

Service
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Service Manual



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Published by SW 1126 Service Audio Subject to modification

3141 785 36470

Version 1.0



PHILIPS

Specifications

AMPLIFIER SECTION

Output power 2 x 4 W RMS
CD Frequency Response
..... 100Hz - 10kHz / ± 3 dB
CD Signal-to-Noise Ratio >50dB (A-WEIGHED)
Output Sensitivity
Line Out (1kHz 0dB) $2\pm 0.2V$

TUNER SECTION

Tuning Range
..... FM 87.5 – 108 MHz
..... MW 531 – 1602 kHz
Signal-to-Noise Ratio FM ≥ 50 dB
..... MW ≥ 30 dB

TAPE SECTION

Frequency Response
Normal tape 125 Hz - 8 kHz / ± 4 dB
Signal-to-Noise Ratio
Normal tape ≥ 45 dB
JIS and WTD $\leq 0.35\%$

DVD SECTION

Laser Type Semiconductor
Video Decoding MPEG-2 / MPEG-1
Video DAC 10 Bits
Signal System PAL / NTSC
Video Format 4:3 / 16:9
Video S/N 56 dB (minimum)
Composite Video Output 1.0Vp-p, 75 Ω

USB PLAYER

USB 12Mb/s, V1.1
..... support MP3 and WMA files
Number of albums/folders maximum 99
Number of tracks/titles maximum 800

MAIN UNIT

Power Supply Rating 110 - 127 / 220 - 230 V
..... 50/60Hz Switchable
Power Consumption
Active 15 W
Standby $\leq 6W$
Dimensions (w x d x h) 400x 242.5 x 169 (mm)
Weight 3.9 kg
Packaging Dimensions (w x d x h)
..... 458x280x210(mm)
Gross weight 3.06 kg

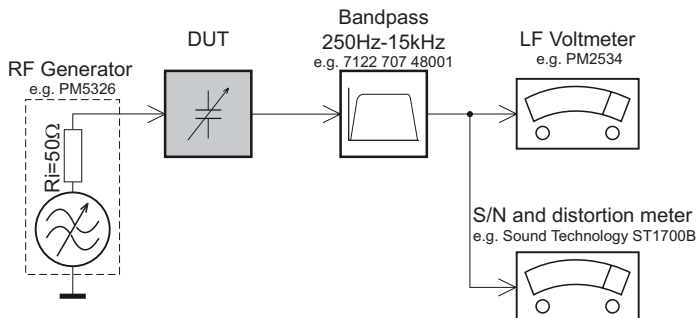
SPEAKERS

Impedance 4 Ω
Speaker drivers full range 4" 1 w/ shield

Specifications subject to change without prior notice

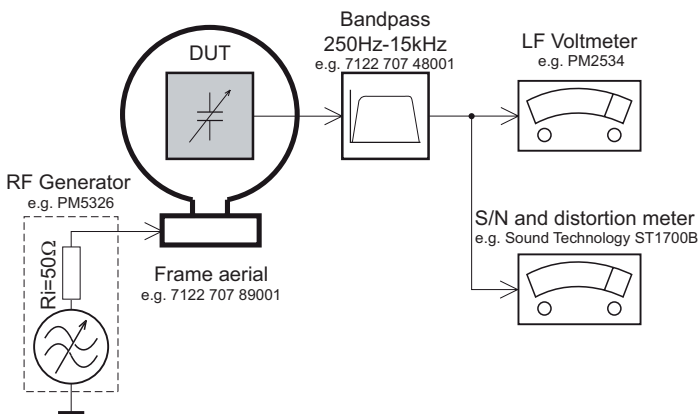
MEASUREMENT SETUP

Tuner FM



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

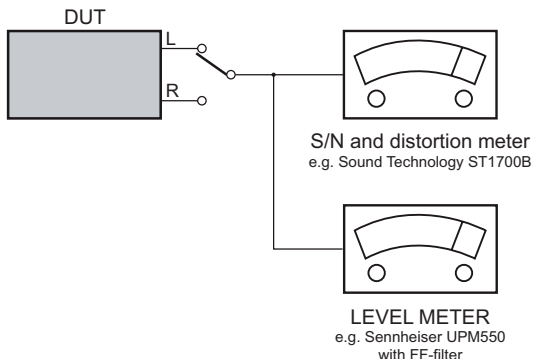
Tuner AM (MW,LW)



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).

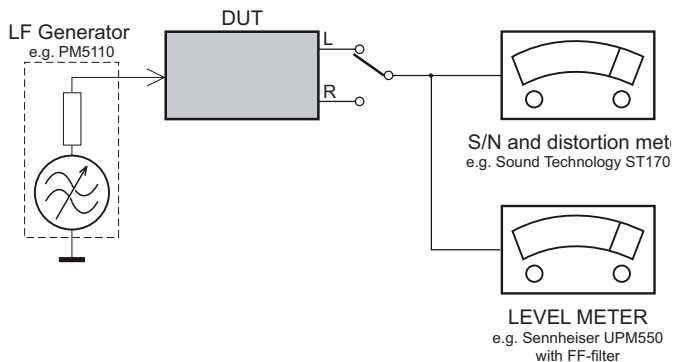
CD

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

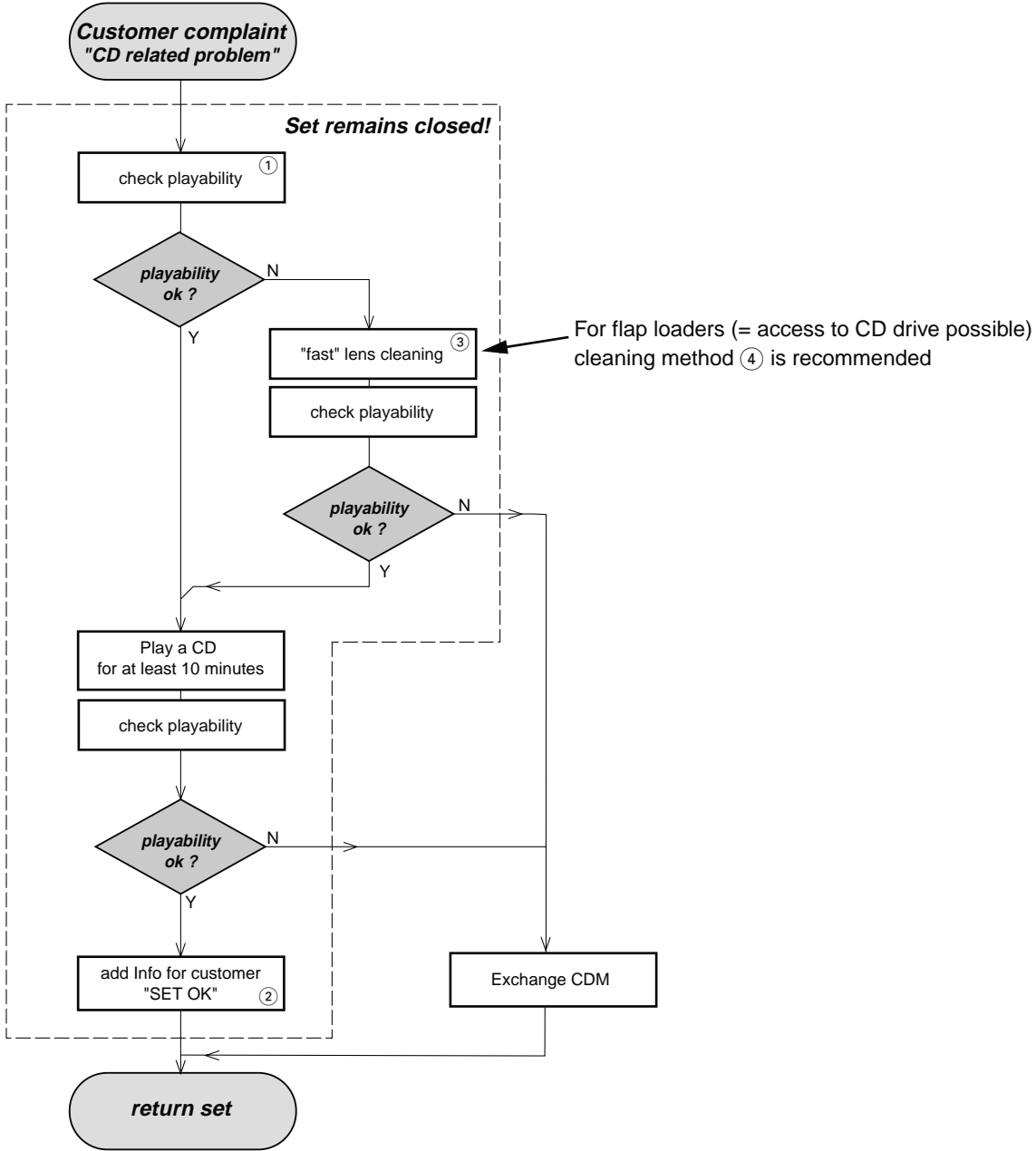


Recorder

Use Universal Test Cassette Cr02 SBC419 4822 397 30069 or Universal Test Cassette Fe SBC420 4822 397 30071



