC509 (on the top of main pcb) output whether are all 3.3V
  - NO → check their conjoints part of L501
  - YES ↓
- check IC509 of main pcb and their conjoint parts

DISASSEMBLY INSTRUCTIONS

Dismantling of the Rear Cabinet

1) Loosen 15 screws “A” on the rear cabinet as shown in figure 1-1.
2) Lifting the front cabinet upwards and pull it right until the MP3 Links Jack out the cabinet as shown in figure 1-2.

Figure 1-1

Figure 1-2

Dismantling of the MP3 Board

1) Loosen 2 screws “B” to remove the MP3 Board as shown in figure 2.

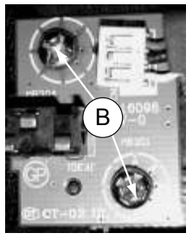


Figure 2

Dismantling of the Main Board Bracket

1) Loosen 6 screws “C” to remove the Main Board Bracket as shown in figure 3.

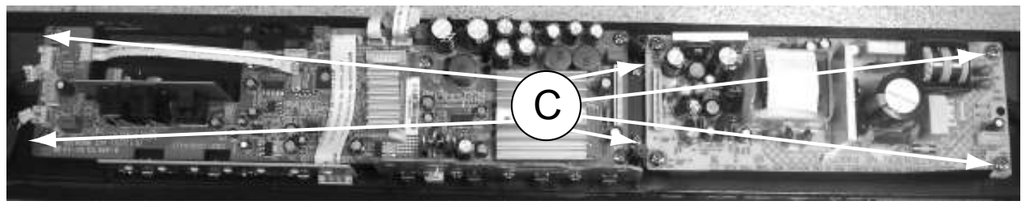


Figure 3

Dismantling of the Led Board

1) Loosen 3 screws “D” to remove the Led Board as shown in figure 4.

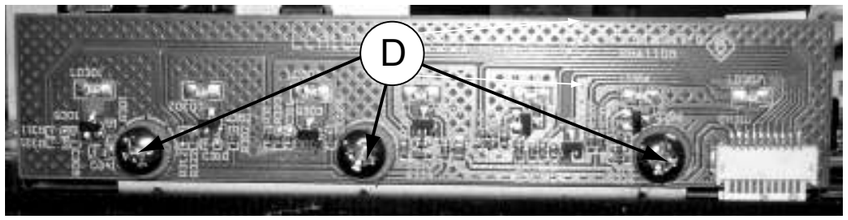


Figure 4

3 - 1

Dismantling of the Key Board

1) Loosen 3 screws “E” to remove the Key Board as shown in figure 5.

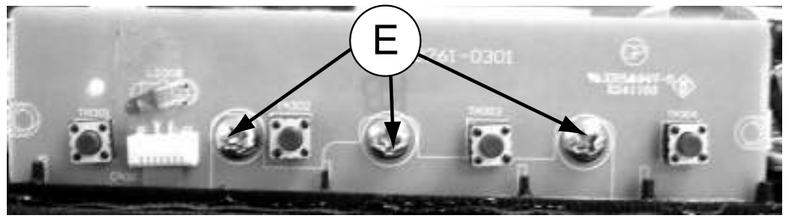


Figure 5

Dismantling of the Main Board

1) Loosen 4 screws “F” on the top of Main Board as shown in figure 6.
2) Loosen 2 screws “G” at the main bracket to remove Main Board as shown if figure 7.

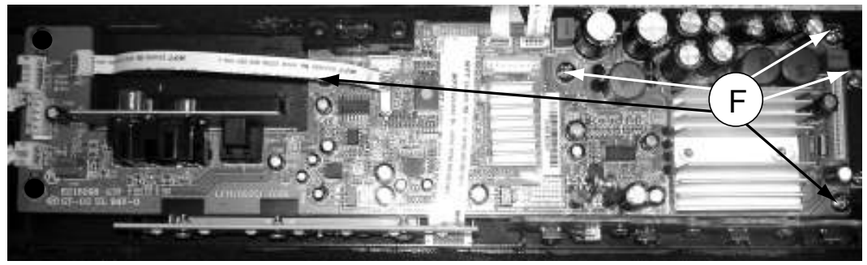


Figure 6

Figure 7

Dismantling of the Power Board

1) Loosen 4 screws “H” on the top of Power Board as shown in figure 8.

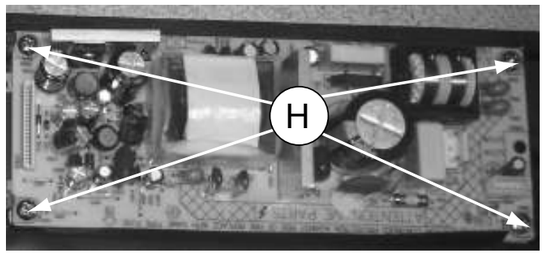


Figure 8

Dismantling of the IR Board

1) Loosen 2 screws “I” on the top of IR Board as shown in figure 9.

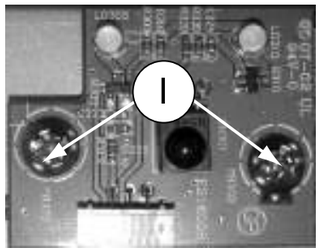
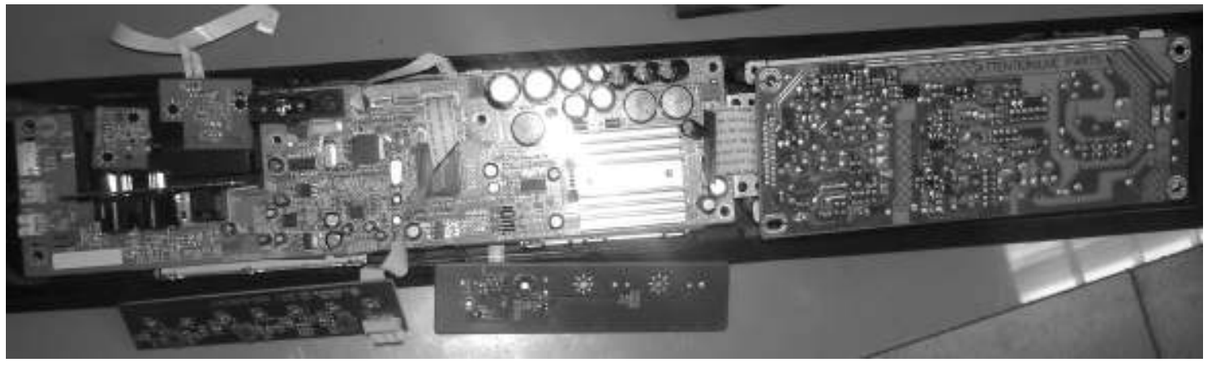


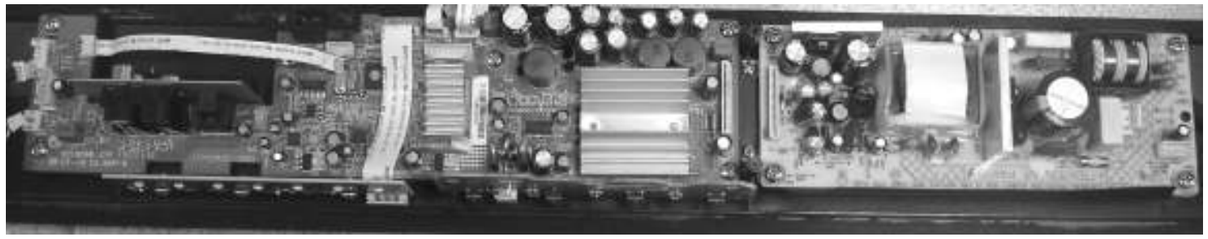
Figure 9

SERVICE POSITIONS

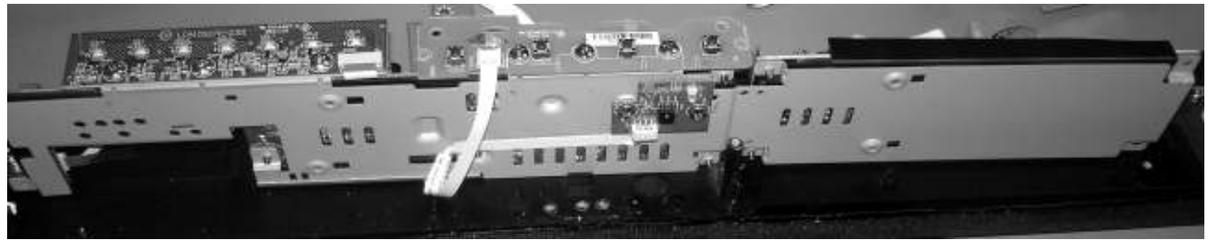
Service Position A - All Boards



Service Position B - Main, Power, Led, Key Board



Service Position C – IR, Led, Key Board



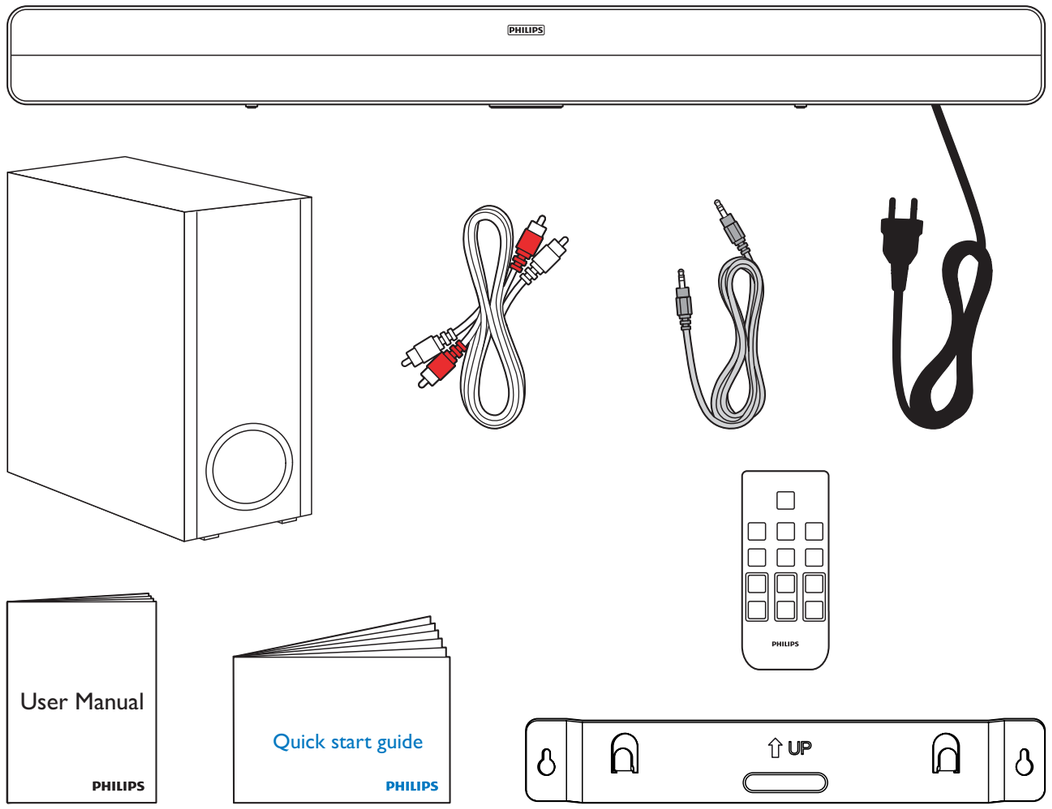
Note:In some service positions the components or copper patterns of one board may risk touching its neighbouring pc boards or metallic parts. To prevent such short-circuit use a piece of hard paper or other insulating material between them.

4 - 1

QUICK START GUIDE

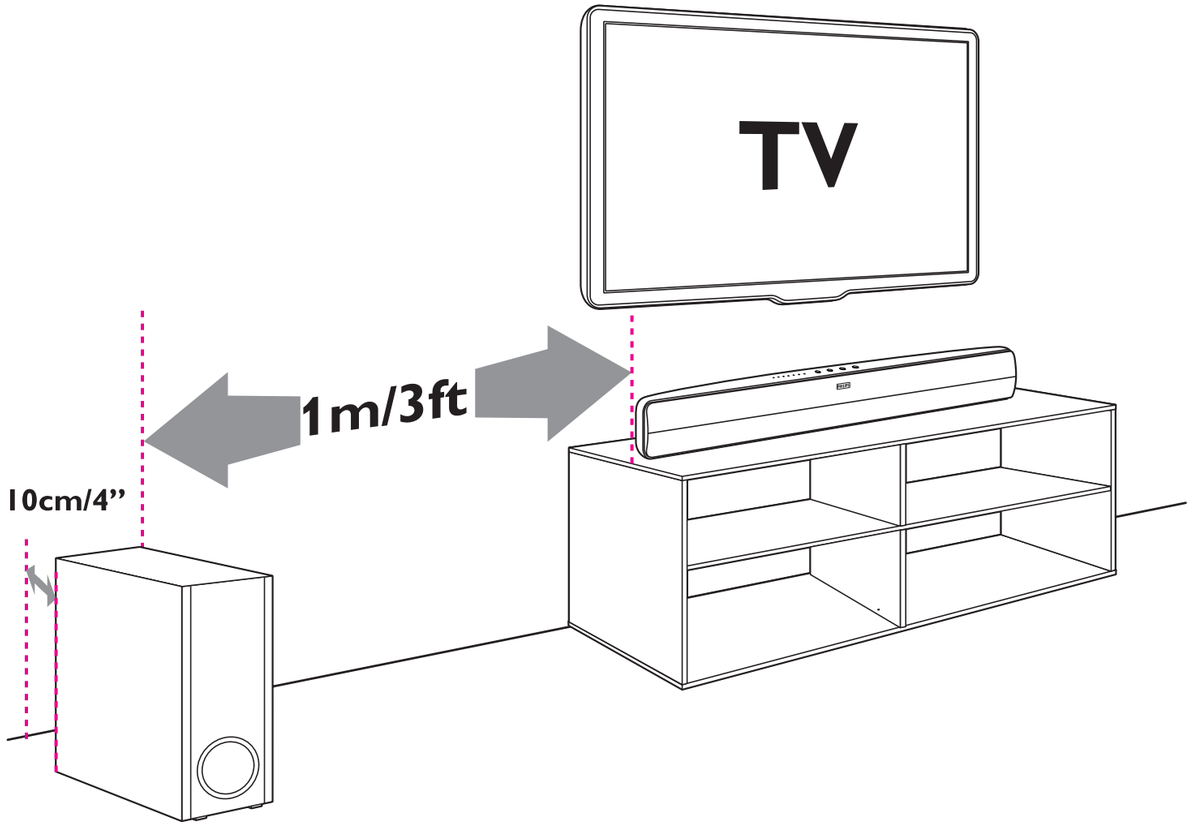
The following excerpt of the QSG/DFU serves as an introduction to the set.
The complete Direction for Use can be download in the different languages from the internet site of Philips Consumer care Center: www.support.philips.com

