

Service Service Service



Service Manual



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Published by ET-SL 0906 Service Audio Printed in The Netherlands Subject to modification

GB 3141 785 33330

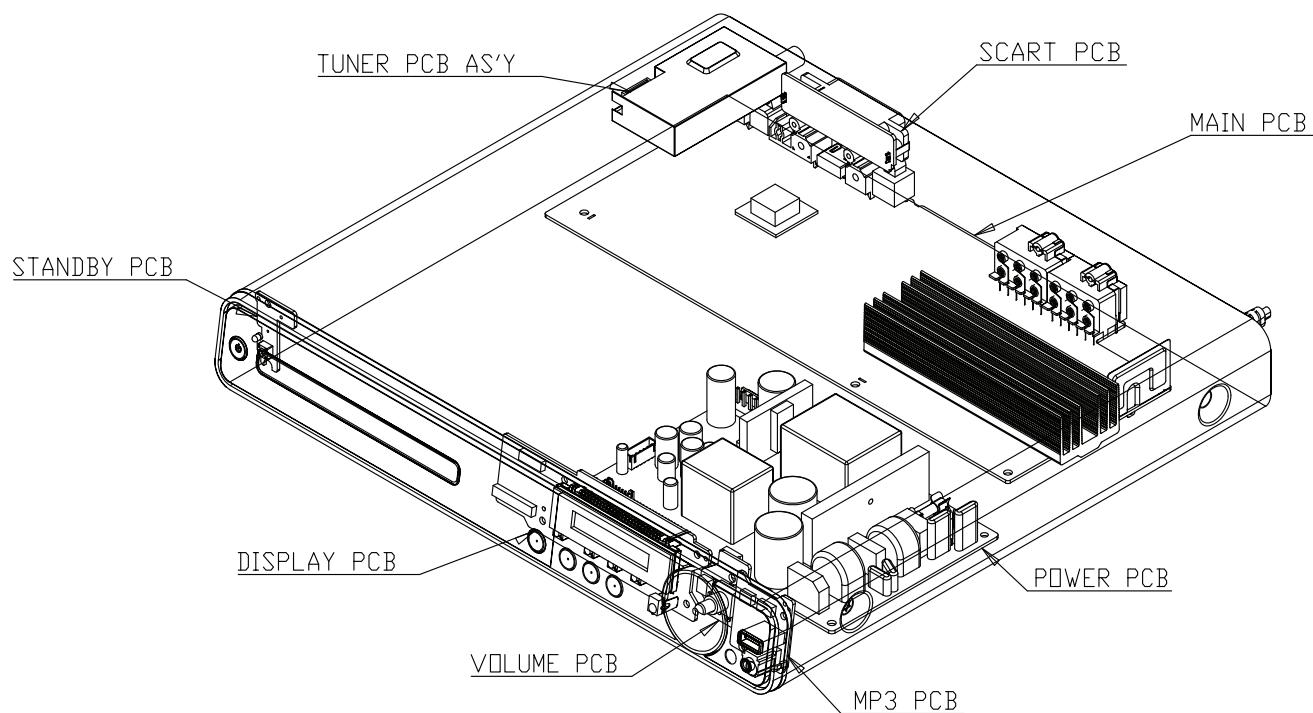
**CLASS 1
LASER PRODUCT**

Version 1.0



PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions Features	HTS3270
	/12/05
Output Power - 420W	X
Voltage (110~240V)	X
MP3 Link	X

SERVICE SCENARIO MATRIX:

Type/Versions Board in used	HTS3270
	/12/05
MAIN Board	C
Power Board	C
DISP+LED+VOL Board	C
Scart Board	C
MP3 IN Board	C

*C = Component Level Repair

SPECIFICATIONS

Playback media

DVD-Video, DVD+R/+RW, DVD-R/-RW, DVD+R DL, CD-R/
CD-RW, Audio CD, Video CD/SVCD, Picture CD, MP3-CD,
WMA-CD, DivX-CD, USB flash drive

Amplifier

Total output power.....
Home Theatre mode.....420 W(2 X 100 + 4 X 55)
Frequency response.....40 Hz ~ 20 kHz
Signal-to-noise ratio..... > 60 dB
..... (A-weighted)
Input sensitivity.....
AUX 400 mV
SCART TO TV..... 250 mV
MP3 LINK 250 mV

Disc

Laser Type..... Semiconductor
Disc diameter..... 12cm / 8cm
Video decoding..... MPEG1/ MPEG2 / DivX
..... / DivX Ultra
Video DAC..... 12 bits, 108 MHz
Signal system PAL / NTSC
Video S/N 56 dB
Audio DAC..... 24 bits / 96 kHz
Frequency response.....
..... 4 Hz - 20 kHz (44.1 kHz)
..... 4 Hz - 22 kHz (48 kHz)
..... 4 Hz - 44 kHz (96 kHz)
PCM..... IEC 60958
Dolby Digital IEC 60958, IEC 61937
DTS IEC 60958, IEC 61937

Radio

Tuning range FM 87.5–108 MHz (50 kHz)
2 6 dB quieting sensitivity FM 22 dBf
IF rejection ratio..... FM 60 dB
Signal-to-noise ratio..... FM 50 dB
Harmonic distortion..... FM 3%
Frequency response..... FM 180 Hz~10 kHz
..... / ± 6 dB
Stereo separation FM 26 dB (1 kHz)
Stereo Threshold..... FM 29 dB

USB

C ompatibility Hi-Speed USB (2.0)
Class support..... UMS (USB Mass Storage Class)
File system FAT12, FAT16, FAT32

Main Unit

Power supply 110–240 V; ~ 50–60 Hz
Power consumption 80 W
Standby power consumption < 1 W
Dimensions (WxHxD) 360 x 57 x 331 (mm)
Weight 2.87 kg

Speakers

System..... full range satellite
Speaker impedance..... 4 ohm (centre), 8 ohm (Front/Rear)
Speaker drivers
Centre/Front/Rear..... 3" full range
Frequency response..... 150 Hz ~ 20 kHz
Dimensions (WxHxD)
- Centre/Front/Rear 100 x 100 x 75 (mm)
Weight
- Centre..... 0.66 kg
- Front..... 0.39 kg
- Rear..... 0.38 kg

Subwoofer

Impedance..... 4 ohm
Speaker drivers 165 mm (6.5") woofer
Frequency response..... 40 Hz ~ 150 Hz
Dimensions (WxHxD) 123 x 310 x 369 (mm)
Weight 3.88 kg

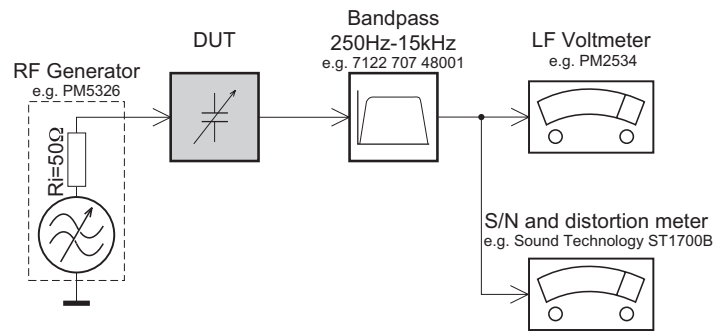
Laser specification

Type..... Semiconductor laser GaAlAs (CD)
Wave length..... 645 - 665 nm (DVD), 770 - 800 nm (CD)
Output power 6 mW (DVD), 7 mW (VCD/CD)
Beam divergence..... 60 degrees.

Specifications subject to change without prior notice.

MEASUREMENT SETUP

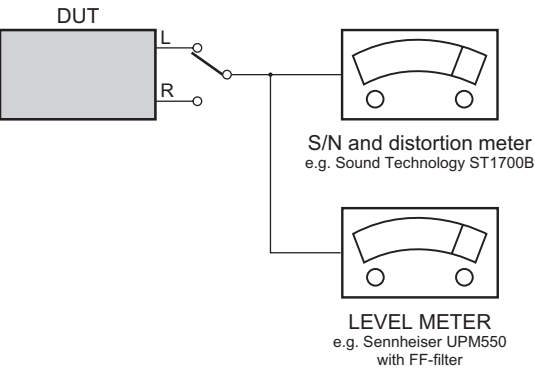
Tuner FM



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

CD

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



SERVICE AIDS

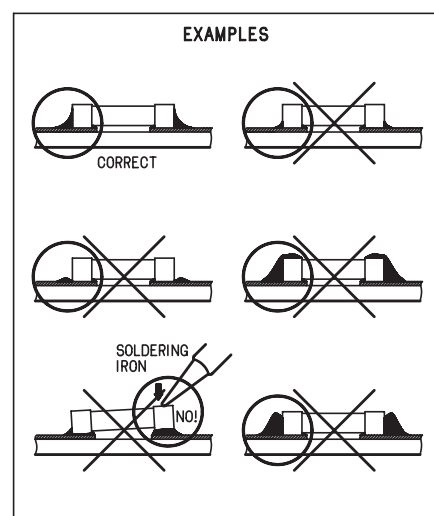
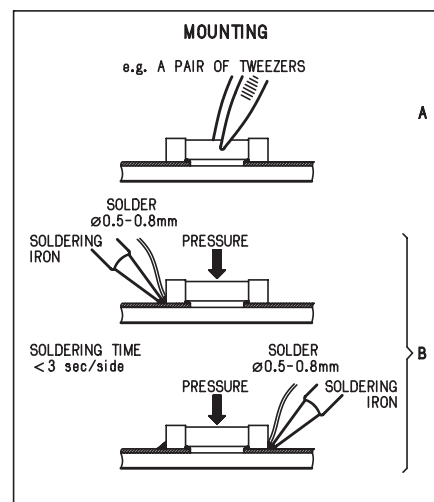
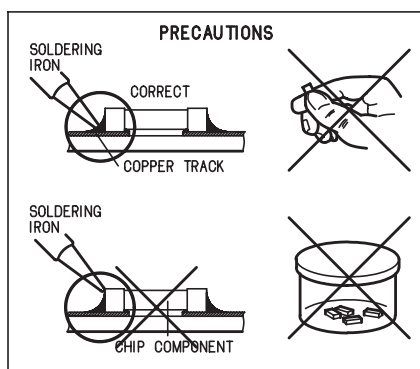
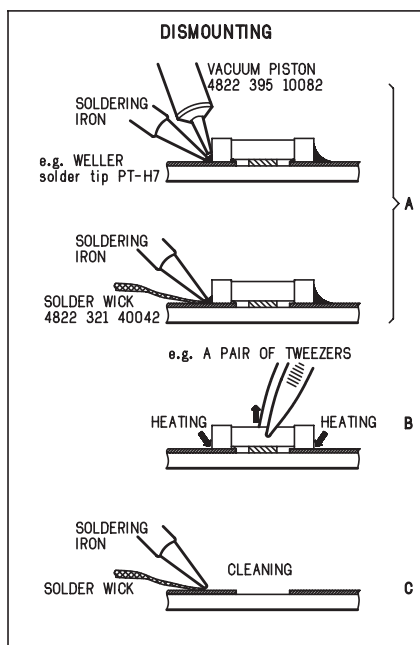
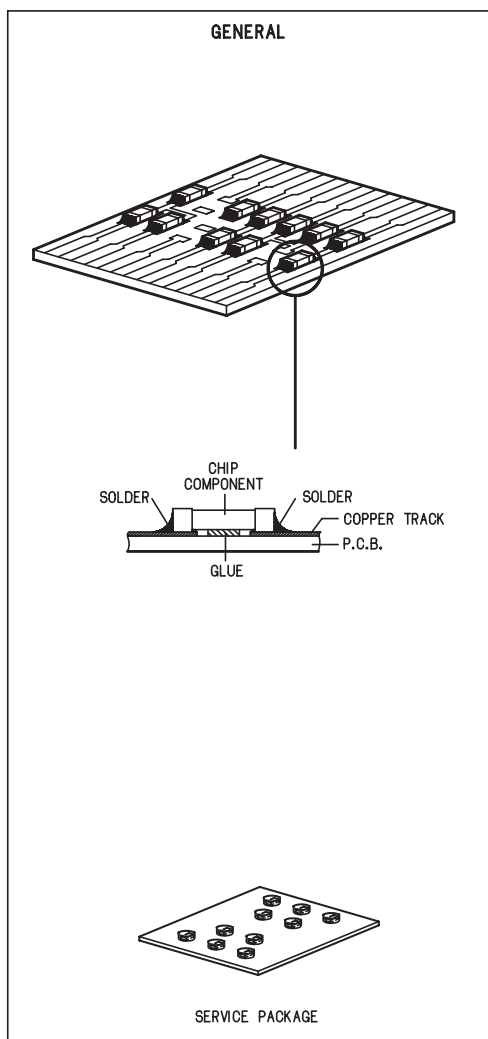
Service Tools:

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.

(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 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.

(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 dit zelfde potentiaal.

(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 Δ .

(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 Δ .

(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 Δ .

(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 Δ 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 Δ .

(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 suojauslaitteiden ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

(DK) Advarsel !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse 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 (lead-ed/ 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 unused equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with lead-ed solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (lead-ed 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 lead-ed 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.

System , Region Code , etc. Setting Prochure

1)System Reset

- a) Press “SETUP“ button on R/C,TV will show setup menu
- b) Select the menu using the▼ and ► on R/C
- c) Go preference page to do system reset

2)Region Code Change

- a) In open mode, press”9” “9” “9” on R/C,then input desired number to change region code :

- | | |
|---|-----------------------|
| 1 | USA |
| 2 | EU |
| 3 | AP |
| 4 | Australia ,NZ , Latam |
| 5 | Russia , INDIA |
| 6 | CHINA |

3)Version Control Change

- a) In open mode, press “1” “5” “9” on R/C
- b) Press “ok” button to confirm
- c) TV will show message as below:

Current model

HTS3270/12/05

Version: XX.XX.XX

Release:XXXX.XX.XX

region :2

Servo:XX.XX.XX.XX

8032:XX.XX.XX.XX

RISC: XX.XX.XX.XX

MCU:XX.XX

If current model does not match you set use down arrow key on the remote to change

OK

4)Password Change

- a) Press “SETUP“ button on R/C,TV will show setup menu
 - b) Select the menu using the▼ and ► on R/C
 - c) Go preference page select “password“ to change
- * 000000 is default password supplied.

5)Check on the Software Version

- a) Open the CD Door
- b) Press “INFO“ button on R/C
- c) TV will show the version on screen

6)Trade model

- a) Press “Open/Close “ button on R/C
- b) Press “2” “5” “9” on R/C,VFD will display “TRA ON “ or “TRA OFF“

7) Upgrading new software

- a) Copy “software files” into a CD-R
- b) Open the CD Door,then insert the CD-R program disc
- c) Close the CD Door
- d) VFD will show:

“Loading“

“Erase” -- erase the flash memory

“Writing” about 1 minute

“done “

* the system will switch off and on again automatically.
- e) OSD will show:

upgrade file detected

Do you wish to continue with the software upgrade?

OK

Cancel

- f) Select “OK”, OSD will show:

upgrade in progress...

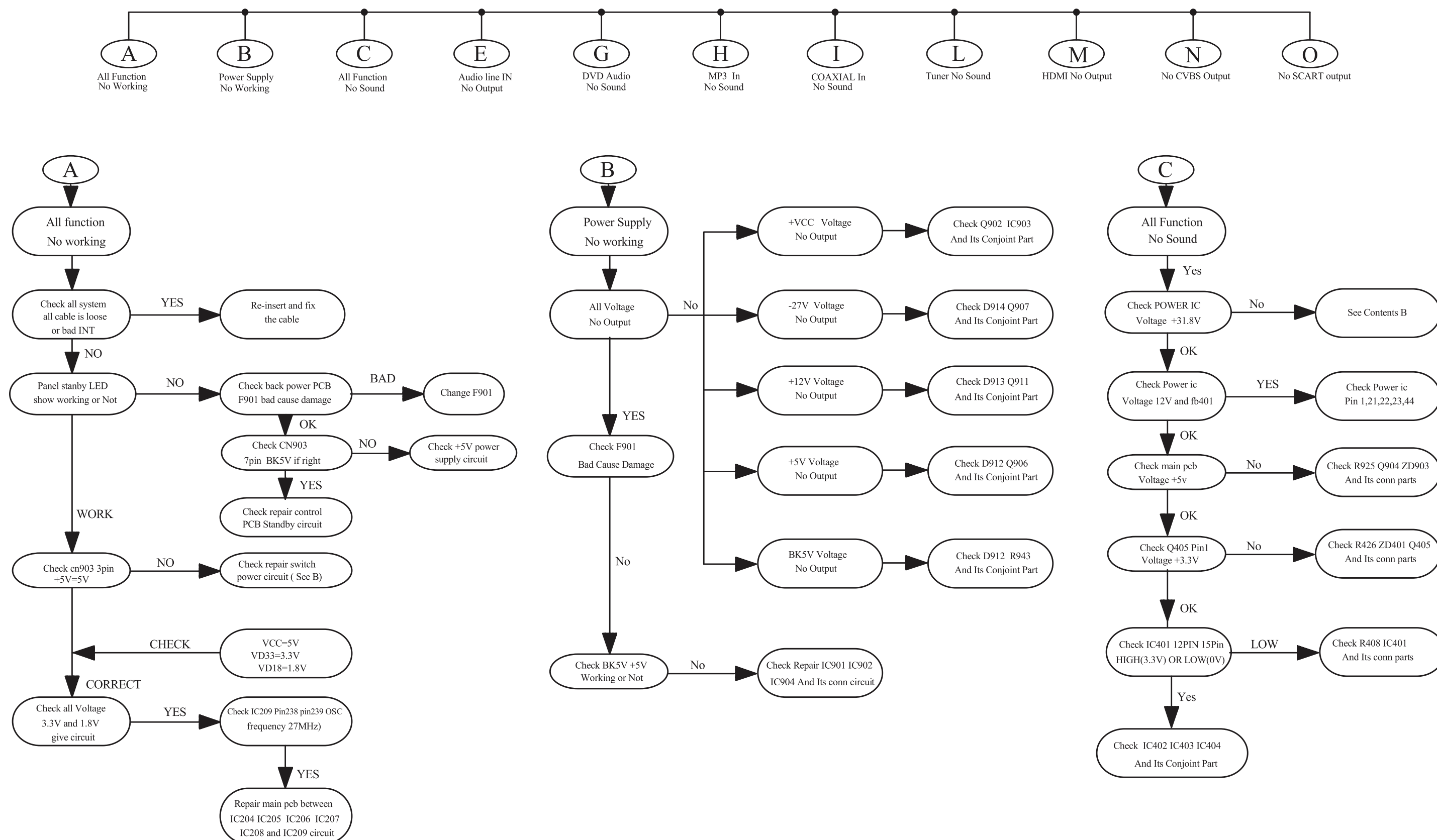
V327X

please do not unplug or switch off the device.

