

Service
Service
Service



It is only for serial number :NSxxxxxxxxxxx

Service Manual

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Published by LX 1231 Service Audio

Printed in The Netherlands

Subject to modification

© 3141 785 34571

Version 1.1



SPECIFICATIONS

| | |
|------------------------------------|---|
| <i>Dimensions (L x W x H)</i> | <i>341mm x 236mm x 122mm</i> |
| <i>Weight</i> | <i>1.8 kg</i> |
| <i>Power supply</i> | <i>DC 9V 1.5 A 110V-127V,60HZ; 220-240V, 50HZ</i> |
| <i>Power consumption</i> | <i>Active <12 W</i> |
| <i>Power output</i> | <i>2 x 1 W RMS</i> |
| <i>Operating temperature range</i> | <i>-10 °C - 50 °C 14 °F -122 °F</i> |

USB playability information

Compatible USB devices:

- USB flash memory (USB 2.0 or USB1.1)
- USB flash players (USB 2.0 or USB1.1)
- *memory cards (requires an additional card reader to work with this apparatus)*

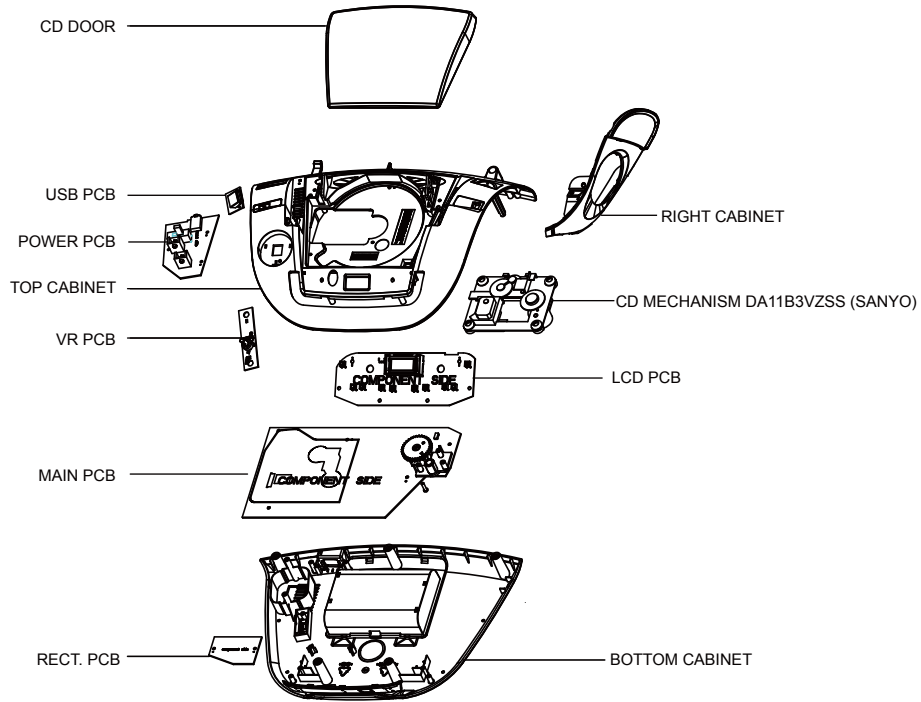
Supported formats:

- USB or memory file format FAT12, FAT16, FAT32 (sector size: 512 bytes)
- *MP3 bit rate (data rate): 32-320 Kbps and variable bit rate*
- *WMA v9 or earlier*
- *Directory nesting up to a maximum of 8 levels*
- *Number of albums/ folders: maximum 99*
- *Number of tracks/titles: maximum 999*
- *ID3 tag v2.0 or later*
- *File name in Unicode UTF8 (maximum length: 128 bytes)*

Unsupported formats:

- *Empty albums: an empty album is an album that does not contain MP3/ WMA files, and is not be shown in the display.*
- Unsupported file formats are skipped. For example, Word documents (.doc) or MP3 files with extension .dlf are ignored and not played.
- AAC, WAV, PCM audio files
- DRM protected WMA files (.wav, .m4a, .m4p, .mp4, .aac)
- WMA files in Lossless format

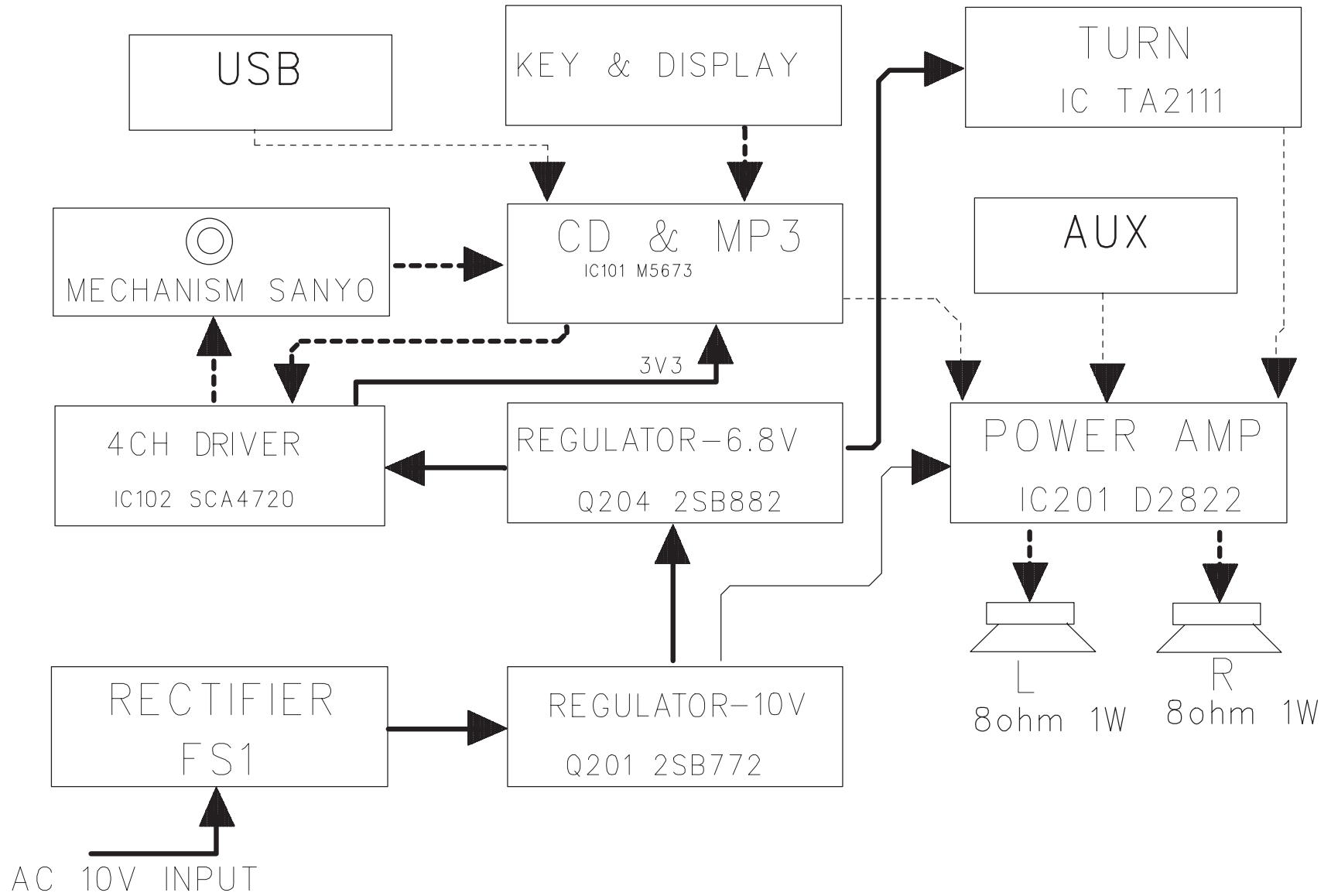
PCBS LOCATION



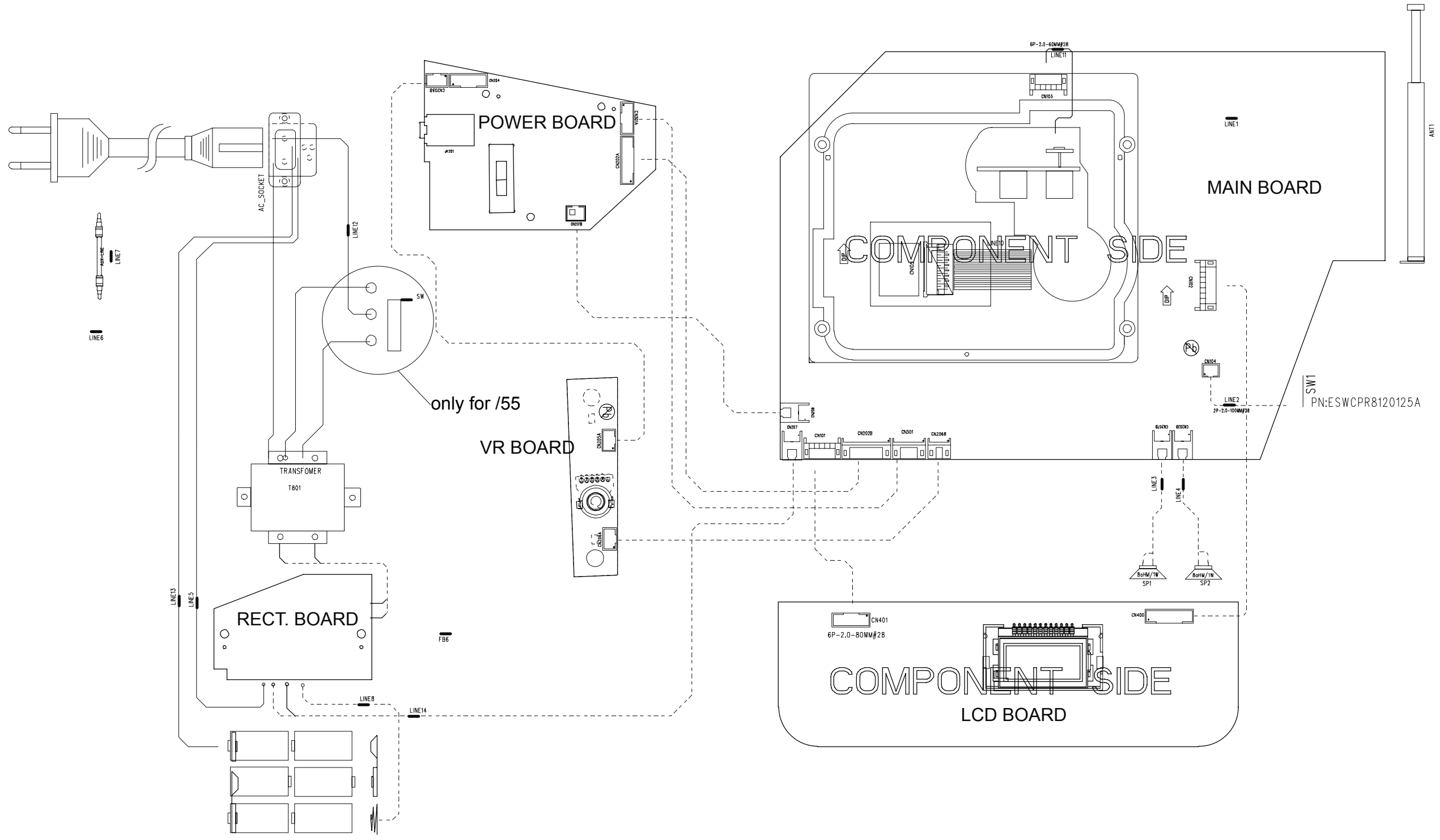
VERSION VARIATIONS

| Board in use | Type / Version | AZ1837 | | | | | | |
|---|----------------|---|-----|-----|-----|-----|-----|-----|
| | Service policy | /05 | /12 | /37 | /55 | /58 | /73 | /98 |
| USB PCB | | | | | C | | C | |
| POWER PCB | | | | | M/C | | M/C | |
| VR PCB | | | | | C | | C | |
| MAIN PCB | | | | | M/C | | M/C | |
| RECT.PCB | | | | | M/C | | M/C | |
| CD MECHANISM DA11B3VZSS(SANYO) | | | | | M | | M | |
| LCD PCB | | | | | C | | C | |
| BOTTOM CABINET | | | | | C | | C | |
| * TIPS: C -- Component Lever Repair. M -- Module Lever Repair X -- Used | | Remark: For Europe, service policy should be OCX. | | | | | | |