EN What's in the box



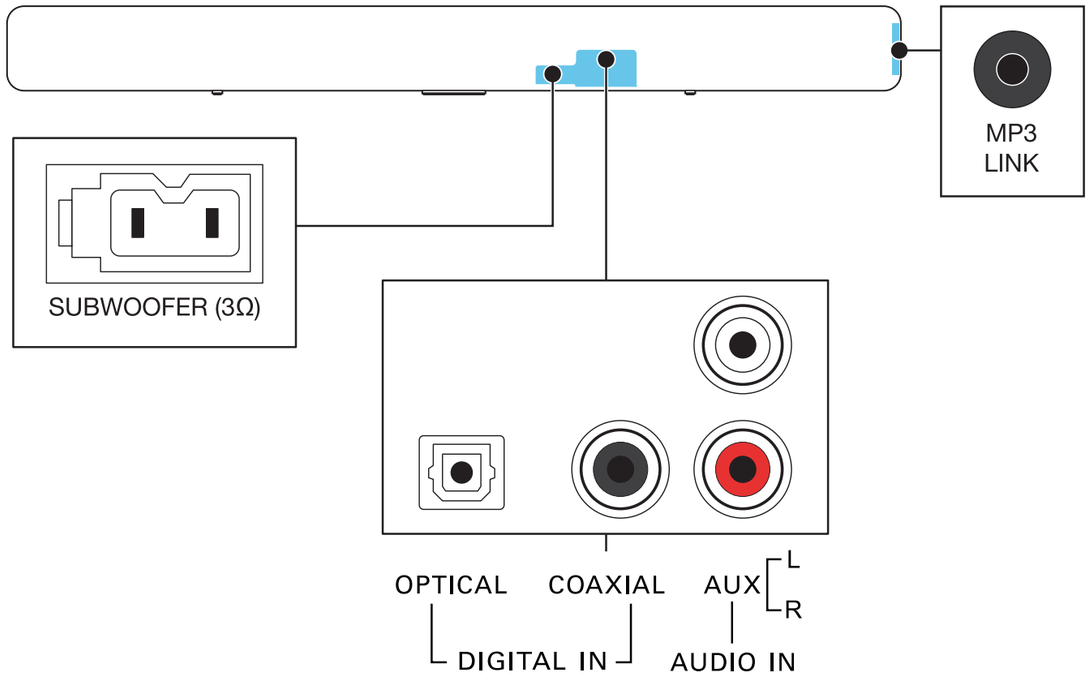
1

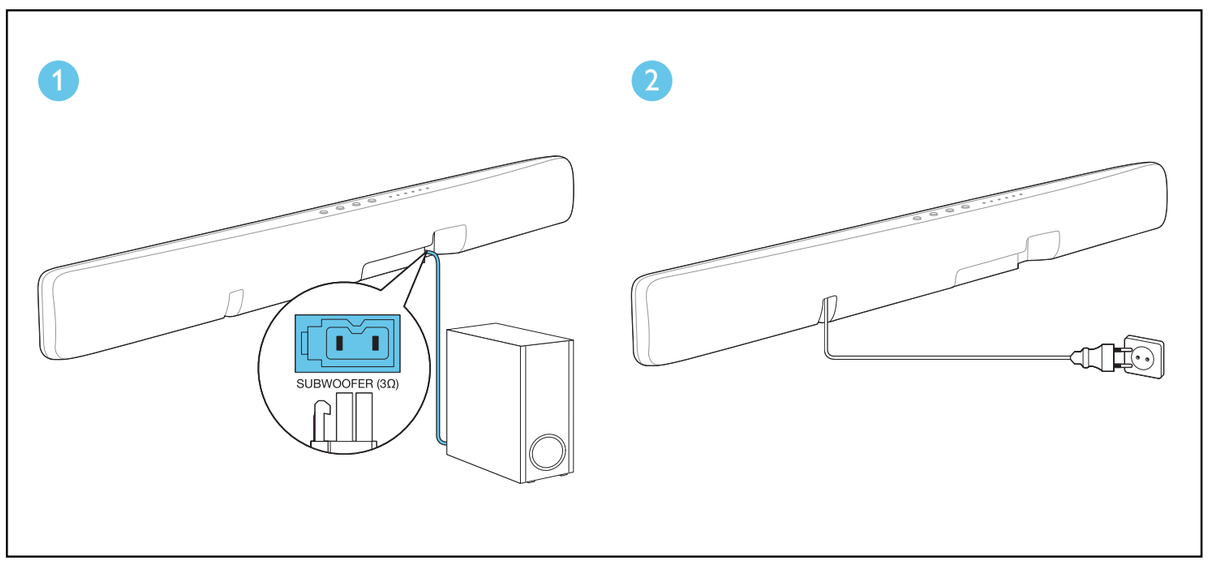
EN Speaker placement



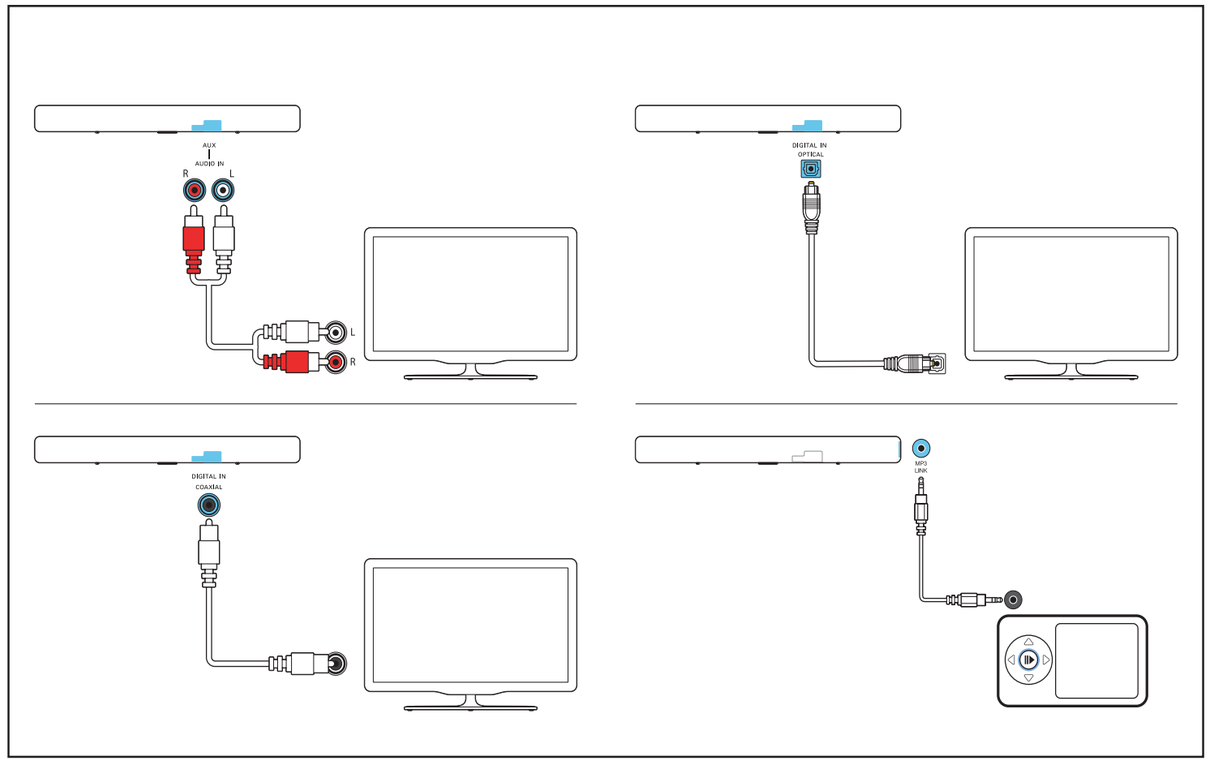
2

EN Connect



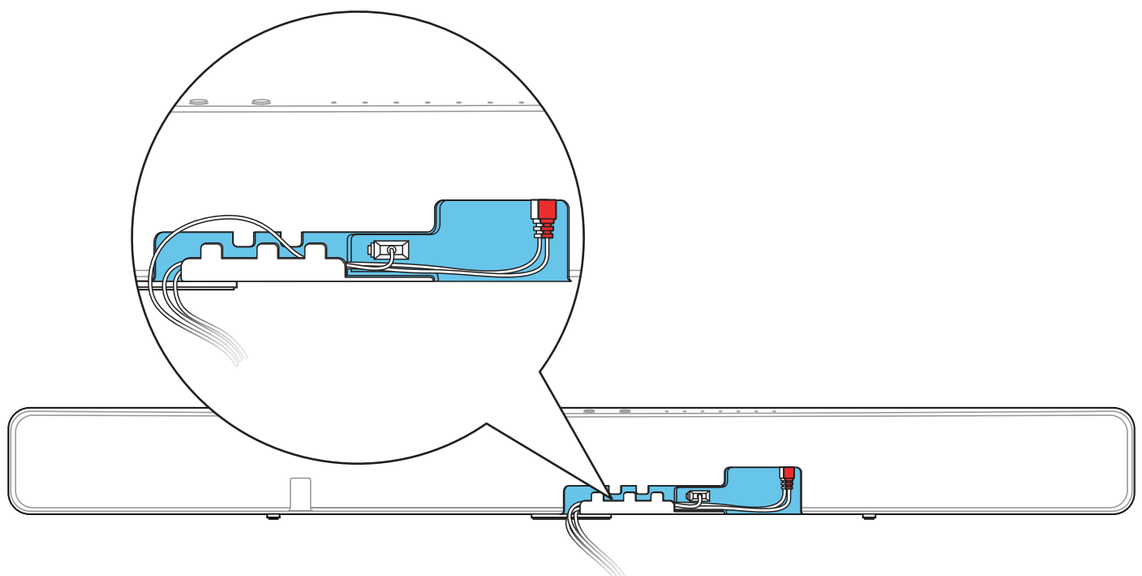


4 - 2



3

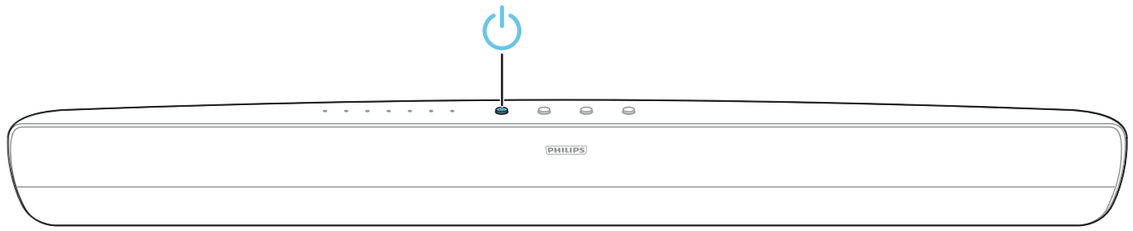
EN Manage cables



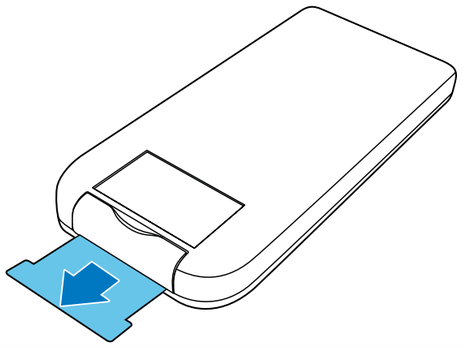
4

EN Switch on

1



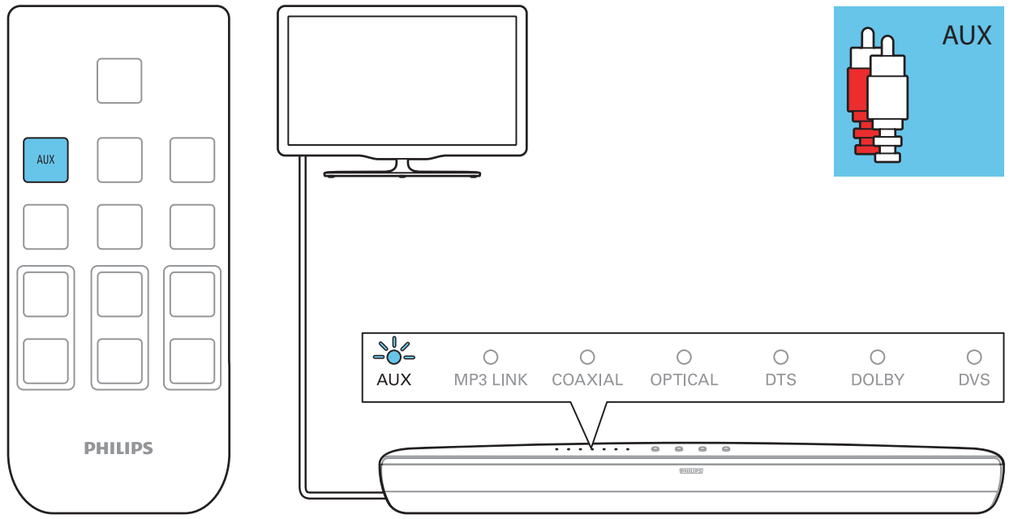
2

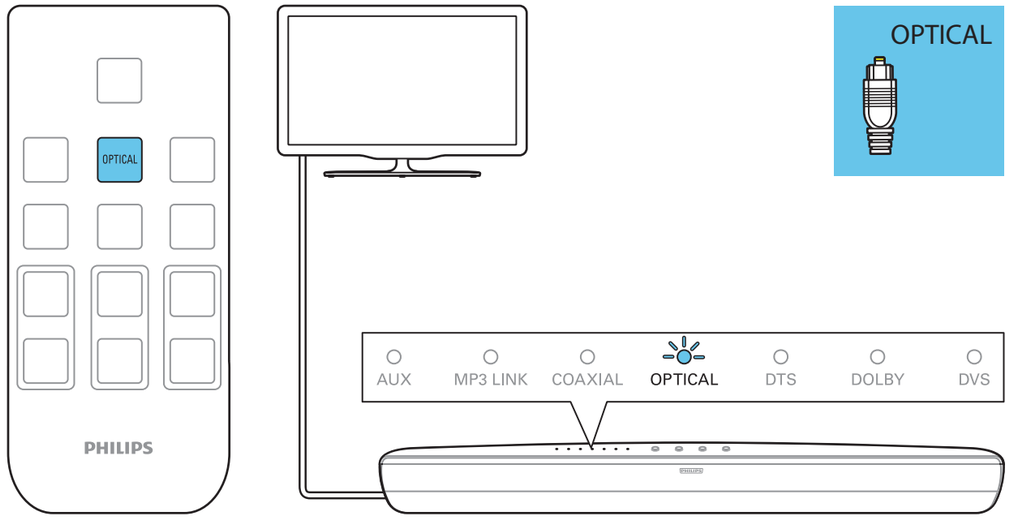


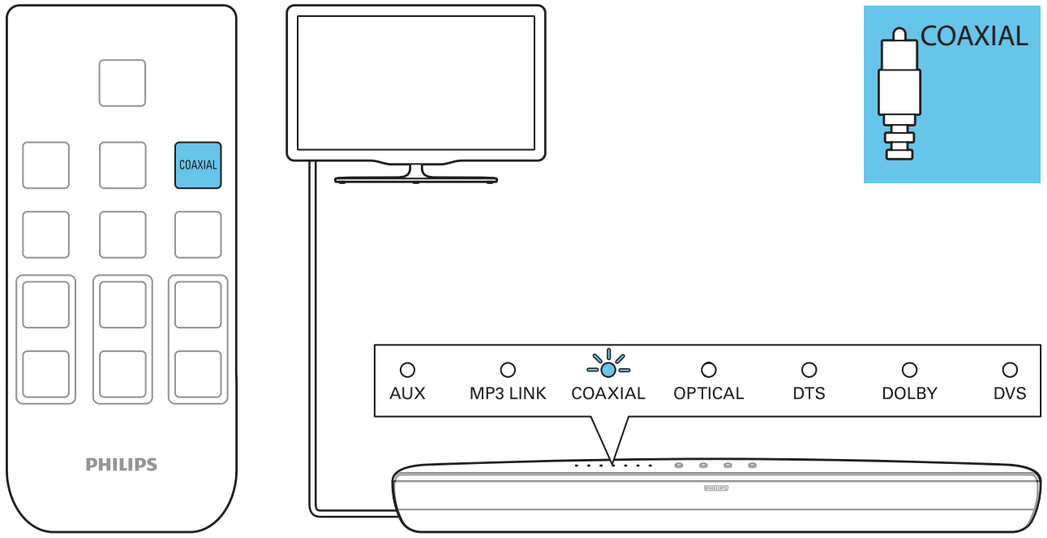
4 - 3

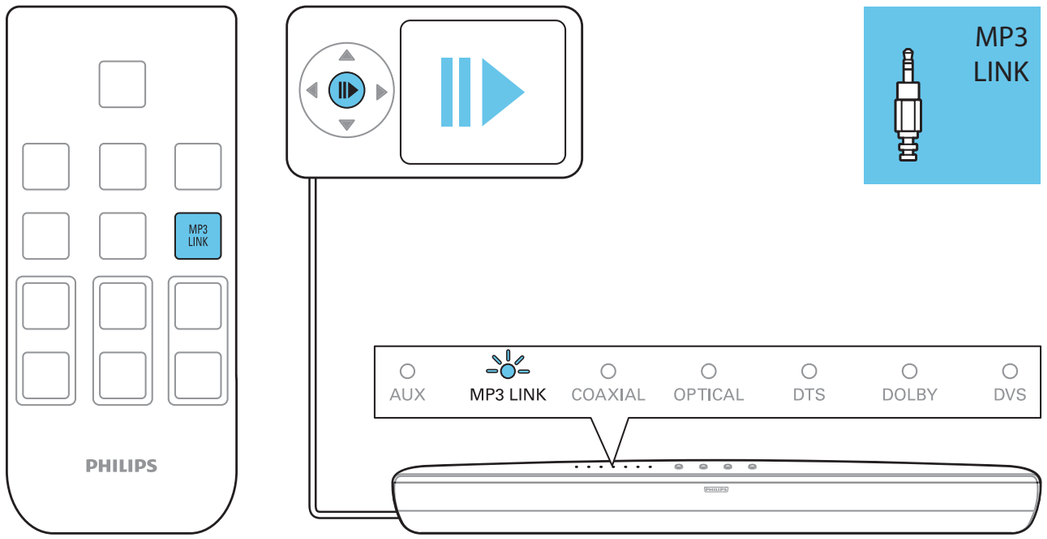
5

EN Select your audio source