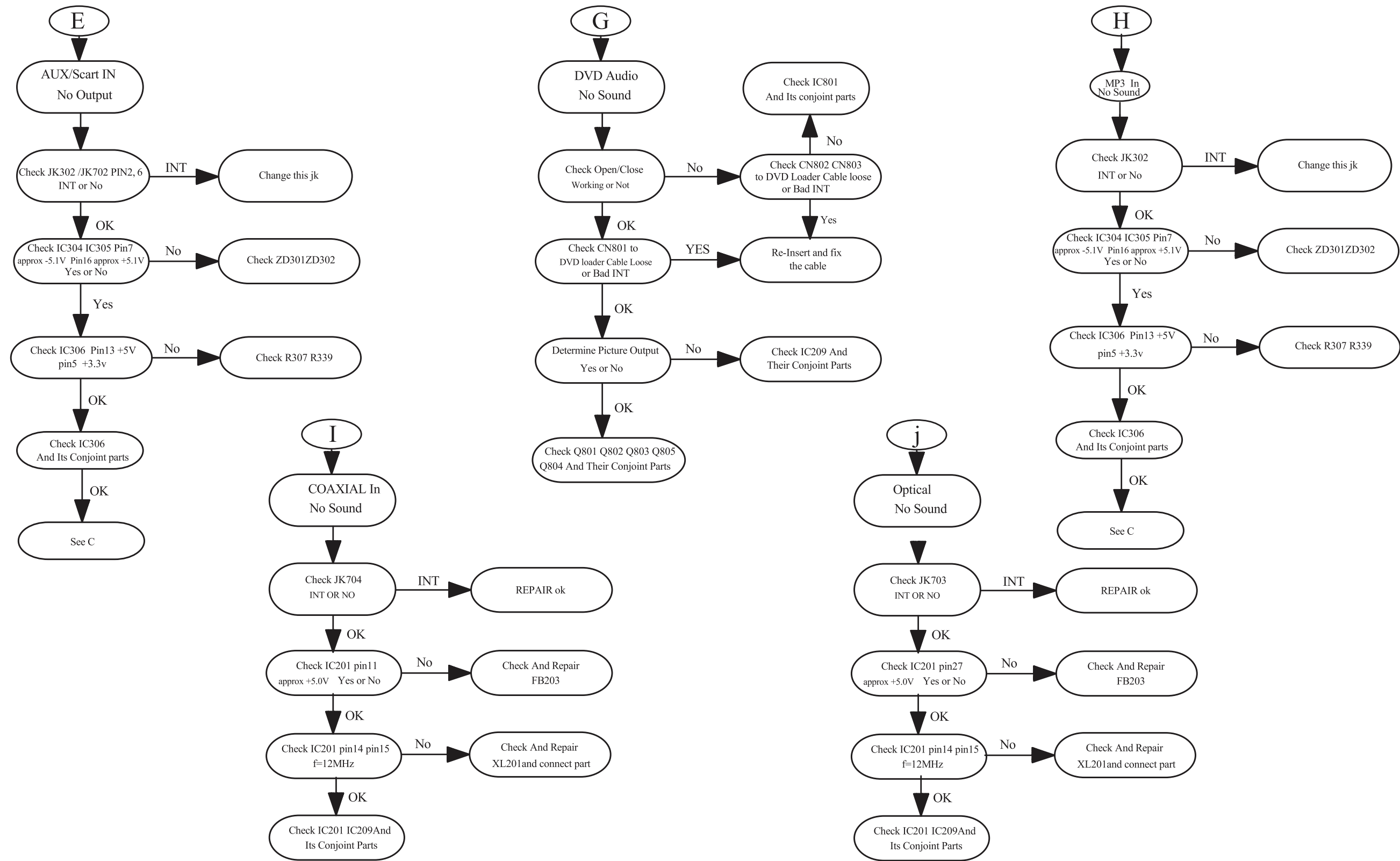
CAUTION!

This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

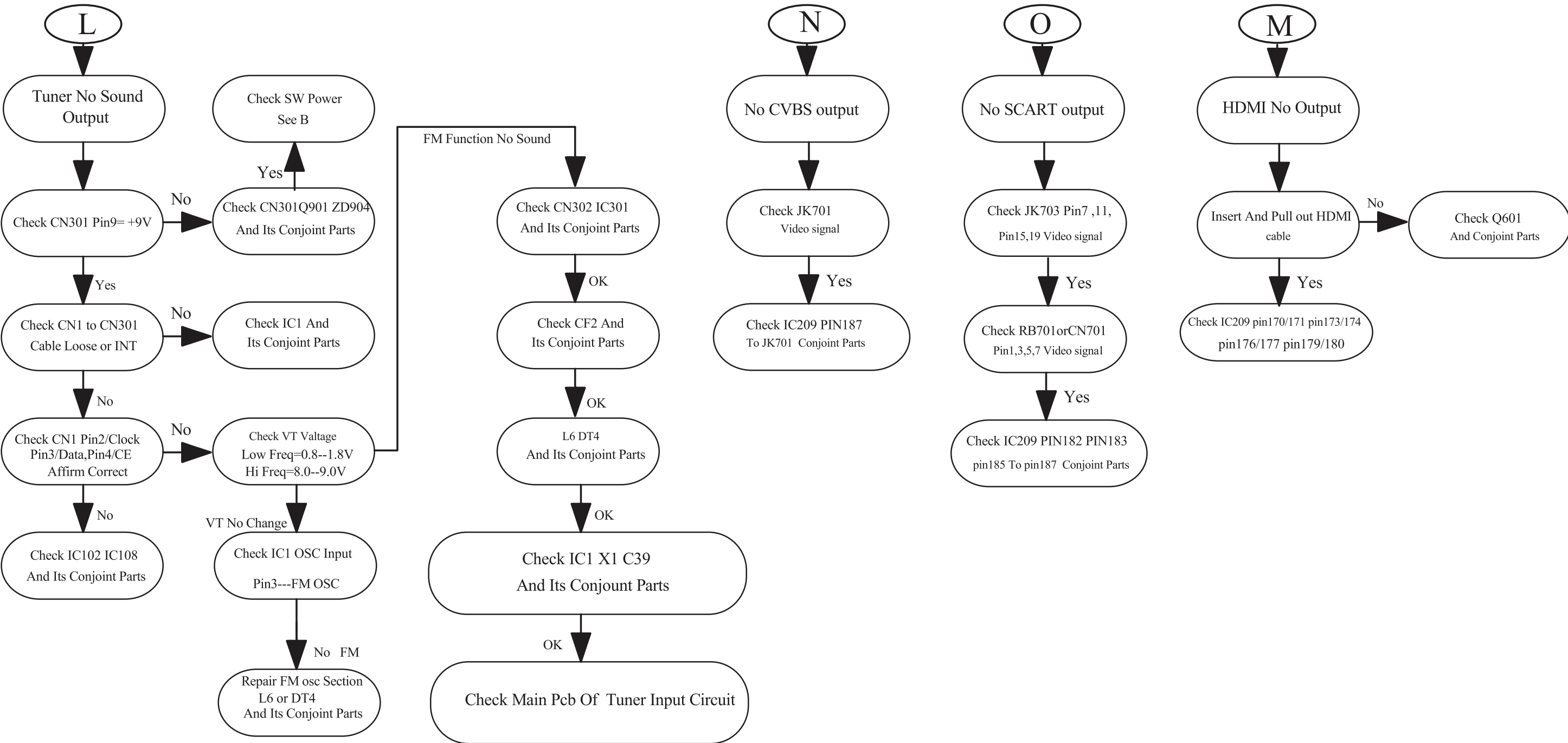
MAIN UNIT REPAIR CHART 1/3



MAIN UNIT REPAIR CHART 2/3



MAIN UNIT REPAIR CHART 3/3



DISASSEMBLY INSTRUCTIONS

3 - 1

Dismantling of the Front Panel Assemble

- 1) Open the DVD Tray by using the Open/Close Button while the Set is ON and disconnect the mains supply after removing the Tray Cover.
Note: If this is not possible, the DVD Tray has to be open manually.
Take a mini screw driver about 2mm diameter and make a marking 24mm from the tip as shown in figure 2 . Place the set on its side, insert the mini screw driver till the marking and slide it towards the left as shown in figure 1 until the Tray moves out of the Front Panel.
- 2) Return the set to its upright position and remove the Tray Cover as shown in Figure 3 and close the tray manually by pushing it back in.

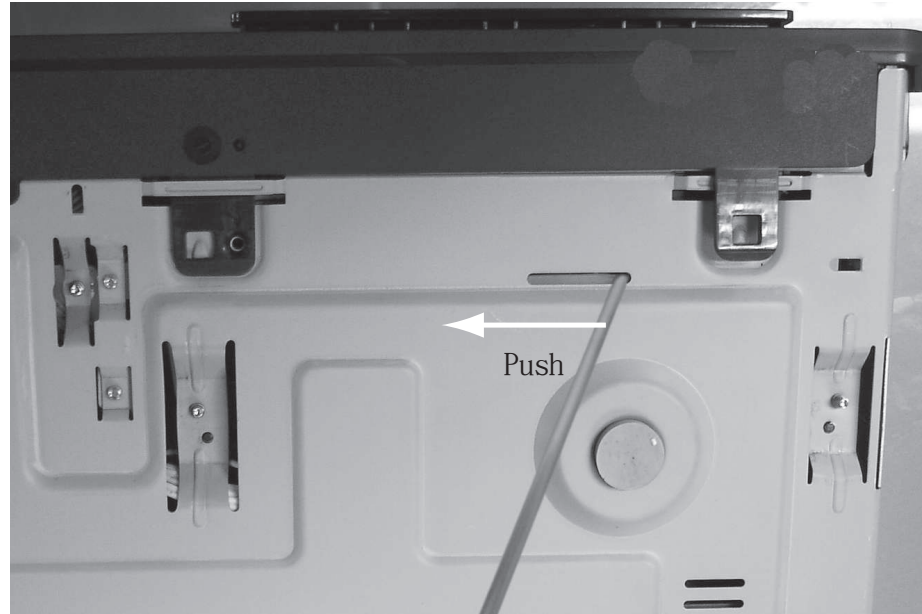


Figure 1

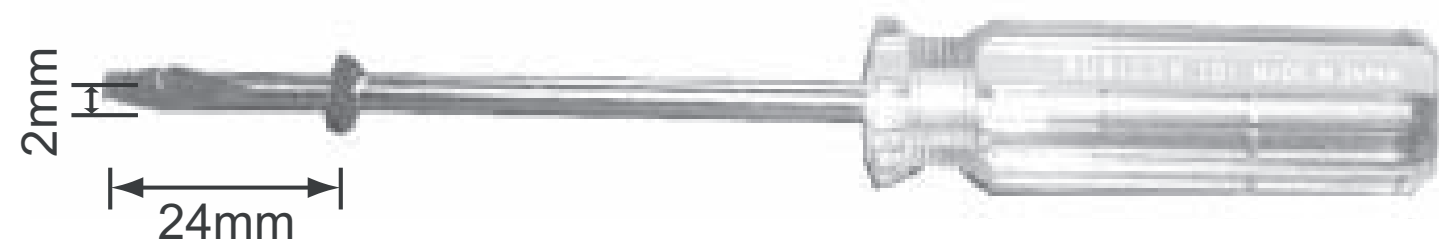


Figure 2

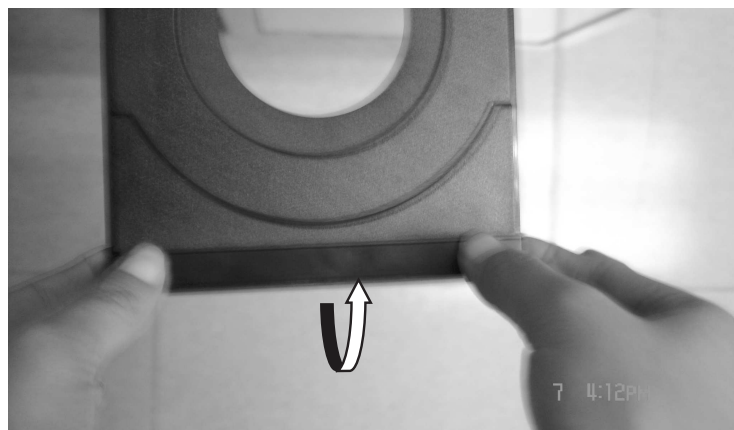


Figure 3

3 - 1

- 3) Loosen 6 screws and remove the Top Cover by lifting the rear portion upwards before sliding it out towards the rear.
 - 1 screw "A" each on the left & right side as shown in figure 4.
 - 4 screws "B" at the back panel as shown in figure 5.
- 4) Loosen 5 screws "C" at the front panel bracket as in figure 6 to remove the front panel.

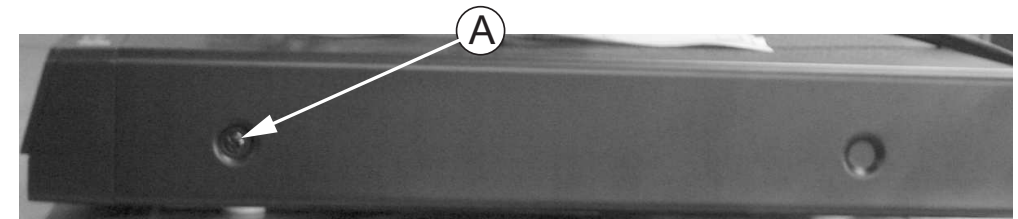


Figure 4

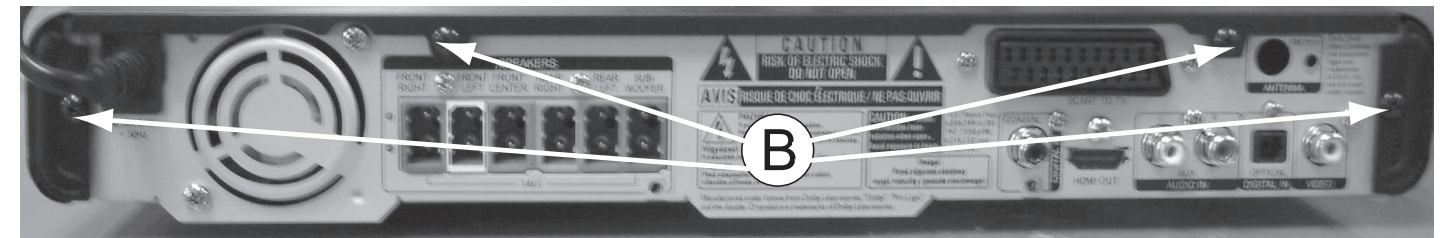


Figure 5

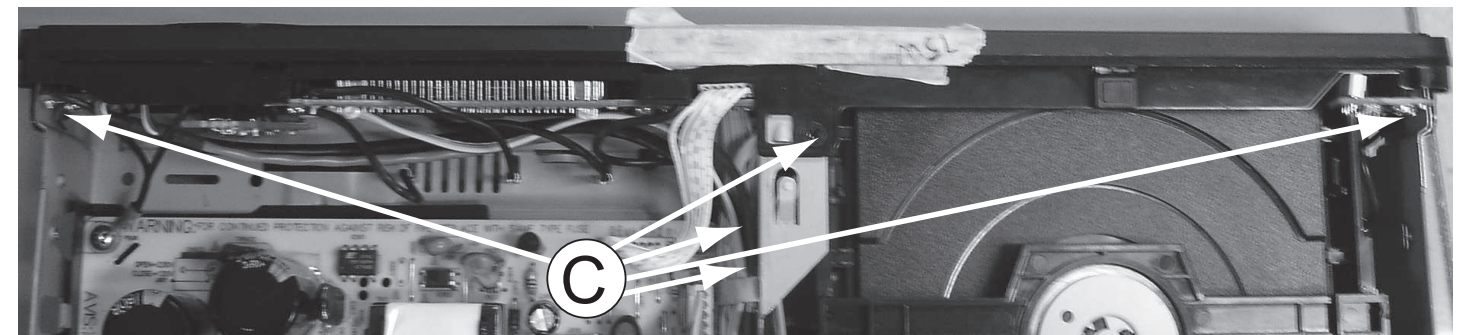


Figure 6

Dismantling of the DVD Module

- 1) Loosen 4 screws "D" at the DVD Module as shown in figure 7.

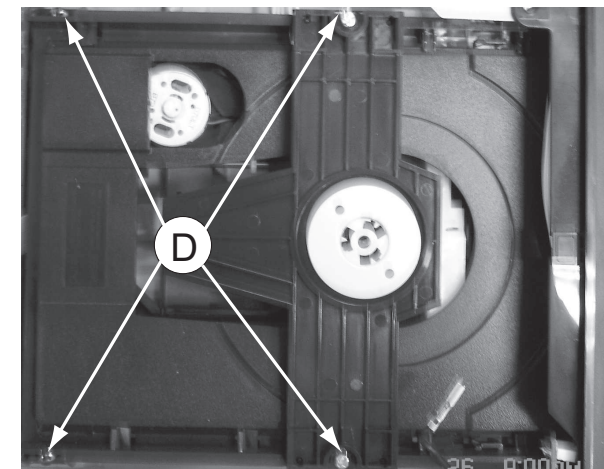


Figure 7

Dismantling of the DISP+LED+VOL&MP3 IN Board

3 - 2

- 1) Loosen 10 screws “E” on the top of DISP+LED+VOL&MP3 IN Board as shown in figure 8.

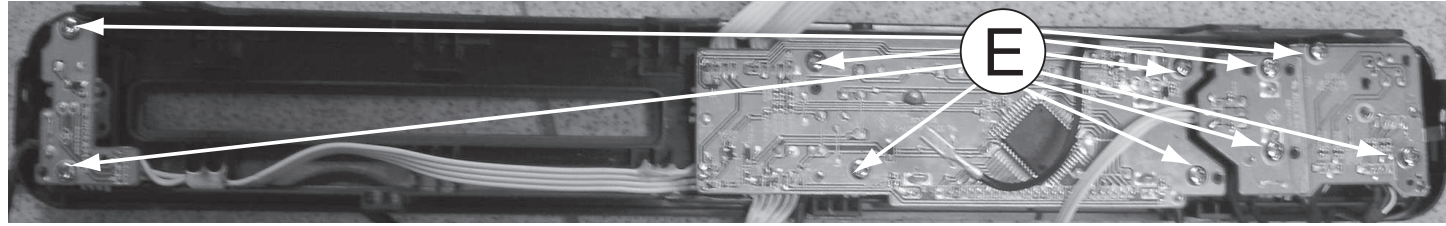


Figure 8

Dismantling of the Power Board

- 1) Loosen 4 screws “F” on the top of Power Board as shown in figure 9.
- 2) With a pincers to nip this space as shown in figure 10 and to take up the power board.

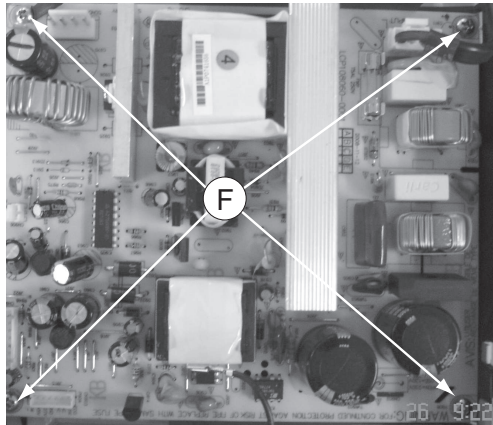


Figure 9

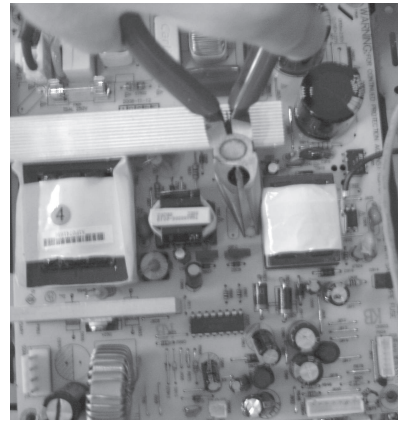


Figure 10

Dismantling of the MAIN+SCART Board

- 1) Loosen 4 screws “G” on the top of Main Board as shown in figure 11.
- 2) At the back panel, loosen 9 screws to remove MAIN Board and loosen 2 screw to remove Scart Board as shown in figure 12.