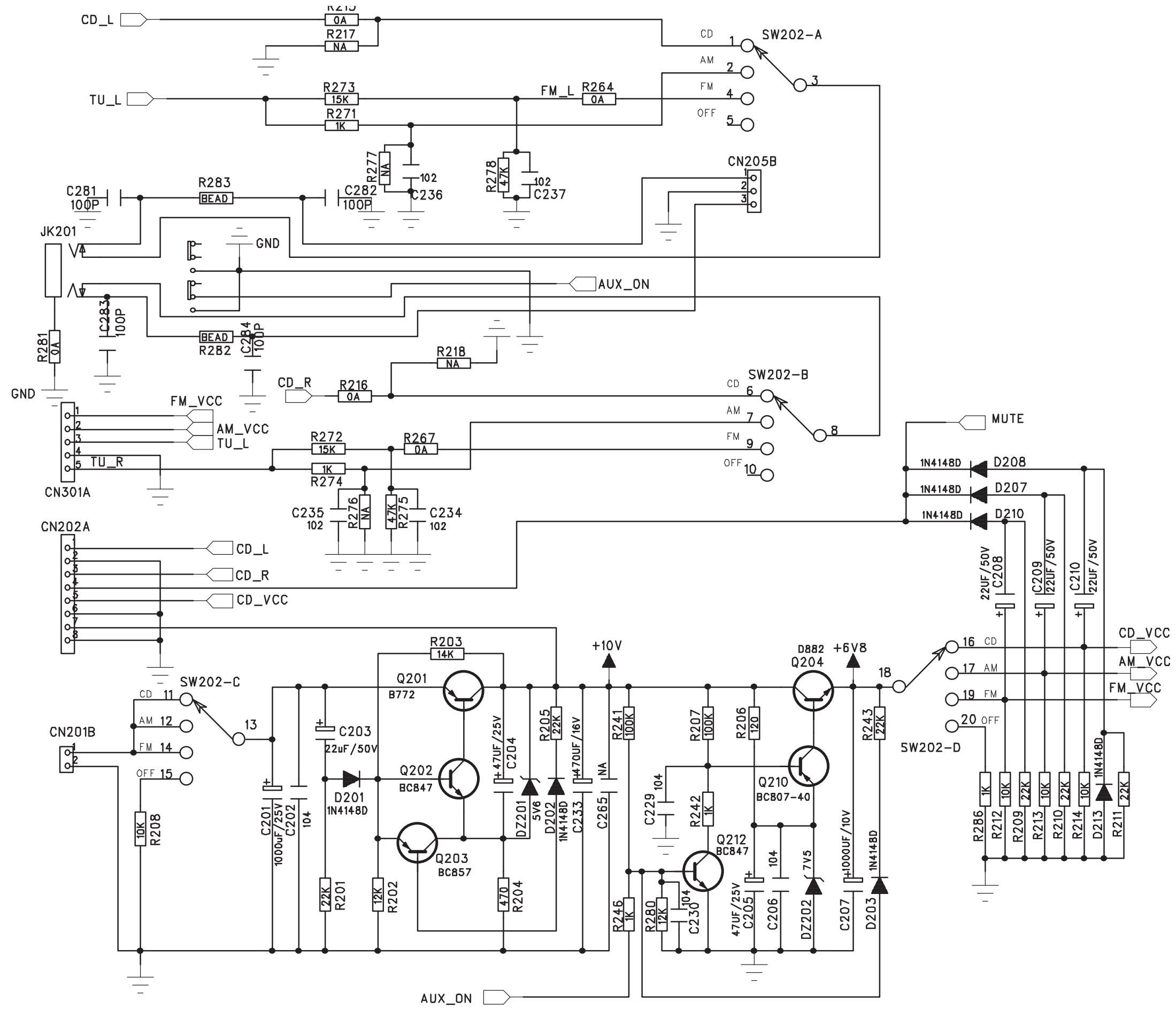
SET BLOCK DIAGRAM



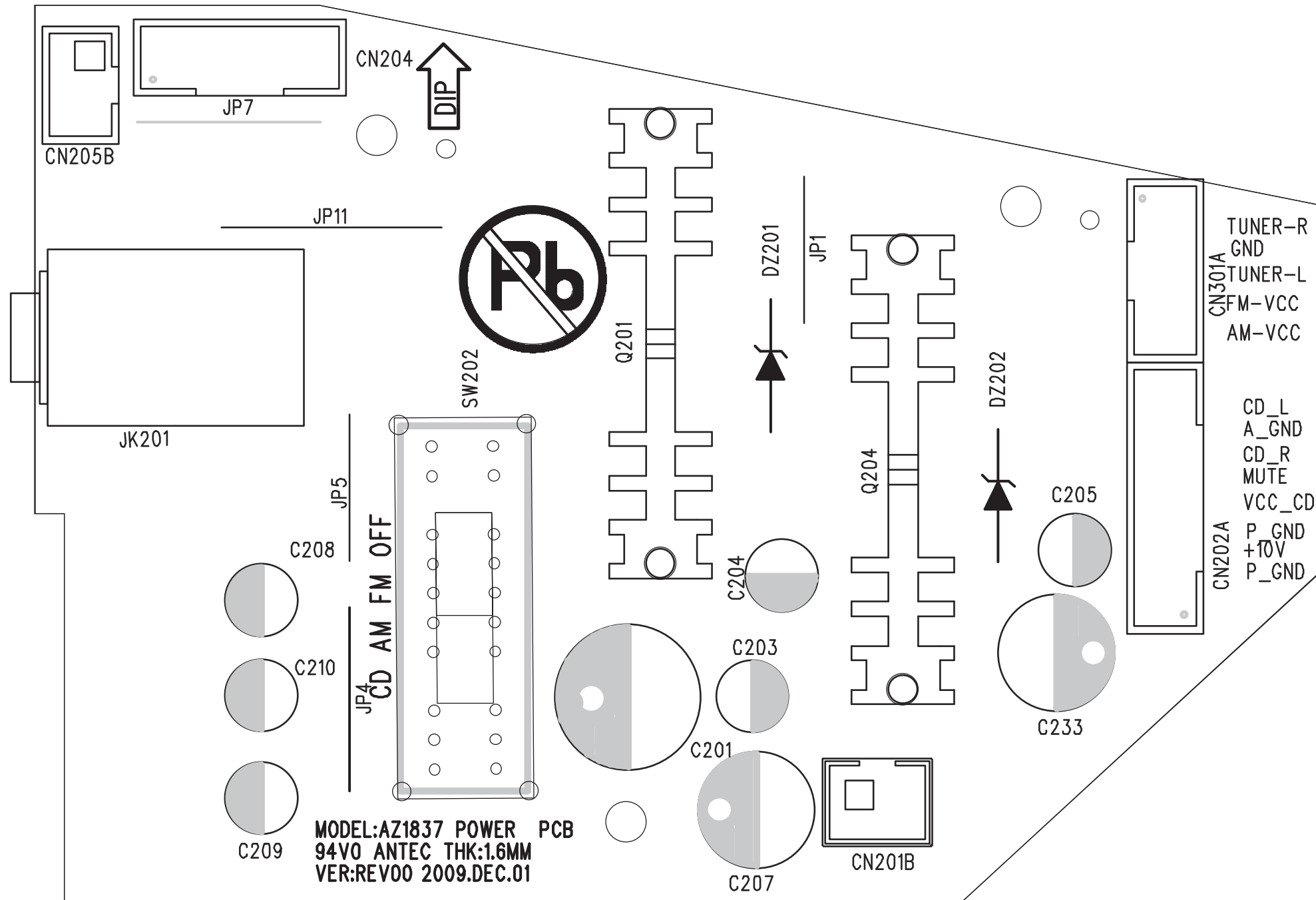
SET WIRING DIAGRAM



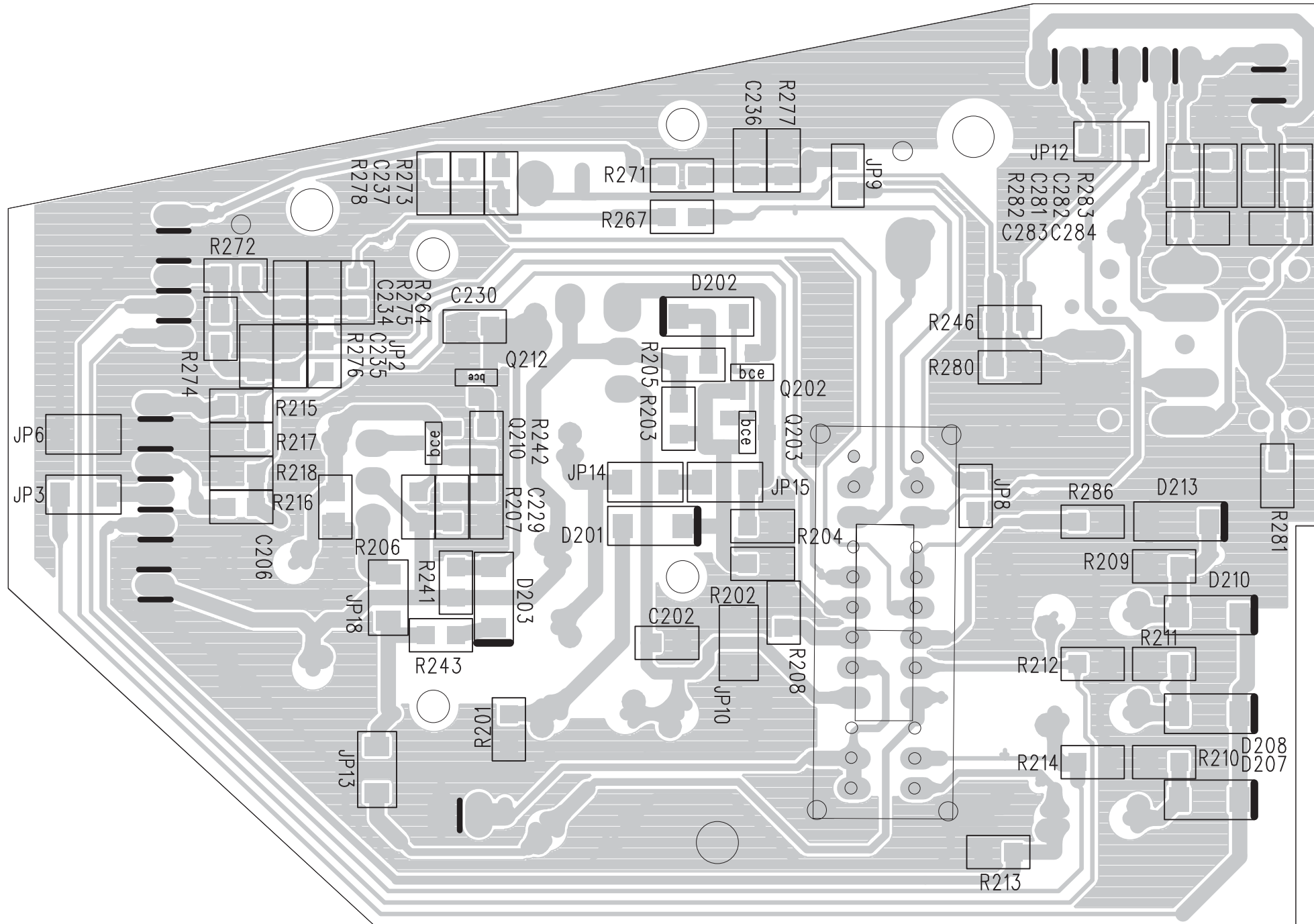
POWER BOARD-CIRCUIT DIAGRAM



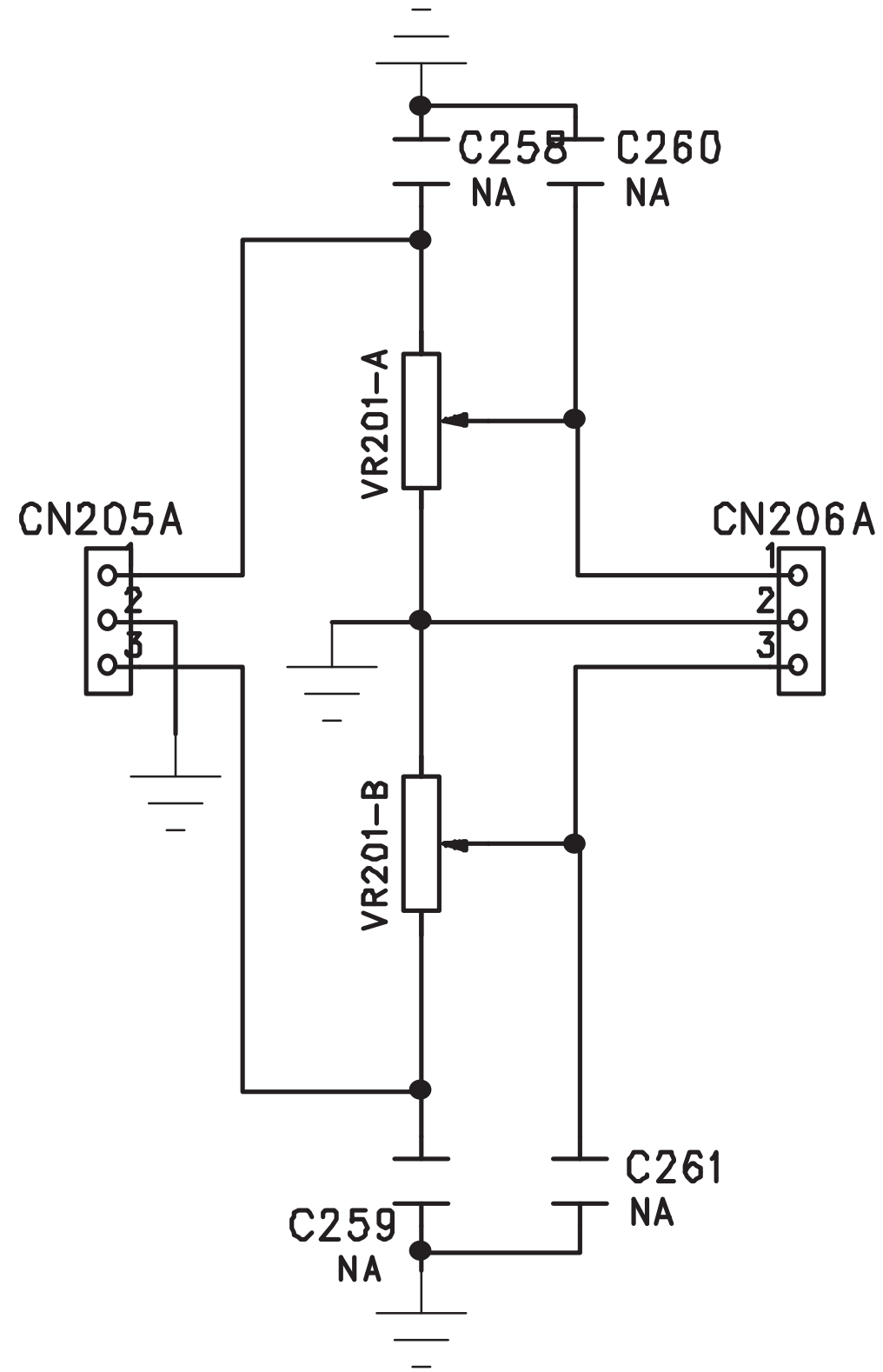
POWER BOARD-LAYOUT DIAGRAM
TOP VIEW



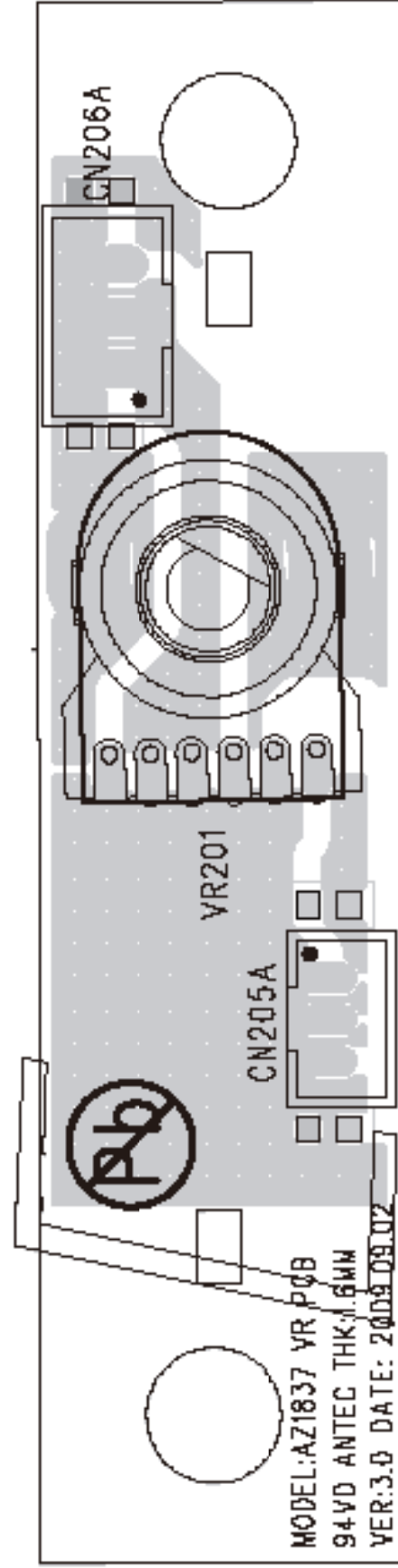
POWER BOARD-LAYOUT DIAGRAM