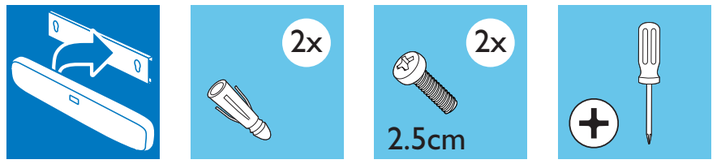




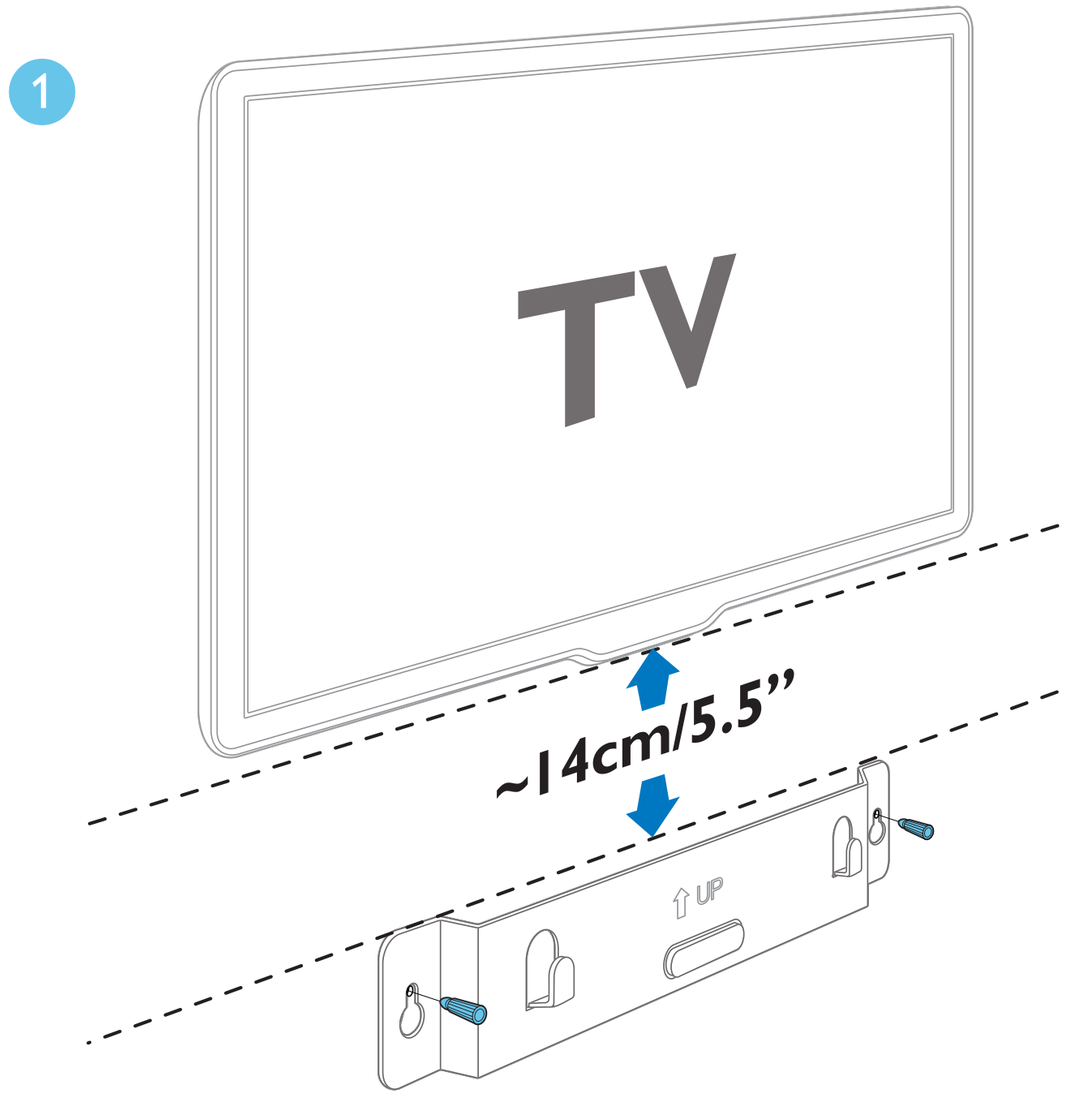




4 - 4



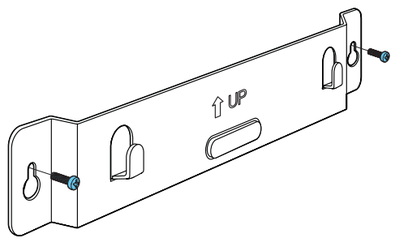
EN Wall mount the soundbar



4 - 5

EN For more information about using this product, visit www.philips.com/supplort

2



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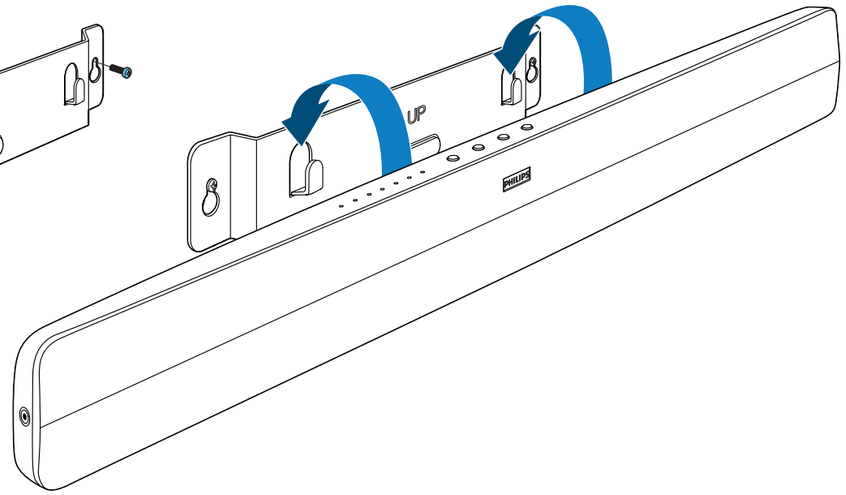
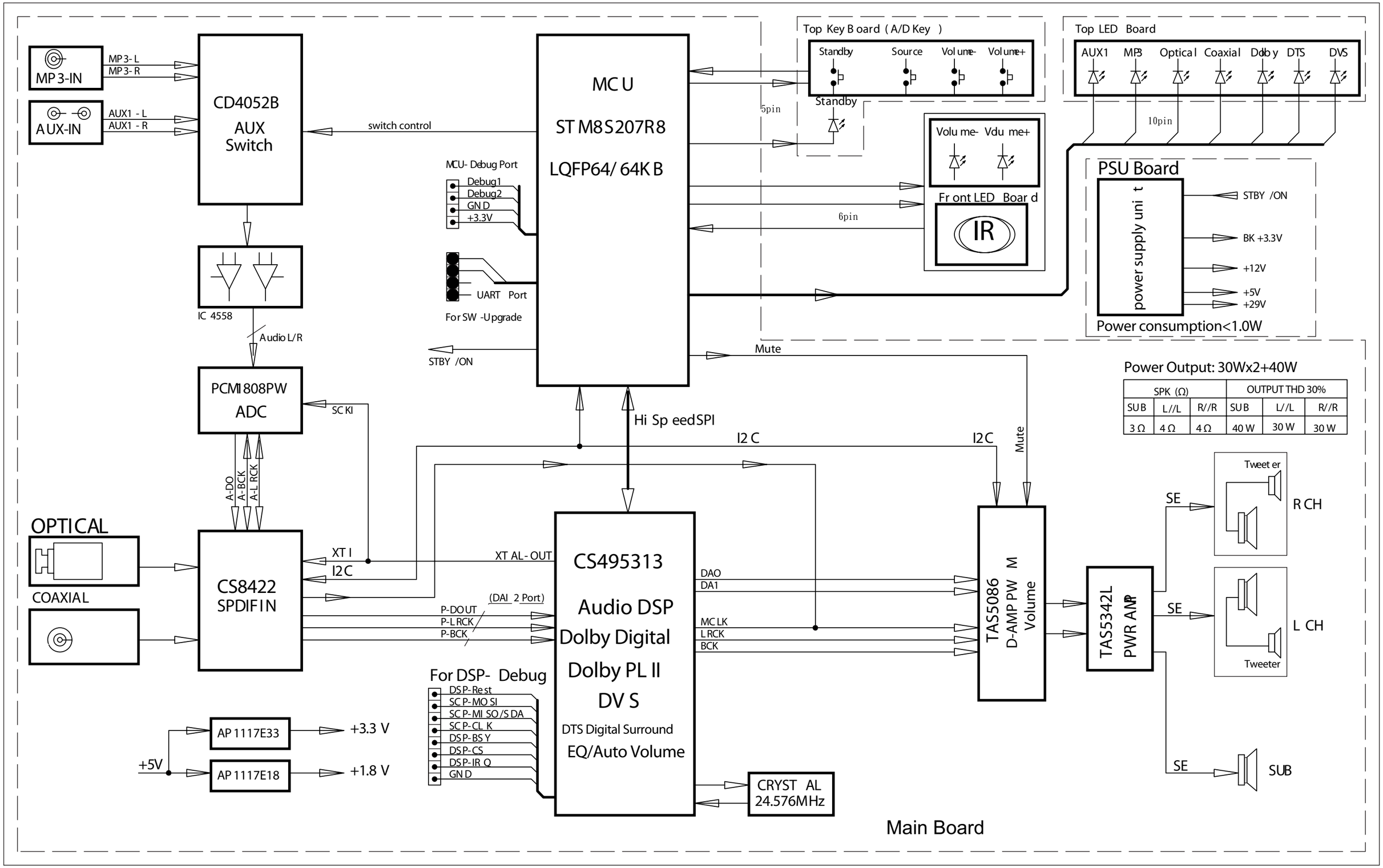


sgtt_1036/12,05,55,78,98_v1

Evite o uso prolongado do aparelho com volume superior a 85 decibéis, pois isto poderá prejudicar a sua audição.
Potência total de saída de 800W RMS, 10% THD