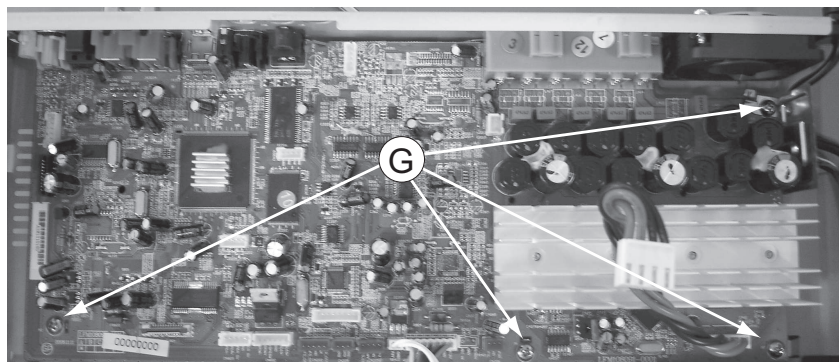


Figure 11

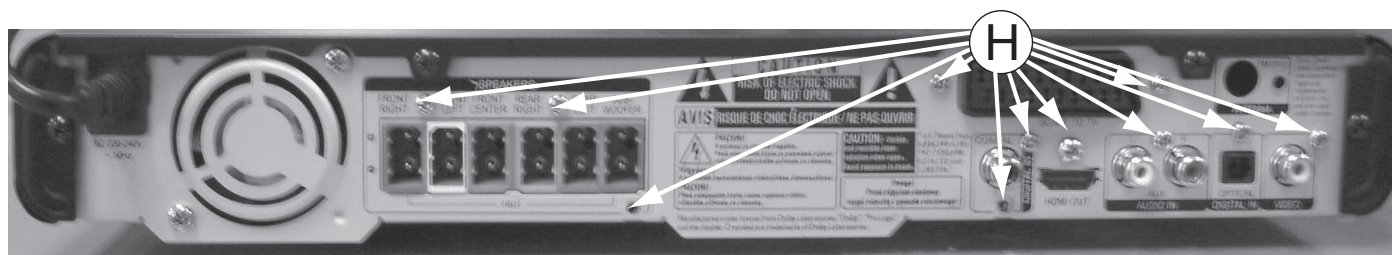
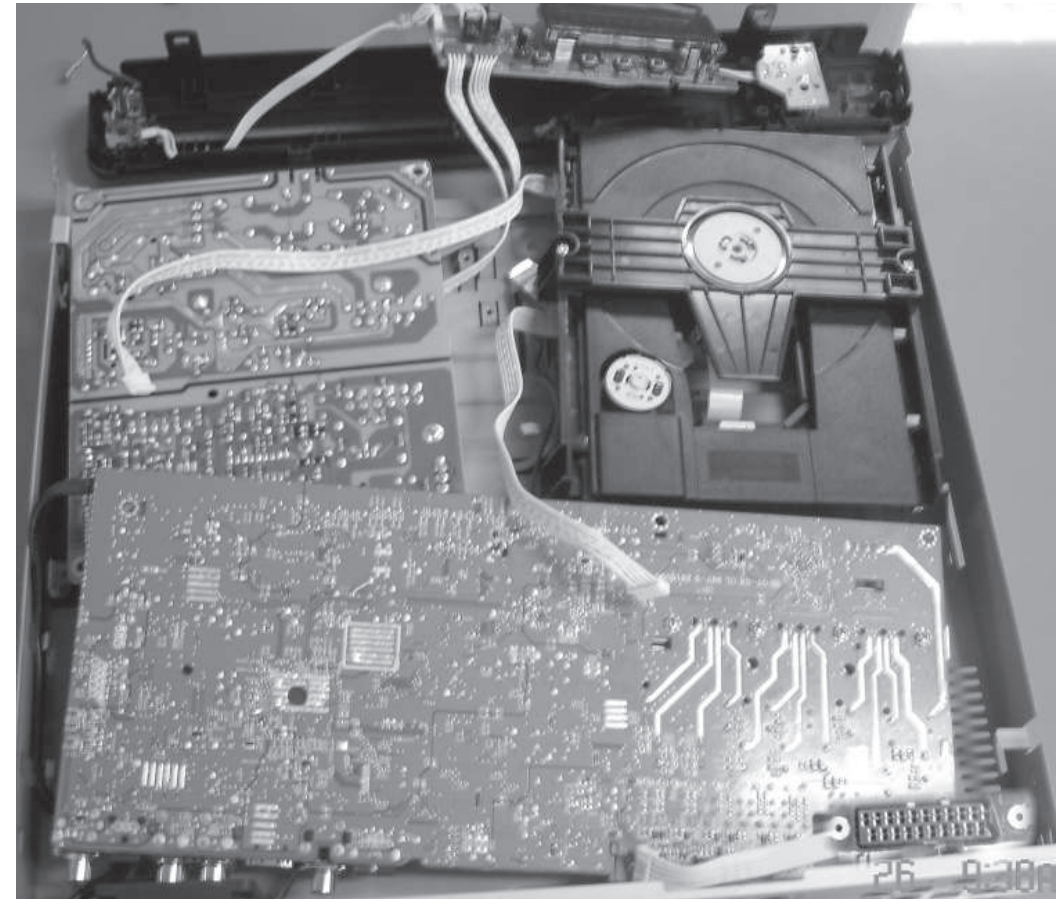


Figure 12

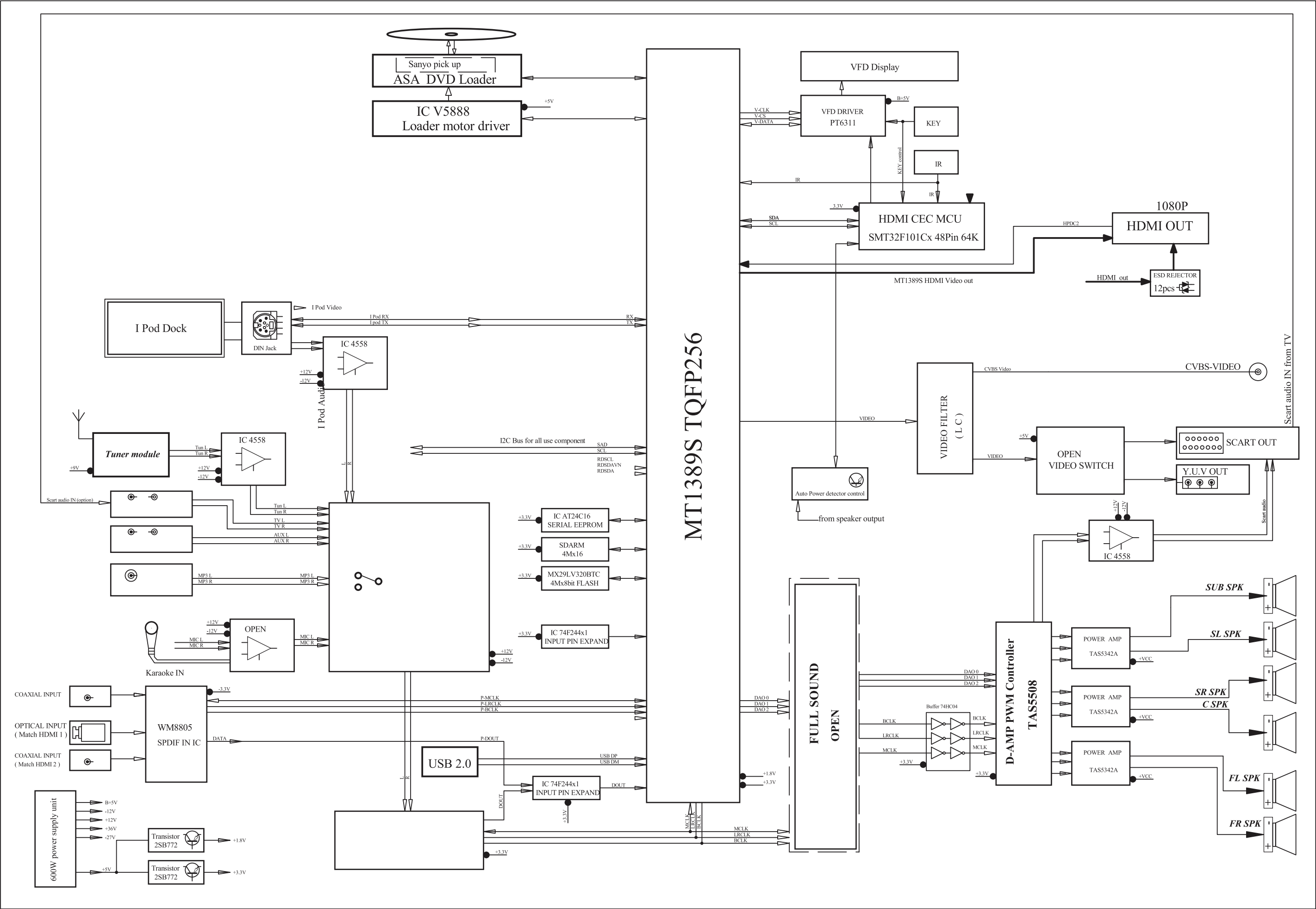
SERVICE POSITIONS

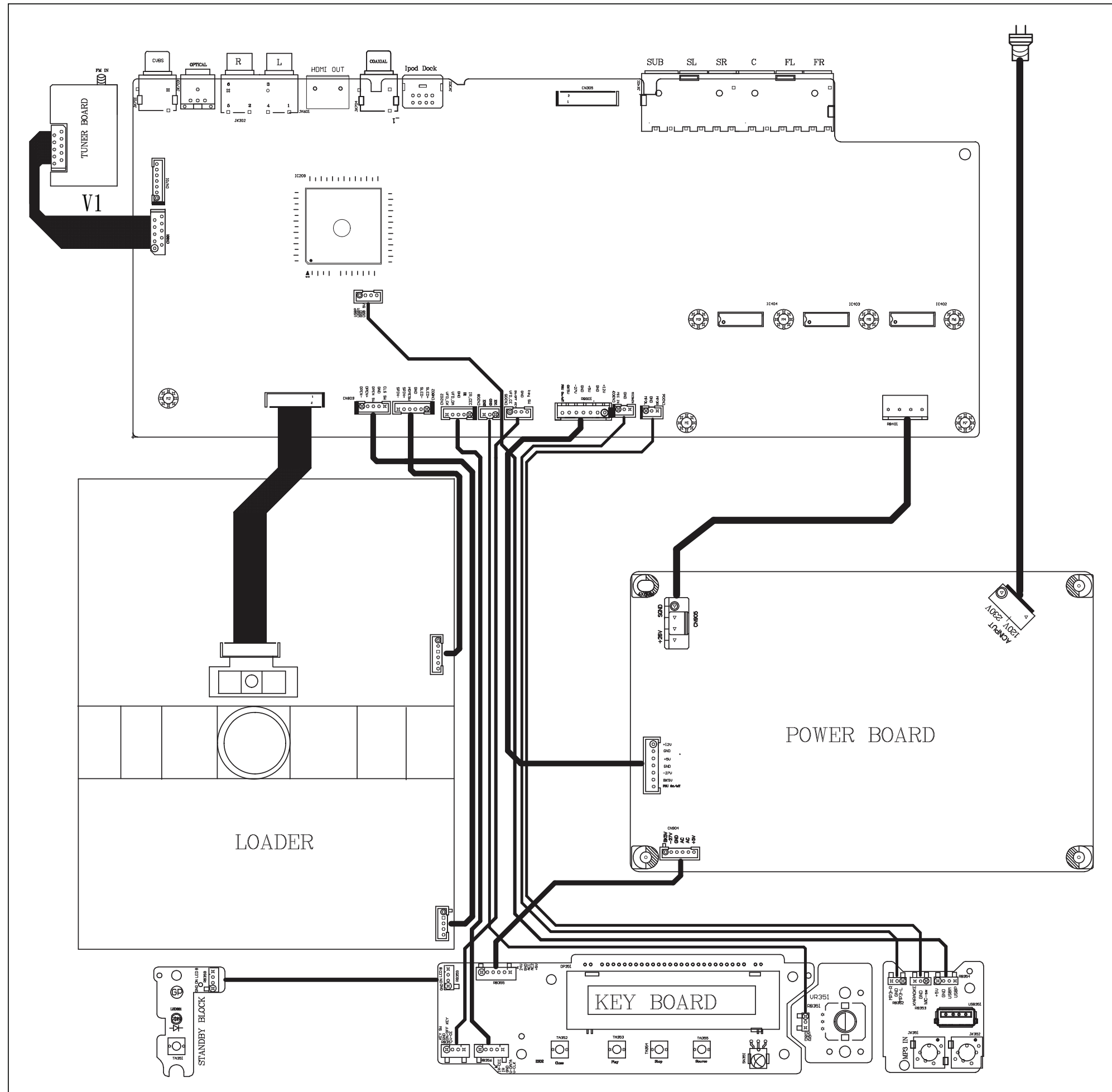
3 - 2

Service position A



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.





DISP+LED+VOL BOARD

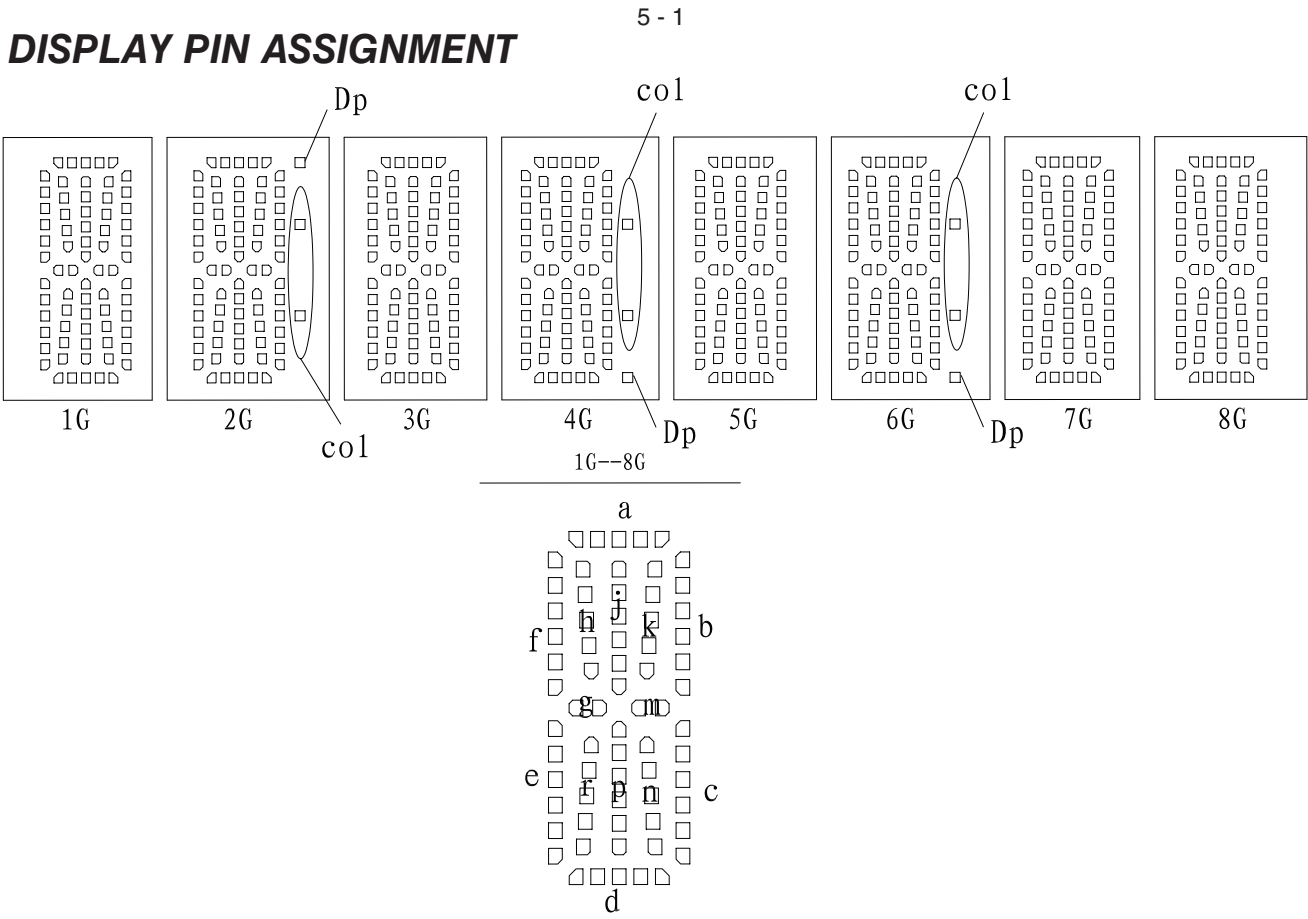
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FTD DISPLAY PIN ASSIGNMENT

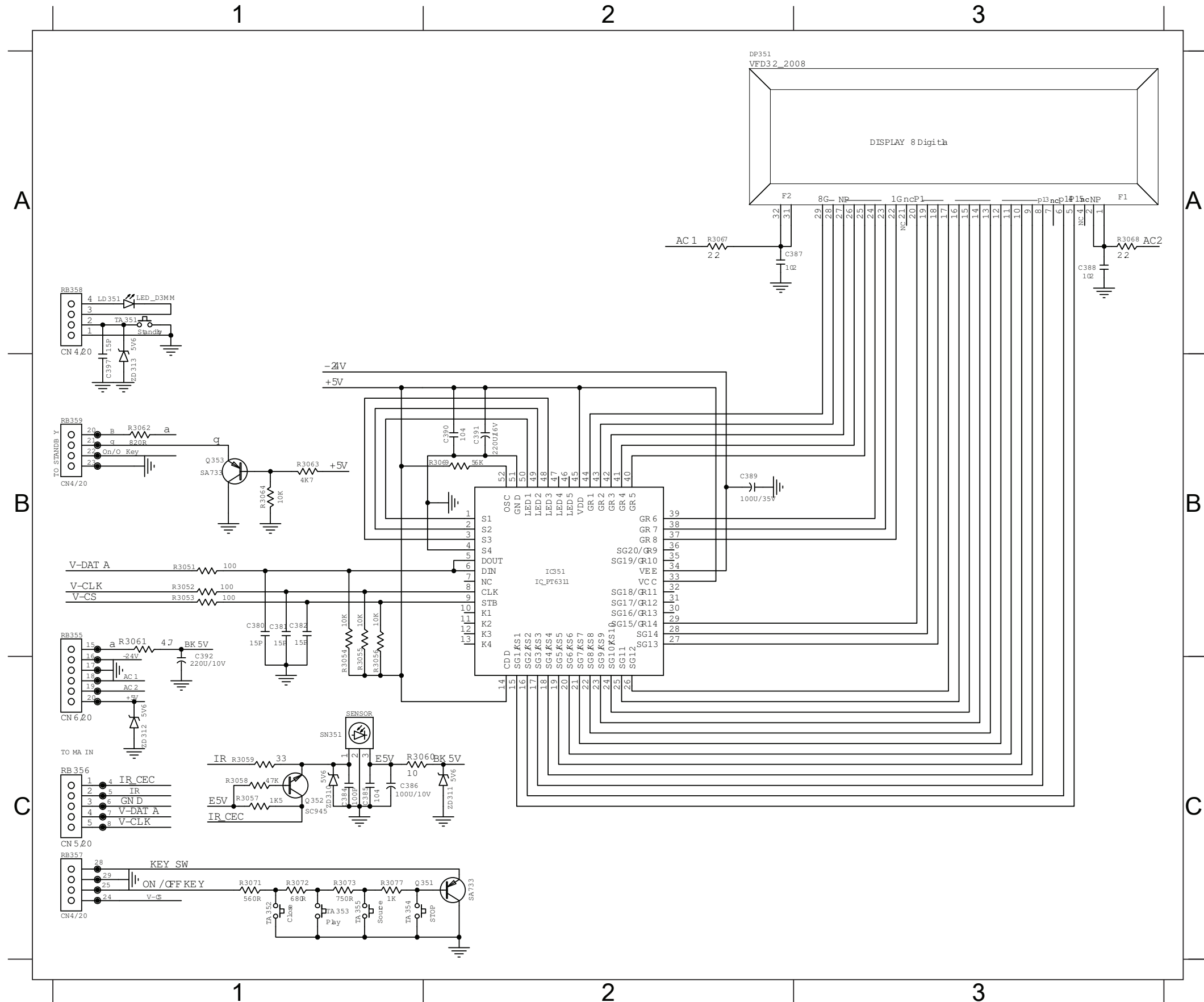


	1G	2G	3G	4G	5G	6G	7G	8G
P1	a	a	a	a	a	a	a	a
P2	j, p	j, p	j, p	j, p	j, p	j, p	j, p	j, p
P3	h	h	h	h	h	h	h	h
P4	k	k	k	k	k	k	k	k
P5	b	b	b	b	b	b	b	b
P6	f	f	f	f	f	f	f	f
P7	m	m	m	m	m	m	m	m
P8	g	g	g	g	g	g	g	g
P9	c	c	c	c	c	c	c	c
P10	e	e	e	e	e	e	e	e
P11	r	r	r	r	r	r	r	r
P12	n	n	n	n	n	n	n	n
P13	d	d	d	d	d	d	d	d
P14		col		col		col		
P15		Dp		Dp		Dp		

PIN CONNECTION

管脚序号 (Pin NO.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
连接 (Connection)	F1	F1	NP	NC	P15	P14	NC	P13	P12	P11	P10	P9	P8	P7	P6	P5
管脚序号 (Pin NO.)	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
连接 (Connection)	P4	P3	P2	P1	NC	1G	2G	3G	4G	5G	6G	7G	8G	NP	F2	F2