BOTTOM VIEW



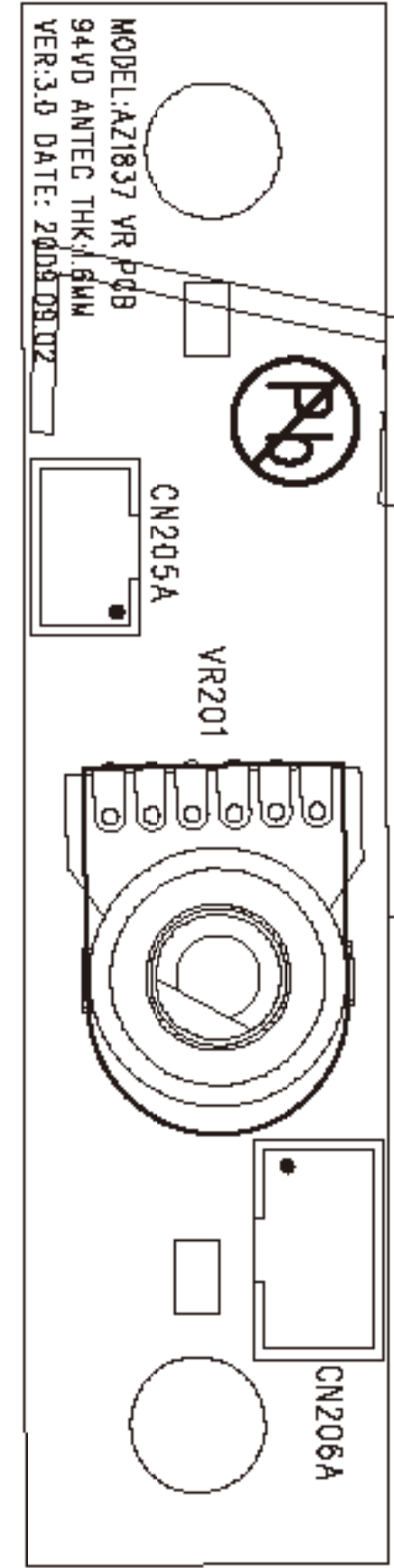
VR BOARD-CIRCUIT DIAGRAM



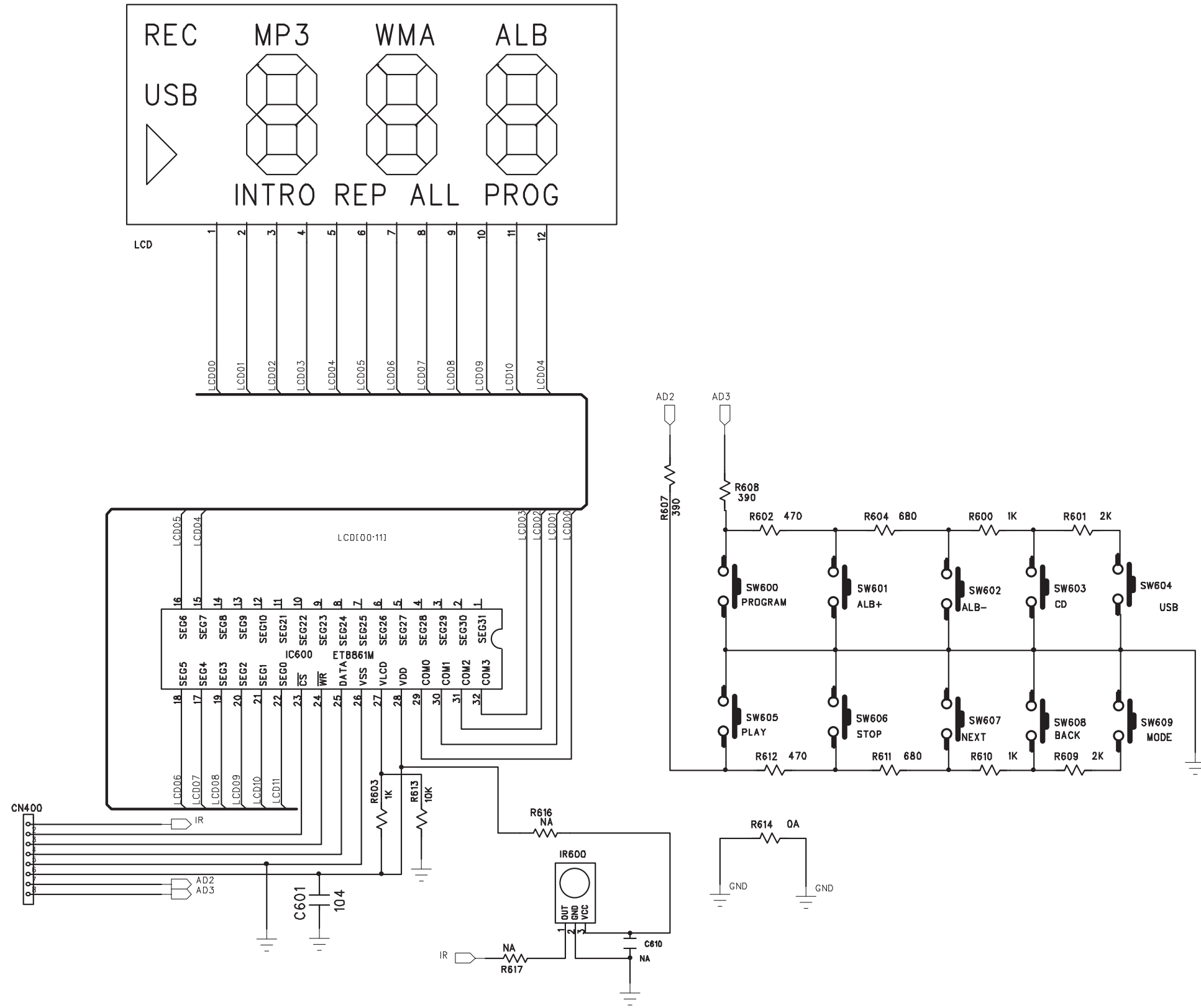
VR BOARD-LAYOUT DIAGRAM
TOP VIEW



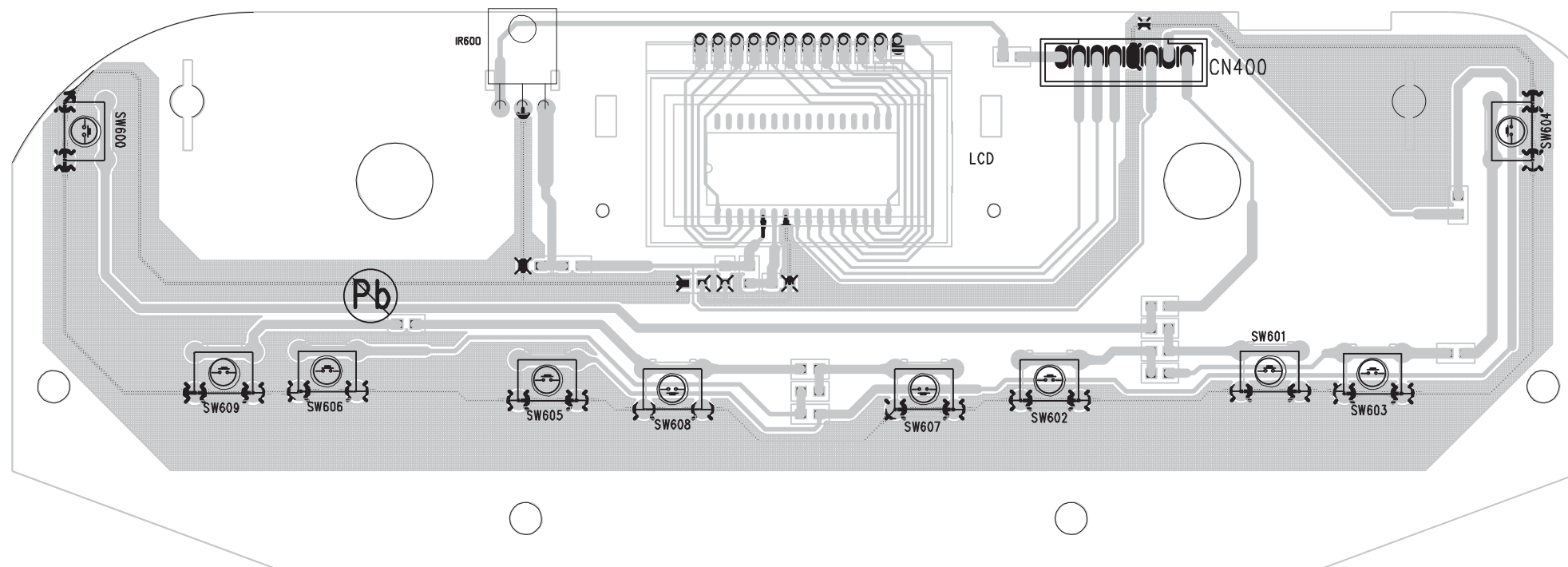
VR BOARD-LAYOUT DIAGRAM
BOTTOM VIEW



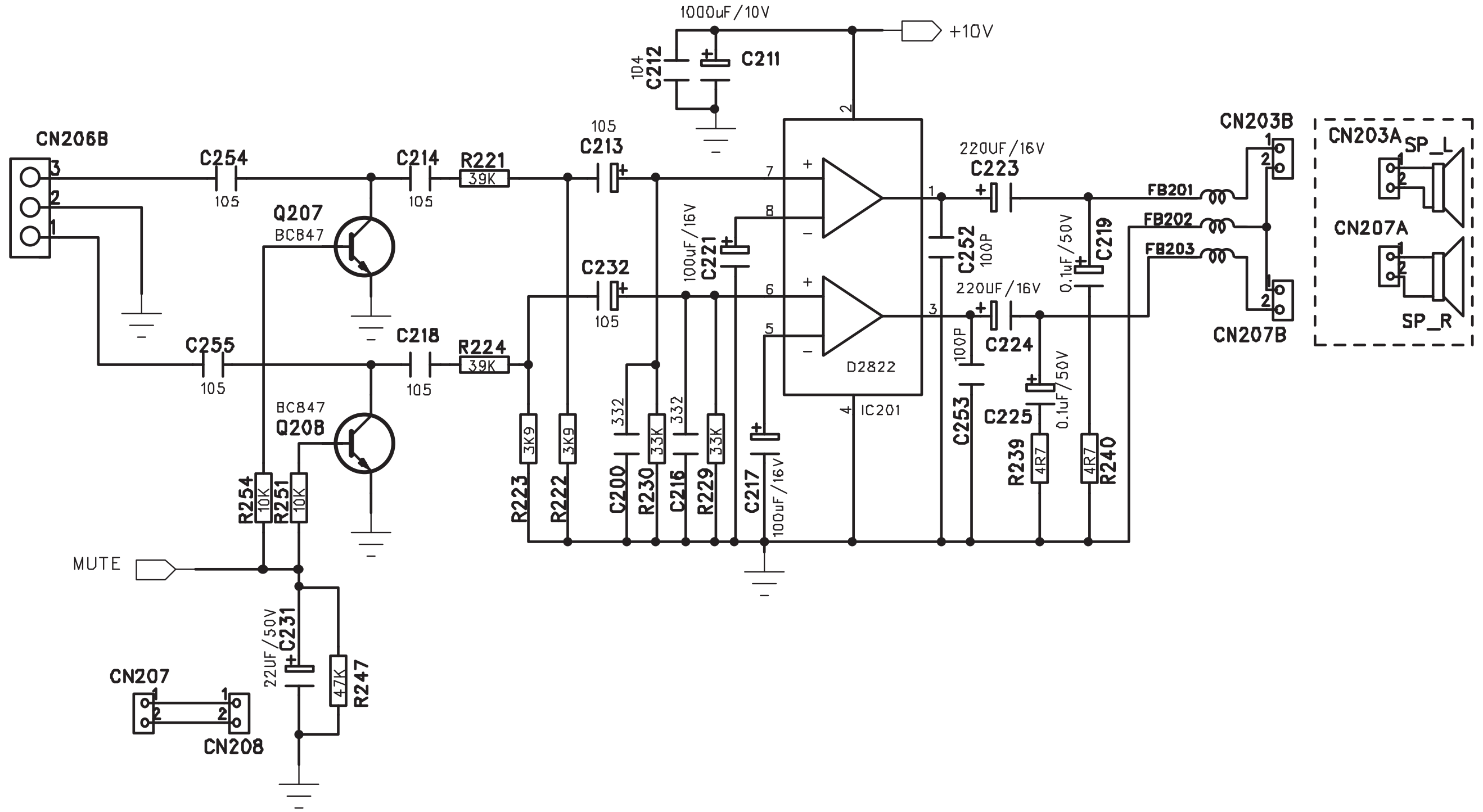
LCD BOARD-CIRCUIT DIAGRAM



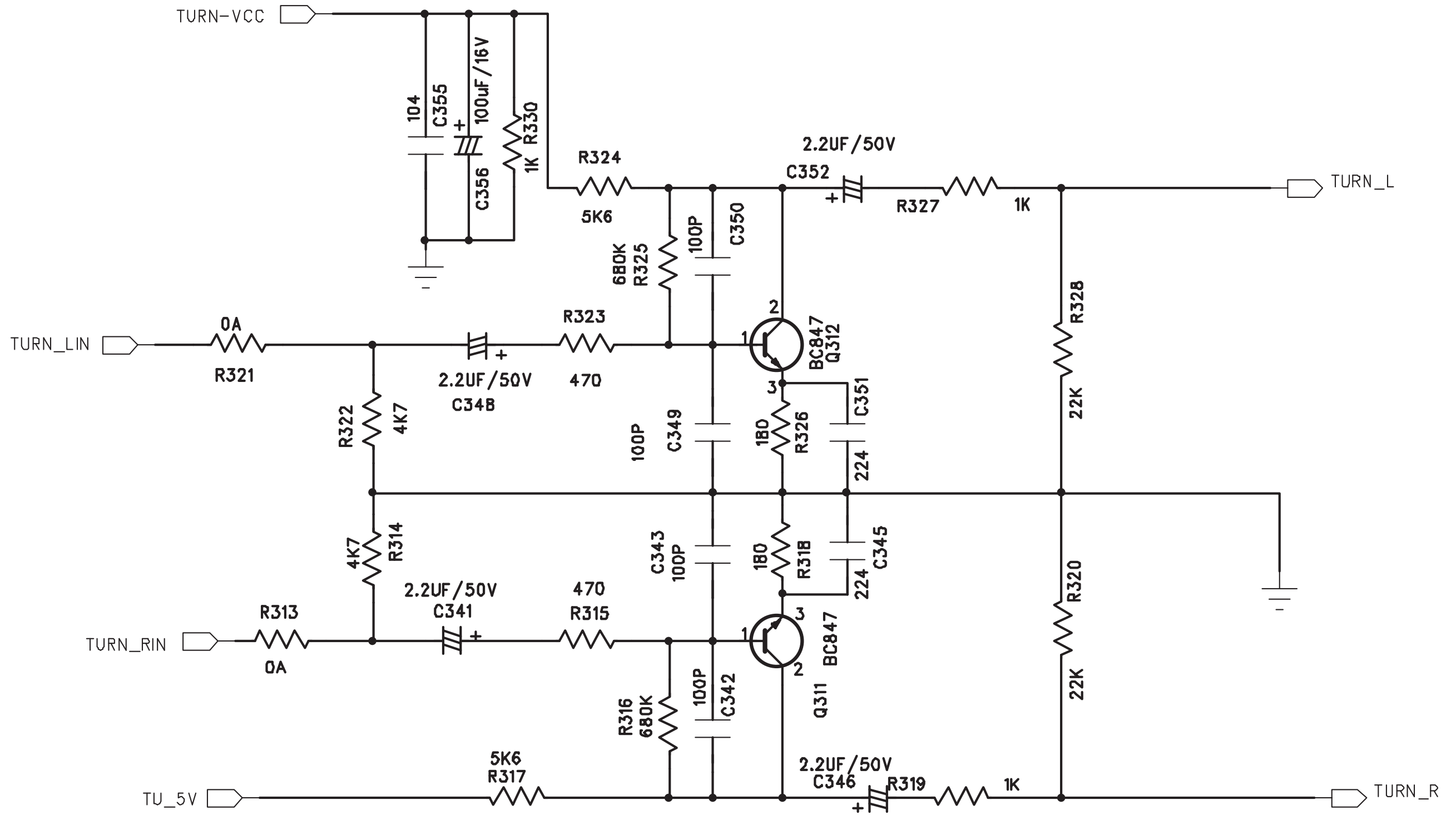