5 - 1

BLOCK DIAGRAM



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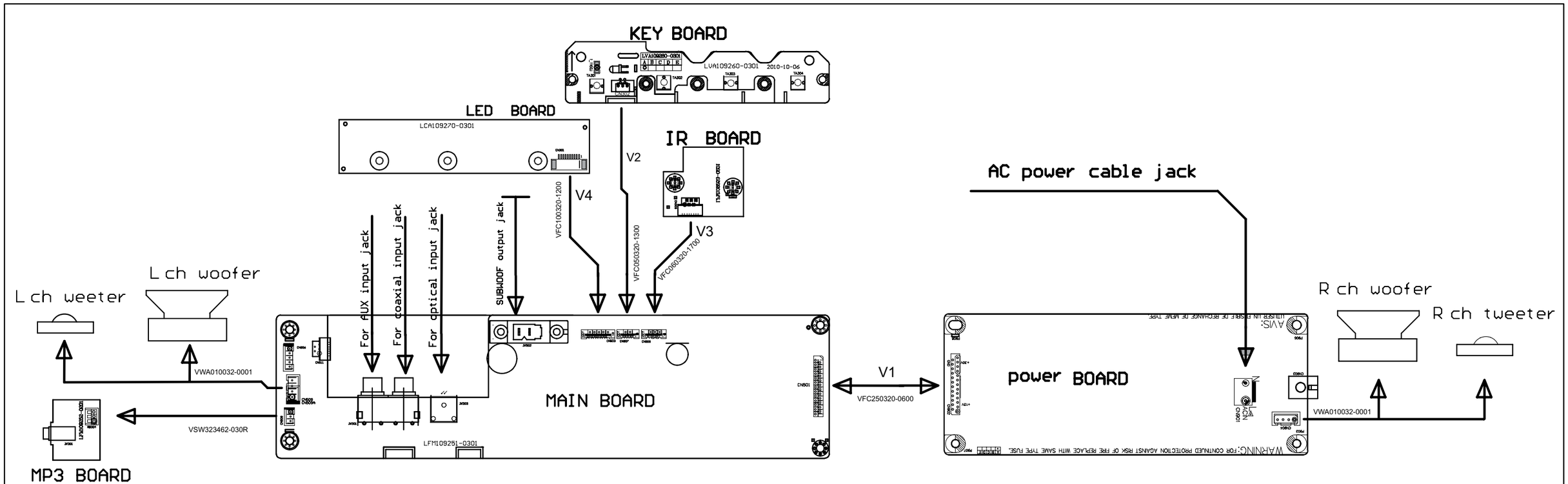
WIRING DIAGRAM



MAIN+MP3+IR BOARD

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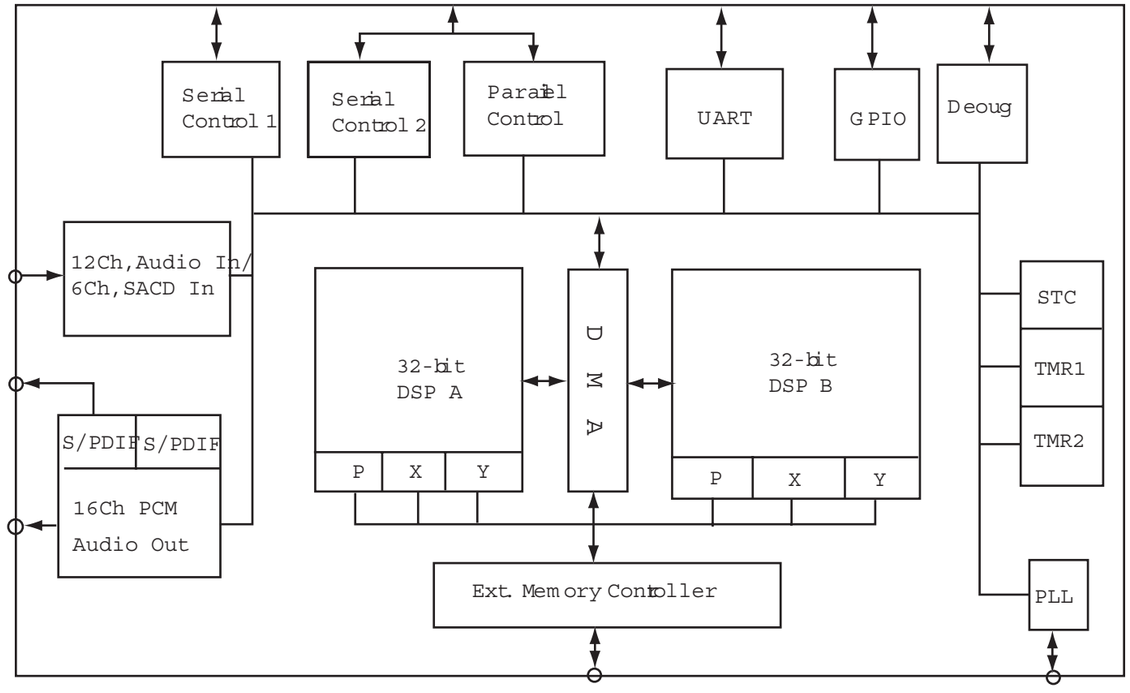
INTERNAL IC DIAGRAM - CS495313



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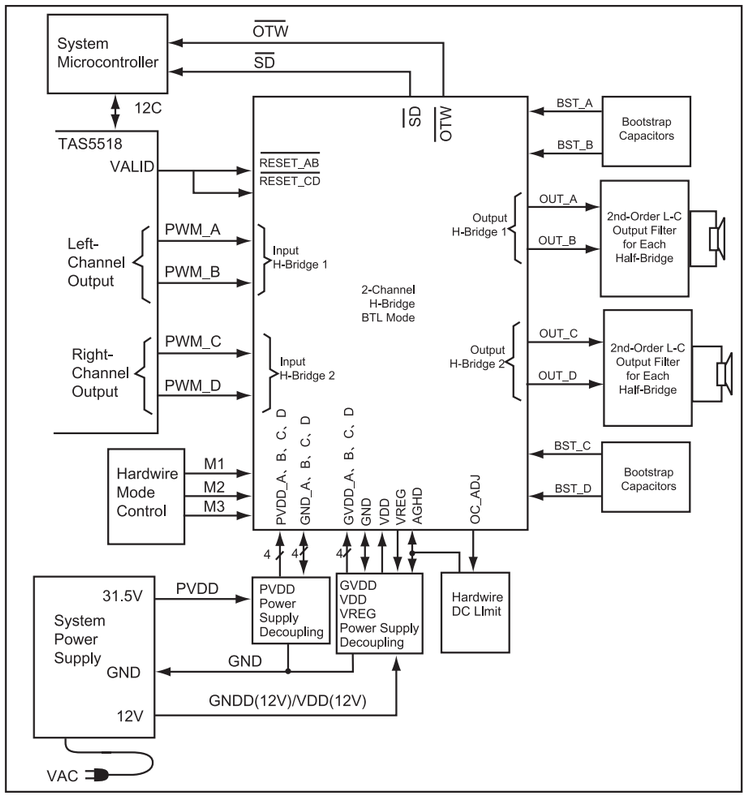

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CIRCUIT DIAGRAM (part one)

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C320 B1 C333 C1 C510 C3 C529 A3 C548 D3 C597 A1 C619 D3 C642 C2 C657 A4 C694 D4 C713 A2 FB301 B4 FB516 C4 L506 D3 R320 C1 R519 A4 R538 B1 R551 D4 R588 D2 R610 B2 R632 D2 R643 C3 R676 C3 R705 A2 R716 C3
C321 B1 C334 B4 C512 A2 C530 A3 C549 B3 C602 A1 C620 D4 C643 C2 C658 A1 C695 A4 C715 A2 FB302 B4 IC504 A4 L507 C4 R329 C1 R520 A4 R539 A1 R552 A3 R590 A4 R611 B2 R633 D2 R644 D3 R677 C3 R706 A2 R717 D2
C322 B1 C335 B4 C517 A1 C531 A3 C550 D3 C603 A1 C621 D4 C644 C2 C659 C4 C696 C2 CN303 B1 FB501 A2 IC505 D3 L512 B2 R330 C1 R521 A4 R541 D4 R558 B2 R592 A4 R614 C2 R634 D2 R645 D3 R678 D4 R707 A2 R718 D2
C323 C1 C336 B4 C518 B3 C540 A2 C551 D4 C604 B1 C633 A1 C645 B2 C660 C4 C698 A4 CN501 A1 FB502 A2 IC506 B4 LD309 C1 R336 C1 R522 C4 R542 D4 R564 A4 R593 B2 R615 D3 R635 D2 R646 D3 R679 D4 R708 A2 R719 C3
C324 C1 C337 B4 C520 B3 C541 C2 C552 D4 C607 A1 C634 A4 C646 B2 C661 A2 C701 A2 CN503 A2 FB503 A1 IC509 C4 LD310 C1 R337 C1 R523 C4 R543 D4 R566 A4 R595 C2 R617 C2 R636 D2 R647 D3 R680 D4 R709 A4 RB304 B4
C327 B1 C500 A4 C523 A1 C542 D2 C572 A2 C608 A3 C635 A4 C649 B2 C662 A2 C702 A2 CN504 C2 FB504 A1 IC510 A3 Q309 C1 R338 B4 R524 B4 R545 A2 R567 C3 R596 C2 R618 C2 R637 D3 R648 D3 R681 C4 R710 A4 SN301 B1
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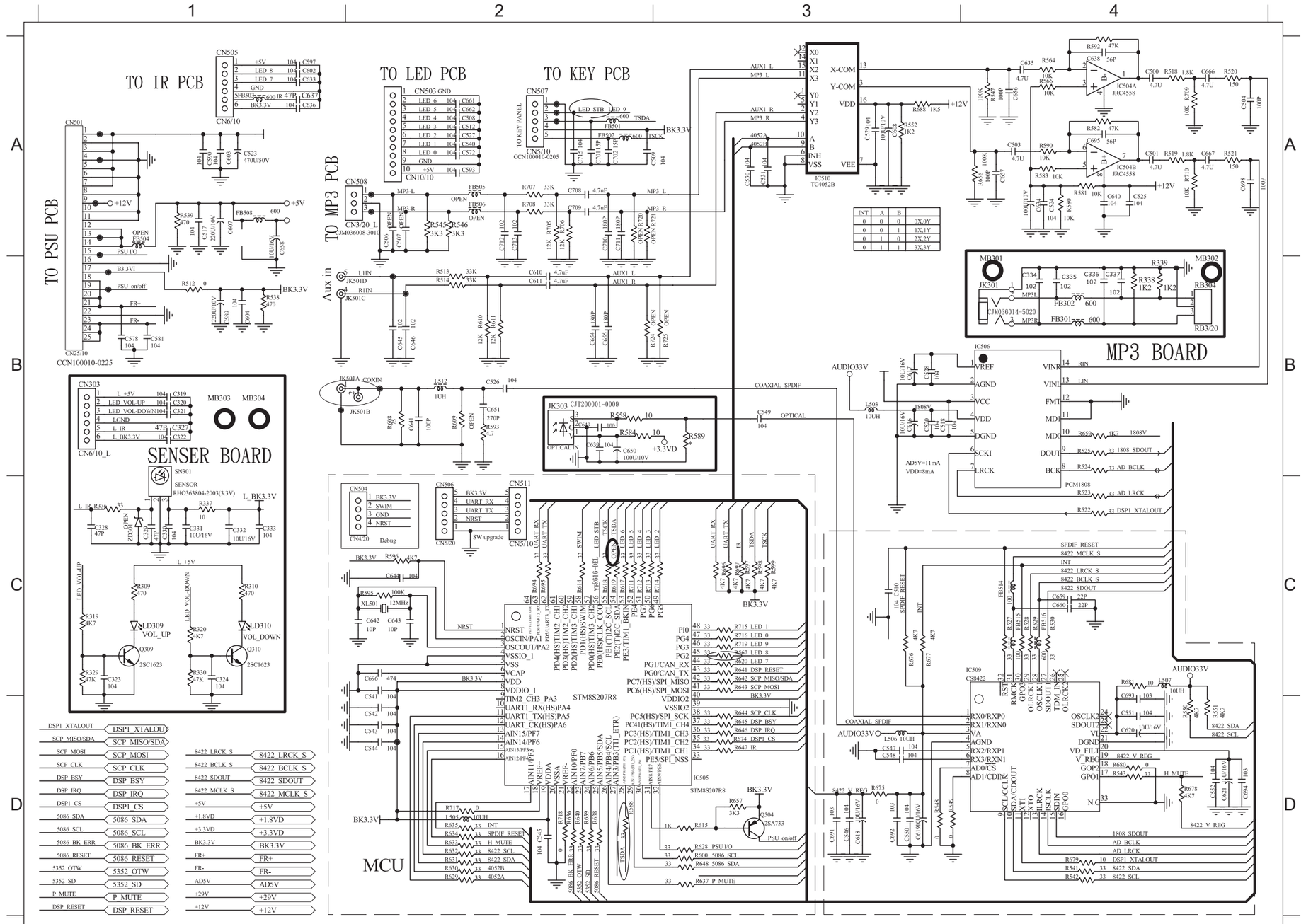
C329 C1 C503 A4 C525 A4 C544 D2 C581 B1 C611 B2 C638 A4 C651 B2 C667 A4 C709 A2 CN506 C2 FB506 A2 JK303 B2 Q504 D3 R512 B1 R527 C4 R547 A4 R581 A4 R598 C3 R628 D3 R639 D2 R658 A4 R694 C2 R712 C2
C330 C1 C504 A4 C526 B2 C545 D2 C589 B1 C616 B3 C639 B2 C654 B2 C691 D3 C710 A2 CN507 A2 FB508 A1 JK501 B2 R309 C1 R513 B2 R528 C4 R548 D3 R582 A4 R599 C3 R629 D2 R640 D2 R659 B4 R695 C2 R713 C2
C331 C1 C508 A2 C527 A2 C546 D3 C590 A1 C617 B3 C640 A4 C655 B2 C692 D3 C711 A2 CN508 A2 FB514 C4 L503 B3 R310 C1 R514 B2 R529 C4 R549 D3 R583 A4 R600 D3 R630 D2 R641 C3 R674 D3 R696 C3 R714 C3