INSTRUCTIONS ON CD PLAYABILITY



For flap loaders (= access to CD drive possible) cleaning method ④ is recommended

① - ④ For description - see following pages

INSTRUCTIONS ON CD PLAYABILITY

①

PLAYABILITY CHECK

For sets which are compatible with **CD-RW** discs
 use CD-RW Printed Audio Disc7104 099 96611
 TR 3 (Fingerprint)
 TR 8 (600µ Black dot) **maximum at 01:00**

- playback of these two tracks without audible disturbance
 playing time for: Fingerprint ≥ 10 seconds
 Black dot from 00:50 to 01:10
- jump forward/backward (search) within a reasonable time

For all other sets
 use CD-DA SBC 444A4822 397 30245
 TR 14 (600µ Black dot) **maximum at 01:15**
 TR 19 (Fingerprint)
 TR 10 (1000µ wedge)

- playback of all these tracks without audible disturbance
 playing time for: 1000µ wedge ≥ 10 seconds
 Fingerprint ≥ 10 seconds
 Black dot from 01:05 to 01:25
- jump forward/backward (search) within a reasonable time

②

CUSTOMER INFORMATION

It is proposed to add an addendum sheet to the set which informs the customer that the set has been checked carefully - but no fault was found.

The problem was obviously caused by a scratched, dirty or copy-protected CD. In case problems remain, the customer is requested to contact the workshop directly.

The lens cleaning (method ③) should be mentioned in the addendum sheet.

The final wording in national language as well as the printing is under responsibility of the Regional Service Organizations.

④

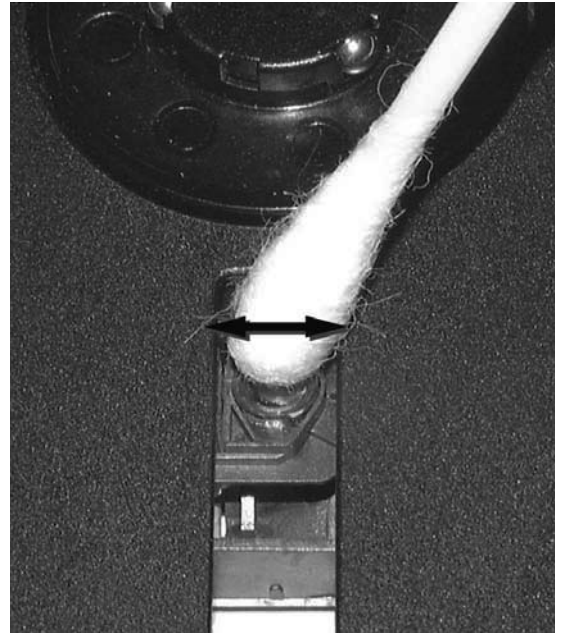
LIQUID LENS CLEANING

Before touching the lens it is advised to clean the surface of the lens by blowing clean air over it. This to avoid that little particles make scratches on the lens.

Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use "Cleaning Solvent

The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. Clean the lens gently (don't press too hard) with a soft and clean cotton bud moistened with the special lens cleaner.

The direction of cleaning must be in the way as indicated in the picture below.



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 strålning.

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.

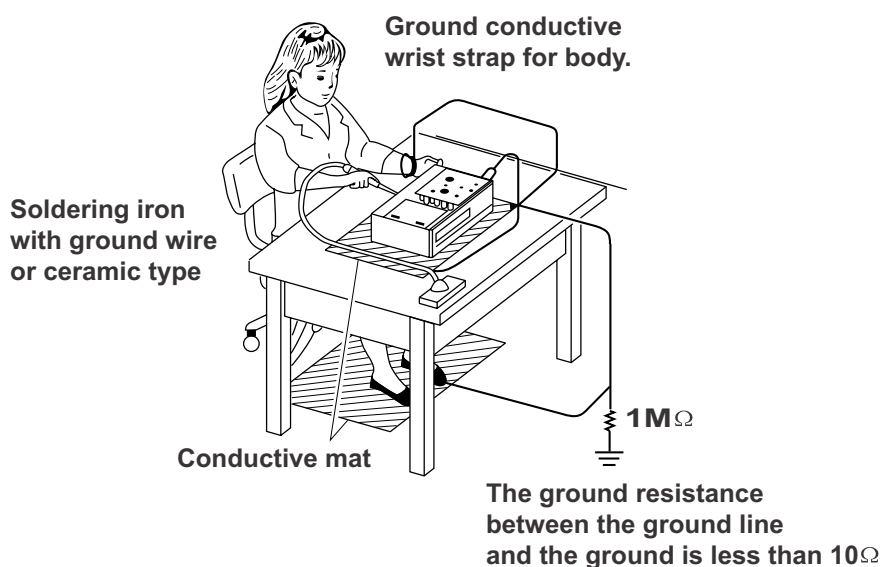
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

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 form damage by static electricity.

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



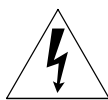
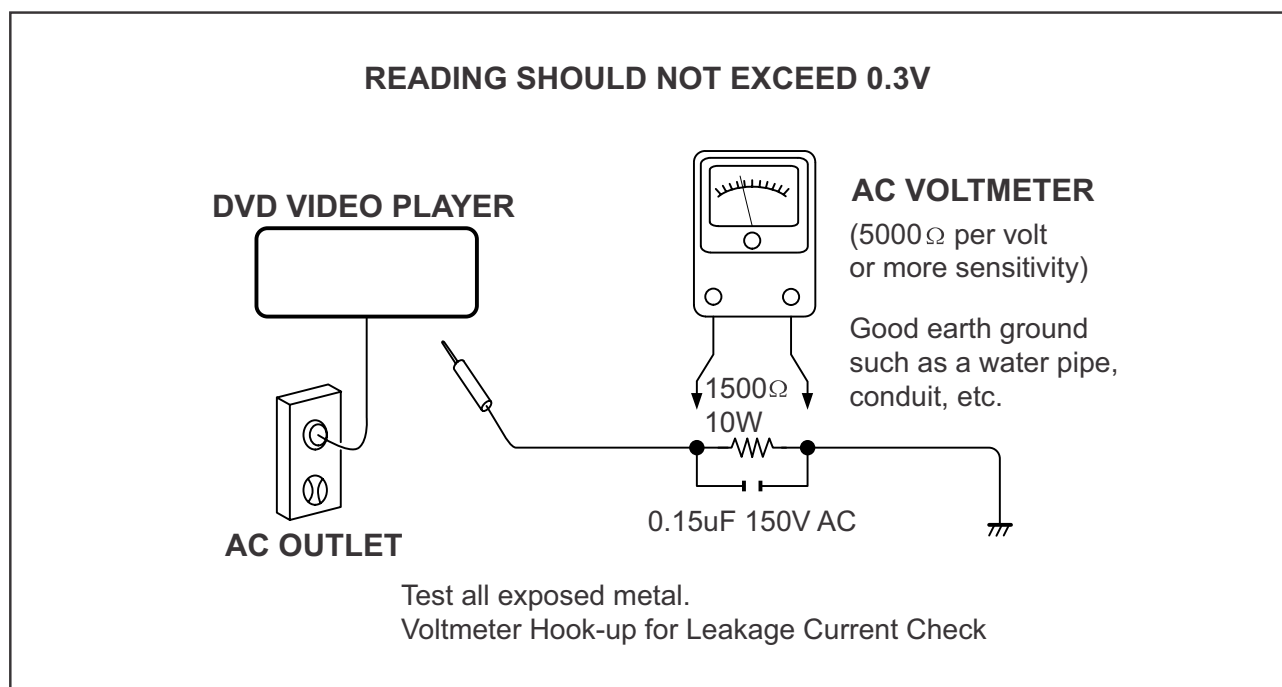
SAFTY NOTICE

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.