LCD BOARD-LAYOUT DIAGRAM



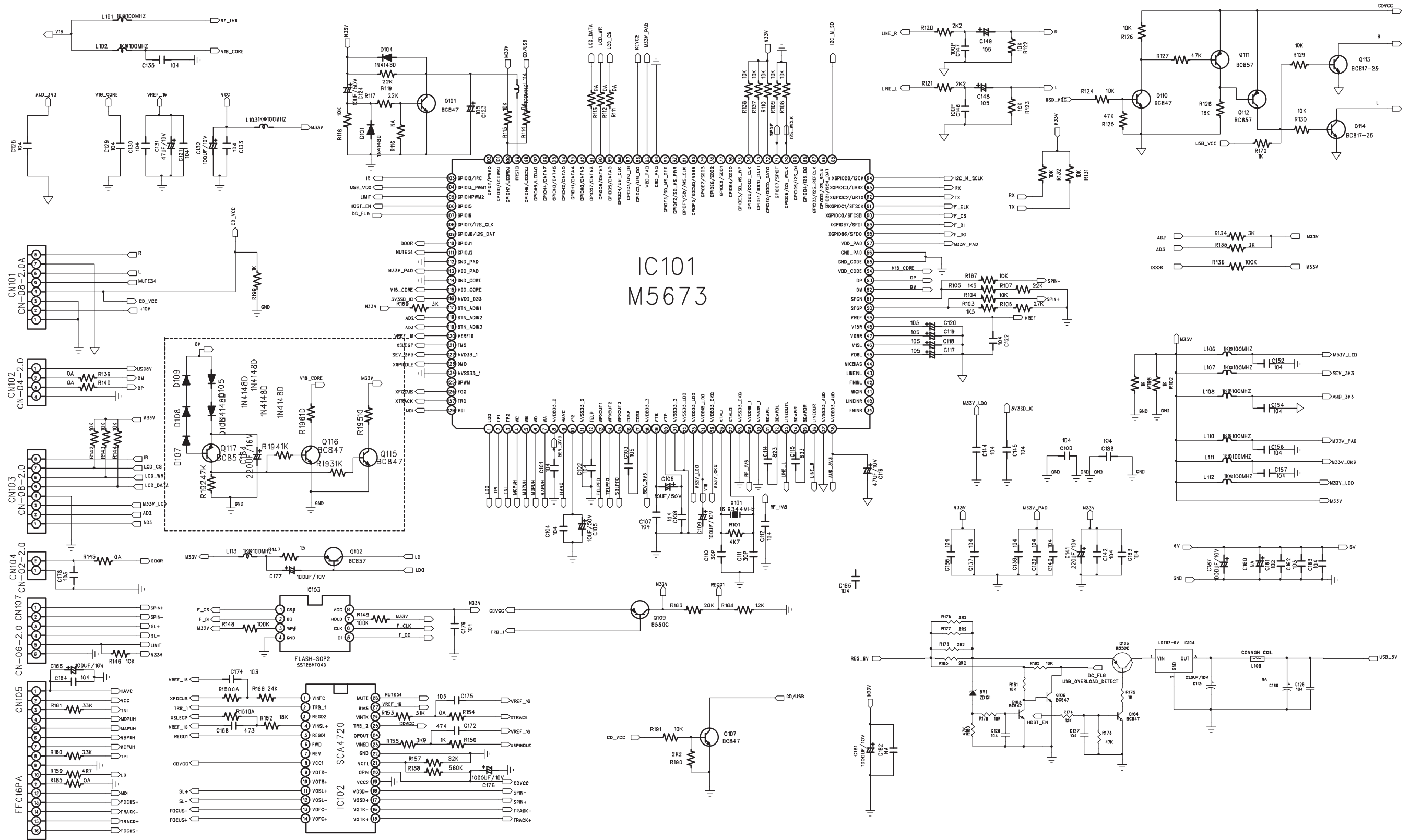
MAIN BOARD-CIRCUIT DIAGRAM (AMP PART)



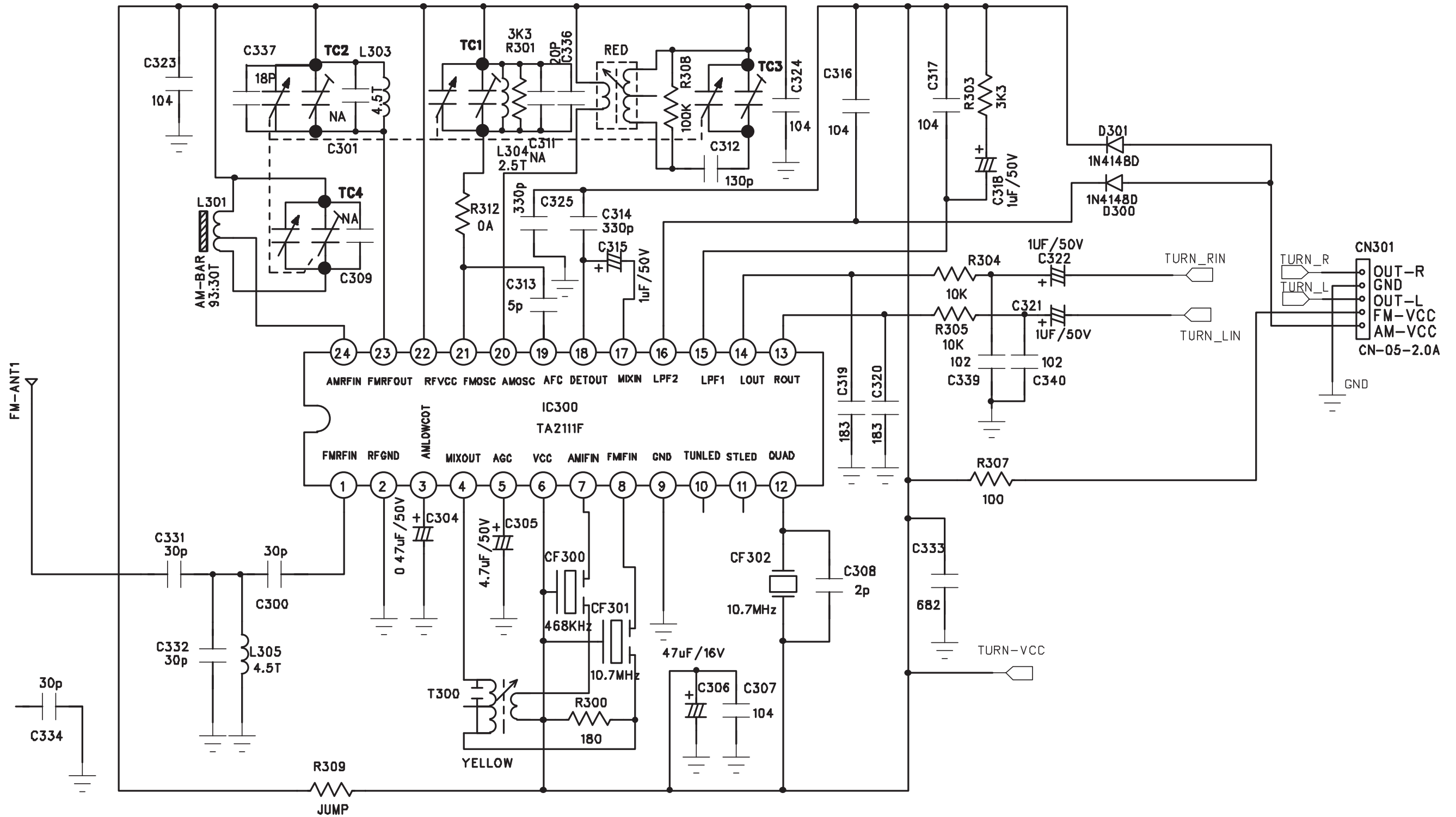
MAIN BOARD-CIRCUIT DIAGRAM (BUFFER PART)



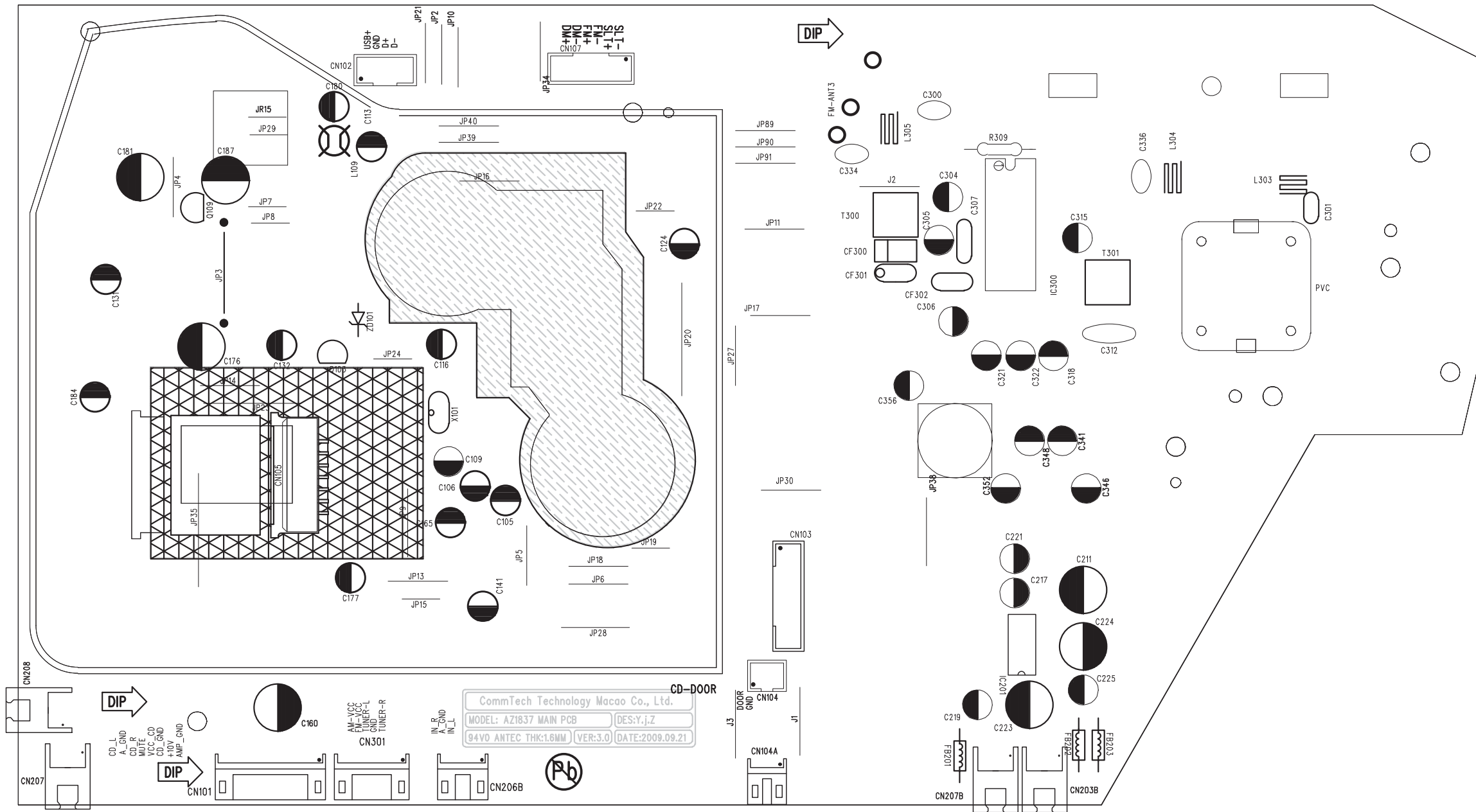
MAIN BOARD-CIRCUIT DIAGRAM (CD PART)



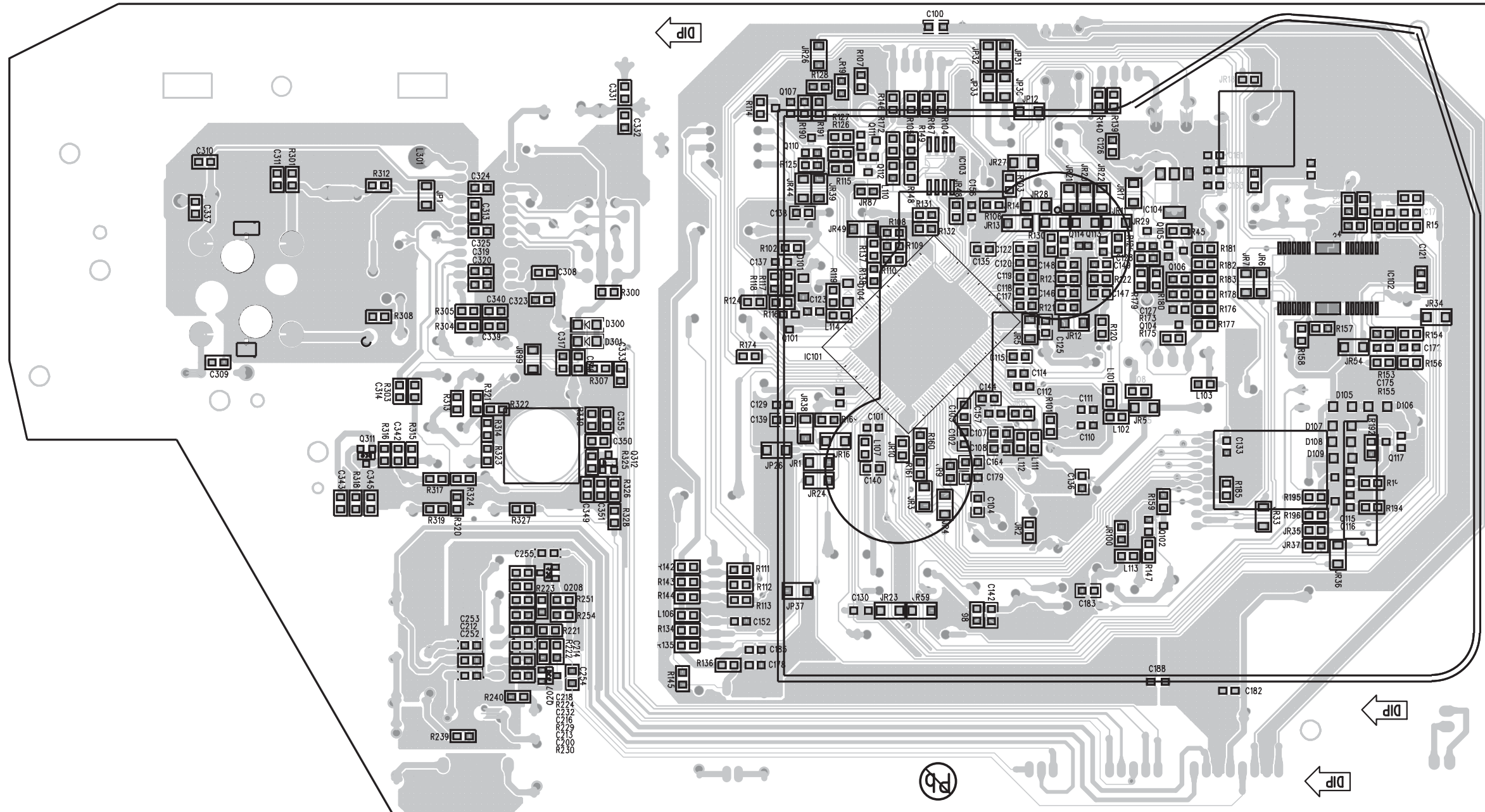
MAIN BOARD-CIRCUIT DIAGRAM (TUNER PART)