6 - 3

CIRCUIT DIAGRAM (part two)

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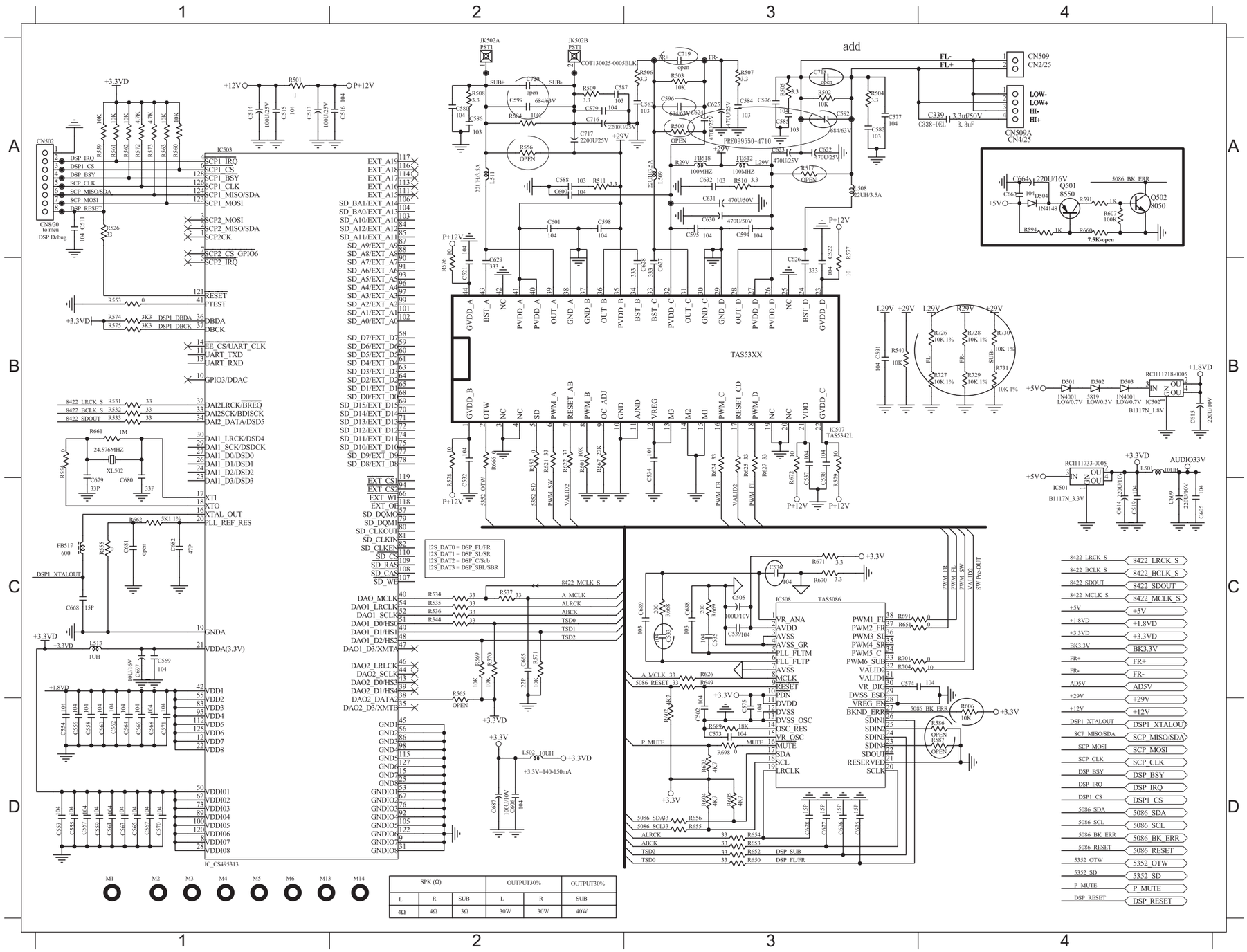
C502 D3 C522 A3 C553 D1 C562 D1 C571 D1 C583 A3 C595 A3 C614 C4 C629 B2 C676 D3 C697 C1 FB512 A3 L501 B4 R502 A3 R511 A2 R540 B3 R562 A1 R576 B2 R604 D3 R627 B3 R661 B1 R684 A2 R729 B4
C505 C3 C532 B2 C554 D1 C563 D1 C573 D3 C584 A3 C596 A3 C615 B4 C630 A3 C677 D3 C716 A2 FB517 C1 L502 D2 R503 A3 R526 A1 R544 C2 R563 A1 R577 A3 R605 D3 R649 C3 R662 C1 R689 D3 R730 B4
C511 A1 C533 C3 C555 D1 C564 D1 C574 C3 C585 A3 C598 A2 C622 A3 C631 A3 C678 D3 C717 A2 FB518 A3 L508 A3 R504 A3 R531 B1 R553 B1 R569 C2 R578 B2 R606 D4 R650 D3 R666 B2 R691 C3 R731 B4
C513 A1 C534 B3 C556 D1 C565 D1 C575 D3 C586 A2 C599 A2 C623 A3 C632 A3 C679 C1 CN502 A1 IC501 C4 L509 A3 R505 A3 R532 B1 R554 B1 R570 C2 R579 B3 R607 A4 R651 C3 R667 B2 R698 A3 XL502 B1
C514 A1 C535 C3 C557 D1 C566 D1 C576 A3 C587 A2 C600 A2 C624 A3 C663 A4 C680 C1 CN509A A4 IC502 B4 L511 A2 R506 A3 R533 B1 R555 C1 R571 C2 R591 A4 R621 B2 R652 D3 R668 C3 R701 C3
C515 A1 C536 C3 C558 D1 C567 D1 C577 A3 C588 A2 C601 A2 C625 A3 C664 A4 C682 C1 D501 B4 IC503 A1 L513 C1 R507 A3 R534 C2 R557 B2 R572 A1 R594 A4 R622 B2 R653 D3 R669 C3 R704 C3
C516 A2 C537 B3 C559 D1 C568 D1 C579 A2 C591 B3 C605 C4 C626 B3 C665 C2 C687 D2 D502 B4 IC507 B3 Q501 A4 R508 A2 R535 C2 R559 A1 R573 A1 R601 B2 R624 B3 R654 D3 R670 C3 R726 B4
C519 C4 C538 B3 C560 D1 C569 C1 C580 A2 C592 A3 C606 D2 C627 B3 C668 C1 C688 C3 D503 B4 IC508 C3 Q502 A4 R509 A2 R536 C2 R560 A1 R574 B1 R602 D3 R625 B3 R655 D3 R671 C3 R727 B4



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PCB LAYOUT - TOP VIEW

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C324 A1 C524 B2 C537 B4 C592 B1 C611 B1 C625 A4 C643 A2 C689 B4 C713 B1 CN509A A1 FB512 A4 IC507 B4 L508 A4 R320 A1 R524 B2 R536 B4 R557 B4 R580 B2 R602 A3 R620 A3 R633 B2 R645 A3 R659 B2 R681 B3 R705 B1 SN301 A2
C339 A1 C525 A3 C538 B4 C594 B4 C614 B2 C626 B4 C650 B2 C691 B2 C716 A3 CN511 A1 FB514 B3 IC508 B3 L509 A4 R329 A2 R525 B2 R537 B4 R566 B2 R581 B2 R603 A3 R621 B4 R634 B2 R646 A3 R661 B3 R684 A3 R706 B1 XL501 A2
C505 B4 C526 B3 C539 B4 C595 A4 C615 B3 C627 B4 C651 B3 C693 B2 C717 A4 D501 B3 FB515 B2 IC509 B2 L511 A4 R330 A1 R526 A3 R540 A4 R567 A3 R582 B2 R604 A3 R622 B4 R635 B2 R648 B3 R666 B4 R688 A2 R707 B1 XL502 B3
C513 B4 C528 B2 C543 A1 C596 A4 C616 B2 C628 B4 C654 B1 C695 B2 CN303 A2 D502 B3 FB516 B2 IC510 A2 L512 B2 R501 B4 R527 B2 R541 B2 R569 B4 R583 B2 R605 A3 R624 B4 R636 B2 R649 A3 R667 B4 R689 A3 R708 B1
C514 A4 C529 A2 C546 B2 C598 B4 C617 B2 C629 B4 C655 B1 C697 B3 CN501 A4 D503 B3 FB517 A3 JK301 A1 LD309 A1 R503 A4 R528 B2 R542 B2 R570 B4 R584 B2 R606 B4 R625 B4 R637 B3 R650 B4 R668 B4 R691 B4 R711 A3
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C518 B2 C531 A2 C551 B2 C601 A4 C619 B3 C631 A4 C660 B3 C702 A2 CN503 A3 FB502 A2 IC501 B2 JK501 B1 Q309 A2 R511 A4 R530 B2 R544 B4 R574 B4 R593 B3 R610 B1 R627 B4 R639 B2 R652 B4 R672 B4 R695 A3 R713 A3
C519 B4 C532 B4 C573 A3 C603 A4 C620 B2 C632 A4 C664 B3 C708 B1 CN504 A2 FB503 A3 IC502 B3 JK502 A2 Q310 A2 R512 B4 R531 B3 R545 B1 R575 B4 R595 A2 R611 B1 R628 B3 R640 B2 R653 B4 R674 A3 R696 A1 R714 A3
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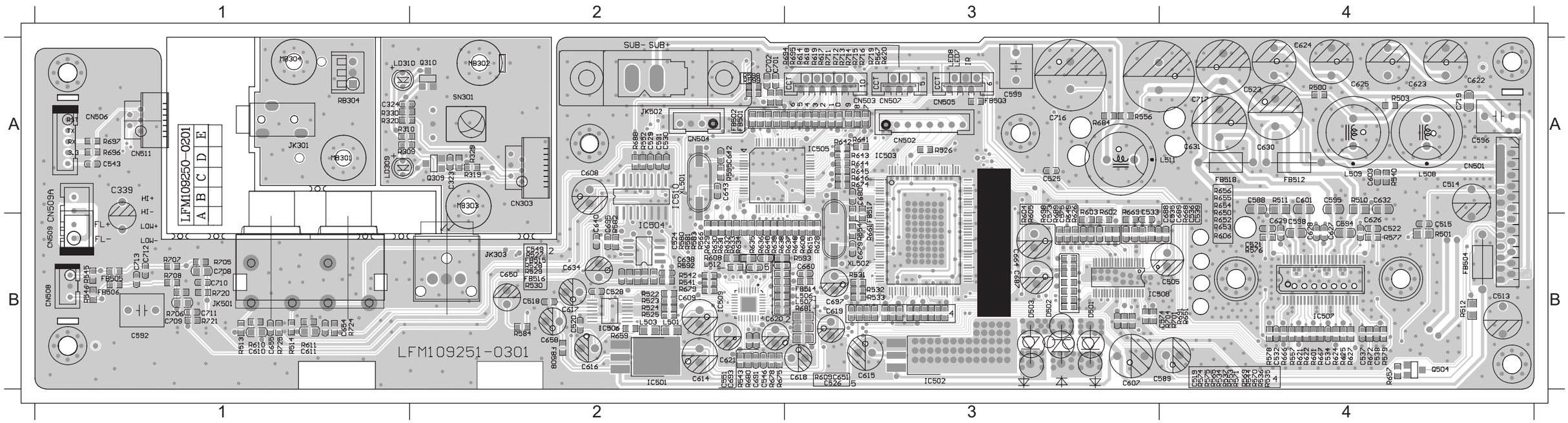
C521 B4 C534 B4 C575 A3 C608 A2 C622 A4 C638 B2 C680 A3 C710 B1 CN506 A1 FB505 B1 IC504 B2 L503 B2 R309 A1 R514 B1 R533 B3 R552 A2 R577 B4 R599 A2 R615 B3 R630 B2 R642 A3 R655 A4 R678 B2 R698 A3 R716 A3
C522 B4 C535 B4 C588 A4 C609 B2 C623 A4 C640 B2 C687 B3 C711 B1 CN507 A3 FB506 B1 IC505 A3 L506 B3 R310 A1 R522 B2 R534 B4 R553 B4 R578 B4 R600 B3 R617 A3 R631 B2 R643 A3 R656 A4 R679 B2 R701 B4 R719 A3