注 (Notes) : Fn : 灯丝 (Filament Pin) nG : 栅极 (Grid Pin)
Pn : 阳极 (Anode Pin) NP : 无引出脚 (No Pin)
NC : 无功能 (No connection Pin)

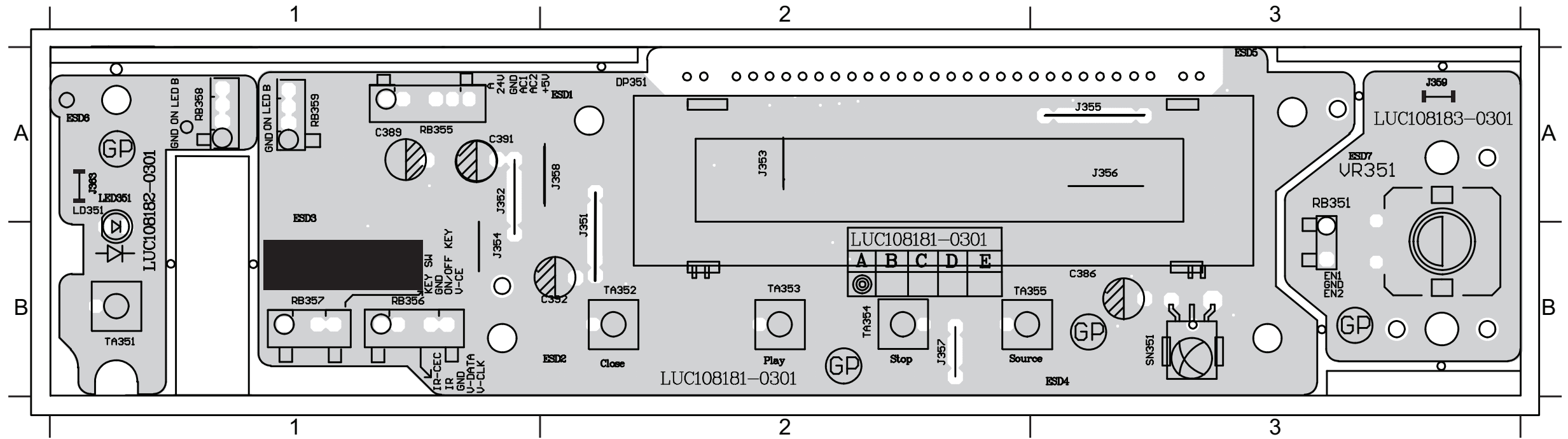


PCB LAYOUT - TOP VIEW

5 - 3

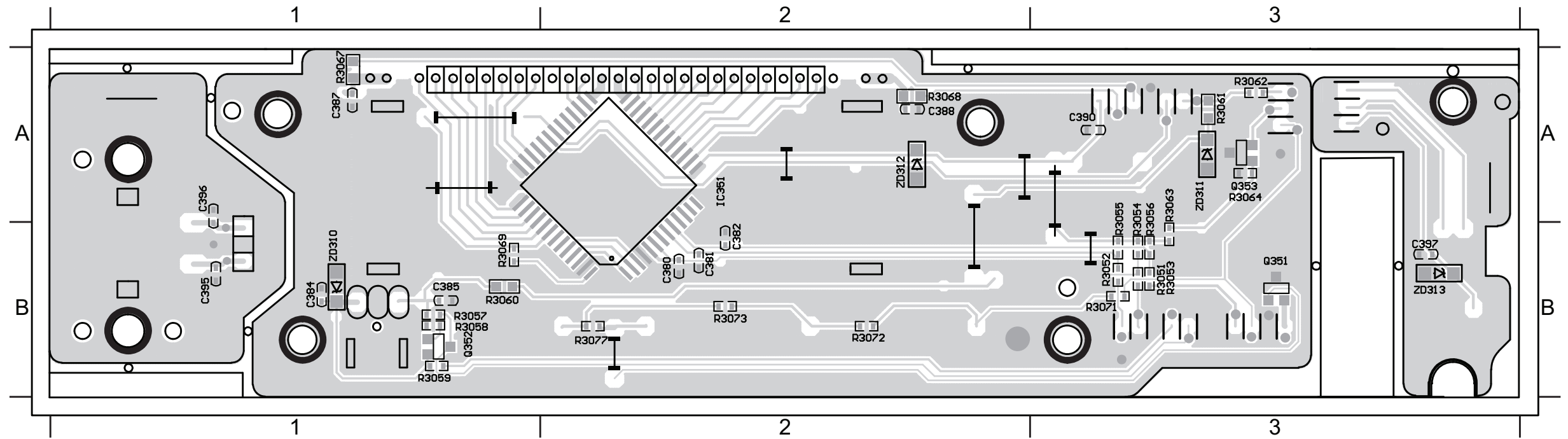
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C389	A1	C392	B2	ESD1	A2	ESD5	B3	ESD7	A3	J352	B1	J354	B1	J356	A3	J358	A2	J363	A1	RB351	A3	RB356	B1	RB359	A1	TA351	B1	TA353	B2	TA355	B2		

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PCB LAYOUT - BOTTOM VIEW

C380	B2	C382	B2	C387	A1	C390	A3	C396	A1	IC351	A2	Q352	B1	R3051	B3	R3053	B3	R3055	A3	R3057	B1	R3059	B1	R3061	A3	R3063	A3	R3067	A1	R3069	B1	R3072	B2	R3077	B2	ZD311	A3	ZD313	B3
C381	B2	C385	B1	C388	A2	C395	B1	C397	B3	Q351	B3	Q353	A3	R3052	B3	R3054	A3	R3056	A3	R3058	B1	R3060	B1	R3062	A3	R3064	A3	R3068	A2	R3071	B3	R3073	B2	ZD310	B1	ZD312	A2		



MAIN BOARD

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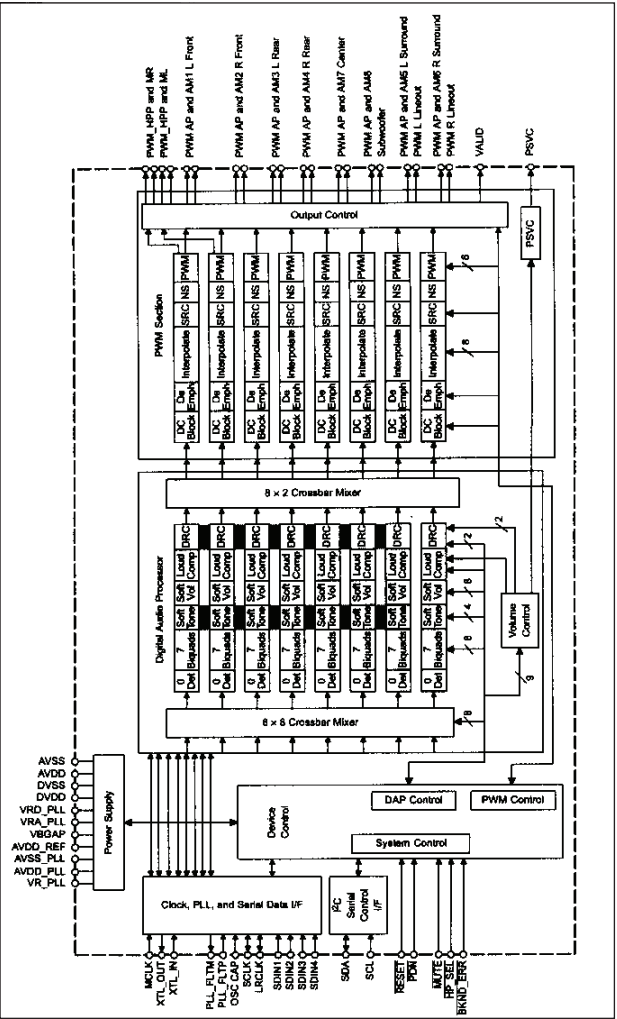
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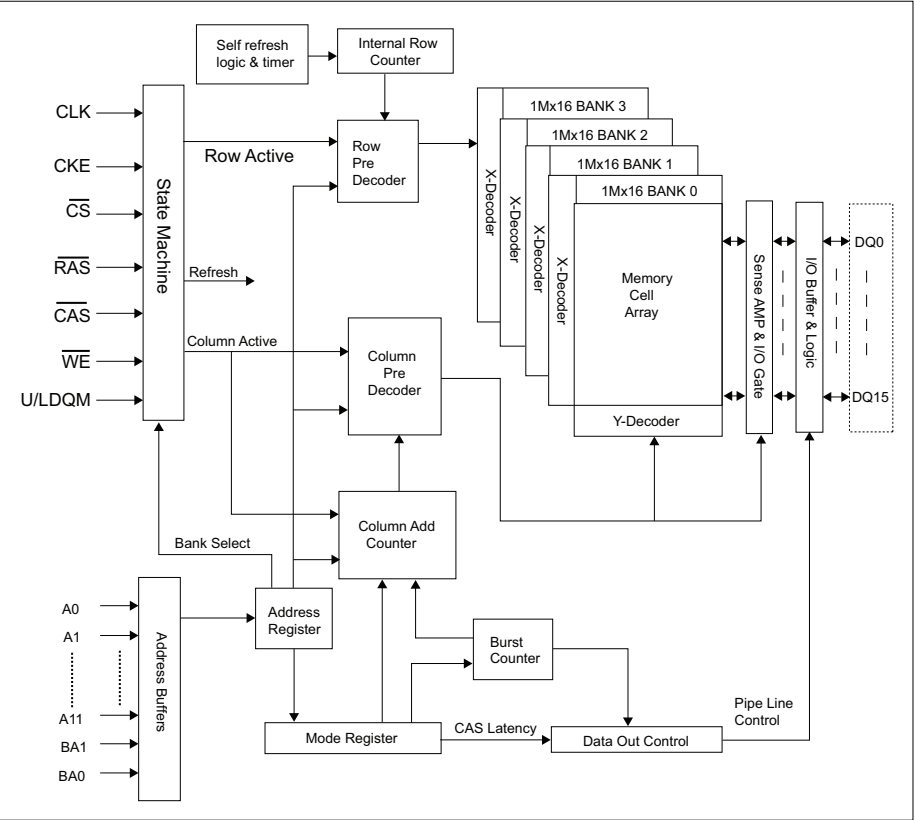
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INTERNAL IC DIAGRAM - TAS5508B

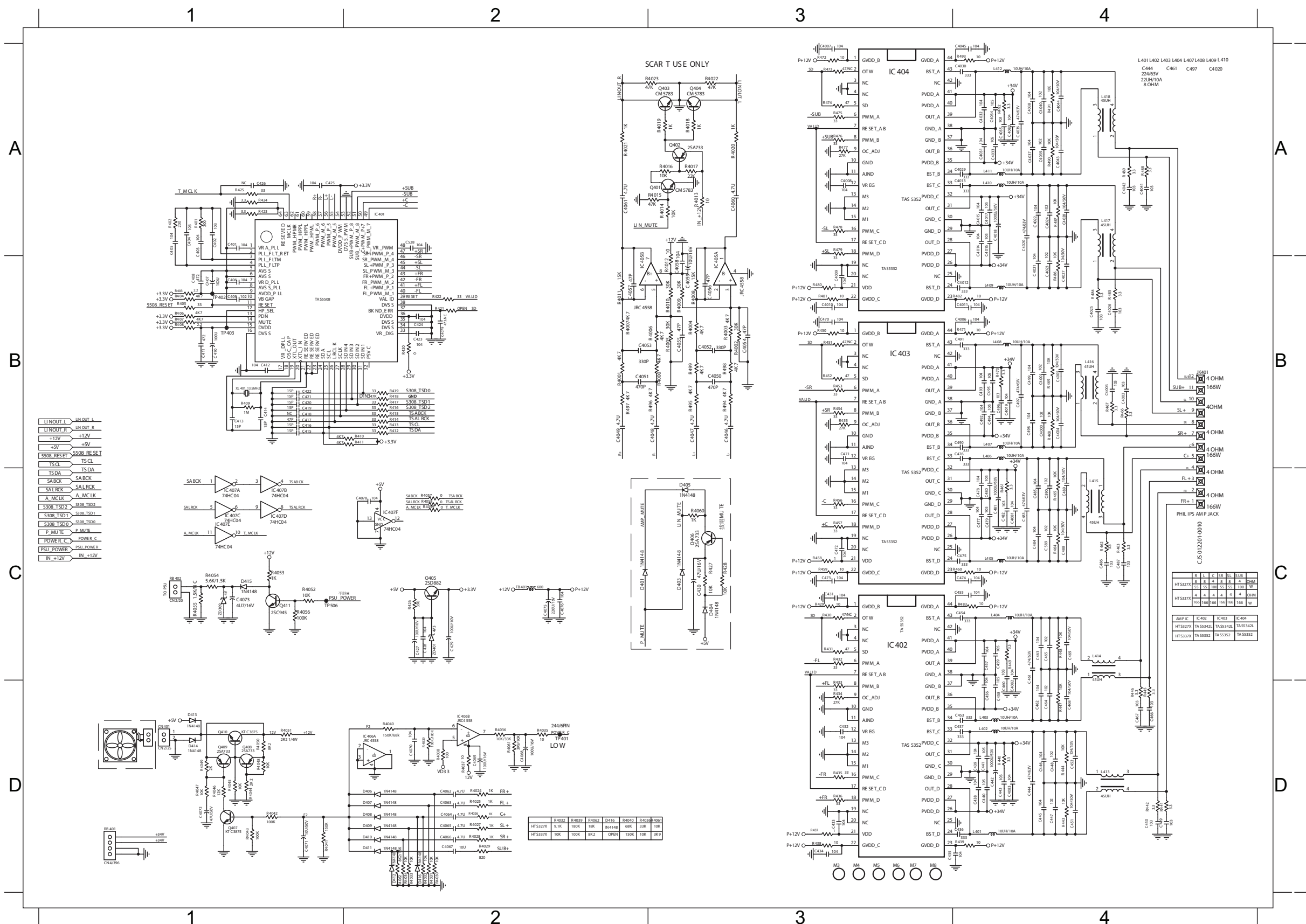


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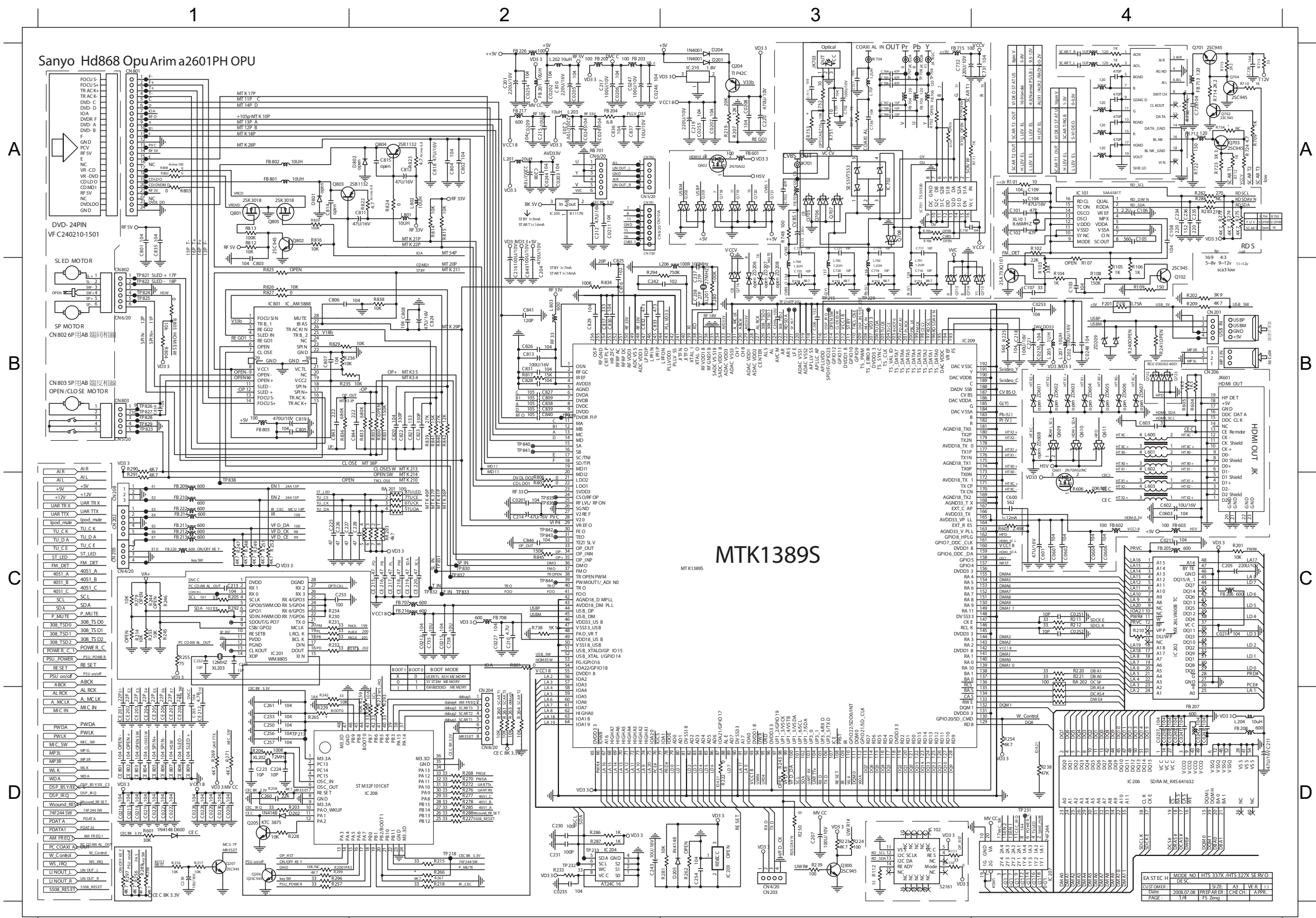
CIRCUIT DIAGRAM - part one

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C402	A1	IC401	A2	R4015	A3	R477	A3	C4030	A4	C4044	A4	R493	A4	C417	B1	XL401	B1	R412	B2	C4009	B3	C470	B3	R4010	B3	R498	B3	C4025	B4	JK401	B4	R484	B4	DA401	C2	IC402	C3	C454	C4	C481	C4	L405	C4	DA14	D1	D406	D2	R4028	D2	R4040	D2	C435	D4	C449	D4	L402	D4
C403	A1	R4021	A2	R4016	A3	R478	A3	C4031	A4	C4045	A4	C406	B1	C419	B1	C4049	B2	R413	B2	C4010	B3	C471	B3	R4012	B3	R499	B3	C4026	B4	L406	B4	R485	B4	FB401	C2	Q406	C3	C455	C4	C482	C4	R448	C4	R4051	D1	D407	D2	R4029	D2	R4061	D2	C436	D4	C450	D4	L403	D4
C404	A1	C4007	A3	R4017	A3	R479	A3	C4032	A4	C4080	A4	C407	B1	C420	B1	C4051	B2	R414	B2	C4046	B3	IC403	B3	R450	B3	C4001	B4	C4027	B4	L407	B4	R486	B4	Q405	C2	R427	C3	C457	C4	C483	C4	R449	C4	RB401	D1	D408	D2	R4030	D2	R4062	D2	C437	D4	C451	D4	R439	D4
C405	A1	C4008	A3	R4018	A3	C4013	A4	C4035	A4	L410	A4	C408	B1	C421	B1	C4053	B2	R415	B2	C4047	B3	IC405	B3	R452	B3	C4002	B4	C476	B4	L408	B4	DA16	C1	R426	C2	R428	C3	C461	C4	C484	C4	R460	C4	C4062	D2	D409	D2	R4031	D2	C432	D3	C438	D4	C452	D4	R440	D4
C425	A1	C4060	A3	R4019	A3	C4014	A4	C4036	A4	L411	A4	C409	B1	C422	B1	C4057	B2	R416	B2	C4048	B3	R4000	B3	R453	B3	C4003	B4	C490	B4	L409	B4	IC407	C1	ZD401	C2	R429	C3	C463	C4	C485	C4	R461	C4	C4063	D2	DA10	D2	R4032	D2	C433	D3	C439	D4	C453	D4	R441	D4
R401	A1	IC404	A3	R4020	A3	C4015	A4	C4037	A4	L412	A4	C410	B1	R403	B1	C423	B2	R417	B2	C4050	B3	R4002	B3	R454	B3	C4004	B4	C491	B4	R466	B4	R4060	C1	C430	C3	R431	C3	C464	C4	C486	C4	R462	C4	C4064	D2	DA11	D2	R4033	D2	C434	D3	C442	D4	C456	D4	R442	D4
R402	A1	Q401	A3	R4022	A3	C4018	A4	C4038	A4	R487	A4	C411	B1	R404	B1	C424	B2	R418	B2	C4052	B3	R4003	B3	R455	B3	C4005	B4	C492	B4	R467	B4	C4075	C2	C431	C3	R432	C3	C465	C4	C487	C4	R463	C4	C4065	D2	DA12	D2	R4034	D2	R433	D3	C443	D4	C460	D4	R443	D4
R423	A1	Q402	A3	R4023	A3	C4020	A4	C4039	A4	R488	A4	C412	B1	R405	B1	R4001	B2	R419	B2	C4054	B3	R4004	B3	R480	B3	C4006	B4	C493	B4	R468	B4	C4076	C2	C472	C3	R456	C3	C469	C4	C488	C4	R464	C4	C4066	D2	IC406	D2	R4035	D2	R434	D3	C444	D4	C462	D4	R444	D4
R424	A1	Q403	A3	R472	A3	C4022	A4	C4040	A4	R489	A4	C413	B1	R406	B1	R4007	B2	R420	B2	C4055	B3	R4005	B3	R481	B3	C4011	B4	C496	B4	R469	B4	C4078	C2	C473	C3	R457	C3	C474	C4	C489	C4																