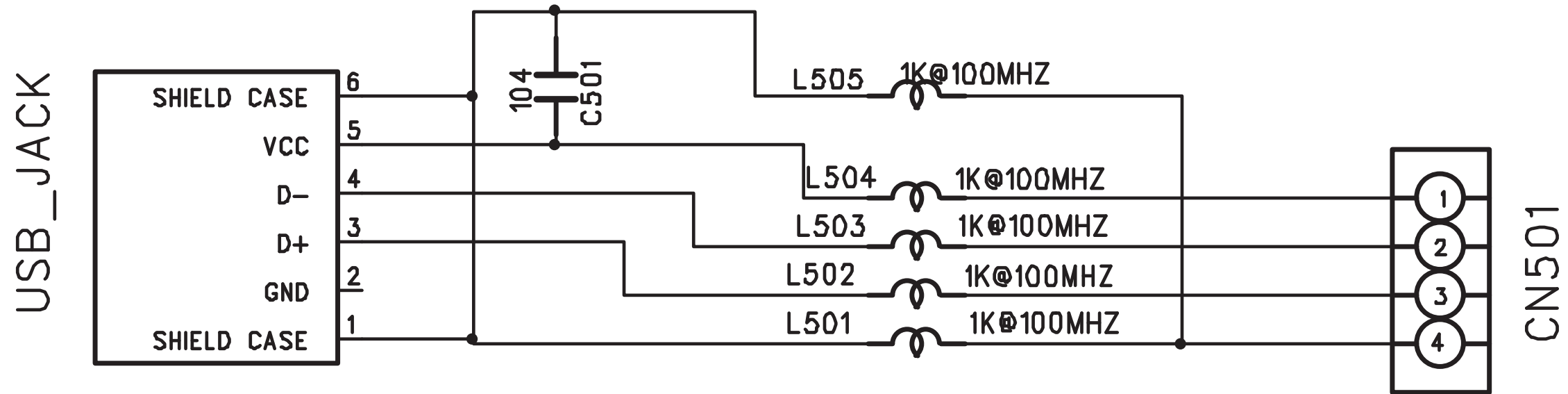
MAIN BOARD-LAYOUT DIAGRAM (TOP VIEW)



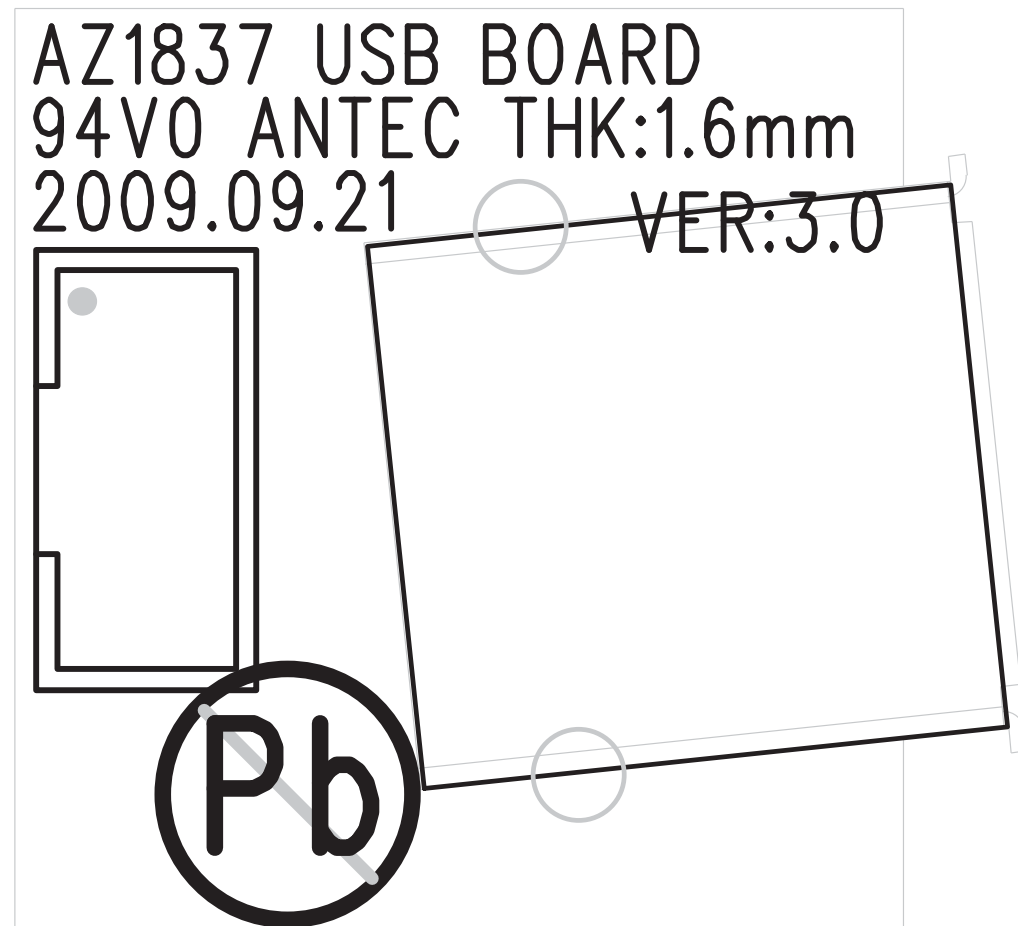
MAIN BOARD-LAYOUT DIAGRAM (BOTTOM VIEW)