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PCB LAYOUT - BOTTOM VIEW

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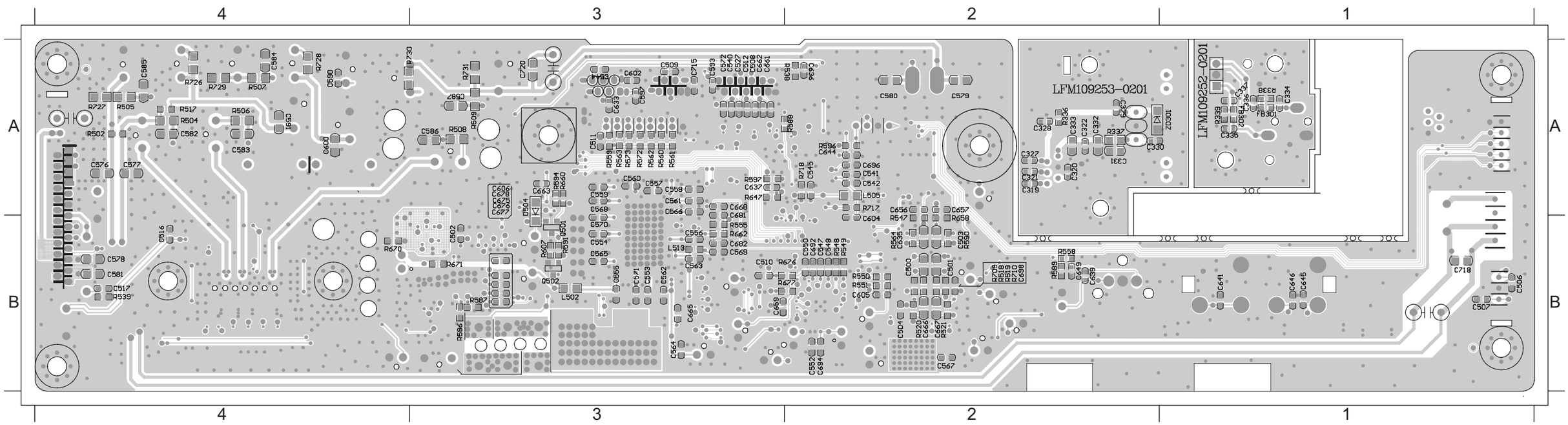
C320 A2 C331 A2 C500 B2 C510 B3 C541 A2 C552 B2 C559 A3 C566 A3 C576 A4 C583 A4 C593 A3 C633 A3 C646 B1 C663 A3 C677 A3 C715 A3 Q501 B3 R504 A4 R519 B2 R549 B2 R561 A3 R590 B2 R658 B2 R710 B2 R730 A4
C321 A2 C332 A2 C501 B2 C511 A3 C542 A2 C553 B3 C560 A3 C567 B2 C577 A4 C584 A4 C597 A3 C635 B2 C649 B2 C665 B3 C678 A3 D504 A3 Q502 B3 R505 A4 R520 B2 R550 B2 R562 A3 R591 B3 R662 B3 R717 A2 R731 A3
C322 A2 C333 A2 C502 B3 C512 A3 C544 A3 C554 B3 C561 A3 C568 A3 C578 B4 C585 A4 C600 A4 C636 A2 C656 A2 C666 B2 C682 B3 FB301A1 R336 A2 R506 A4 R521 B2 R551 B2 R563 A3 R594 A3 R670 B4 R718 A2
C327 A2 C334 A1 C503 B2 C516 B4 C545 A2 C555 B3 C562 B3 C569 B3 C579 A2 C586 A3 C602 A3 C639 B2 C657 A2 C667 B2 C692 B2 FB302A1 R337 A2 R507 A4 R538 A2 R555 B3 R564 B2 R596 A2 R671 B3 R726 A4
C328 A2 C335 A1 C504 B2 C517 B4 C547 B2 C556 B3 C563 B3 C570 B3 C580 A2 C587 A3 C604 B2 C641 B1 C659 B3 C668 A3 C694 B2 L502 B3 R338 A1 R508 A3 R539 B4 R558 B2 R572 A3 R597 A3 R676 B3 R727 A4
C329 A2 C336 A1 C508 A3 C527 A3 C548 B2 C557 A3 C564 B3 C571 B3 C581 B4 C590 A4 C605 B2 C644 A2 C661 A3 C675 A3 C696 A2 L505 A2 R339 A1 R509 A3 R547 B2 R559 A3 R573 A3 R607 B3 R677 B3 R728 A4



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KEY BOARD

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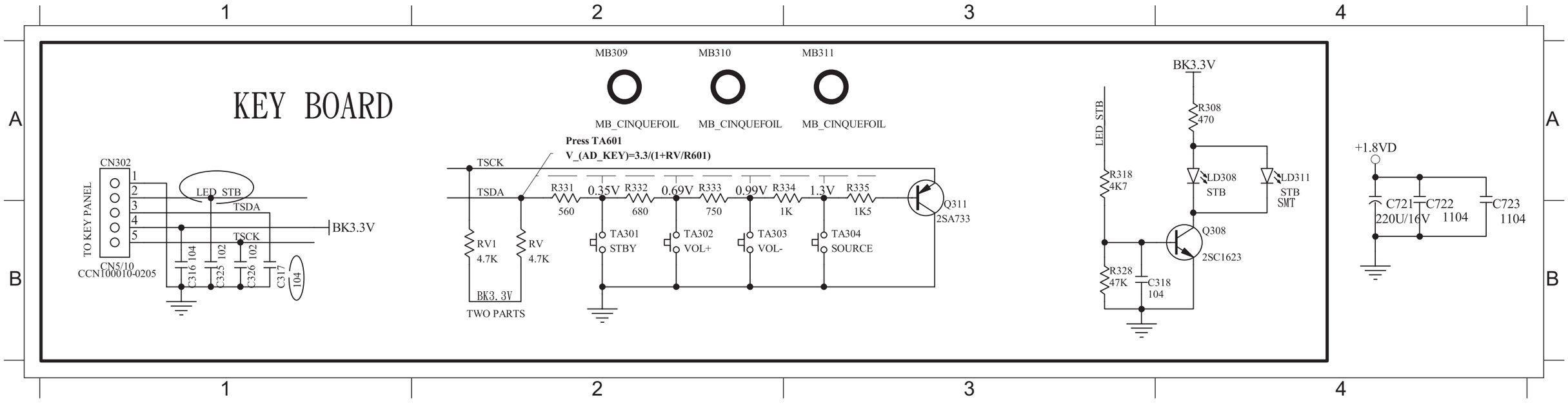
CIRCUIT DIAGRAM

C316	B1	C318	B3	C326	B1	LD308	A4	Q311	A3	R318	A3	R331	A2	R333	A2	R335	A3	TA302	B2	TA304	B3
C317	B1	C325	B1	CN302	A1	Q308	B4	R308	A4	R328	B3	R332	A2	R334	A2	TA301	B2	TA303	B2		



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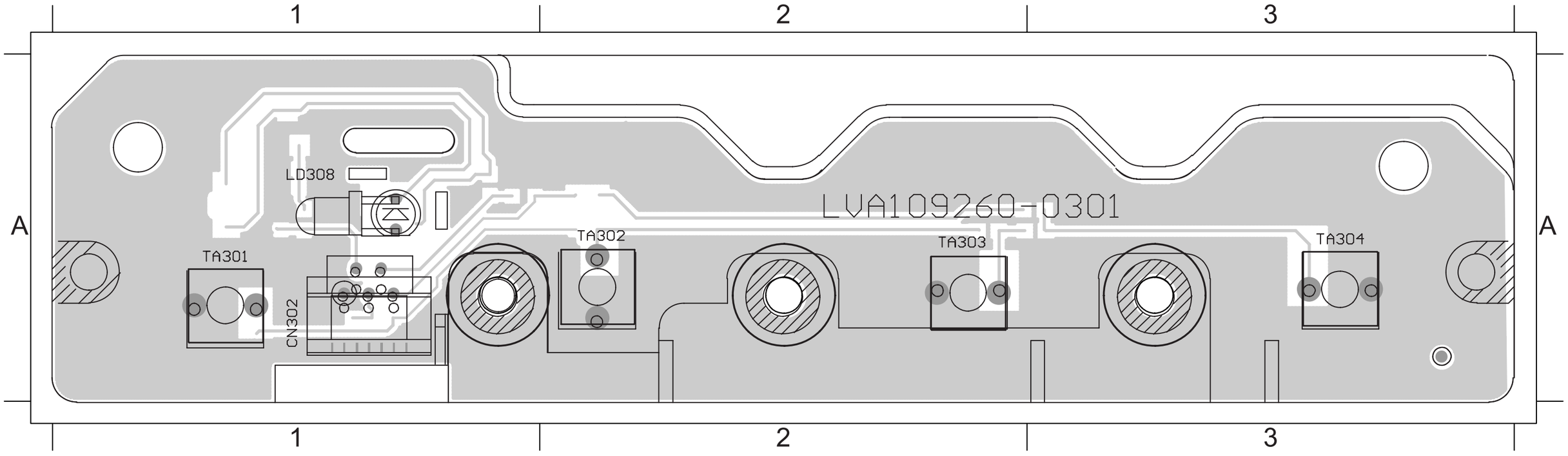
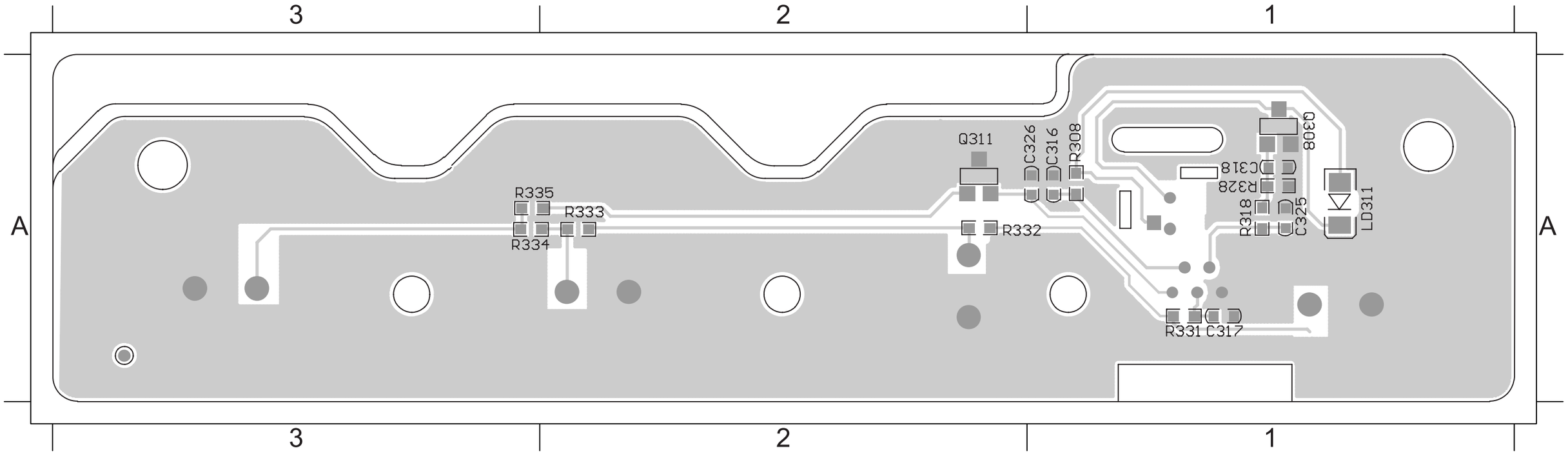
PCB LAYOUT - TOP VIEW

CN302 A1 LD308 A1 TA301 A1 TA302 A2 TA303 A2 TA304 A3



PCB LAYOUT - BOTTOM VIEW

C316 A1 C317 A1 C318 A1 C325 A1 C326 A1 Q308 A1 Q311 A2 R308 A1 R318 A1 R328 A1 R331 A1 R332 A1 R333 A2 R334 A2 R335 A2



POWER BOARD

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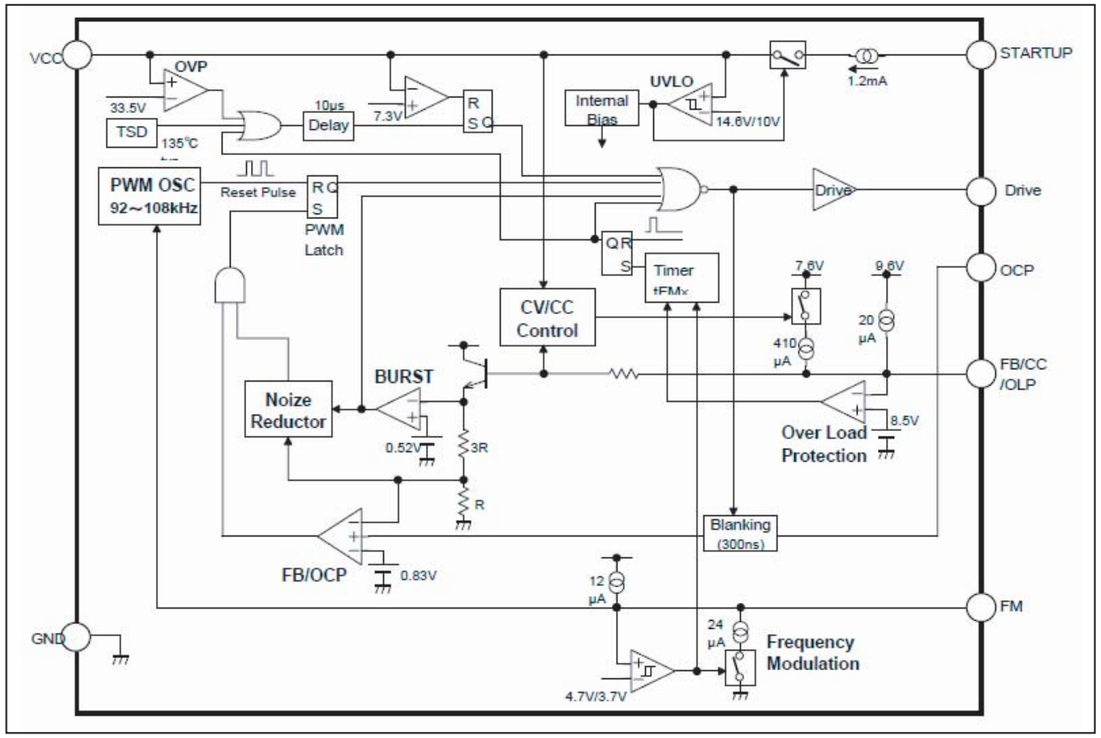
INTERNAL IC DIAGRAM - SSC620S