2.2 SAFETY INSTRUCTIONS

Battery Handling Guideline

Since the battery is packed in soft package, to ensure its better performance, it's very important to carefully handle the battery

2.2.1 Soft Aluminium foil

The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles.

- Don't strike battery with any sharp edge parts
- Trim your nail or wear glove before taking battery
- Clean worktable to make sure no any sharp particle



2.2.2 Sealed edge

Sealing edge is very flimsy

- Don't bend or fold sealing edge



2.2.3 Folding edge

The folding edge is form in battery process and passed all hermetic test.

- Don't open or deform folding edge



2.2.4 Tabs

The battery tabs are not so stubborn especially for aluminum tab.

- Don't bend tab



2.2.5 Mechanical shock

- Don't Fall, hit, bend battery body



2.2.6 Short

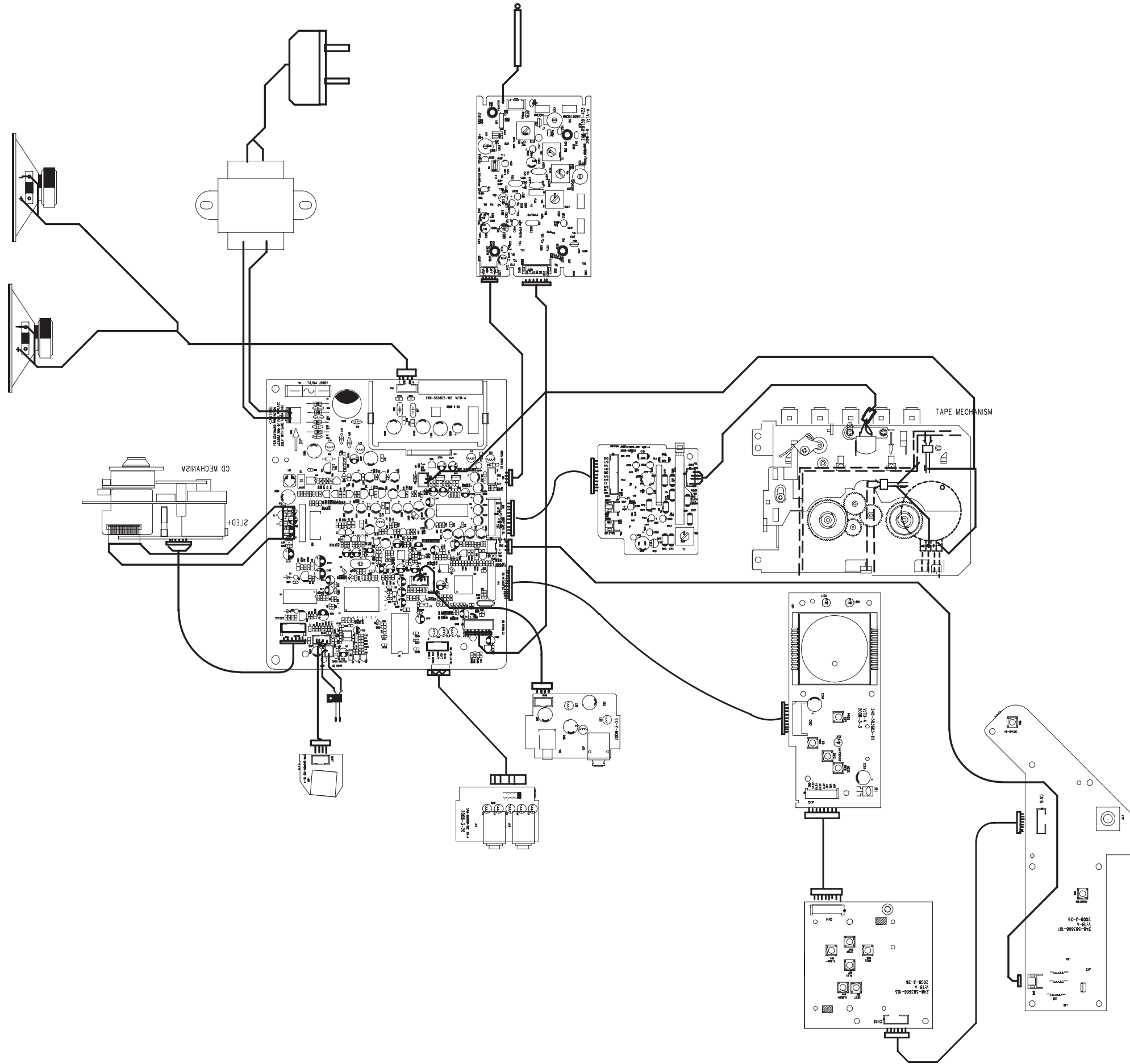
Short terminals of battery is strictly prohibited, it may damage battery.