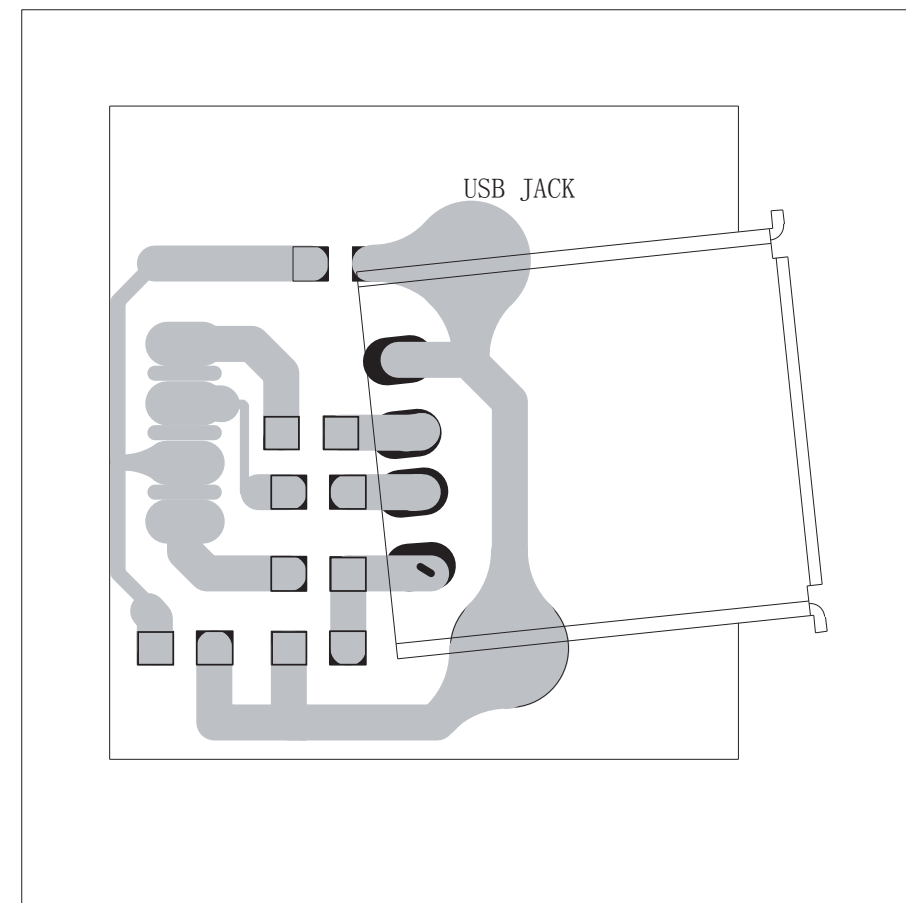
USB BOARD-CIRCUIT DIAGRAM



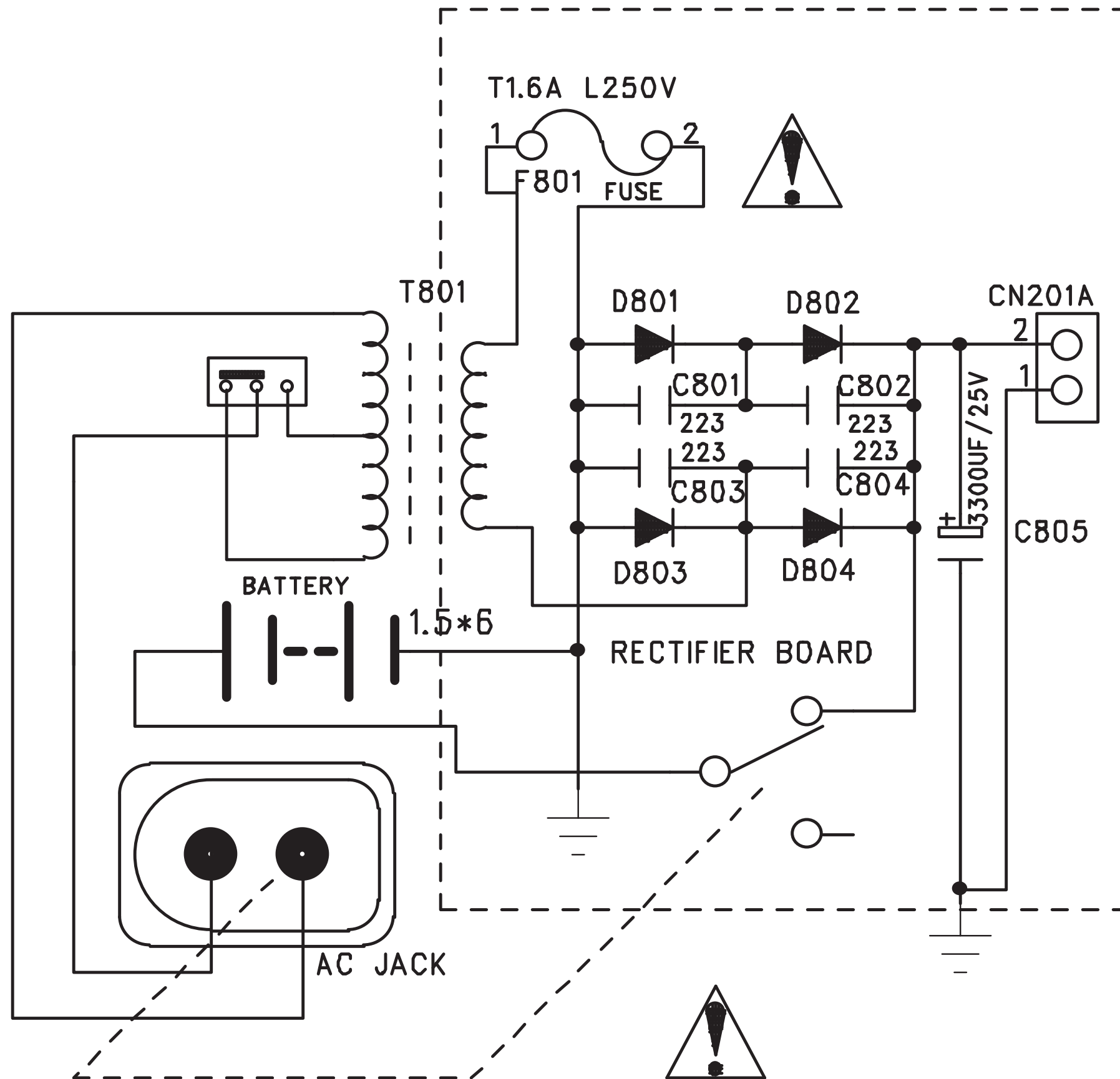
USB BOARD-LAYOUT DIAGRAM
TOP VIEW



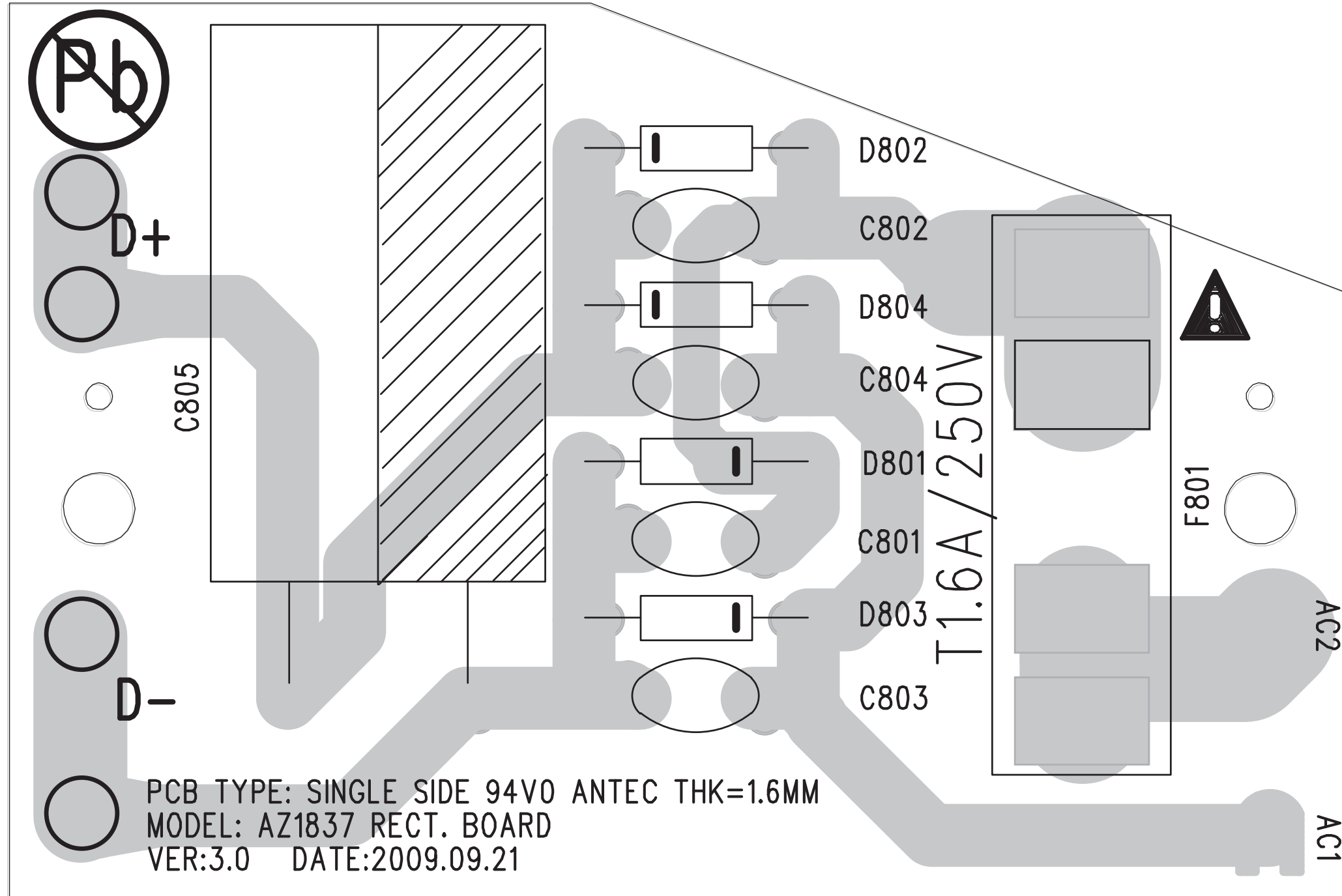
USB BOARD-LAYOUT DIAGRAM
BOTTOM VIEW



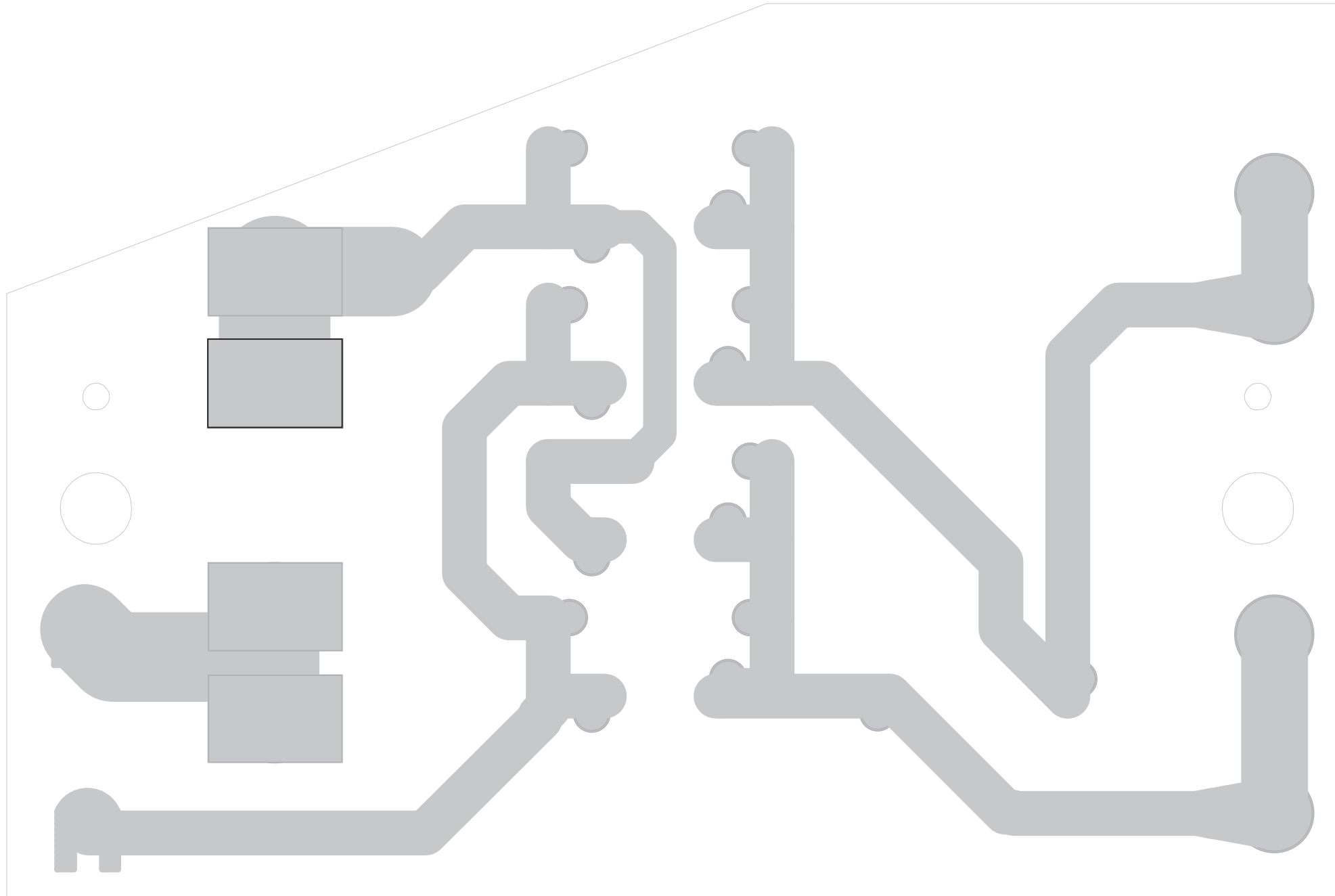
RECTIFIER BOARD-CIRCUIT DIAGRAM



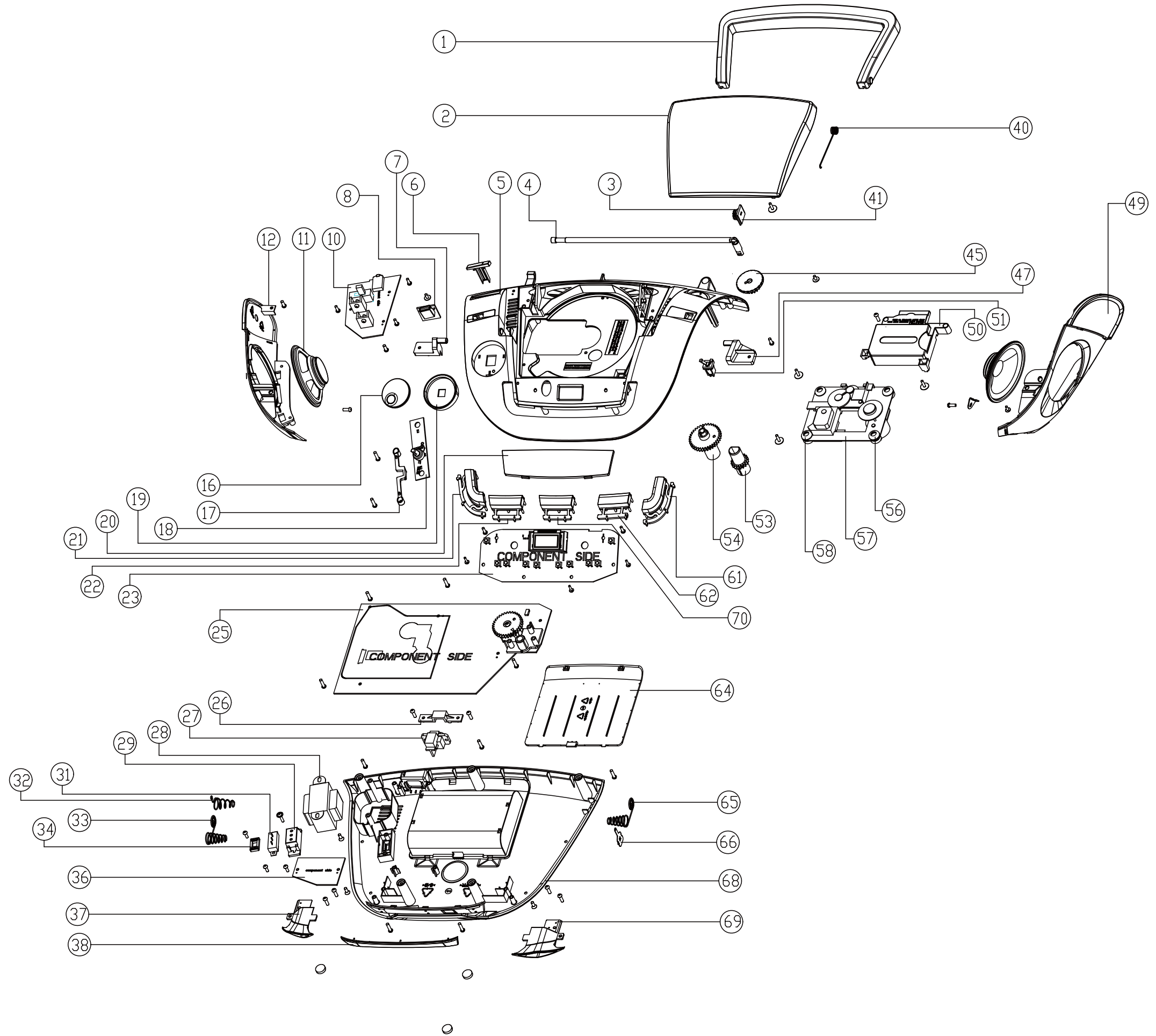
RECTIFIER BOARD-LAYOUT DIAGRAM
TOP VIEW



**RECTIFIER BOARD-LAYOUT DIAGRAM
BOTTOM VIEW**



SET MECHANICAL EXPLODED VIEW



MECHANICAL & ACCESSORIES PARTS LIST

| | | |
|----|----------------|-----------------------------------|
| 1 | 996510030502 | HANDLE |
| 10 | △ 996510031044 | POWER PCBA |
| 11 | 996510030538 | 77MM SPEAKER 8R 1W 3INCH |
| 12 | 996510031046 | LEFT CABINET |
| 16 | 996510031043 | VOLUME KNOB |
| 17 | 996510030534 | VOL-PCB-BRACKET |
| 18 | 996510031038 | VR PCB |
| 19 | 996510030527 | VOL. DECO RING W/PLATE |
| 2 | 996510031048 | CD DOOR /55 |
| 2 | 996510032562 | CD DOOR /73 |
| 20 | 996510030549 | LENS LCD /55 |
| 20 | 996510032712 | LENS LCD /73 |
| 21 | 996510031031 | FUNCTION BUTTON A |
| 22 | 996510031032 | FUNCTION BUTTON B |
| 23 | 996510031058 | LCD PCB /55 |
| 23 | 996510032713 | LCD PCB /73 |
| 25 | 996510031042 | MAIN PCB |
| 26 | 996510030531 | AC SOCKET HOLDER |
| 27 | △ 996510016704 | 2PINS AC SOCKET |
| 28 | △ 994000005096 | TRANSFOMER EI-41 120/230V /55 |
| 28 | △ 996500039377 | TRANSFOMER EI-41 230V 50Hz 9V /73 |
| 29 | 996510021543 | AC SELECTOR COVER |
| 3 | 996510000931 | CD DOOR GEAR |
| 31 | 996510000874 | VOLTAGE SELECTOR WS-12J01-GC7 |
| 32 | 996510031023 | BATTERY SPRING |
| 33 | 996510031021 | BATTERY SPRING |
| 34 | 996510030509 | AC SELECTOR PLATE |
| 36 | 996510031029 | RECT PCB |
| 37 | 996510030512 | SOUND PIPE (L) |
| 38 | 996510031059 | LENS PANEL |
| 4 | 994000003393 | ROD ANTENNA 2-SECTIONS L=420MM |
| 40 | 996510030507 | CD DOOR SPRING |
| 41 | 994000001409 | CD DOOR GEAR HOLDER |
| 45 | 996510030529 | TUNING KNOB |
| 47 | 996510030517 | ROTATE BRACKET R |
| 49 | 996510031037 | RIGHT CABINET |
| 5 | 996510031045 | TOP CABINET |
| 50 | 994000001417 | DUST COVER FOR DA12N |
| 51 | 994000001422 | CD DOOR SWITCH 1P1T |
| 53 | 996510030541 | TUNING GEAR B |
| 54 | 996510030518 | TUNING GEAR C |
| 56 | 996510030528 | CD DAMPER GRN COLOR 658N |
| 57 | 996510030505 | CD MECHANISM DA11B3VZSS |
| 58 | 994000005115 | CD DAMPER BLACK 658PH |
| 6 | 996510030532 | SWITCH KNOB |
| 61 | 996510031022 | FUNCTION BUTTON E |
| 62 | 996510031041 | FUNCTION BUTTON D |
| 64 | 996510031027 | BATTERY DOOR |
| 65 | 996510031036 | BATTERY SPRING |
| 66 | 996510031034 | BATTERY SPRING |

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

MECHANICAL & ACCESSORIES PARTS LIST

| | | |
|---------|----------------|----------------------------------|
| 68 | 996510031028 | BOTTOM CABINET /55 |
| 68 | 996510032559 | BOTTOM CABINET /73 |
| 69 | 996510030516 | SOUND PIPE (R) |
| 7 | 996510030537 | ROTATE BRACKET L |
| 70 | 996510031035 | FUNCTION BUTTON C |
| 8 | 996510031039 | USB PCB |
| A | 996510030536 | TUNING GEAR A |
| ACCOIL1 | △ 996510018690 | 1.5M VDE POWER CORD /55 |
| ACCOIL1 | △ 996510000876 | 5 FT VDE APPROVED POWER CORD /73 |
| LINE10 | 994000001423 | 16P FFC L=70MM P=1MM |
| LINE6 | △ 996510000935 | 2 PINS PLUG ADAPTOR |
| LINE7 | 996510001906 | AUX STEREO CORD BLACK |
| RC | 996510032558 | REMOTE CONTROL |

ELECTRICAL PARTSLIST**MAIN BOARD ASSEMBLY**

| | | |
|-------|--------------|--------------------------------|
| CN105 | 996510021555 | FFC SOCKET P1.0MM (ANGLE TYPE) |
| D101 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D104 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D105 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D106 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D107 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D108 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D109 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D300 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D301 | 996510010774 | DIODE 1N4148 FDLL4148 |
| IC101 | 996510021675 | IC M5673 128P LQFP |
| IC102 | 996510021673 | IC SCA4720 |
| IC103 | 996510031019 | IC PROGRAMMED A25L020Z01A |
| IC104 | 996510003844 | I.C. VOLTAGE REGULATOR |
| IC201 | 996510018432 | IC D2822N |
| IC300 | 996510031033 | IC SA2111C SDIP-24 |
| Q101 | 996510024762 | TRANSISTOR KTC9014S |
| Q102 | 996510012833 | TRANSISTOR BC857B |
| Q103 | 996510003718 | TRANSISTOR KTC-8550C |
| Q104 | 996510024762 | TRANSISTOR KTC9014S |
| Q105 | 996510024762 | TRANSISTOR KTC9014S |
| Q106 | 996510024762 | TRANSISTOR KTC9014S |
| Q107 | 996510024762 | TRANSISTOR KTC9014S |
| Q109 | 996510003718 | TRANSISTOR KTC-8550C |
| Q110 | 996510024762 | TRANSISTOR KTC9014S |
| Q111 | 996510012833 | TRANSISTOR BC857B |
| Q112 | 996510012833 | TRANSISTOR BC857B |
| Q113 | 996510030525 | TRANSISTOR BC817-40 SOT23 |
| Q114 | 996510030525 | TRANSISTOR BC817-40 SOT23 |
| Q115 | 996510024762 | TRANSISTOR KTC9014S |
| Q116 | 996510024762 | TRANSISTOR KTC9014S |
| Q117 | 996510012833 | TRANSISTOR BC857B |
| Q207 | 996510024762 | TRANSISTOR KTC9014S |
| Q208 | 996510024762 | TRANSISTOR KTC9014S |
| Q311 | 996510024762 | TRANSISTOR KTC9014S |

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

ELECTRICAL PARTSLIST**MAIN BOARD ASSEMBLY**

| | | |
|-------|--------------|--------------------------------|
| Q312 | 996510024762 | TRANSISTOR KTC9014S |
| X101 | 996510011310 | CERAMIC RESONATORZTA16.9344MHZ |
| ZD101 | 994000005744 | ZENER DIODE 5V1 1/2W |