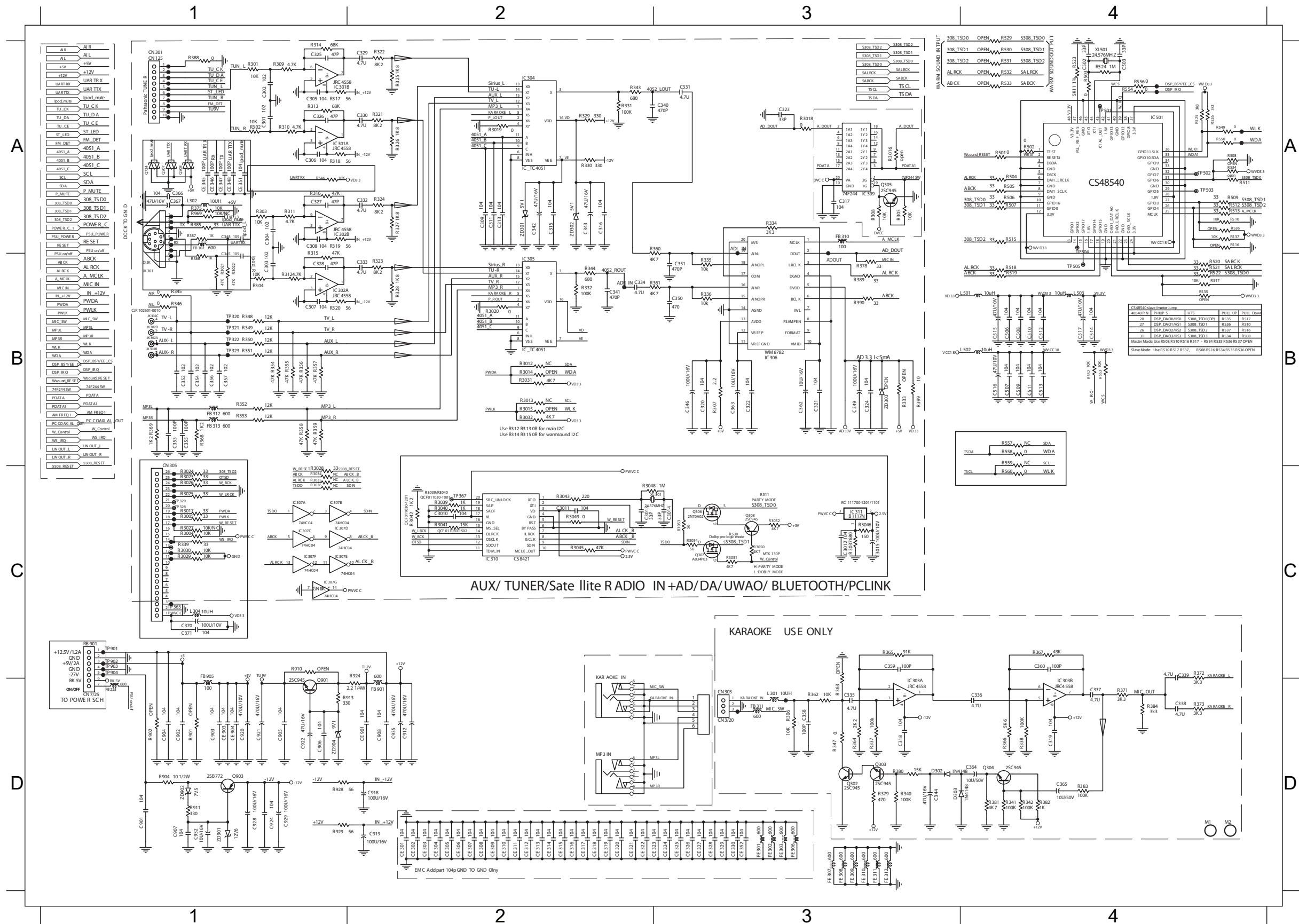


CIRCUIT DIAGRAM - part two

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C0202 A2	C0218 D1	C0241 D4	C0604 C4	C205 C4	C221 B4	C237 B3	C602 C4	C723 B3	C806 B1	C823 B2	C838 B2	CE208 D1	CE808 D1	D201 A3	FB210 C1	FB708 C2	IC207 D4	L207 B4	Q300 D3	Q804 A2	R207 A3	R223 D3	R242 D3	R261 D2	R280 B3	R297 D1	R722 A4	R804 B1	R826 B1	RA202 C4
C0203 A2	C0219 D1	C0242 D4	C0606 C4	C206 B3	C222 D1	C238 B3	C603 B4	C728 A4	C807 B1	C824 B2	C839 B2	CE212 D1	CE809 D1	D202 D1	FB211 C1	FB712 A4	IC208 D2	L201 B3	Q601 B4	Q805 A1	R208 D2	R224 D3	R245 C1	R263 D2	R281 D3	R298 D1	R724 A4	R805 B1	R827 B1	RA203 C2
C0204 D1	C0220 D1	C0243 D4	C101 A4	C207 D3	C224 D1	C239 D1	C701 A3	C729 A4	C808 B2	C825 A2	C840 B2	CE215 C2	CN201 B4	D204 A3	FB212 C1	FB713 A3	IC209 B3	L702 B3	Q602 A3	Q806 A1	R209 B4	R225 B4	R247 C1	R267 D2	R282 A4	R299 D1	R731 B3	R806 C2	R829 B1	XL101 A4
C0205 A2	C0221 D1	C0244 A2	C102 A4	C208 A2	C225 C1	C242 B2	C702 A3	C730 A4	C809 B2	C826 B2	C841 B2	CE216 C2	CN202 C1	D205 D3	FB213 C1	FB715 A3	IC210 A3	L703 B3	Q611 B4	R102 A4	R210 C4	R227 D2	R248 C1	R268 D2	R283 A4	R601 D1	R732 B3	R807 C2	R831 B1	XL201 B3
C0206 A2	C0222 D1	C0245 A2	C103 B4	C209 B3	C226 C1	C243 D2	C703 A3	C731 A4	C810 A2	C827 B2	C843 B1	CE217 C2	CN203 D3	D600 D1	FB214 C1	FB801 A1	IC801 B1	L704 B3	Q701 A4	R103 B4	R211 C4	R228 D1	R249 C1	R269 D1	R285 D2	R603 C4	R733 B3	R808 A1	R833 B2	XL202 D1
C0207 A3	C0226 D1	C0246 A2	C104 A4	C210 C2	C227 C1	C250 D1	C710 A3	C732 A3	C811 A2	C828 B2	C844 B2	CE218 C2	CN204 D2	F201 B4	FB216 C2	FB802 A1	JK601 B4	L707 A3	Q702 A4	R104 B4	R212 C4	R229 D1	R250 D3	R270 D2	R286 D2	R604 B4	R734 B3	R812 A1	R834 B2	XL203 C1
C0208 A3	C0227 C2	C0247 A2	C105 A4	C211 D4	C228 C2	C253 C1	C711 A3	C735 C2	C812 A2	C829 B2	C846 C2	CE219 C2	CN205 C1	FB201 A2	FB217 A2	FB803 B1	JK701 A3	L801 A3	Q703 A4	R105 B4	R213 D2	R230 C1	R251 C1	R271 D1	R287 D2	R605 B4	R737 A3	R813 A1	R835 B2	ZD209 B4
C0209 A2	C0228 D1	C0248 B4	C106 A4	C213 C1	C229 C1	C254 D3	C713 A3	C736 A3	C813 B2	C830 B2	C849 B2	CE220 C2	CN206 B4	FB202 A2	FB220 C1	GT01 D3	JK703 A3	L802 A2	Q704 A4	R106 B4	R215 D2	R231 C1	R252 C1	R272 D2	R288 D2	R606 C4	R738 C2	R814 A2	R836 B1	
C0210 B4	C0229 D1	C0249 A2	C107 B4	C214 C2	C230 D2	C255 D1	C716 B3	C737 A3	C816 B2	C831 B2	CE201 D1	CE801 D1	CN208 C1	FB203 A2	FB222 C1	IC101 A4	JK704 A3	L803 B2	Q705 A3	R108 B4	R216 D1	R232 C1	R253 C1	R273 A4	R289 D1	R702 A3	R748 A3	R815 A2	R838 B2	
C0211 A2	C0230 D1	C0251 C4	C108 A4	C215 A2	C231 D2	C256 D1	C717 A3	C738 C2	C817 B2	C832 B2	CE202 D1	CE802 D1	CN701 A3	FB204 A2	FB226 A2	IC201 D3	L201 A2	Q101 A3	Q706 A3	R109 B4	R217 D1	R233 D2	R254 D4	R274 A4	R290 B1	R704 A3	R750 A4	R816 A1	R839 B2	
C0213 A4	C0235 D2	C0252 C4	C109 A4	C216 B2	C232 C1	C257 D1	C718 B3	C801 A1	C818 A2	C833 B2	CE203 D1	CE803 D1	CN702 A2	FB205 C4	FB601 A3	IC202 C4	L202 A2	Q102 B4	Q707 A3	R201 C4	R218 D2	R234 C1	R256 D1	R275 A4	R291 C1	R705 A3	R751 A3	R817 B2	R840 B2	
C0214 C4	C0237 D4	C0253 B4	C201 A2	C217 A2	C233 D1	C260 D1	C719 A3	C802 A2	C819 B1	C834 B1	CE204 D1	CE804 D1	CN801 A1	FB206 C4	FB602 C4	IC203 D3	L203 A2	Q204 A3	Q708 A3	R202 B4	R219 A3	R235 B1	R257 D2	R276 D2	R292 C1	R712 A4	R752 A3	R820 A1	R841 B2	
C0215 C2	C0238 D4	C0601 C4	C202 B4	C218 B4	C234 A4	C261 D1	C720 B3	C803 B1	C820 B2	C835 A1	CE205 D1	CE805 D1	CN802 B1	FB207 D4	FB603 C4	IC204 D2	L204 D4	Q205 D1	Q801 A1	R203 D1	R220 C4	R236 B1	R258 D1	R277 D2	R293 D2	R713 A4	R801 C2	R822 A2	R842 B2	
C0216 D1	C0239 D4	C0602 C4	C203 A2	C219 A3	C235 A4	C600 C4	C721 A3	C804 A2	C821 B2	C836 A2	CE206 D1	CE806 D1	CN803 B1	FB208 D4	FB703 A3	IC205 A2	L205 B4	Q206 D1	Q802 A1	R204 D1	R221 C4	R238 D4	R259 D2	R278 D2	R294 B2	R714 A4	R802 A1	R823 A2	R845 C2	

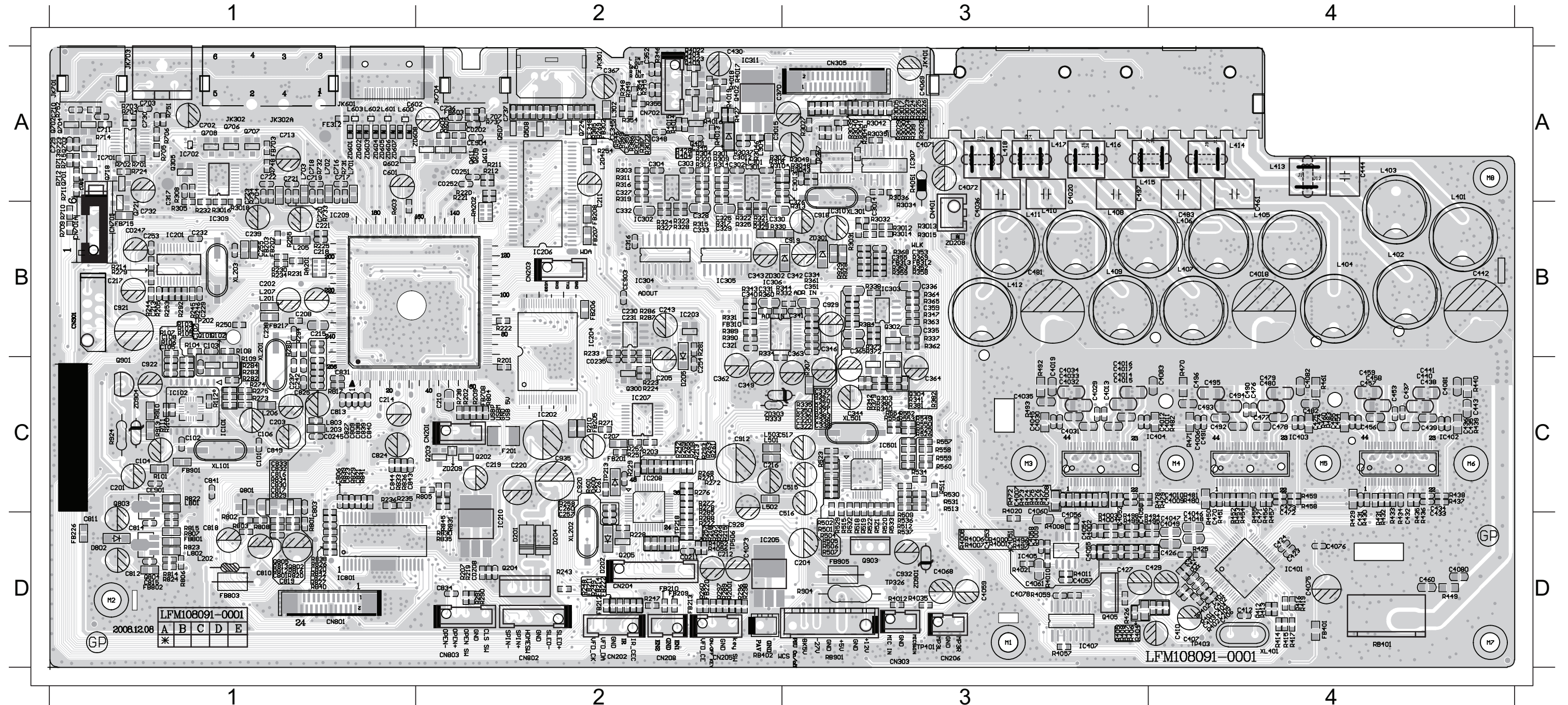


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C302	A1	R302	A1	R388	A1	C342	A2	R330	A2	FB310	A3	R529	A4	C354	B1	R348	B1	R357	B1	R344	B2	C362	B3	R390	B3	RB901	C1	C907	D1	CE904D1	R929	D1	CE301D2	CE310D2	CE319D2	CE326D3	FE307	D3		
C305	A1	R309	A1	R546	A1	C343	A2	R343	A2	IC309	A3	R530	A4	C355	B1	R349	B1	R358	B1	C320	B3	C363	B3	R399	B3	R924	C2	C920	D1	FB223	D1	ZD901	D1	CE302D2	CE311	D2	CE320D2	CE327D3	FE308	D3
C306	A1	R310	A1	C309	A2	IC304	A2	R360	A2	Q305	A3	R531	A4	C356	B1	R350	B1	R359	B1	C321	B3	IC306	B3	R552	B4	R560	C4	C921	D1	FB901	D1	ZD902	D1	CE303D2	CE312D2	CE321D2	CE328D3	FE309	D3	
C325	A1	R313	A1	C311	A2	R3019	A2	ZD301	A2	R3018	A3	R532	A4	C357	B1	R351	B1	C334	B2	C322	B3	R307	B3	R553	B4	C901	D1	C922	D1	Q901	D1	ZD904	D1	CE304D2	CE313D2	CE322D2	CE329D3	FE310	D3	
C326	A1	R314	A1	C313	A2	R321	A2	ZD302	A2	R305	A3	R533	A4	FB312	B1	R352	B1	C341	B2	C324	B3	R335	B3	R558	B4	C902	D1	C924	D1	Q903	D1	C908	D2	CE305D2	CE314D2	CE323D2	CE330D3	FE312	D3	
C4000	A1	R315	A1	C315	A2	R322	A2	C317	A3	R308	A3	R709	A4	FB313	B1	R353	B1	IC305	B2	C346	B3	R336	B3	FB905	C1	C903	D1	C928	D1	R904	D1	C912	D2	CE306D2	CE315D2	CE901D2	CE352D3	C319	D4	
CN301	A1	R316	A1	C316	A2	R325	A2	C323	A3	R331	A3	R710	A4	JK302	AB1	R354	B1	R3020	B2	C349	B3	R361	B3	R3028	C1	C904	D1	C929	D1	R911	D1	C918	D2	CE307D2	CE316D2	C318	D3	FE301	D3	
IC301	A1	R317	A1	C329	A2	R326	A2	C331	A3	R334	A3	C352	B1	R345	B1	R355	B1	R328	B2	C350	B3	R378	B3	R3031	C1	C905	D1	C932	D1	R913	D1	C919	D2	CE308D2	CE317D2	CE324D3	FE302	D3		