Caution: Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

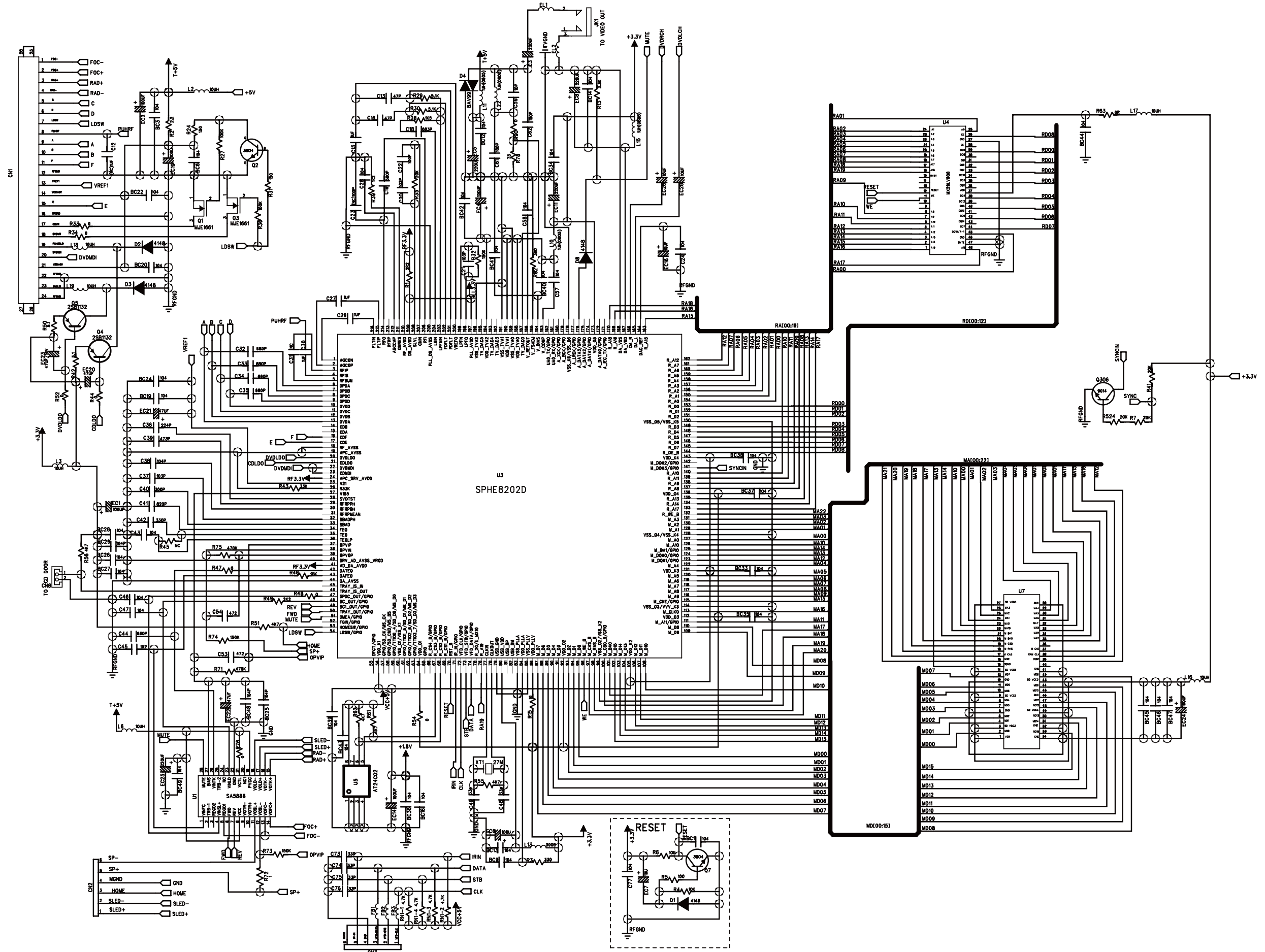
SET WIRING DIAGRAM

3-1

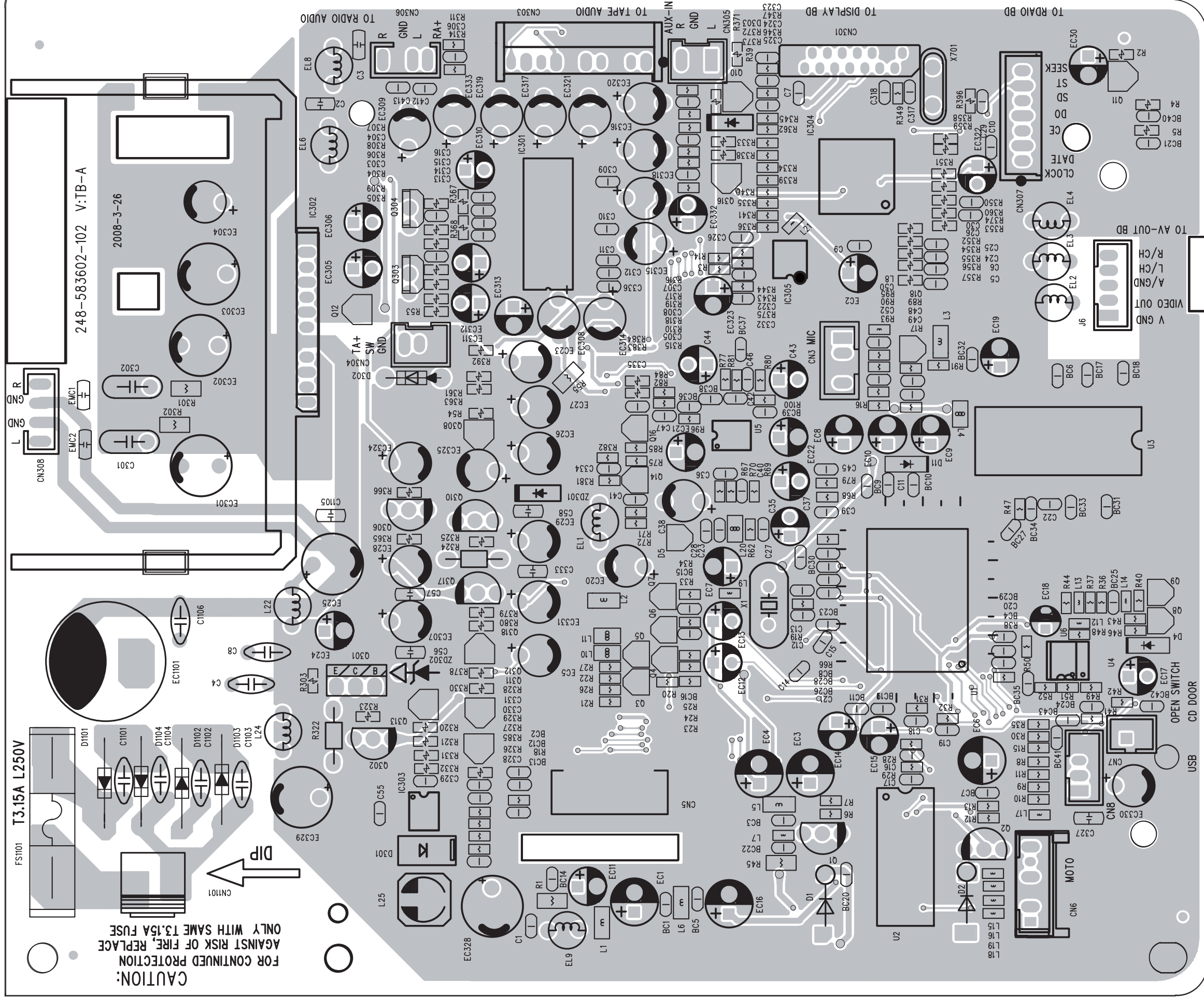
3-1



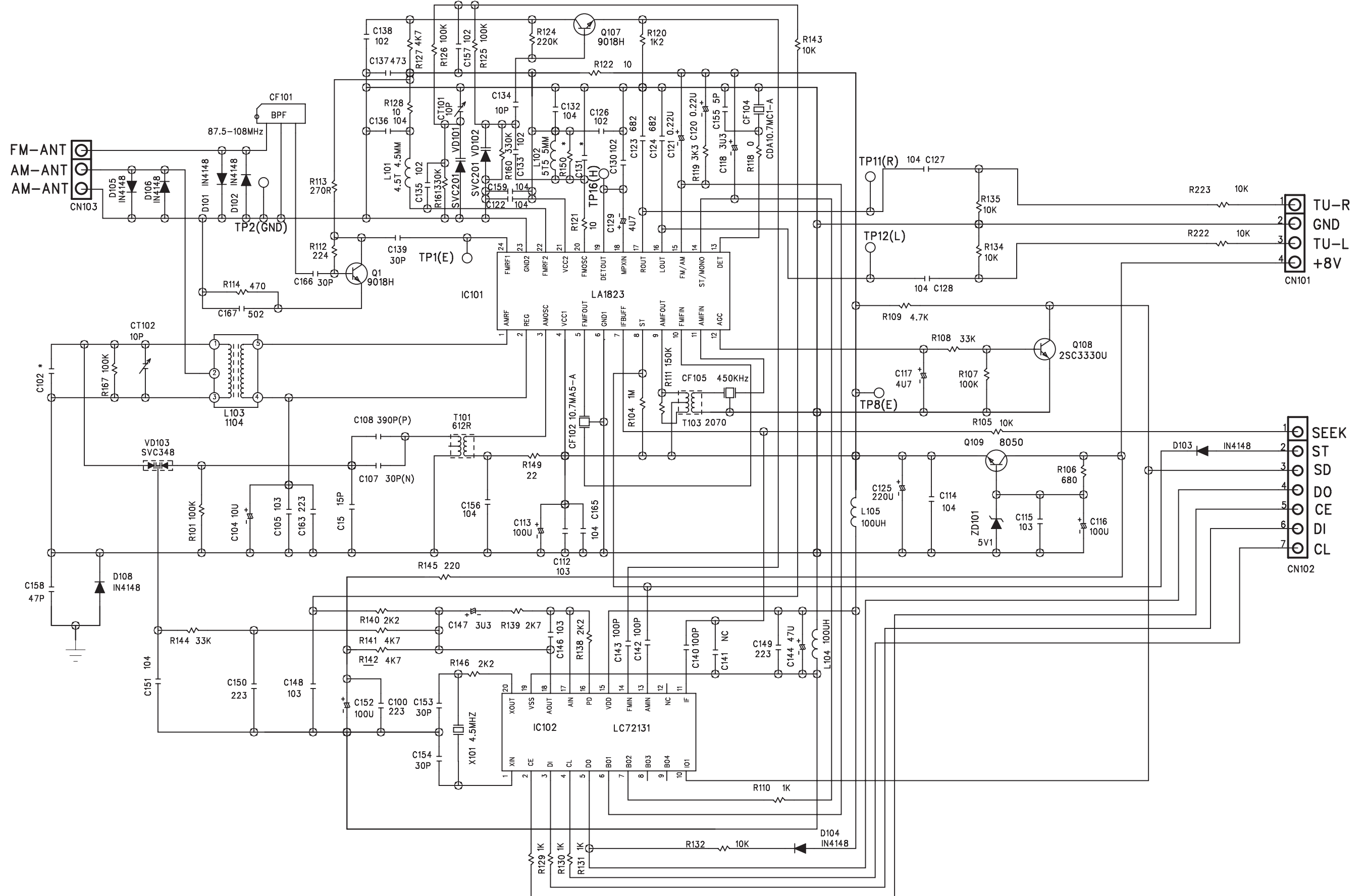
CIRCUIT DIAGARM - MAIN BOARD PART 2