ELECTRICAL PARTSLIST**POWER BOARD ASSEMBLY**

| | | |
|-------|--------------|------------------------------|
| D201 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D202 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D203 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D207 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D208 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D210 | 996510010774 | DIODE 1N4148 FDLL4148 |
| D213 | 996510010774 | DIODE 1N4148 FDLL4148 |
| DZ201 | 996510012835 | ZENER DIODE 5V6 1/2W (TC5V6) |
| DZ202 | 996510011336 | ZENER DIODE 7V5 1/2W (TC7V5) |
| JK201 | 996510003840 | 3.5MM STEREO JACK |
| Q201 | 996510001414 | TRANSISTOR KTB772 (KEC) TAPE |
| Q202 | 996510024762 | TRANSISTOR KTC9014S |
| Q203 | 996510012833 | TRANSISTOR BC857B |
| Q204 | 996510003717 | TRANSISTOR KTD882 (KEC) |
| Q210 | 996510030524 | TRANSISTOR BC807-40 SOT23 |
| Q212 | 996510024762 | TRANSISTOR KTC9014S |
| R282 | 996510031047 | FERRITE BEAN 2K7R 100MHZ |
| R283 | 996510031047 | FERRITE BEAN 2K7R 100MHZ |

USB & VR & LCD BOARD ASSEMBLY

| | | |
|---------|--------------|---------------------------|
| USBJACK | 996510001071 | USB JACK 4P ANGLE TYPE |
| VR201 | 996510030514 | ROTARY VOLUME F-122KGP |
| IC600 | 996510025149 | IC ET8861M LCD DRIVER |
| LCD | 996510031061 | LCD DISPLAY GS-35468-TRPC |
| SW600 | 996500039269 | TACT SWITCH |
| SW601 | 996500039269 | TACT SWITCH |
| SW602 | 996500039269 | TACT SWITCH |
| SW603 | 996500039269 | TACT SWITCH |
| SW604 | 996500039269 | TACT SWITCH |
| SW605 | 996500039269 | TACT SWITCH |
| SW606 | 996500039269 | TACT SWITCH |
| SW607 | 996500039269 | TACT SWITCH |
| SW608 | 996500039269 | TACT SWITCH |
| SW609 | 996500039269 | TACT SWITCH |

RECT BOARD ASSEMBLY

| | | |
|------|--|------------------------|
| C805 | 994000003217 | AL.E.CAP 3300UF 25V |
| D801 | 996510011339 | DIODE 1N4003 |
| D802 | 996510011339 | DIODE 1N4003 |
| D803 | 996510011339 | DIODE 1N4003 |
| D804 | 996510011339 | DIODE 1N4003 |
| F801 |  996510018427 | FUSE 1.6A 250V D5X20MM |

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

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It is only for serial number XUxxxxxxx

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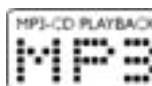


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2.0 SAFETY INSTRUCTIONS

(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 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 enfilez le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

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

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

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

(NL)

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

**(F)**

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

(GB) Warning !

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

(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.

(S) Varning !

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

(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.

(SF) Varoitus !

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

"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."

DK Advarsel !

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

Caution: These servicing instructions are for use by qualified service personnel only.

To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

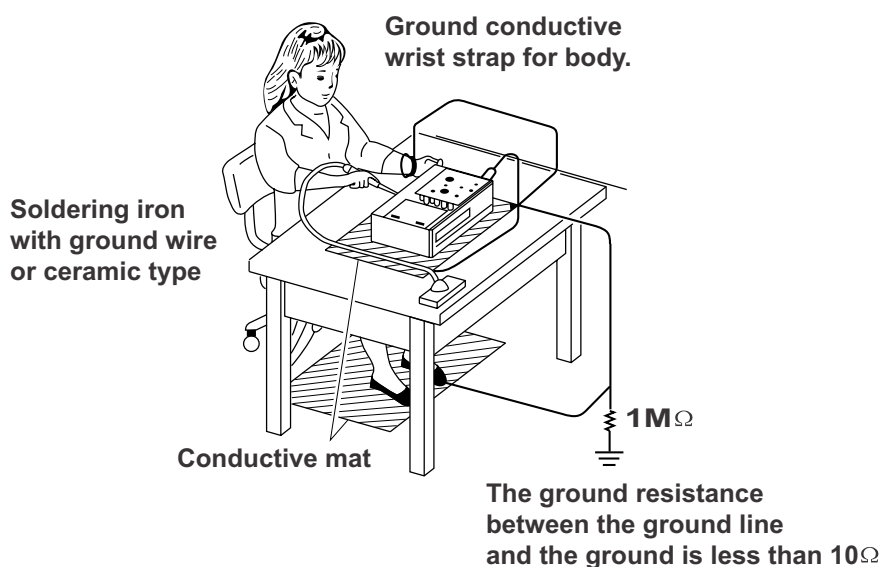
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electrocity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



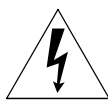
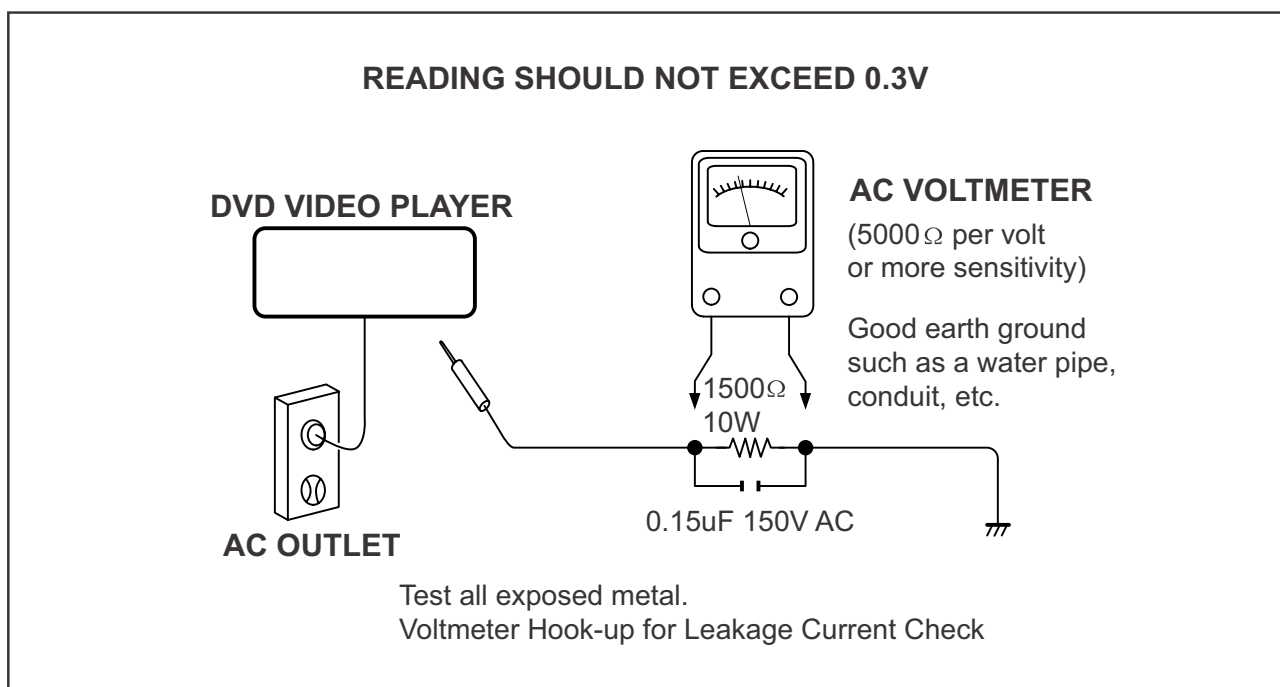
SAFTY NOTICE

SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor, paralleled by a $0.15\mu\text{F}$ 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