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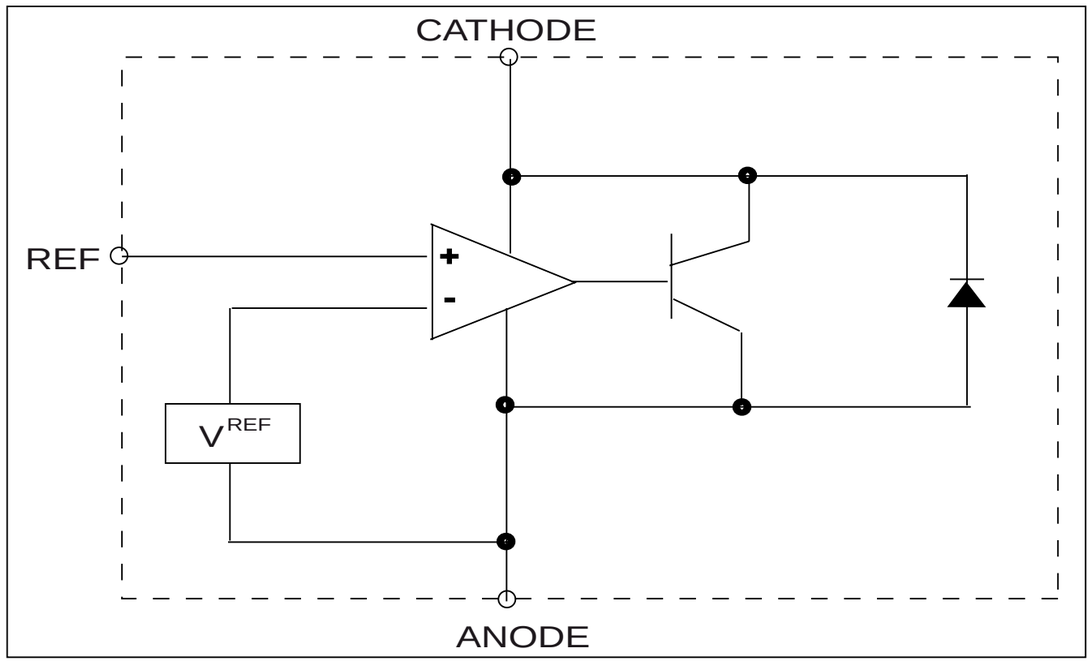

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CIRCUIT DIAGRAM

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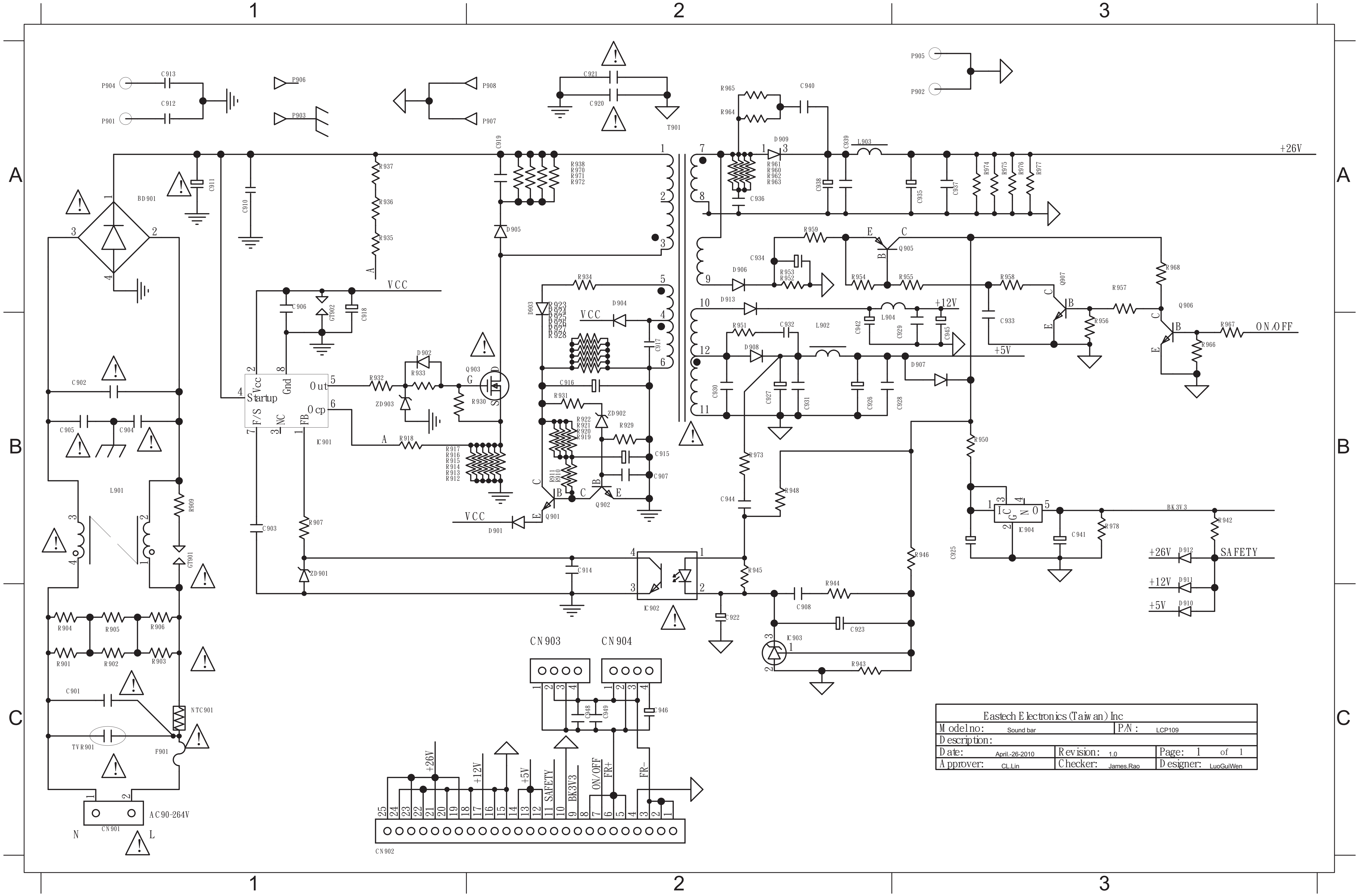
C901 C1	C907 B2	C914 B2	C920 A2	C928 B3	C934 A2	C940 A2	CN901 C1	D904 A2	D910 C3	GT902 A1	L901 B1	Q901 B2	R901 C1	R907 B1	R914 B1	R920 B2	R926 B2	R932 B1	R938 A2	R948 B2	R955 A3	R961 A2	R967 B3	R974 A3	ZD902 B2
C902 B1	C908 C2	C915 B2	C922 C2	C929 B3	C935 A3	C941 B3	CN902 C1	D905 A2	D911 B3	IC901 B1	L901 B1	Q902 B2	R902 C1	R909 B1	R915 B1	R921 B2	R927 B2	R933 B1	R942 B3	R950 B3	R956 B3	R962 A2	R968 A3	R975 A3	ZD903 B1
C903 B1	C910 A1	C916 B2	C923 C2	C930 B2	C936 A2	C942 B2	CN904 C2	D906 A2	D912 B3	IC902 C2	L902 B2	Q903 B1	R903 C1	R910 B2	R916 B1	R922 B2	R928 B2	R934 A2	R943 C2	R951 B2	R957 A3	R963 A2	R970 A2	R976 A3	
C904 B1	C911 A1	C917 B2	C925 B3	C931 B2	C937 A3	C944 B2	D901 B2	D907 B3	D913 A2	IC903 C2	L903 A2	Q905 A3	R904 C1	R911 B2	R917 B1	R923 A2	R929 B2	R935 A1	R944 C2	R952 A2	R958 A3	R964 A2	R971 A2	R977 A3	
C905 B1	C912 A1	C918 A1	C926 B2	C932 B2	C938 A2	C945 A2	D902 B1	D908 B2	F901 C1	IC903 C2	L904 B2	Q906 B2	R905 C1	R912 B1	R918 B1	R924 A2	R930 B2	R936 A1	R945 C2	R953 A2	R959 A2	R965 A2	R972 A2	T901 A2	



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PCB LAYOUT - TOP VIEW

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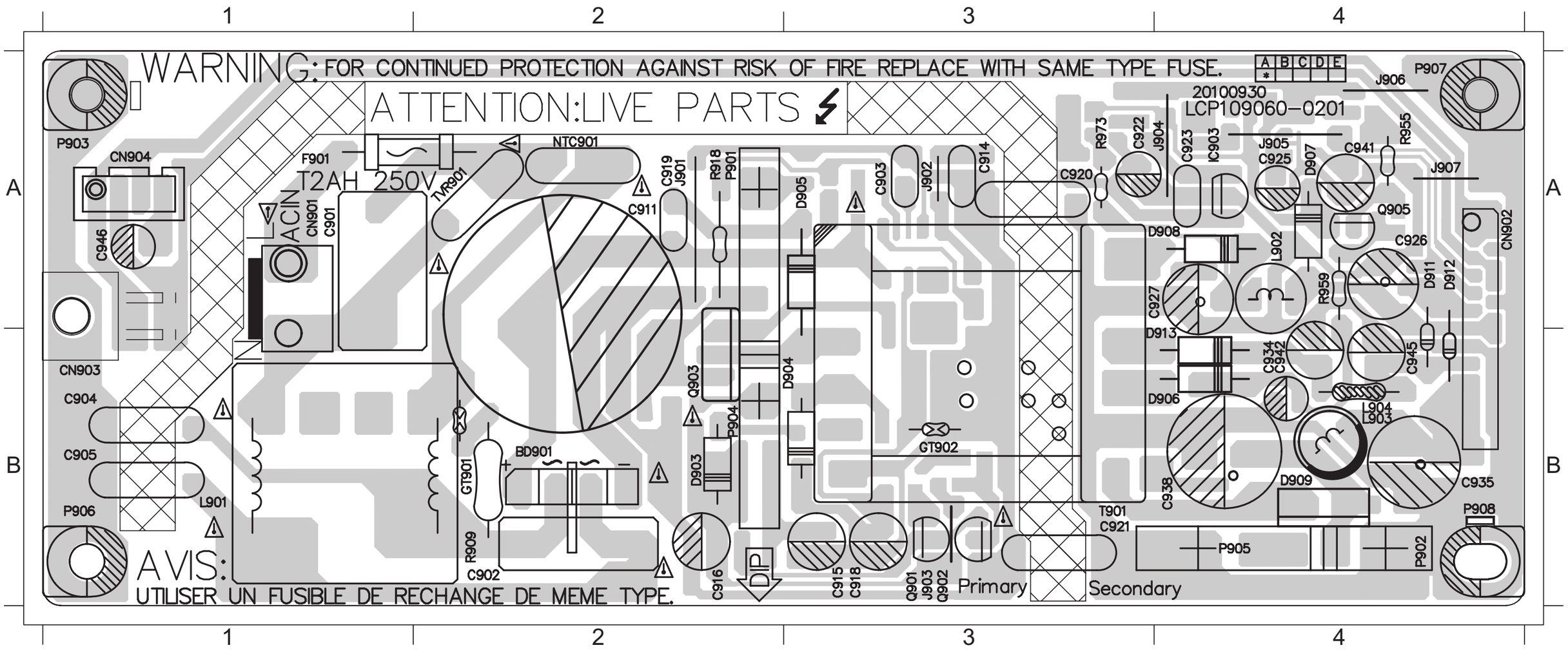
C901 A1 C904 B1 C914 A3 C918 B3 C922 A3 C926 A4 C935 B4 C942 B4 CN901 A1 D903 B2 D906 B4 D909 B4 D913 B4 GT902 B3 J901 A2 J904 A4 J907 A4 L902 A4 NTC901 A2 Q903 B2 R918 A2 R973 A3
C902 B2 C905 B1 C915 B3 C919 A2 C923 A4 C927 A3 C938 B4 C945 B4 CN902 A4 D904 B3 D907 A4 D911 A4 F901 A1 IC903 A4 J902 A3 J905 A4 L901 B1 L903 B4 Q901 B3 Q905 A4 R955 A4 T901 B3



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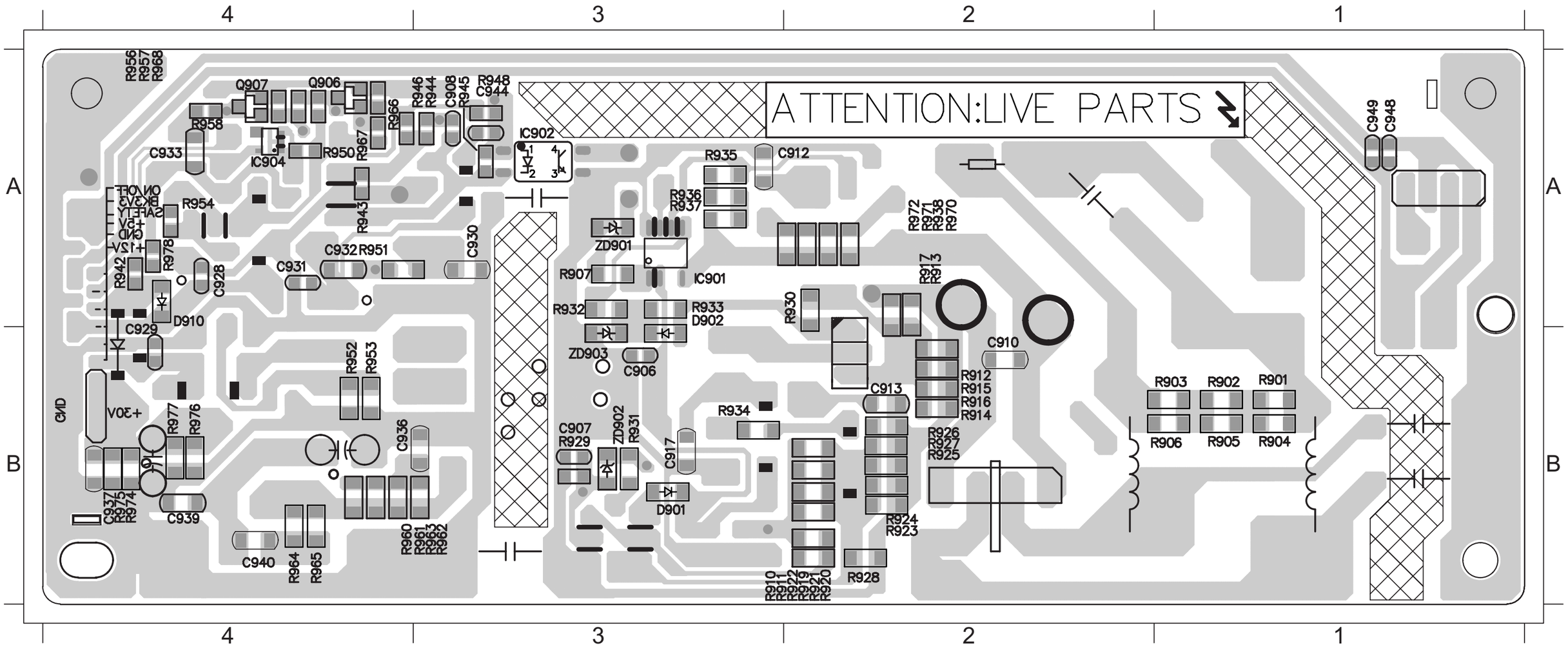
PCB LAYOUT - BOTTOM VIEW