LAYOUT DIAGARM - MAIN BOARD



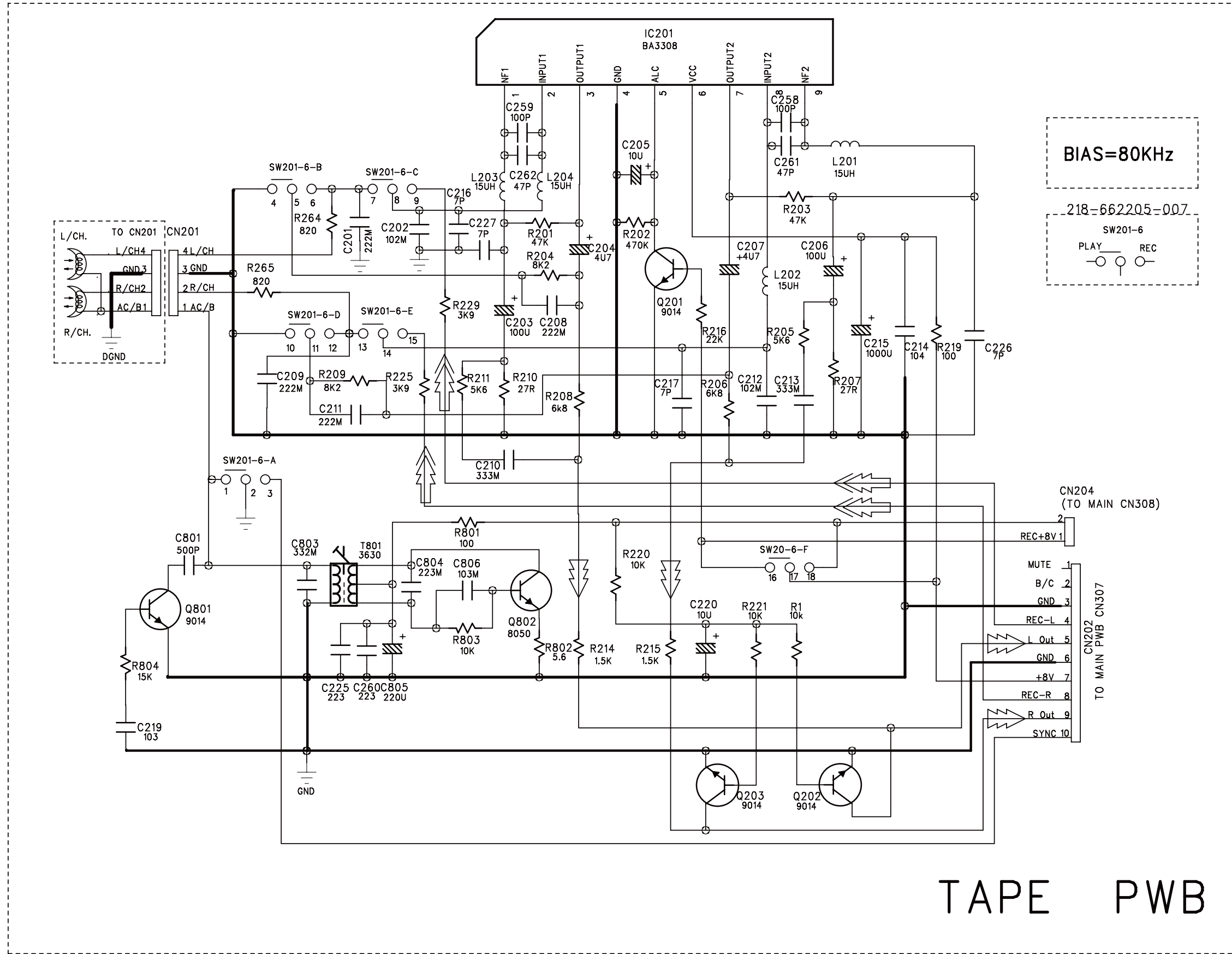
CIRCUIT DIAGARM - TUNER BOARD



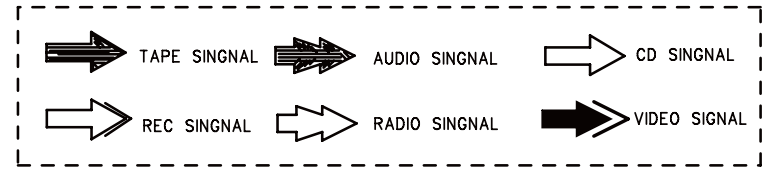
* C107 30P(N) FOR (US.CA.AU.KR.PA)

* C160.C161(0.022U) AND R150(4.7K OHM) FOR FCC(US.CA)