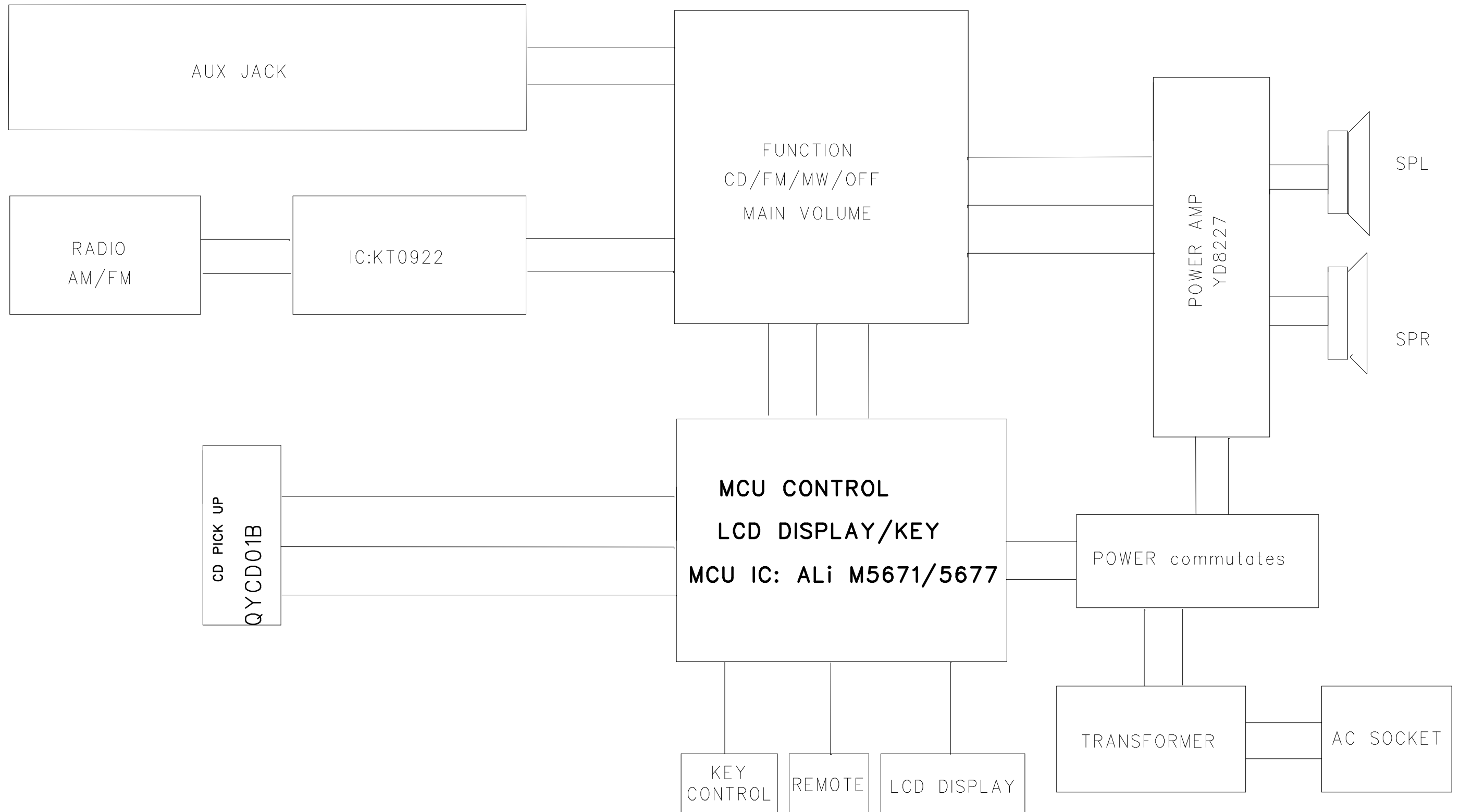


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

BLOCK DIAGRAM

3-1

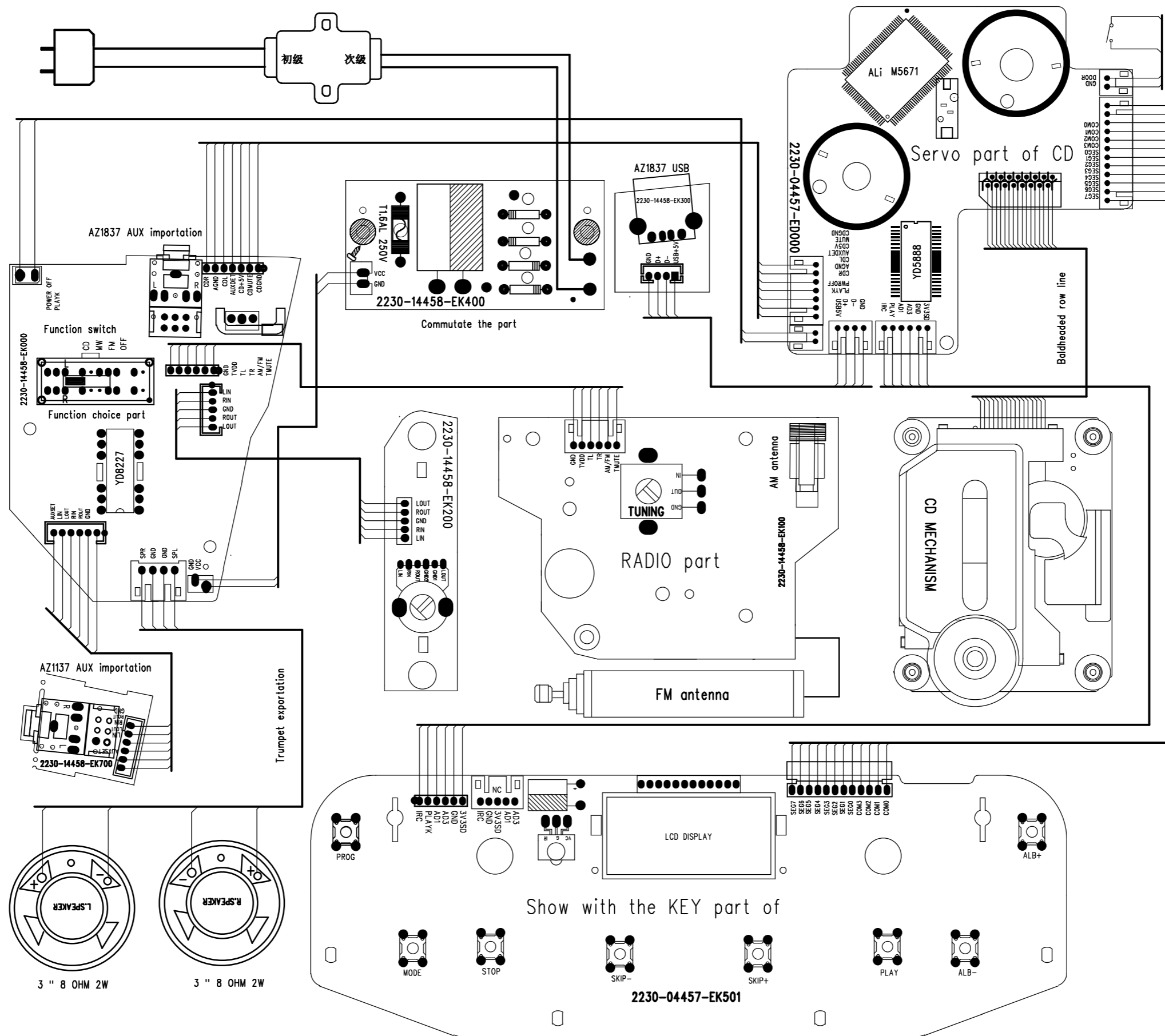
3-1



WIRING DIAGRAM

4-1

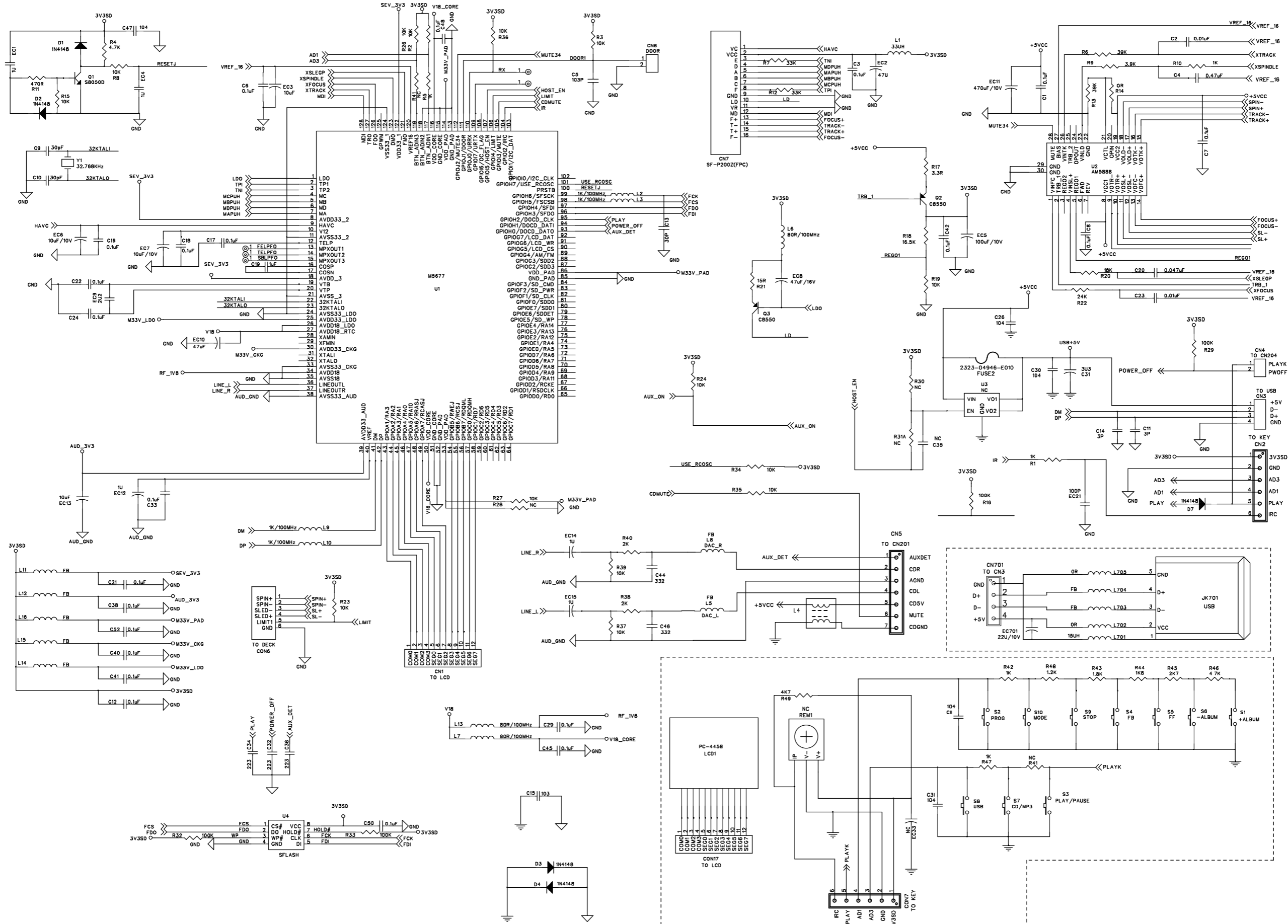
4-1

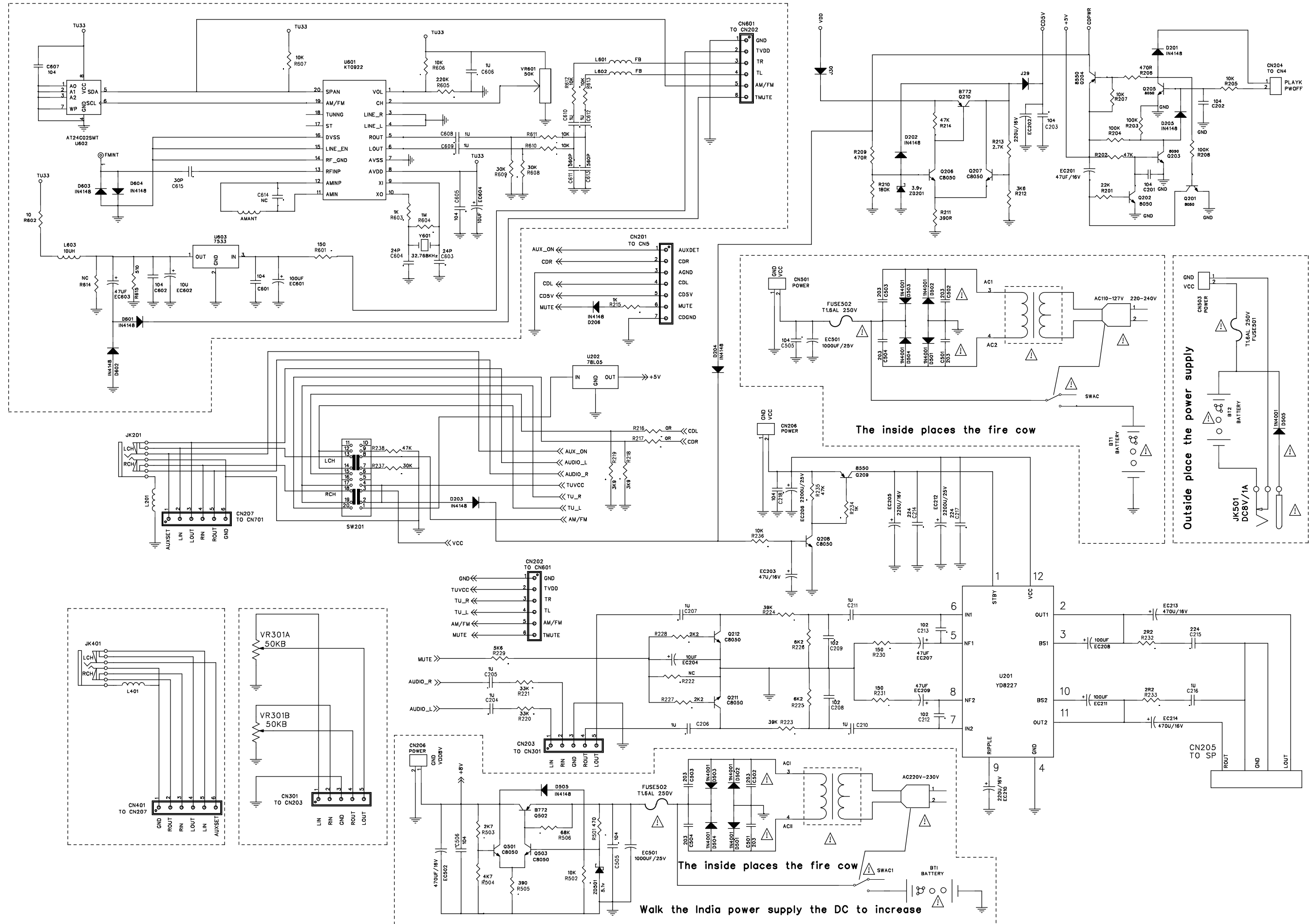


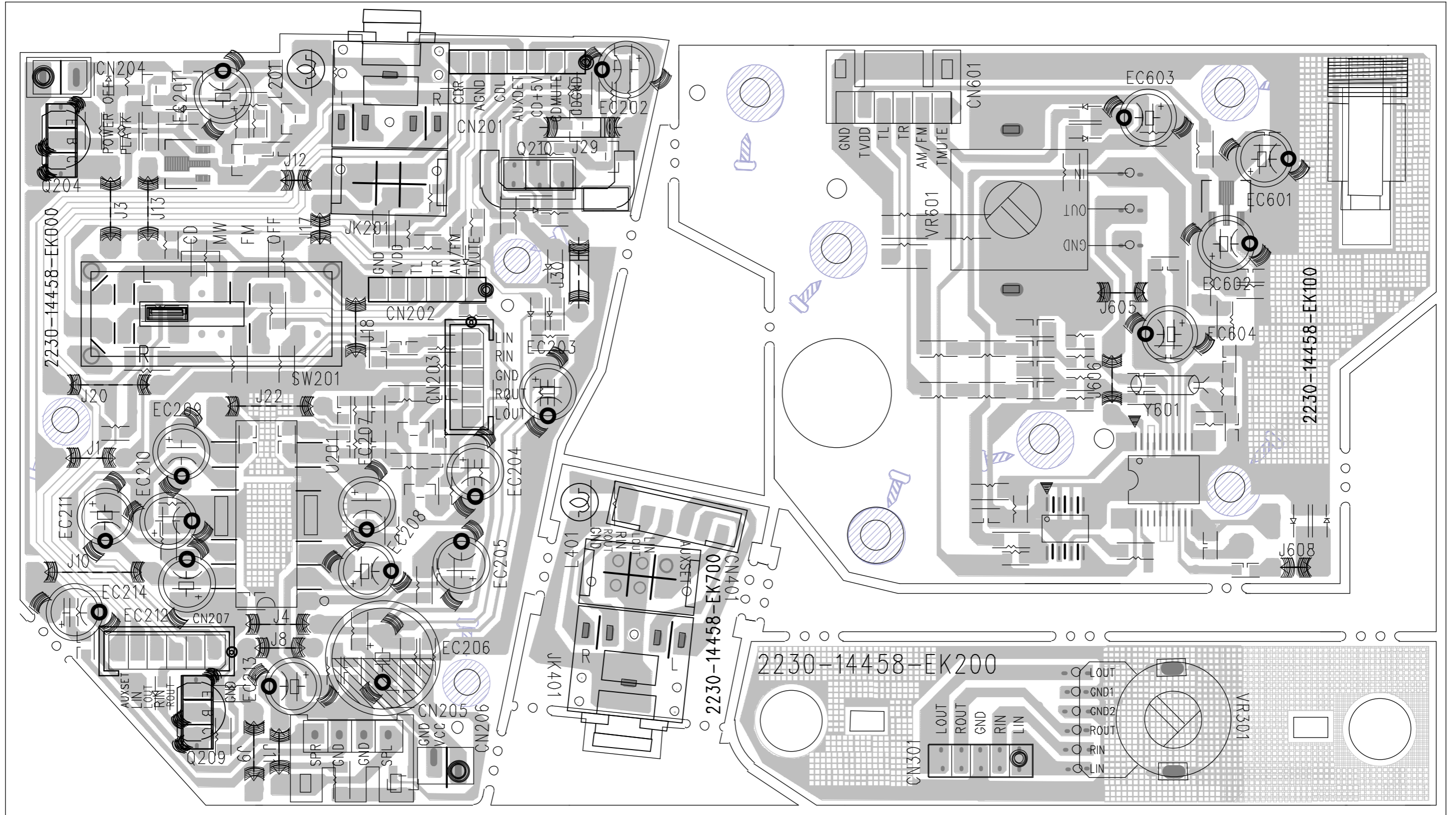
CIRCUIT DIAGRAM - PART 1

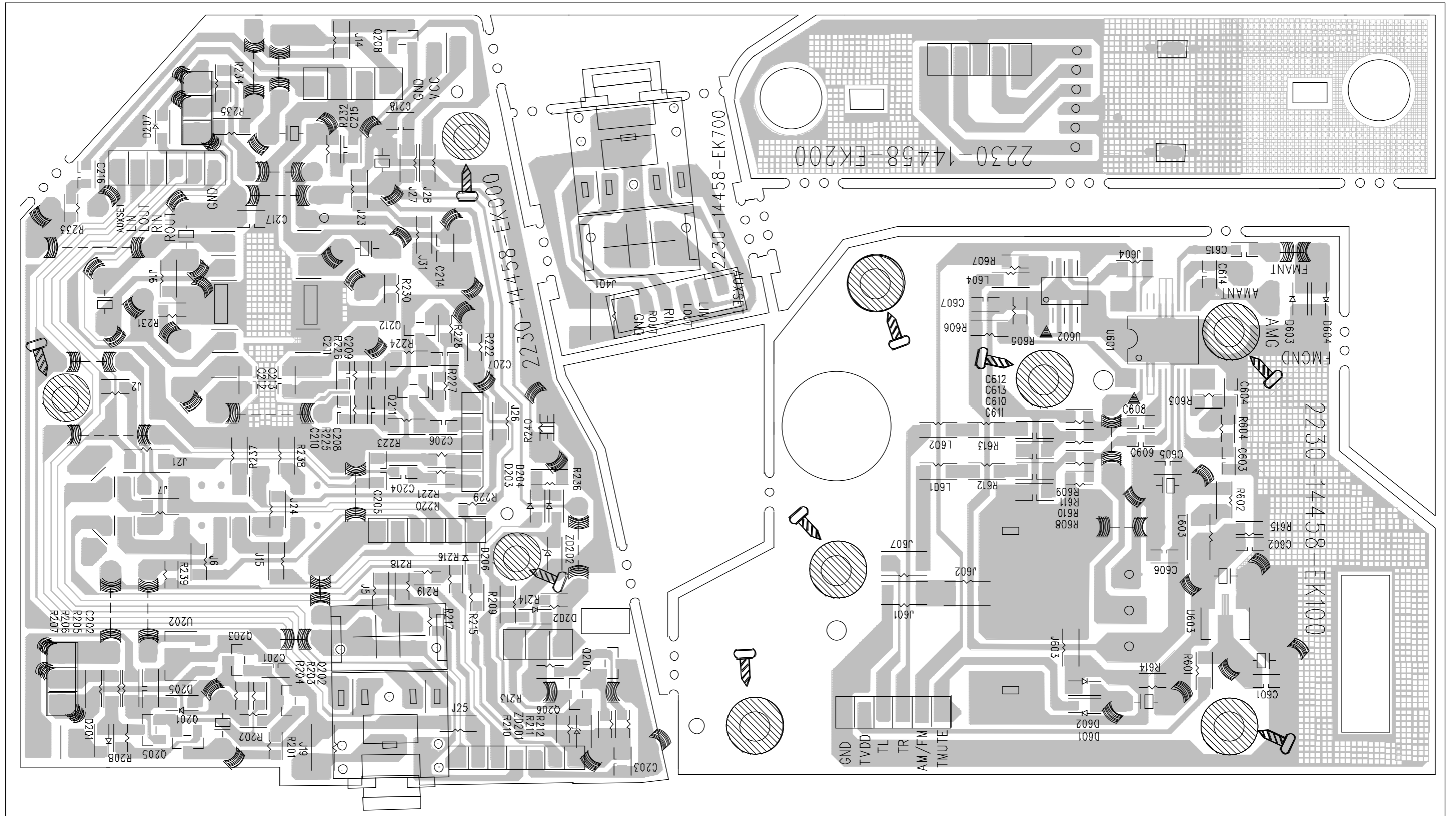
5-1

5-1









EXPLODED VIEW DIAGRAM