C906 B3 C912 A3 C929 A4 C933 A4 C940 B4 D910 A4 Q906 A4 R903 B1 R907 A3 R913 A2 R917 A2 R922 B2 R926 B2 R930 A2 R934 B3 R938 A2 R945 A3 R951 A4 R956 A4 R961 B3 R965 B4 R970 A2 R975 B4 ZD903B3
C907 B3 C913 B2 C930 A3 C936 B4 C944 A3 IC901 A3 Q907 A4 R904 B1 R910 B3 R914 B2 R919 B2 R923 B2 R927 B2 R931 B3 R935 A3 R942 A4 R946 A3 R952 B4 R957 A4 R962 B3 R966 A4 R971 A2 R976 B4
C908 A3 C917 B3 C931 A4 C937 B4 D901 B3 IC902 A3 R901 B1 R905 B1 R911 B2 R915 B2 R920 B2 R924 B2 R928 B2 R932 A3 R936 A3 R943 A4 R948 A3 R953 B4 R958 A4 R963 B3 R967 A4 R972 A2 R977 B4
C910 B2 C928 A4 C932 A4 C939 B4 D902 A3 IC904 A4 R902 B1 R906 B1 R912 B2 R916 B2 R921 B2 R925 B2 R929 B3 R933 A3 R937 A3 R944 A3 R950 A4 R954 A4 R960 B4 R964 B4 R968 A4 R974 B4 ZD902B3



9 - 1

LED BOARD

TABLE OF CONTENTS

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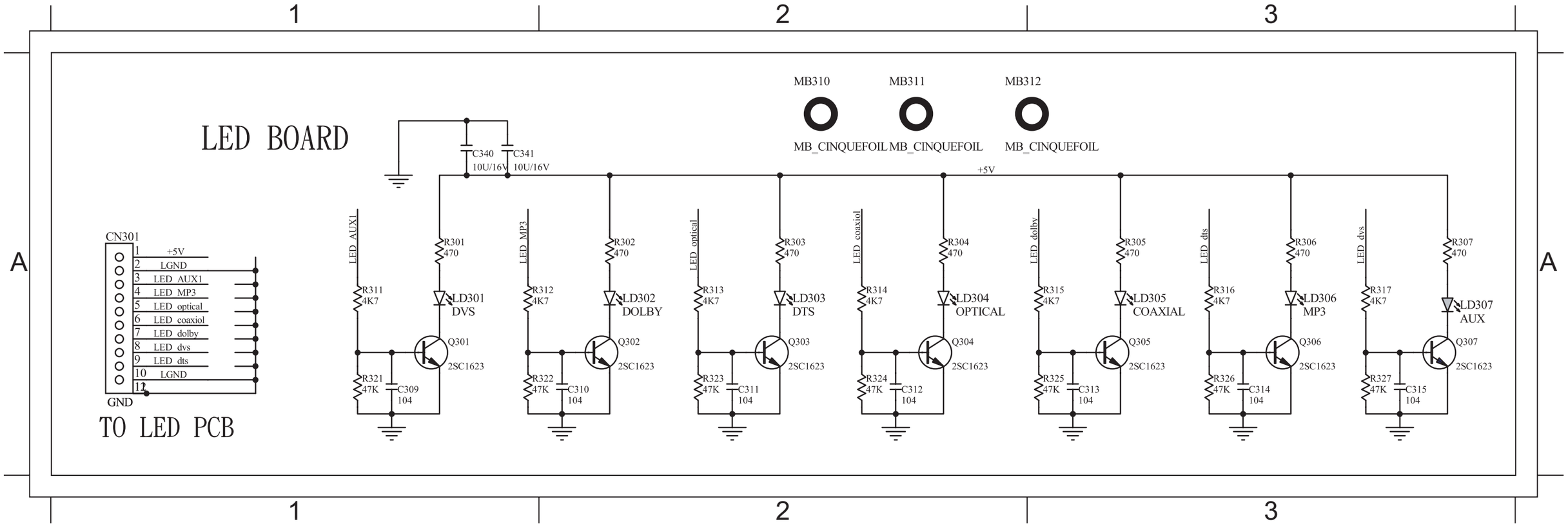
CIRCUIT DIAGRAM

C309	A1	C312	A2	C315	A3	CN301	A1	LD303	A2	LD306	A3	Q301	A1	Q303	A2	Q304	A2	Q306	A3	Q307	A3	R303	A2
C310	A2	C313	A3	C340	A1	LD301	A1	LD304	A2	LD307	A3	Q302	A2	Q303	A2	Q305	A3	Q306	A3	R301	A1	R304	A2
C311	A2	C314	A3	C341	A1	LD302	A2	LD305	A3	Q301	A1	Q302	A2	Q304	A2	Q305	A3	Q307	A3	R302	A2	R305	A3

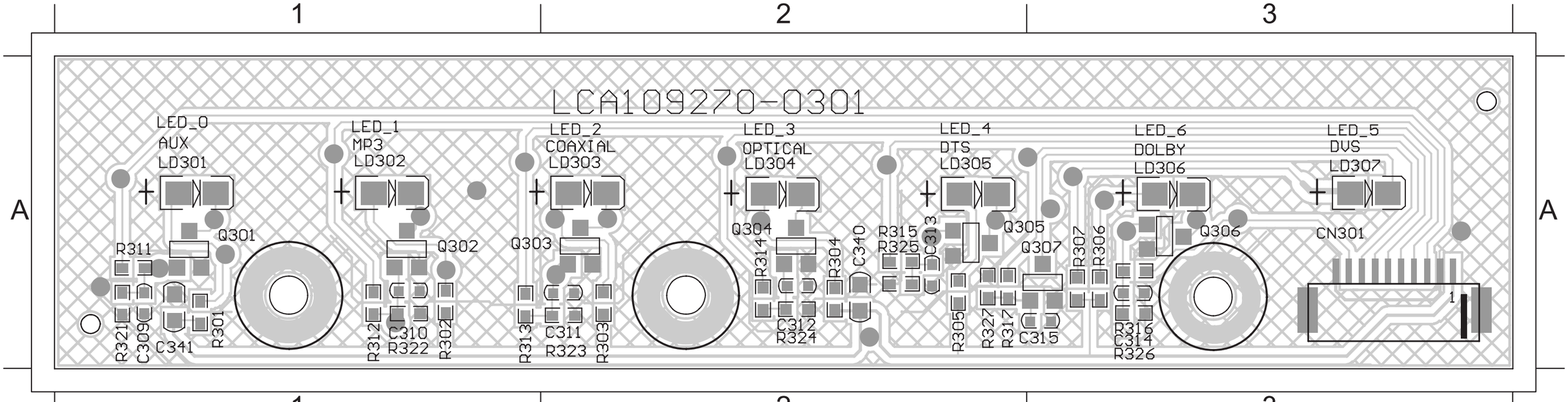
R306	A3	R312	A1	R315	A3	R321	A1	R324	A2	R327	A3												
R307	A3	R313	A2	R316	A3	R322	A1	R325	A3														
R311	A1	R314	A2	R317	A3	R323	A2	R326	A3														



9 - 3

PCB LAYOUT - TOP & BOT VIEW

C309	A1	C312	A2	C315	A3	CN301	A3	LD303	A2	LD306	A3	Q301	A1	Q303	A1	Q304	A2	Q306	A3	Q307	A3	R303	A2	R306	A3	R312	A1	R315	A2	R321	A1	R324	A2	R327	A2
C310	A1	C313	A2	C340	A2	LD301	A1	LD304	A2	LD307	A3	Q302	A1	Q303	A1	Q305	A2	Q306	A3	R301	A1	R304	A2	R307	A3	R313	A1	R316	A3	R322	A1	R325	A2		
C311	A2	C314	A3	C341	A1	LD302	A1	LD305	A2	Q301	A1	Q302	A1	Q304	A2	Q305	A2	Q307	A3	R302	A1	R305	A2	R311	A1	R314	A2	R317	A2	R323	A2	R326	A3		



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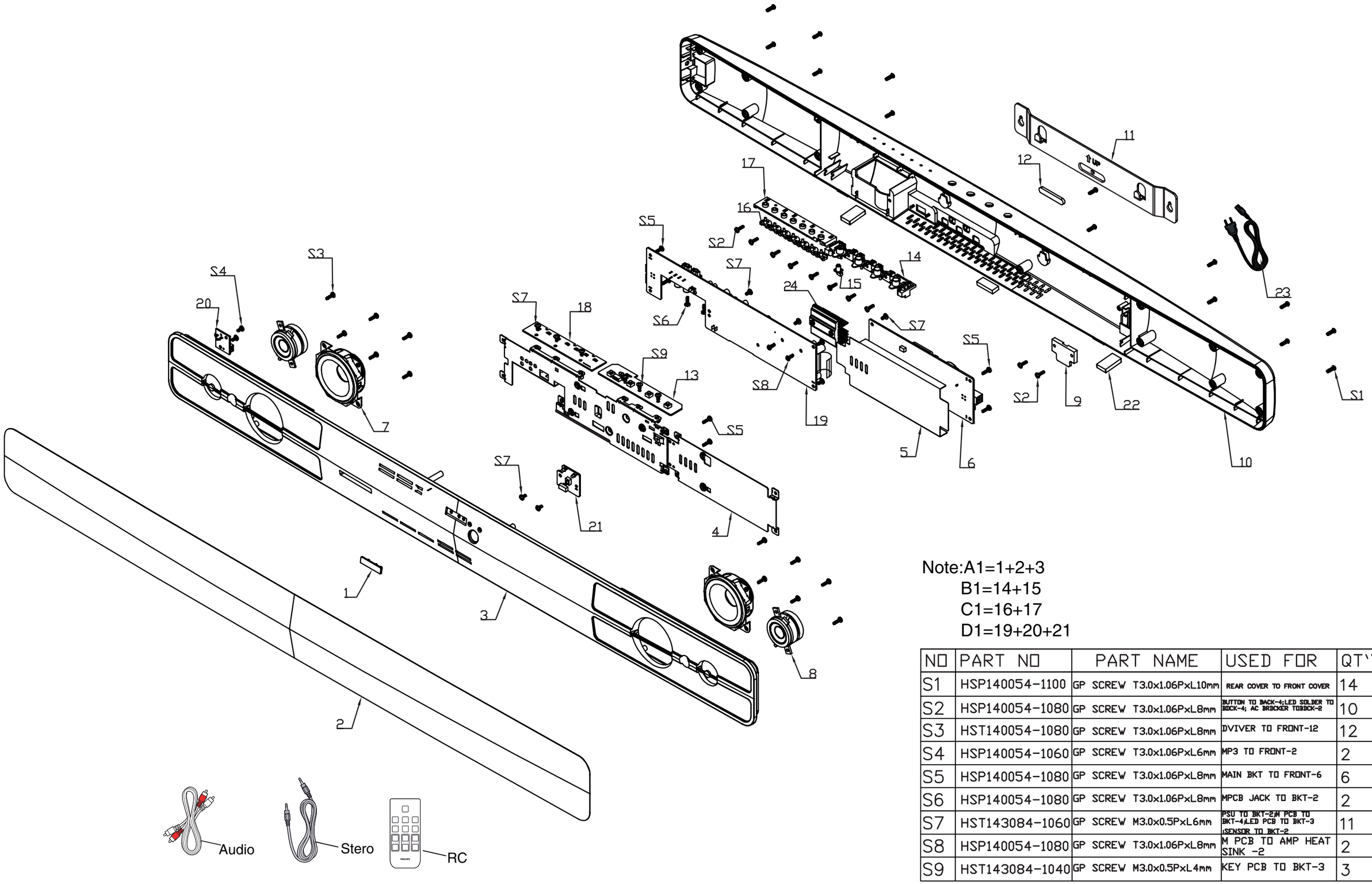
Mechanical Exploded View



Note:A1=1+2+3
B1=14+15
C1=16+17
D1=19+20+21

NO	PART NO	PART NAME	USED FOR	QT'Y
S1	HSP140054-1100	GP SCREW T3.0x1.06PxL10mm	REAR COVER TO FRONT COVER	14
S2	HSP140054-1080	GP SCREW T3.0x1.06PxL8mm	BUTTON TO BACK-4;LED SOLDER TO BDCK-4; AC BRDCKER TOBDCK-2	10
S3	HST140054-1080	GP SCREW T3.0x1.06PxL8mm	DVIVER TO FRONT-12	12
S4	HSP140054-1060	GP SCREW T3.0x1.06PxL6mm	MP3 TO FRONT-2	2
S5	HSP140054-1080	GP SCREW T3.0x1.06PxL8mm	MAIN BKT TO FRONT-6	6
S6	HSP140054-1080	GP SCREW T3.0x1.06PxL8mm	MPCB JACK TO BKT-2	2
S7	HST143084-1060	GP SCREW M3.0x0.5PxL6mm	PSU TO BKT-2;M PCB TO BKT-4;LED PCB TO BKT-3 ;SENSOR TO BKT-2	11
S8	HSP140054-1080	GP SCREW T3.0x1.06PxL8mm	M PCB TO AMP HEAT SINK -2	2
S9	HST143084-1040	GP SCREW M3.0x0.5PxL4mm	KEY PCB TO BKT-3	3

REVISION LIST

Version 1.0
*Initial release

Version 1.1
*HTS3111/05 combine with HTS3111/12