CIRCUIT DIAGRAM - RECORDING BOARD

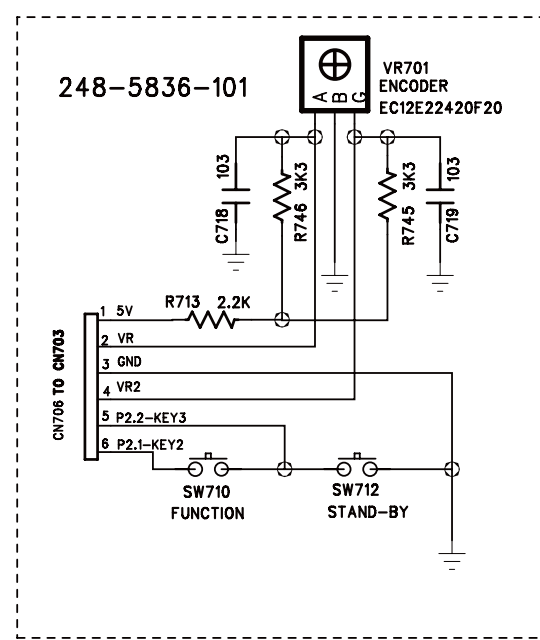
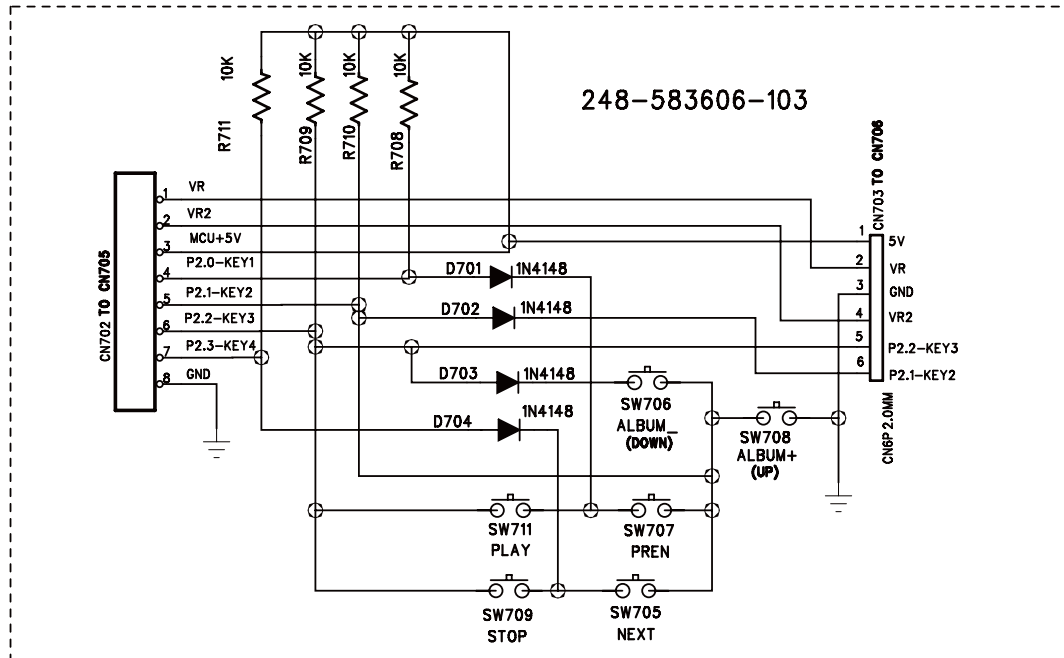
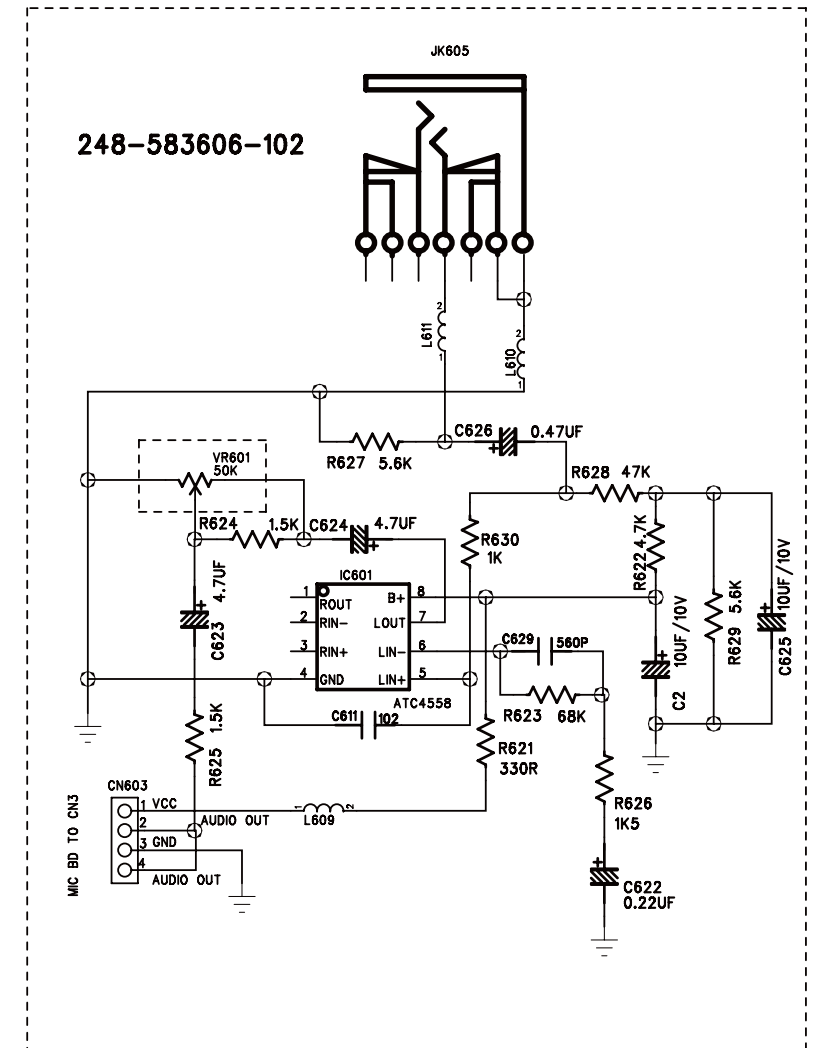
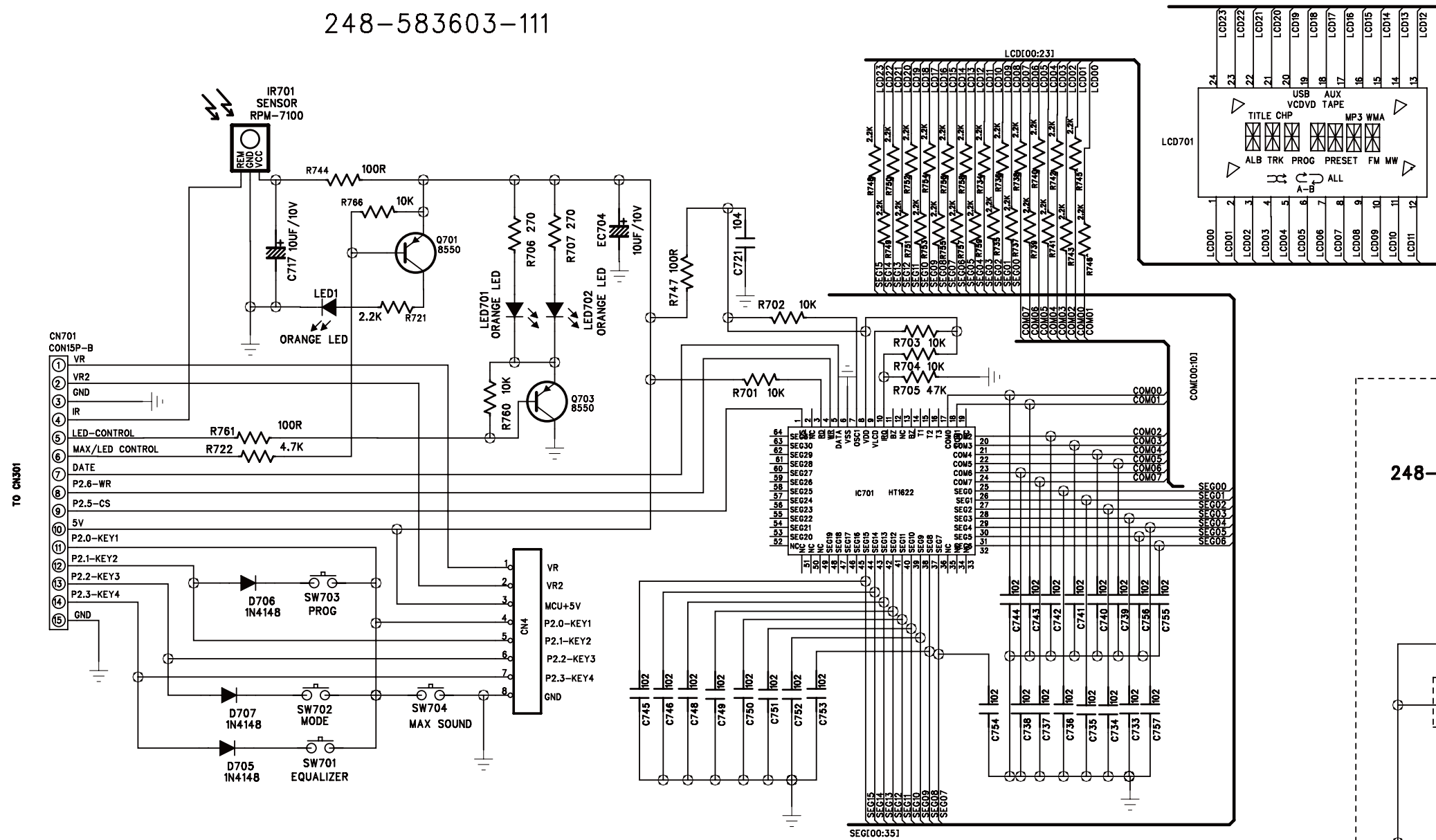