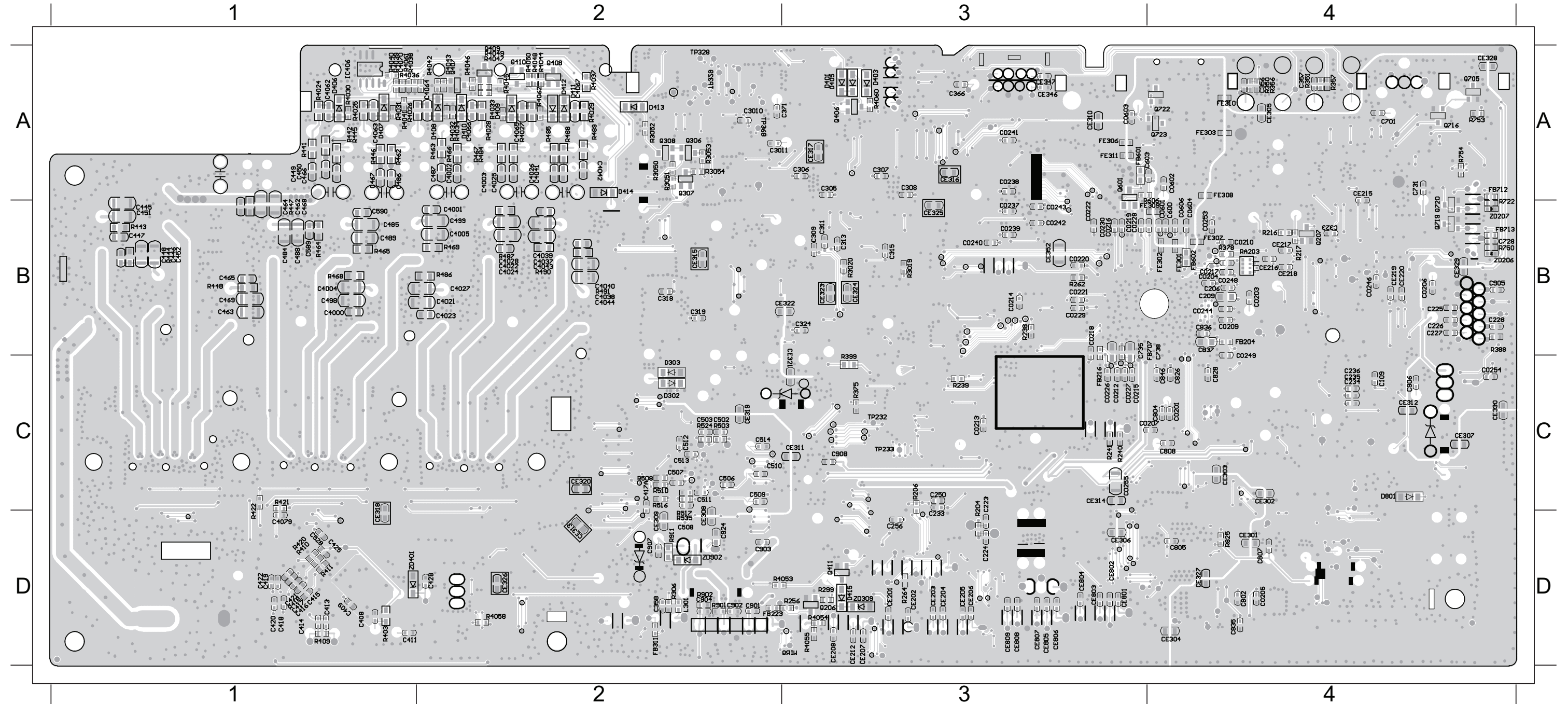
PCB LAYOUT - TOP VIEW

C0202 A2 C210 C2 C257 D2 C351 B3 C4030 C3 C4060 D3 C436 C4 C481 B3 C723 A1 C825 C1 C932 D3 D600 C2 FB603 A2 IC301 A2 J9 A4 L410 B3 Q611 A2 R109 C1 R229 C2 R263 C2 R290 D2 R317 B2 R355 A2 R4015 A2 R419 D4 R455 C4 R495 D3 R710 B1 R807 D1 R841 C1
C0208 D2 C211 A2 C260 C2 C352 A2 C4031 C3 C4061 D3 C437 C4 C482 C4 C729 A1 C827 C1 C935 C2 F201 C2 FB703 A1 IC304 B2 JK302A A1 L411 B3 Q701 A1 R201 C2 R230 B2 R267 D2 R291 D2 R318 A2 R358 B3 R4016 A2 R423 D4 R456 C4 R496 D3 R711 A1 R808 D1 R842 D1
C0211 D2 C213 B1 C261 C2 C353 B3 C4032 C3 C4068 D3 C438 C4 C483 B4 C730 A1 C829 C1 CE901 C1 FB201 C2 FB708 C2 IC305 B2 JK401 A3 L412 B3 Q702 A1 R202 C2 R231 B1 R268 C3 R292 B1 R321 B2 R359 B3 R4017 A2 R424 D4 R457 C4 R497 D3 R712 A1 R812 D1 R845 D2
C0235 C2 C214 C1 C301 A2 C354 A2 C4035 C3 C4069 A3 C439 B4 C490 C4 C732 B1 C830 C1 CE903 B2 FB202 B1 FB713 B1 IC306 B2 JK601 A1 L701 A1 Q703 A1 R203 C2 R232 B1 R269 A2 R293 C2 R322 B2 R360 B2 R4018 A2 R425 D4 R458 C4 R498 D3 R713 B1 R813 D1 R904 D3
C0245 C1 C215 B1 C302 A2 C355 B3 C4036 A3 C407 D4 C442 B4 C491 C4 C736 A2 C831 C1 CE904 A2 FB203 B1 FB715 B1 IC309 B1 JK701 A1 L702 A1 Q704 A1 R205 B1 R233 B2 R270 C2 R294 B1 R325 B2 R361 B3 R4019 A2 R426 D4 R459 C4 R499 D3 R714 A1 R814 D1 R913 C1
C0247 B1 C216 C2 C316 B2 C362 C2 C404 D4 C4072 A3 C443 C4 C492 C4 C737 A2 C832 C1 CN201 C2 FB205 C2 FB801 D1 IC401 D4 JK703 A4 L703 A1 Q705 A4 R207 D2 R234 B2 R271 C2 R296 D2 R326 B2 R389 B2 R402 D4 R427 A2 R460 C4 R529 D3 R715 B1 R815 D1 R924 C1
C0251 A2 C217 B1 C317 A1 C363 B3 C4045 C3 C4075 D4 C444 A4 C493 C4 C801 D1 C833 C1 CN202 D2 FB206 B2 FB802 D1 IC402 C4 JK704 A2 L704 A1 Q706 A1 R208 C2 R235 C1 R272 C2 R297 D2 R328 B2 R390 B2 R4020 D3 R428 A2 R461 C4 R530 C3 R722 B4 R816 D1 R928 B3
C0252 A2 C218 B1 C320 C3 C4006 C4 C4046 D4 C4076 D4 C453 C4 C496 C4 C803 C1 C834 D2 CN203 B2 FB207 B2 FB803 D1 IC403 C4 L201 B1 L707 A2 Q707 A1 R209 C2 R236 C1 R273 C1 R298 D2 R329 B2 R4000 D3 R4021 D3 R429 C4 R470 C4 R531 C3 R724 A1 R817 C1 R929 B3
C101 C1 C219 C2 C321 B2 C4007 C3 C4047 D4 C4078 D4 C454 C4 C497 A3 C806 C1 C838 C1 CN204 D2 FB208 B2 FB901 C1 IC404 C3 L202 D1 L801 C1 Q708 A1 R210 C2 R242 C2 R274 C1 R301 A2 R330 B2 R4001 D3 R4022 A2 R431 C4 R471 C4 R532 D3 R731 A1 R820 D1 RA201 B1
C102 C1 C220 C2 C322 C3 C4008 C3 C4048 D4 C4080 D4 C455 C4 C601 A1 C809 C1 C839 C1 CN205 D2 FB209 D2 FB905 D3 IC405 D3 L203 C1 L802 D1 Q801 C1 R211 A2 R245 B1 R275 C1 R3018 B1 R331 B2 R4002 D3 R4023 A2 R432 C4 R472 C3 R533 D3 R732 A1 R822 C1 RA202 A2
C103 B1 C221 B1 C325 B2 C4009 C4 C4049 D4 C4081 C4 C456 C4 C602 A1 C810 D1 C840 C1 CN206 D3 FB210 D2 FE312 A1 IC407 D3 L204 A2 L803 C1 Q802 D1 R212 A2 R247 D2 R276 C2 R302 A2 R332 B2 R4003 D3 R4035 D3 R433 C4 R474 C3 R546 A2 R733 B1 R823 D1 RB401 D4
C104 C1 C229 B1 C326 A2 C401 D4 C405 D4 C410 D4 C457 C4 C702 A1 C811 D1 C841 C1 CN208 D2 FB211 D2 GT01 B1 IC801 D1 L205 B1 Q101 D2 Q803 C1 R213 C2 R248 D2 R277 C2 R3028 A3 R334 B2 R4004 D3 R404 D3 R434 C4 R475 C3 R552 C3 R734 A1 R824 D1 RB901 D3
C105 B1 C230 B2 C329 B2 C4010 C4 C4050 D3 C412 D4 C460 D4 C703 A1 C812 D1 C843 C1 CN301 B1 FB212 D2 IC101 C1 J1 A3 L206 C1 Q102 B1 Q804 D1 R215 D2 R249 D2 R278 C2 R3031 B3 R335 C3 R4005 D3 R405 D3 R435 C4 R476 C3 R553 C3 R737 A2 R826 D1 XL101 C1
C106 C1 C231 B2 C330 B2 C4011 C4 C4051 D3 C423 D4 C461 A3 C710 A1 C813 C1 C844 C1 CN701 B1 FB213 D2 IC201 B1 J10 A4 L207 B1 Q204 D2 Q805 D1 R218 D2 R250 B1 R279 B1 R3032 B3 R336 C3 R4006 D3 R4051 A3 R436 C4 R477 C3 R558 C3 R738 C2 R827 D1 XL201 B1
C107 B1 C232 B1 C331 B2 C4012 C4 C4052 D3 C424 D4 C470 C4 C711 A1 C816 C1 C849 C1 CN702 A2 FB214 D2 IC202 C2 J11 A4 L401 A4 Q205 D2 Q901 C1 R219 D2 R251 C2 R280 B1 R305 B1 R343 B2 R4007 D3 R406 D3 R437 C4 R478 C4 R560 C3 R748 A1 R829 C1 XL202 D2
C108 B1 C237 C1 C334 B3 C4013 C3 C4053 D3 C427 D3 C471 C4 C713 A1 C817 C1 C912 C2 CN801 D1 FB217 B1 IC203 B2 J12 A4 L402 B4 Q300 C2 Q903 D3 R220 A2 R252 C2 R281 B2 R307 C3 R344 B3 R4008 D3 R407 D3 R438 C4 R479 C4 R601 C2 R751 A1 R831 D2 XL203 B1
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C203 C1 C242 C1 C342 B3 C4018 B4 C4056 D3 C431 C4 C474 C4 C718 A1 C820 D1 C920 C2 D201 D2 FB226 D1 IC206 B2 J4 A3 L405 B4 Q402 A2 R103 B1 R223 C2 R257 D2 R285 D2 R310 A2 R348 A2 R4010 D3 R413 D4 R449 D4 R482 C4 R605 A2 R802 D1 R835 D2 ZD301 B3
C204 D3 C243 B2 C343 B2 C402 D4 C4057 D3 C432 C4 C475 C4 C719 A1 C821 C1 C921 B1 D202 D2 FB310 B2 IC207 C2 J5 A3 L406 B4 Q403 A2 R104 B1 R224 C2 R258 C2 R286 B2 R313 B3 R349 A2 R4011 D3 R414 D4 R450 C4 R483 C4 R702 A1 R803 D1 R836 C1 ZD302 B2
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C207 C2 C254 C2 C349 C2 C4029 C3 C4059 D3 C434 C4 C477 C4 C721 A1 C823 C1 C928 D2 D205 C2 FB313 B3 IC209 B1 J7 A4 L408 B3 Q405 D3 R106 B1 R227 D2 R260 D2 R288 D2 R315 B2 R353 B3 R4013 A2 R416 D4 R453 C4 R493 C3 R705 A1 R805 C2 R839 C1 ZD904 C1
C208 B1 C255 B1 C350 C3 C403 D4 C406 D4 C435 C4 C478 C4 C722 A1 C824 C1 C929 B3 D404 A2 FB401 D4 IC210 D2 J8 A4 L409 B3 Q602 A1 R108 B1 R228 D2 R261 C2 R289 D2 R316 A2 R354 A2 R4014 A2 R417 D4 R454 C4 R494 D3 R709 B1 R806 D1 R840 D1



PCB LAYOUT - BOTTOM VIEW

C0241	A1	R4030	A1	C4026	A2	R4027	A2	C0602	A3	Q601	A3	R357	A4	C485	B1	C4001	B2	CE315	B2	C0230	B3	CE323	B3	C0246	B4	C728	B4	FE302	B4	CE311	C2	C0201	C4	CE330	C4	C528	D1	CE309	D2	CE207	D3	R256	D3
C4062	A1	R4031	A1	C4041	A2	R4028	A2	C0603	A3	R4060	A3	C4004	B1	C488	B1	C4005	B2	R469	B2	C0237	B3	CE324	B3	C0248	B4	C738	B4	FE307	B4	CE319	C2	C109	C4	CO254	C4	R403	D1	CE313	D2	CE208	D3	R299	D3
C4063	A1	R4036	A1	C4042	A2	R4029	A2	C305	A3	C356	A4	C445	B1	C489	B1	C4021	B2	R486	B2	C0238	B3	CE325	B3	C0249	B4	C836	B4	FE309	B4	CE320	C2	C234	C4	C408	D1	R409	D1	CE326	D2	CE212	D3	C0205	D4
C4070	A1	R4038	A1	C4064	A2	R4032	A2	C306	A3	C357	A4	C446	B1	C498	B1	C4022	B2	R487	B2	C0239	B3	CE352	B3	C0253	B4	C837	B4	Q207	B4	CO207	C3	C235	C4	C409	D1	R410	D1	FB223	D2	CE306	D3	C802	D4
C449	A1	R4039	A1	C4065	A2	R4033	A2	C4000	A3	C701	A4	C447	B1	C589	B1	C4023	B2	R490	B2	CO240	B3	R238	B3	C0601	B4	C905	B4	R216	B4	CO213	C3	C236	C4	C411	D1	R411	D1	R911	D2	CE801	D3	C805	D4
C450	A1	R4040	A1	C4066	A2	R4034	A2	C603	A3	C731	A4	C448	B1	C590	B1	C4024	B2	R491	B2	CO242	B3	R3019	B3	C0604	B4	CE216	B4	R217	B4	CO215	C3	C804	C4	C413	D1	R418	D1	ZD902	D2	CE802	D3	C807	D4
C466	A1	R4061	A1	C4067	A2	R4037	A2	CE310	A3	CE215	A4	C451	B1	R443	B1	C4027	B2	CO214	B3	CO243	B3	R3020	B3	C0606	B4	CE217	B4	R378	B4	CO226	C3	C808	C4	C414	D1	R420	D1	C224	D3	CE803	D3	C835	D4
C467	A1	R441	A1	C487	A2	R4062	A2	CE316	A3	CE305	A4	C452	B1	R444	B1	C4028	B2	CO216	B3	C309	B3	R399	B3	C206	B4	CE218	B4	R388	B4	CO227	C3	C826	C4	C415	D1	ZD401	D1	C233	D3	CE804	D3	CE301	D4
C486	A1	R442	A1	D408	A2	R463	A2	CE317	A3	CE328	A4	C462	B1	R447	B1	C4037	B2	CO218	B3	C311	B3	CO203	B4	C209	B4	CE219	B4	R606	B4	C223	C3	C828	C4	C416	D1	C428	D2	C256	D3	CE805	D3	CE304	D4
D406	A1	R445	A1	D409	A2	R466	A2	D401	A3	FB712	A4	C463	B1	R448	B1	C4038	B2	CO219	B3	C313	B3	CO204	B4	C225	B4	CE220	B4	R750	B4	C250	C3	C846	C4	C417	D1	C901	D2	CE201	D3	CE806	D3	CE327	D4
D407	A1	R446	A1	D410	A2	R467	A2	D403	A3	FE308	A4	C464	B1	R464	B1	C4039	B2	CO220	B3	C315	B3	CO206	B4	C226	B4	CE329	B4	RA203	B4	C908	C3	C906	C4	C419	D1	C902	D2	CE202	D3	CE807	D3		
IC406	A1	R462	A1	D411	A2	R484	A2	D405	A3	FE310	A4	C465	B1	R465	B1	C4040	B2	CO221	B3	C324	B3	CO209	B4	C227	B4	FB204	B4	CE318	C1	CE314	C3	CE302	C4	C420	D1	C903	D2	CE203	D3	CE808	D3		
R4024	A1	C4002	A2	D412	A2	R485	A2	FB601	A3	R350	A4	C468	B1	R468	B1	C4043	B2	CO222	B3	C735	B3	CO210	B4	C228	B4	FB602	B4	R421	C1	FB216	C3	CE303	C4	C421	D1	C904	D2	CE204	D3	CE809	D3		
R4025	A1	C4003	A2	D413	A2	R488	A2	FE306	A3	R351	A4	C469	B1	C318	B2	C4044	B2	CO228	B3	CE321	B3	CO217	B4	C323	B4	FB707	B4	R422	C1	R204	C3	CE307	C4	C422	D1	C907	D2	CE205	D3	D416	D3		
R4026	A1	C4025	A2	D414	A2	R489	A2	Q406	A3	R356	A4	C484	B1	C319	B2	C499	B2	CO229	B3	CE322	B3	CO244	B4	C600	B4	FE301	B4	CE308	C2	R239	C3	CE312	C4	C425	D1	C924	D2	CE206	D3	Q206	D3		

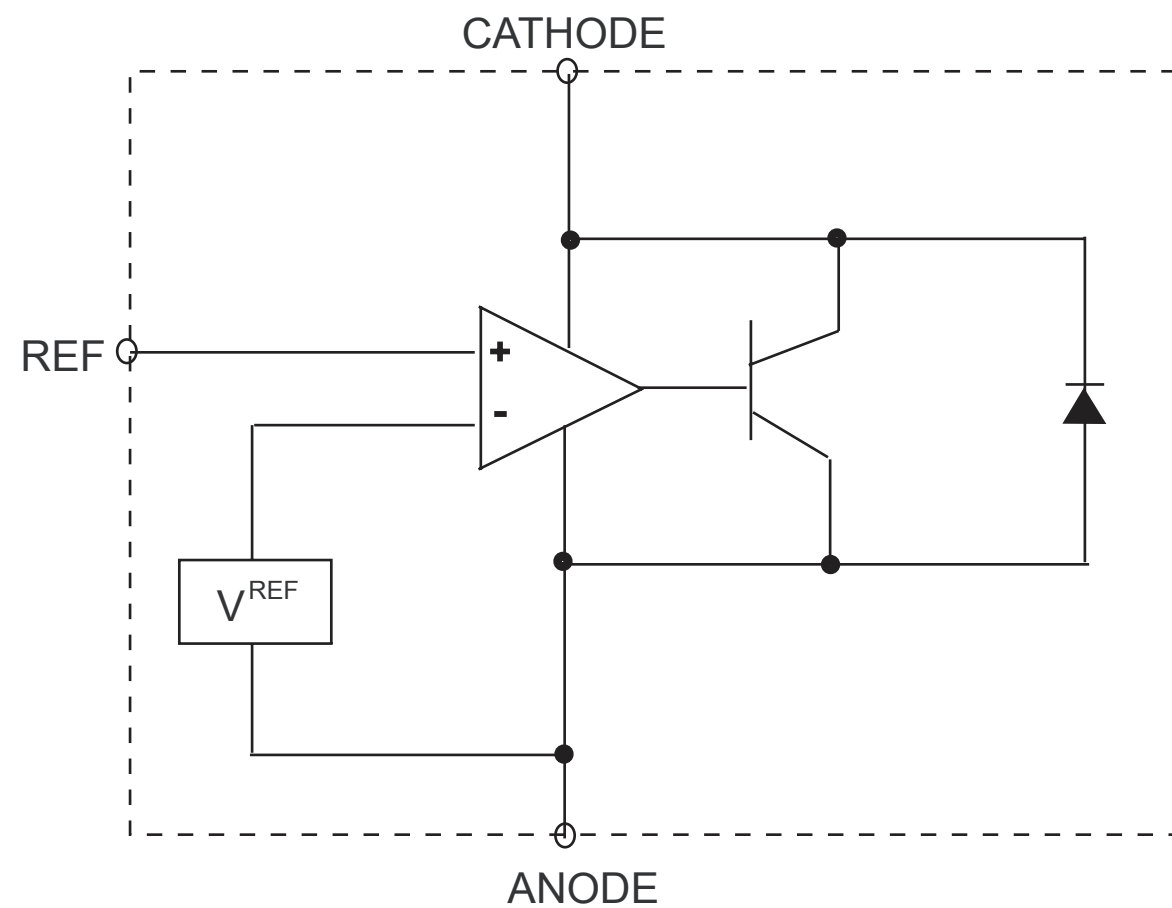


POWER BOARD

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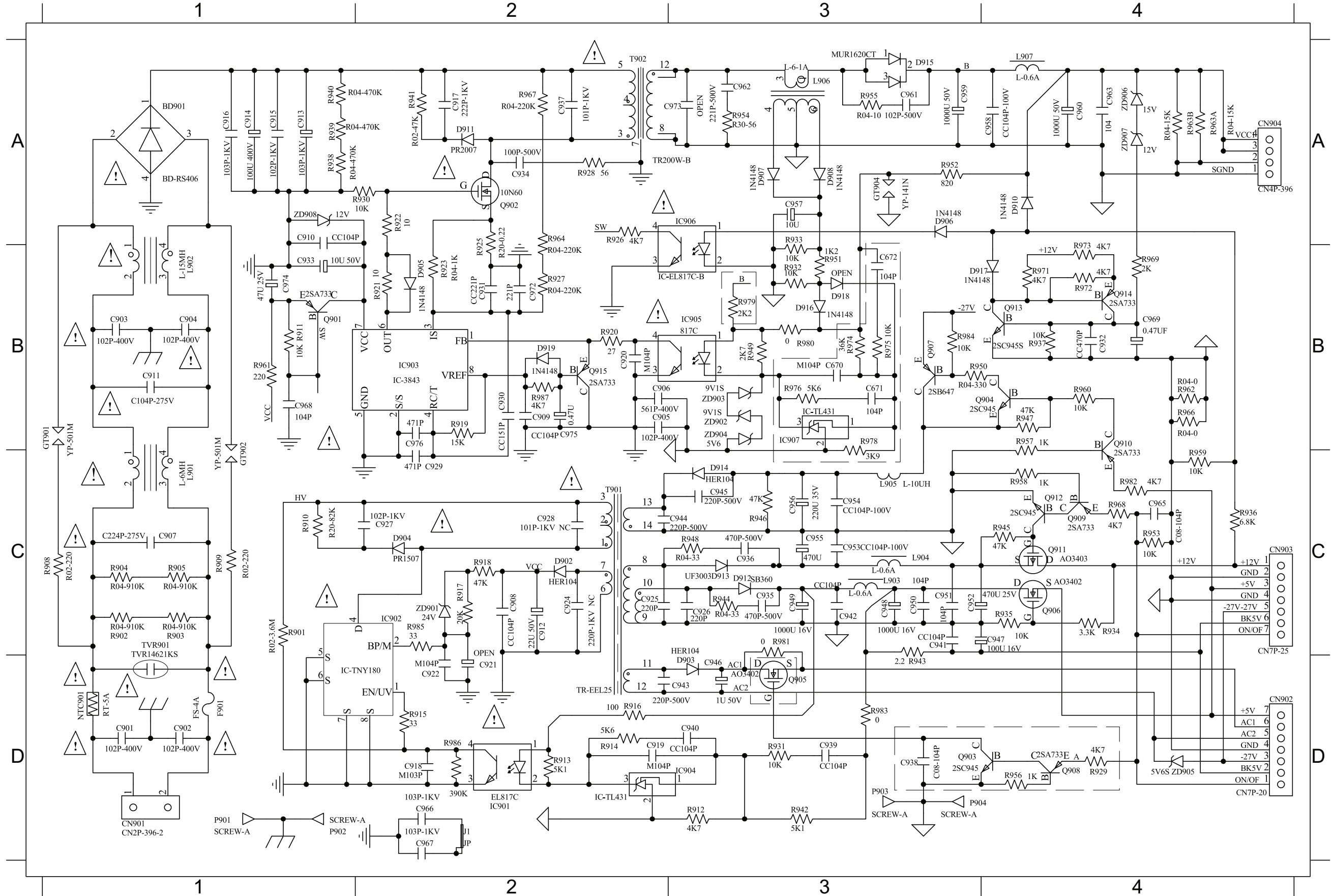
Internal IC Diagram	7-1
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PCB Layout Top View	7-3
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INTERNAL IC DIAGRAM - AZ431