TAPE PWB

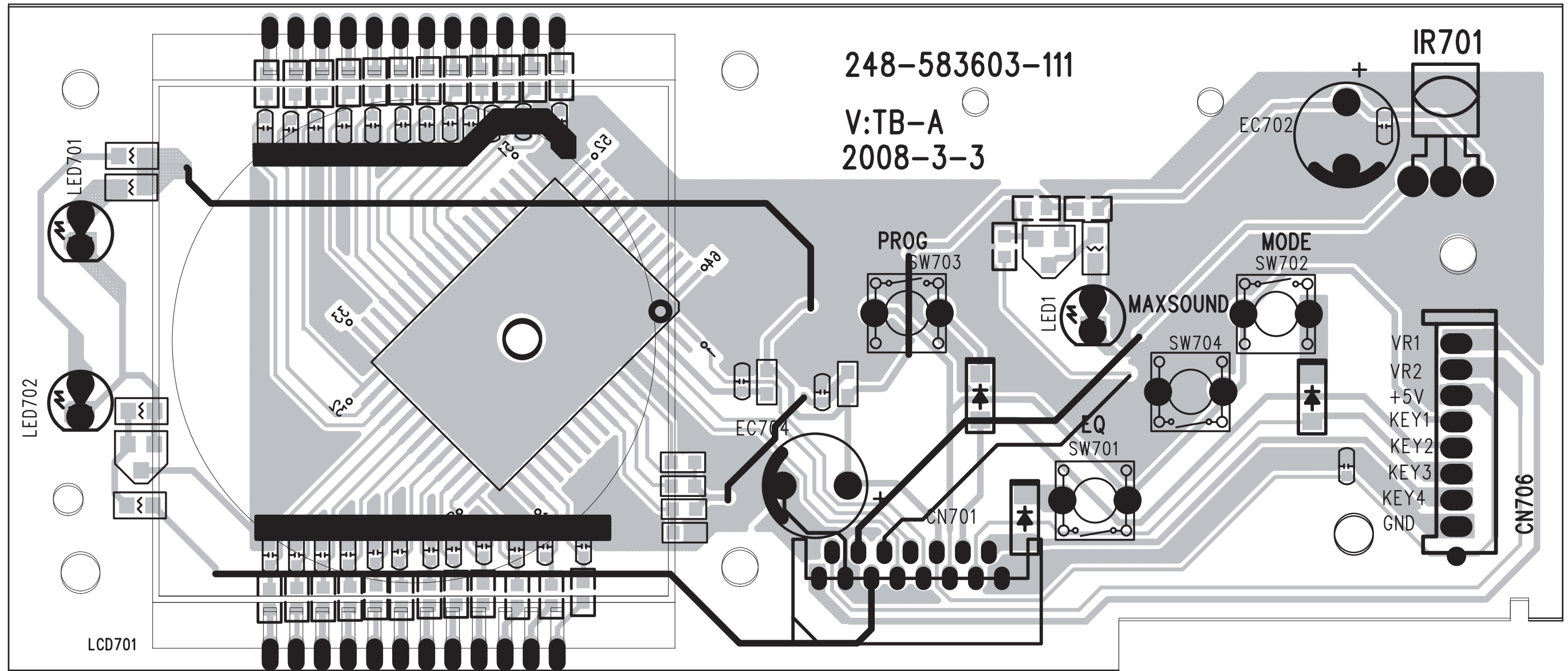


CIRCUIT DIAGRAM - CONTROL AND JACK BOARD

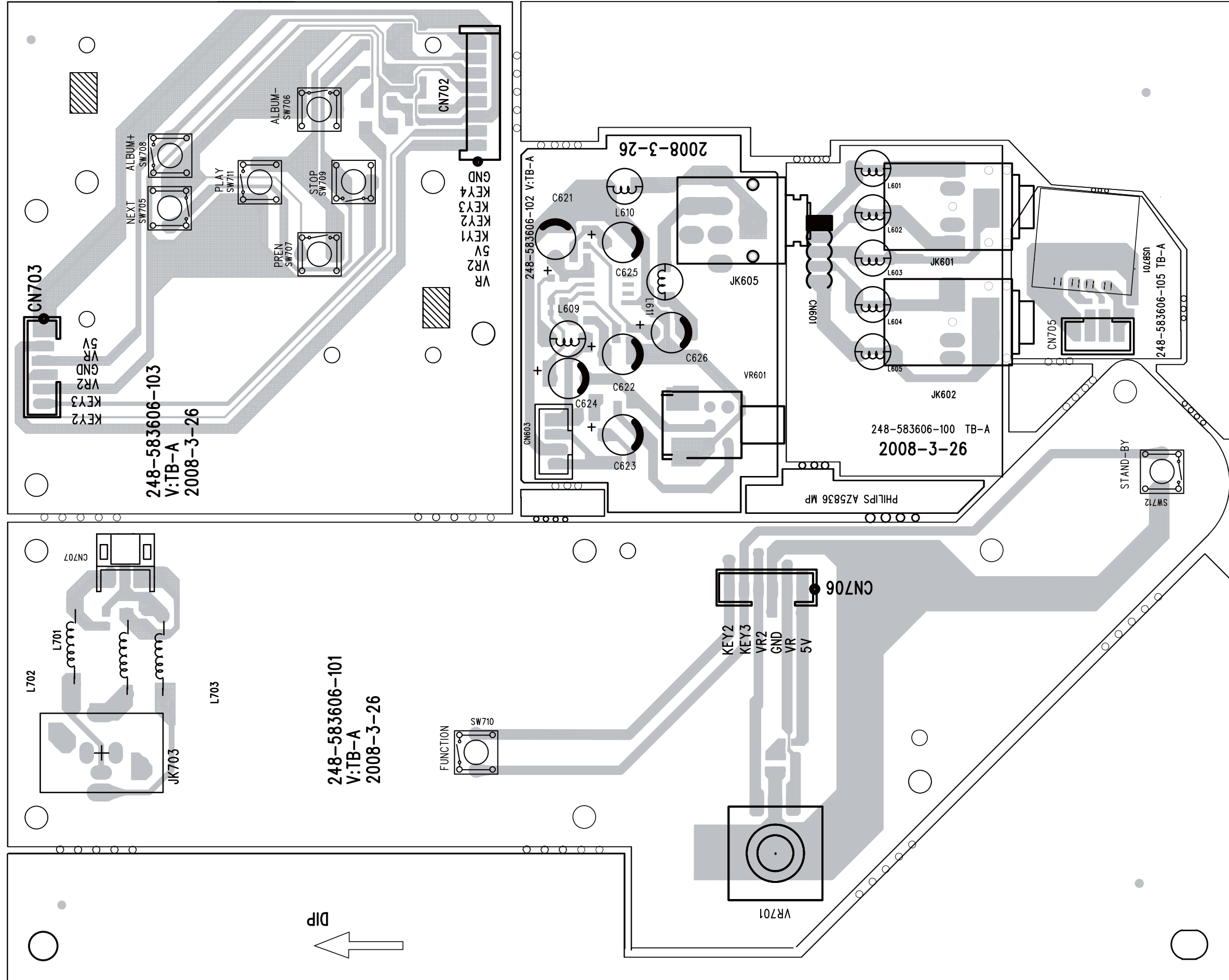
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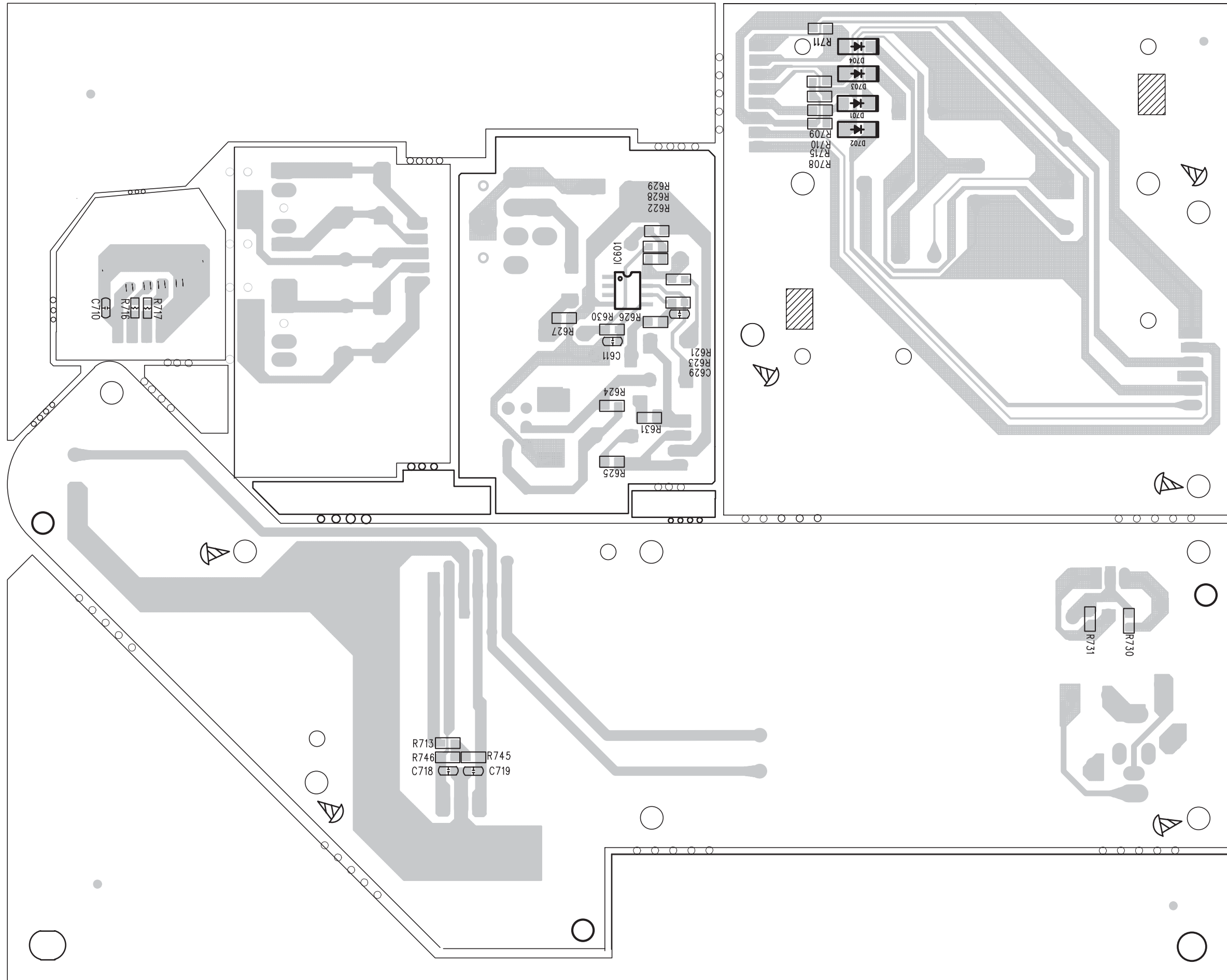
LAYOUT DIAGRAM - CONTROL BOARD