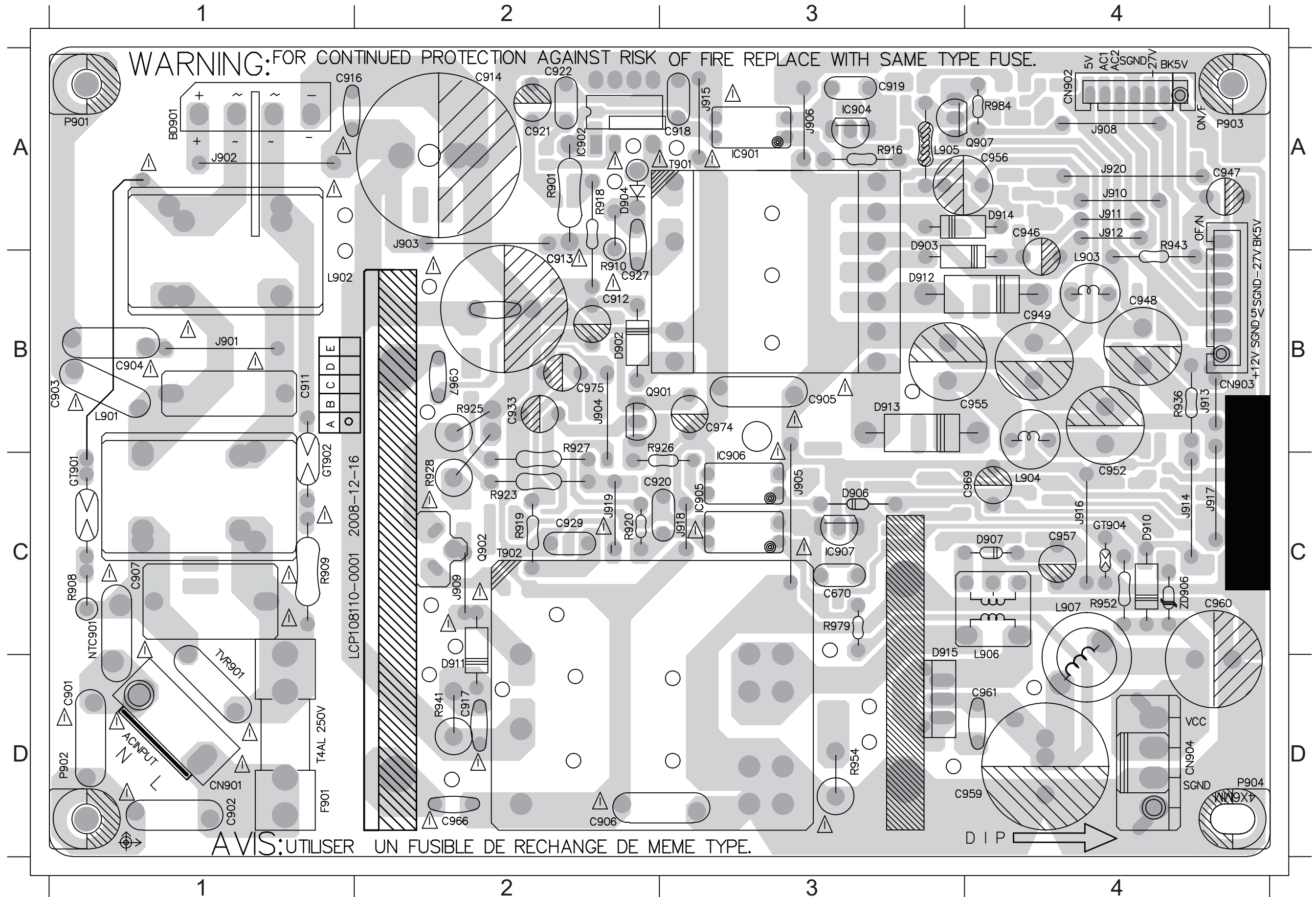


CIRCUIT DIAGRAM

BD901A1 C910 A1 C918 D2 C930 B2 C939 C3 C949 C3 C957 A3 C967 D2 CN903C4 D908 A3 D917 B3 IC905 B3 L907 A4 Q910 B4 R903 C1 R914 D2 R922 A2 R932 B3 R940 A1 R948 C3 R957 B4 R964 A2 R980 B3 T901 C2 ZD906A4
C903 B1 C911 B1 C919 D2 C931 B2 C940 D3 C950 C3 C958 A3 C968 B1 CN904A4 D910 A4 D919 B2 IC906 A3 NTC901D1 Q911 C4 R904 C1 R915 D2 R923 B2 R933 A3 R941 A2 R949 B3 R958 C4 R966 B4 R981 C3 T902 A2 ZD907A4
C904 B1 C912 C2 C920 B2 C932 B4 C941 C3 C951 C3 C959 A3 C969 B4 D902 C2 D911 A2 F901 D1 L901 C1 Q901 B1 Q912 C4 R905 C1 R916 D2 R925 A2 R934 C4 R942 D3 R950 B3 R959 B4 R967 A2 R982 C4 TVR901C1 ZD908A1
C905 B2 C913 A1 C921 D2 C933 B1 C942 C3 C952 C3 C960 A4 C972 B2 D903 D3 D912 C3 GT902B1 L902 B1 Q902 A2 Q913 B4 R909 C1 R917 C2 R926 A2 R935 C4 R943 D3 R951 B3 R960 B4 R968 C4 R983 D3 ZD901C2
C906 B2 C914 A1 C922 D2 C934 A2 C945 C4 C953 C3 C961 A3 C974 B1 D904 C2 D913 C3 IC901 D2 L903 C3 Q904 B3 Q914 B4 R910 C1 R918 C2 R927 B2 R936 C4 R944 C3 R952 A2 R961 B1 R969 B4 R984 B3 ZD902B3
C907 C1 C915 A1 C927 C2 C935 C3 C946 D3 C954 C3 C962 A3 C975 B2 D905 B2 D914 C3 IC902 C2 L904 C3 Q906 C4 Q915 B2 R911 B1 R919 B2 R928 A2 R937 B4 R945 C4 R953 C4 R962 B4 R971 B4 R985 C2 ZD903B3
C908 C2 C916 A1 C928 C2 C936 C3 C947 C4 C955 C3 C963 D4 CN901D1 D906 A3 D915 A3 IC903 B2 L905 C3 Q907 B3 R901 C1 R912 D3 R920 B2 R930 A1 R938 A1 R946 C3 R954 A3 R963AA4 R972 B4 R986 D2 ZD904B3
C909 B2 C917 A2 C929 C2 C937 A2 C948 C3 C956 C3 C965 C4 CN902D4 D907 A3 D916 B3 IC904 D3 L906 A3 Q909 C4 R902 C1 R913 D2 R921 B2 R931 D3 R939 D2 R947 B4 R955 A3 R963BA4 R973 B4 R987 B2 ZD905D4



BD901A1	C907	C1	C916	A1	C921	A2	C946	A4	C955	B4	C961	D4	CN901D1	D903	A3	D911	D2	F901	D1	IC905	B3	J904	B2	J910	A4	J915	A3	L901	B1	L906	C4	Q907	A4	R918	A2	R926	B2	R943	A4	T902	C2
C903	B1	C911	B1	C917	D2	C922	A2	C947	A4	C956	A4	C967	B2	CN902A4	D904	A2	D912	B4	GT902C1	IC906	C3	J905	C3	J911	A4	J916	C4	L902	B1	L907	C4	R901	A2	R919	C2	R927	B2	R952	C4	TVR901C1	
C904	B1	C912	B2	C918	A3	C927	B2	C948	B4	C957	C4	C969	C4	CN903B4	D906	C3	D913	B3	IC901A3	J901	B1	J906	A3	J912	A4	J917	C4	L903	B4	NTC901C1	R909	C1	R920	C2	R928	C2	R954	D3	ZD906C4		
c905	B4	C913	B2	C919	A3	C929	C2	C949	B4	C959	D4	C974	B3	CN904D4	D907	C4	D914	A4	IC902	A2	J902	A1	J908	A4	J913	B4	J918	C3	L904	C4	Q901	B2	R910	B2	R923	C2	R936	B4	R984	A4	
C906	D2	C914	A2	C920	C2	C933	B2	C952	C4	c960	C4	C975	B2	D902	B2	D910	C4	D915	C3	IC904	A3	J903	A2	J909	C2	J914	C4	J919	C2	L905	A3	Q902	C2	R916	A3	R925	B2	R941	D2	T901	A3

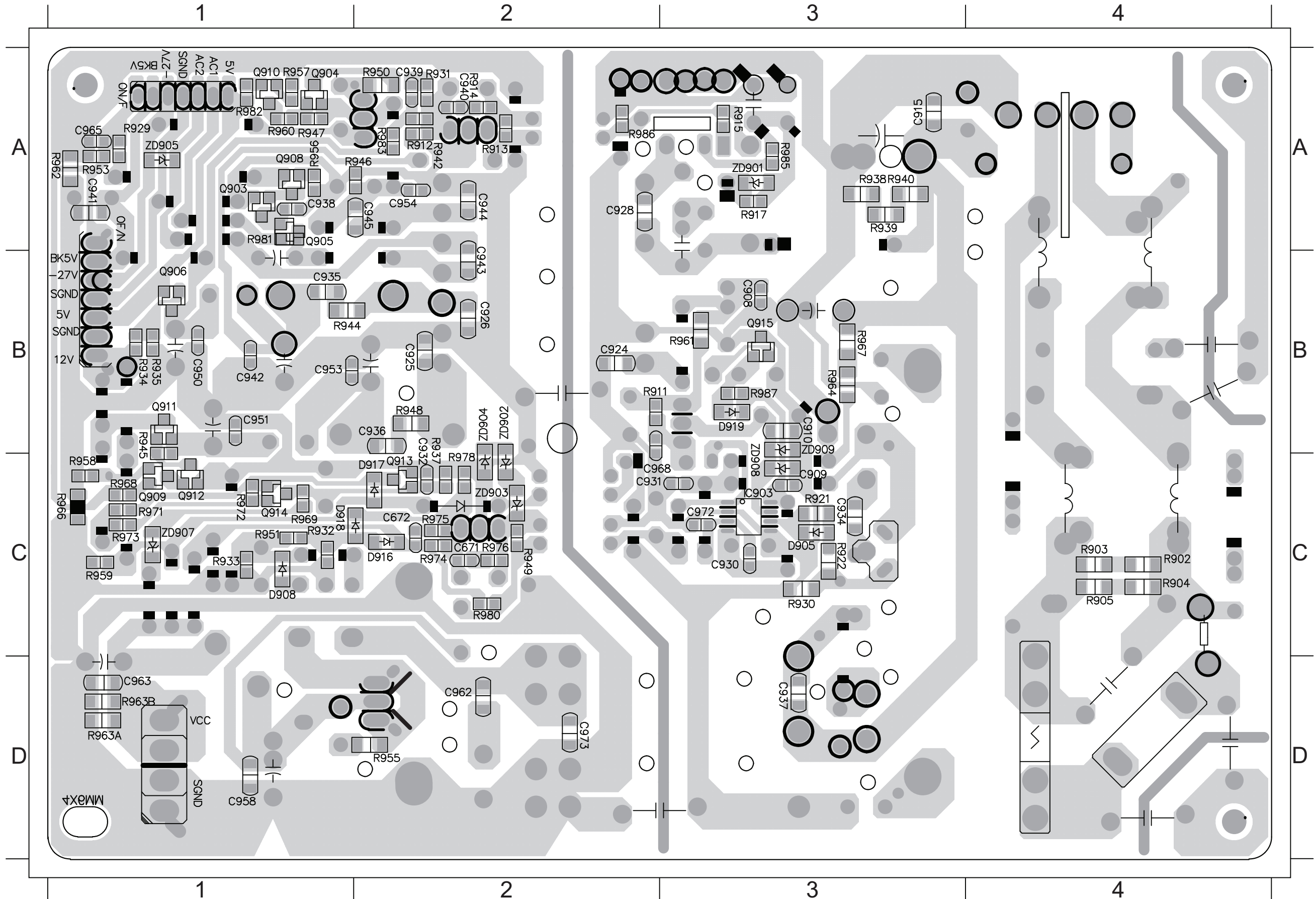


PCB LAYOUT - BOTTOM VIEW

7 - 4

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C941 A1 R953 A1 ZD905 A1 R912 A2 R983 A2 R939 A3 C950 B1 R944 B1 R937 B2 D919 B3 ZD908 B3 R933 C1 R969 C1 D916 C2 C909 C3 R922 C3 C958 D1 C937 D3
C965 A1 R957 A1 C928 A2 R913 A2 R986 A2 R940 A3 C951 B1 R945 B1 R948 B2 Q915 B3 D908 C1 R951 C1 R971 C1 D917 C2 C934 C3 R930 C3 C963 D1
Q904 A1 R960 A1 C939 A2 R914 A2 C915 A3 R985 A3 C953 B1 c932 B2 ZD902 B2 R961 B3 Q909 C1 R958 C1 R972 C1 Q913 C2 C972 C3 R902 C4 C931 D2
Q910 A1 R962 A1 C940 A2 R931 A2 R915 A3 ZD901 A3 Q906 B1 C936 B2 ZD904 B2 R964 B3 Q912 C1 R959 C1 R973 C1 R949 C2 D905 C3 R903 C4 C962 D2
R946 A1 R981 A1 C945 A2 R942 A2 R917 A3 C935 B1 Q911 B1 R911 B2 C908 B3 R967 B3 Q914 C1 R966 C1 ZD907 C1 R980 C2 IC903 C3 R904 C4 R955 D2
R947 A1 R982 A1 C954 A2 R950 A2 R938 A3 C942 B1 R934 B1 R935 B2 C910 B3 R987 B3 R932 C1 R968 C1 C968 C2 ZD903 C2 R921 C3 R905 C4 C930 D3



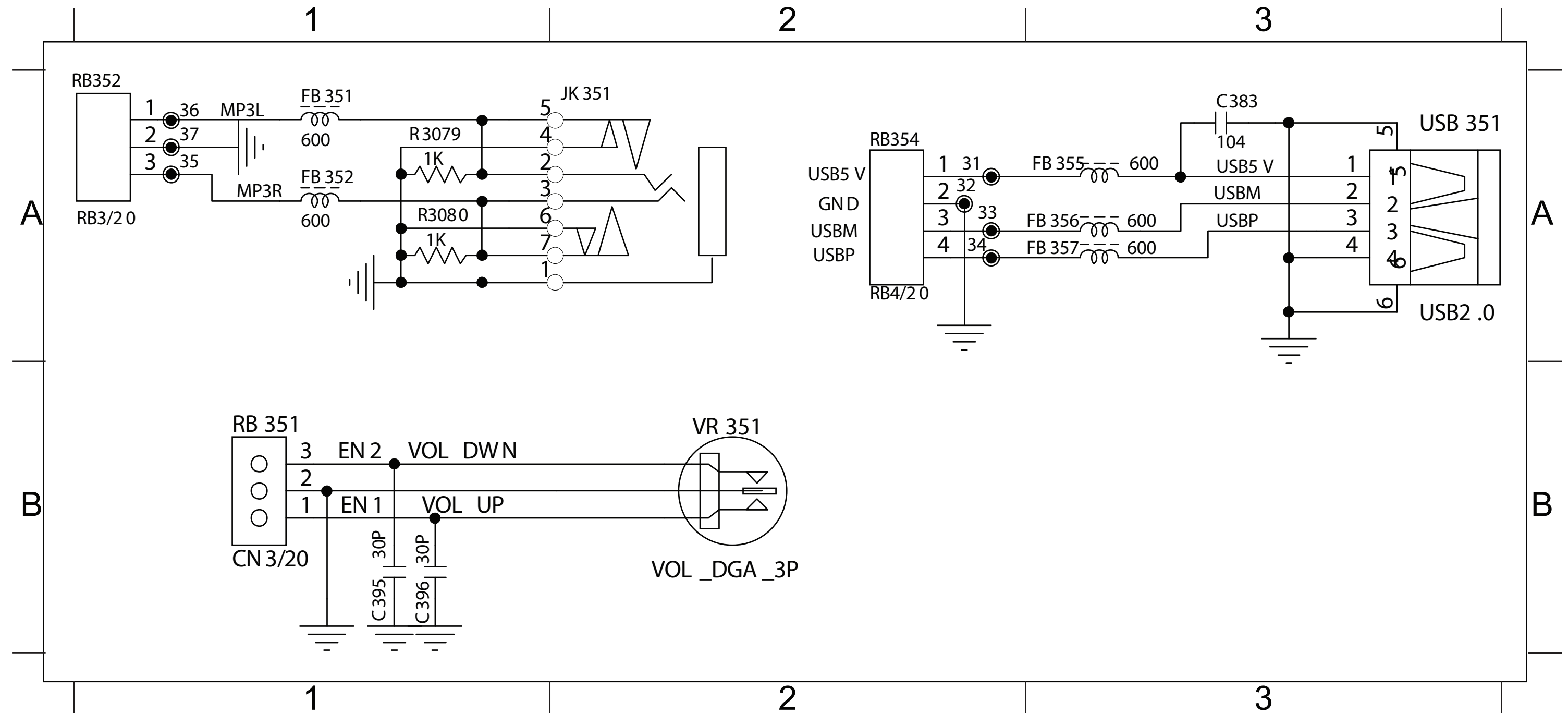
MP3 IN BOARD

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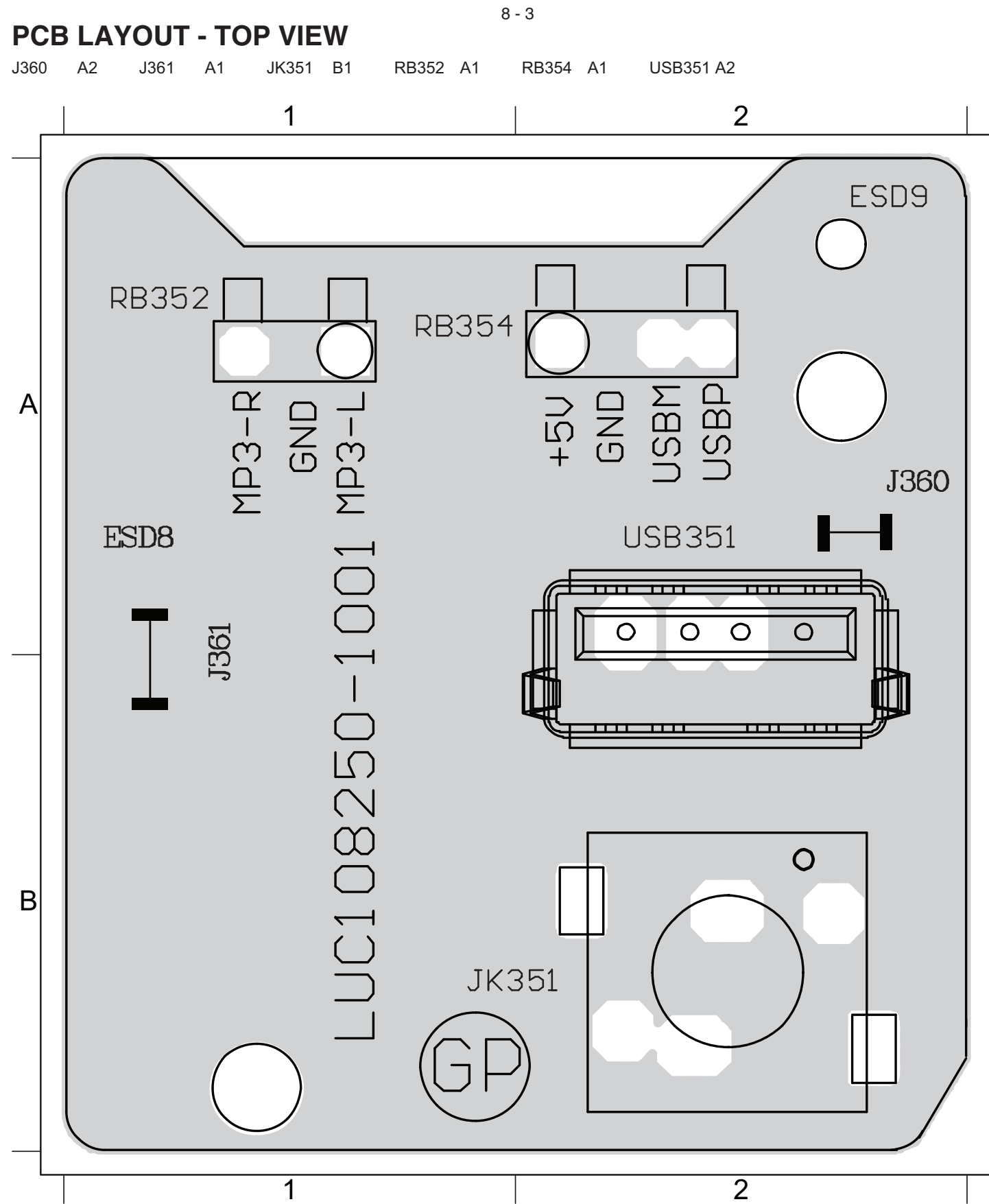
Circuit Diagram.....8-1

PCB Layout Top & Bottom View.....8-2

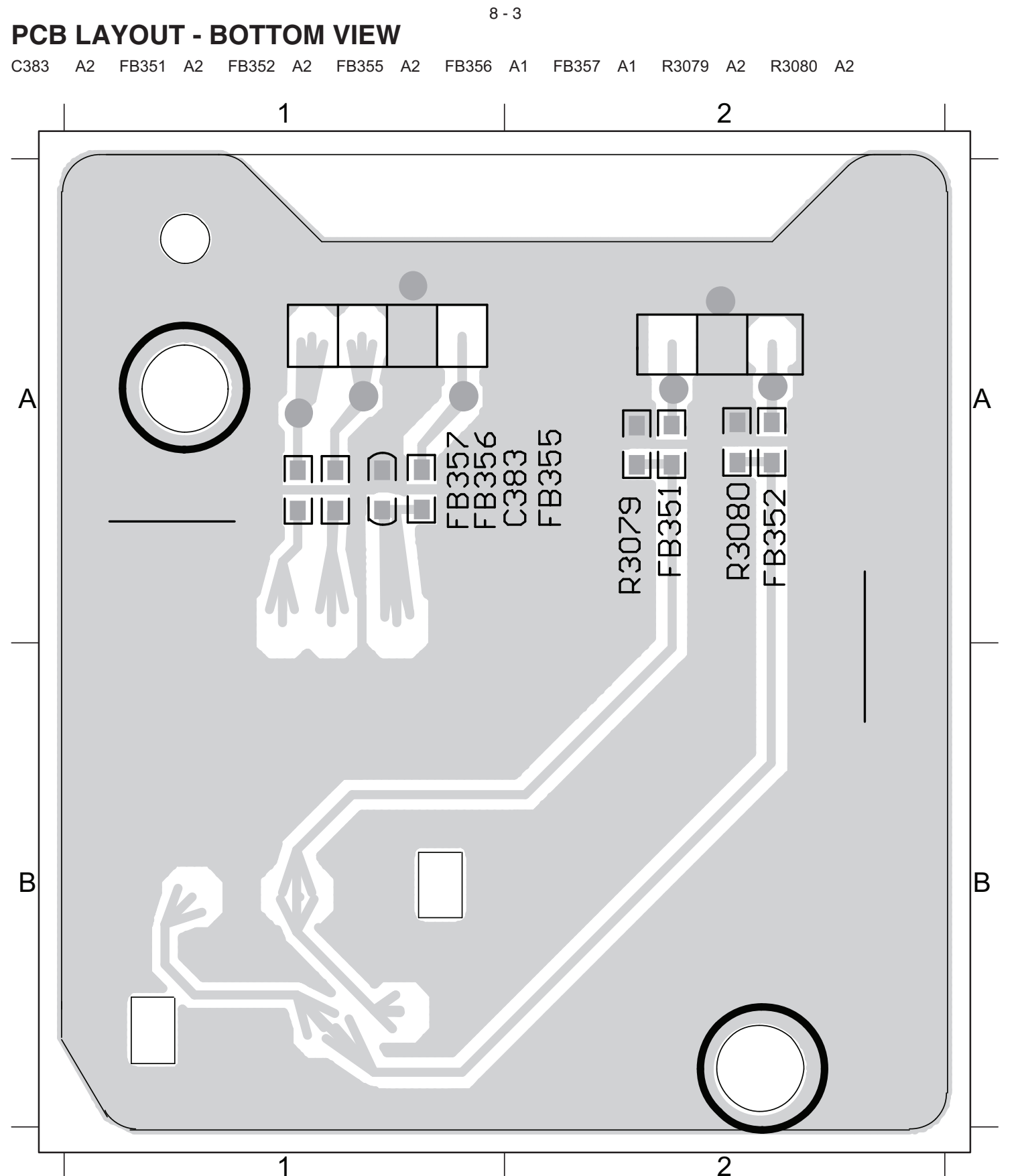
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PCB LAYOUT - TOP VIEW



PCB LAYOUT - BOTTOM VIEW

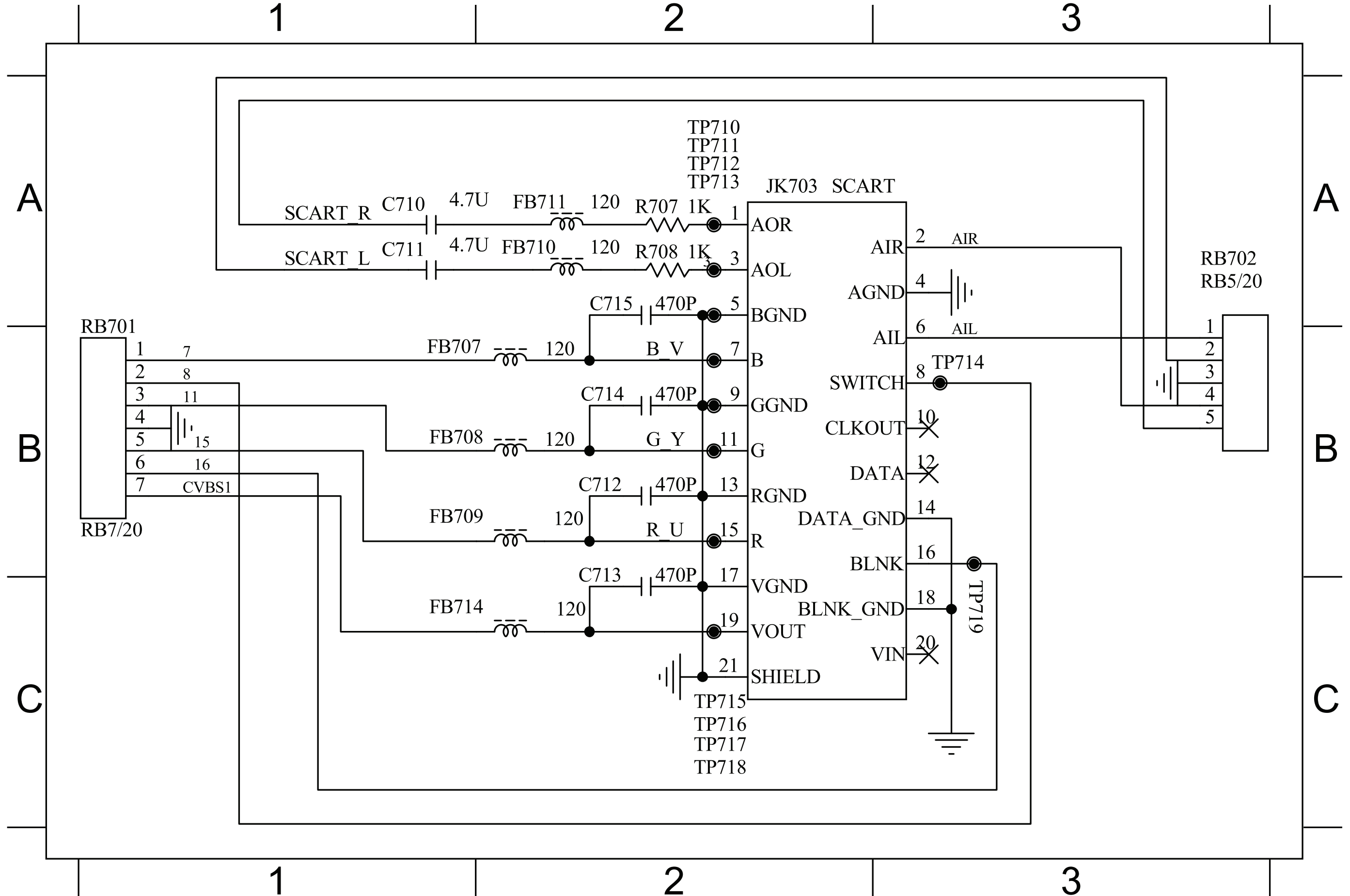


SCART BOARD

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Circuit Diagram	9-2
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C710	A1	C712	B2	C714	B2	FB707	B1	FB709	B1	FB711	A2	JK703	A2	R708	A2	RB702	A1
C711	A1	C713	B2	C715	A2	FB708	B1	FB710	A2	FB714	C2	R707	A2	RB701	B1		

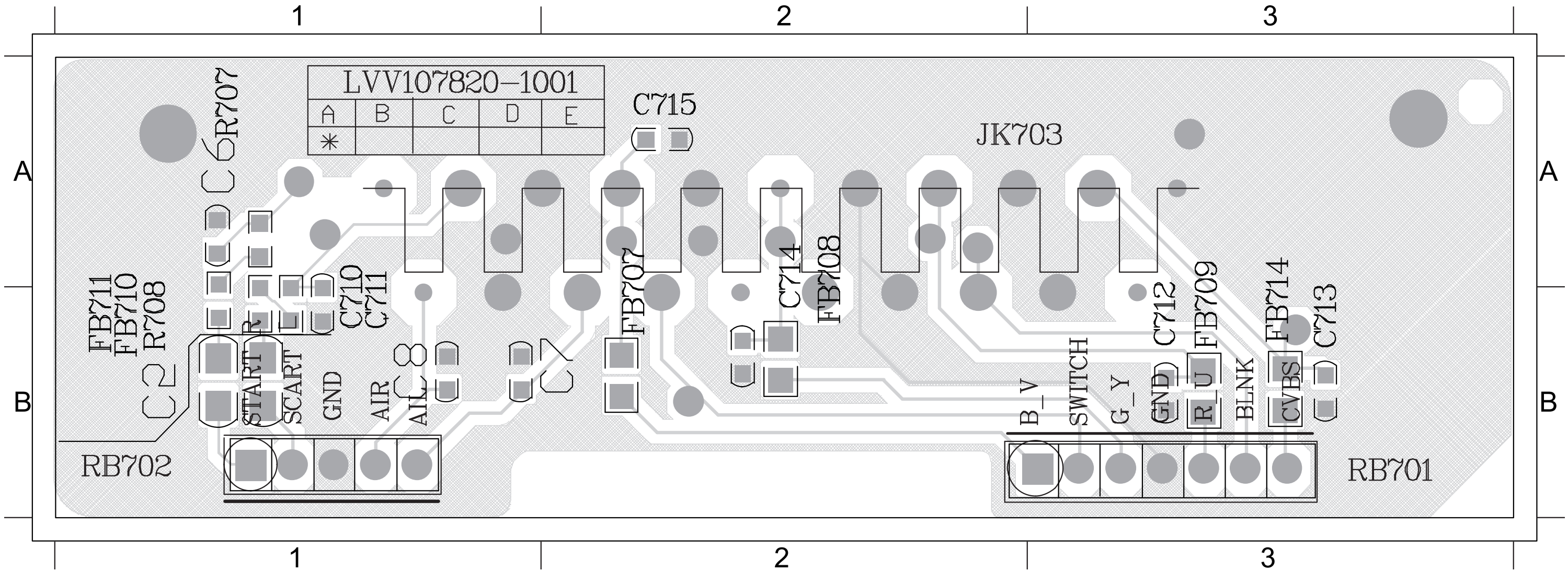


PCB LAYOUT - SCART PCB VIEW

9 - 3

9 - 3

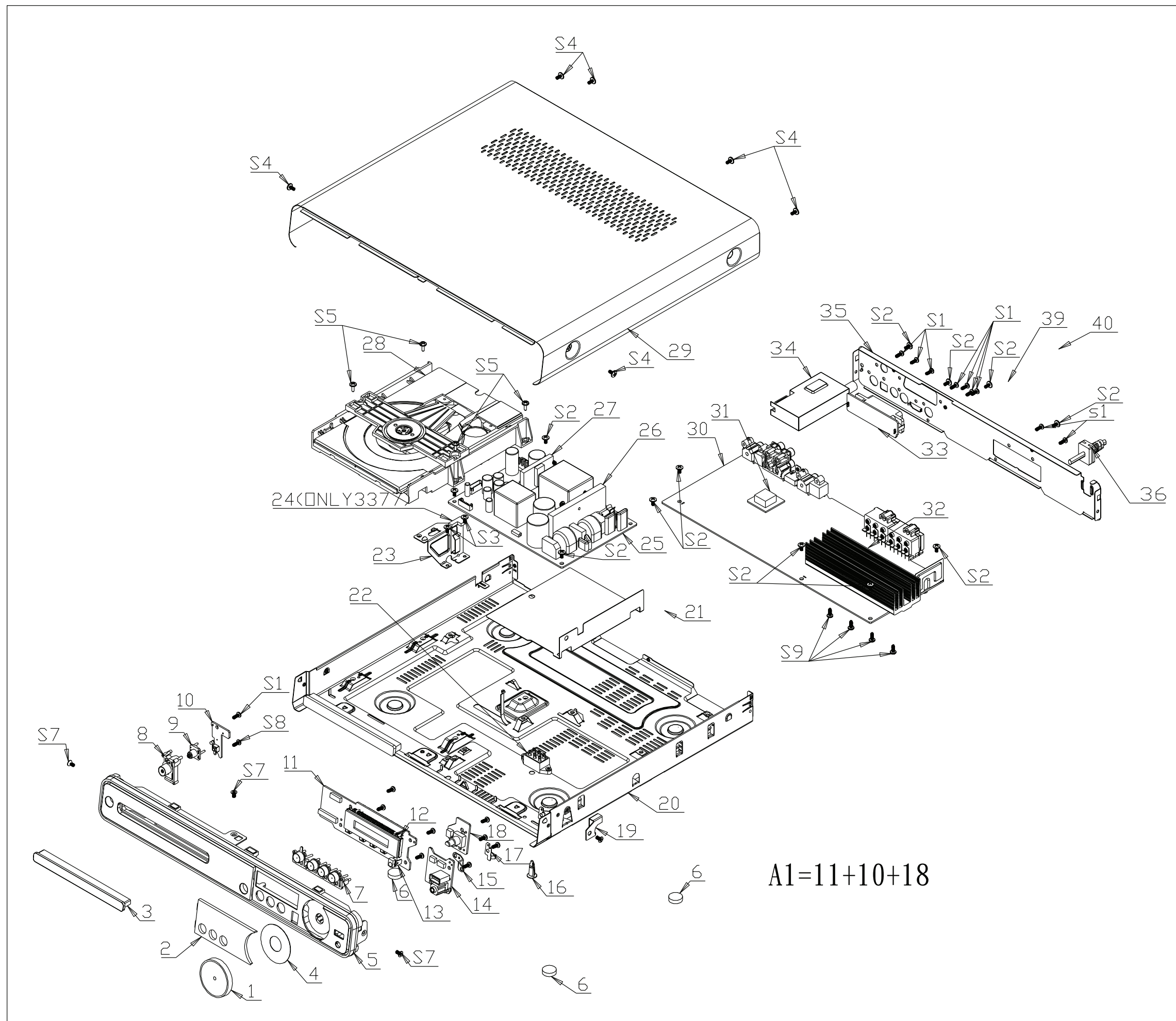
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C711 A1 C713 B3 C715 A2 FB708 A1 FB710 A1 FB714 A1 R707 A1 RB701 B3



Mechanical Exploded View

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MECHANICAL & ACCESSORIES PARTS LIST

Loc.	12NC	Description
MAIN UNIT		
1	996510021087	VOLUME KNOB
2	996510021093	DISPLAY LENS
3	996510021227	DVD DOOR
5	996510021057	FRONT PANEL
7	996510021068	FUNCTION KNOB
8	996510021069	STANDBY KNOB
9	996510021064	STANDBY LENS
14	996510021066	MP3 IN PCB ASSY
25	996510021228	POWER PCB ASSY 420W
28	996510021248	DVD LOADER
30	996510021237	MAIN PCB ASSY
33	996510021058	SCART PCB ASSY
34	996510018486	TUNER PACK KST-MT004FS1-6D
36	△ 996510001638	POWER CORD /12
36	△ 996510002665	POWER CORD /05
A1	996510021089	DISP+LED+VOL PCB ASSY
FM	996510008251	FM ANT
Scart	996510001650	SCART CABL
RC	996510021067	REMOTE CONTROL 39 KEYS
V1	996510007429	FFC CABLE 10P100mm UL20798 P1

LOUDSPEAKER SYSTEM

SPKC	996510021235	SPEAKER BOX - CENTER
SPKML	996510021239	SPEAKER BOX - FRONT LEFT
SPKMR	996510021234	SPEAKER BOX- FRONT RIGHT
SPKRL	996510021231	SPEAKER BOX- REAR LEFT
SPKRR	996510021224	SPEAKER BOX- REAR RIIGHT
SPKSUB	996510021226	SPEAKER BOX - SUB

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

REVISION LIST

Version 1.0
*Initial release