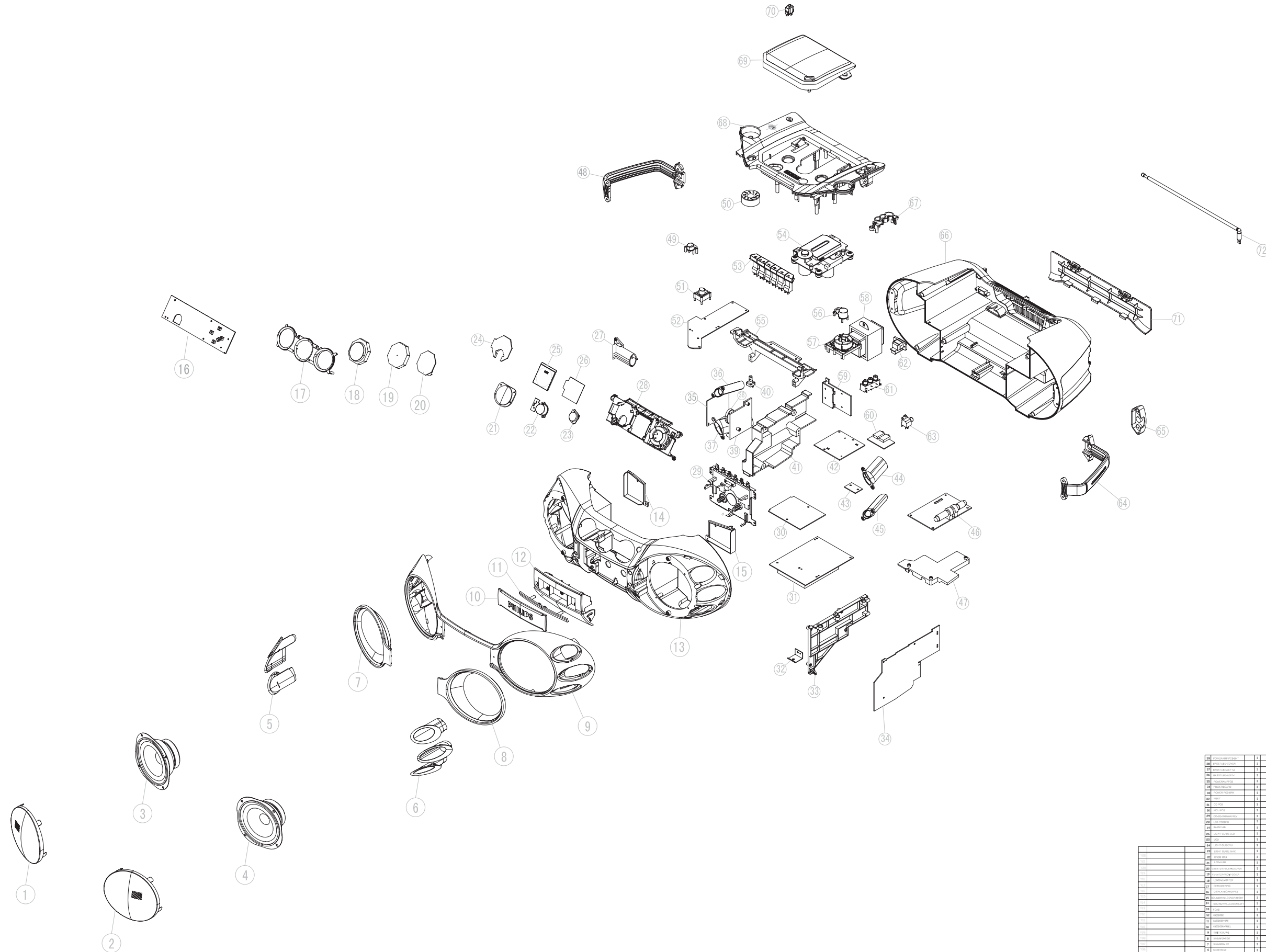
LAYOUT DIAGRAM - JACK BOARD
TOP VIEW SIDE



LAYOUT DIAGRAM - JACK BOARD
BOTTOM VIEW SIDE



EXPLODED VIEW DIAGRAM



NO.	DESCRIPTION	QTY	PKT	UNIT	WARRANTY	REVISION	DATE	BY	CHKD
1	HEADLIGHT HOUSING	1							
2	FOG LIGHT HOUSING	1							
3	HEADLIGHT LENS	1							
4	FOG LIGHT LENS	1							
5	HEADLIGHT BULB	1							
6	FOG LIGHT BULB	1							
7	HEADLIGHT RING	1							
8	FOG LIGHT RING	1							
9	HEADLIGHT ASSEMBLY	1							
10	FOG LIGHT ASSEMBLY	1							
11	HEADLIGHT BRACKET	1							
12	FOG LIGHT BRACKET	1							
13	INSTRUMENT CLUSTER HOUSING	1							
14	INSTRUMENT CLUSTER	1							
15	INSTRUMENT CLUSTER BRACKET	1							
16	INSTRUMENT CLUSTER COVER	1							
17	INSTRUMENT CLUSTER LENS	1							
18	INSTRUMENT CLUSTER RING	1							
19	INSTRUMENT CLUSTER BULB	1							
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