Service
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Second Generation

Service Manual

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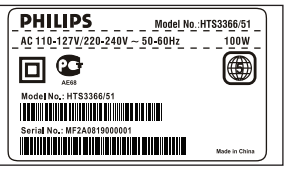
This service manual is for HTS3366/51 Second Generation model, which is different from the previous generation HTS3366/51 models.

For Second Generation model the serial number begin with MF2AXXXXXXXXXX. Refer to the rating label illustration at right.



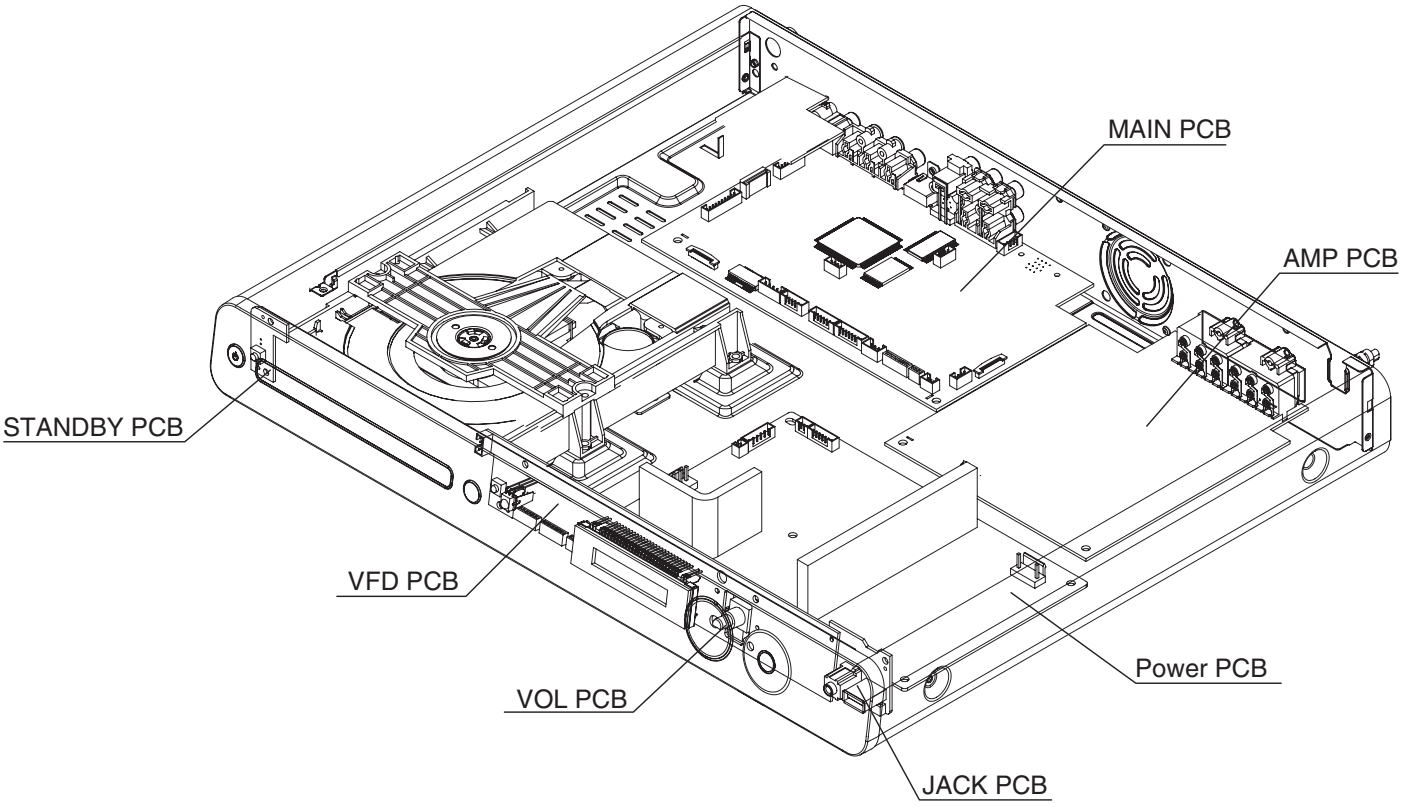
Published by LM0835 Service Audio Printed in The Netherlands Subject to modification

GB 3139 785 34560

Version 1.0

PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Features \ Type/Versions	HTS3366
	/51
Main(Power Output-600W)	X
S-video out	X
Power Voltage (120V/230V)	X
WMA	X

SERVICE SCNARIO MATRIX:

Boards in used \ Type/Versions	HTS3366
	/51
Main Board	Bd
Power Board	Bd
AMP Board	Bd
VFD+JACK+VOL+STANDBY Board	Bd

* Bd= Board Level Repair

SPECIFICATIONS

Amplifier

Total output power
Home Theatre mode..... 600W
Frequency response..... 180 Hz~18 kHz / ±3dB
Signal-to-noise ratio..... > 60 dB (A-weighted)
Input sensitivity
AUX ..... 400 mV
MP3 LINK ..... 400 mV

Disc

Laser Type..... Semiconductor
Disc diameter..... 12cm / 8cm
Video decording..... MPEG1/ MPEG2 / DivX / DivX Ultra
Video DAC..... 12 bits
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, DTS IEC60958, IEC61937

Radio

Tuning range ..... FM 87.5-108 MHz (50 kHz),
26 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 / ±6dB
Stereo separation ..... FM 26 dB (1 kHz)
Stereo Threshold..... FM 29 dB

USB

Compatibility..... Hi-Speed USB (2.0)
Class support..... UMS (USB Mass Storage Class)
..... MTP (Media Transfer Protocol)

Main unit

Power supply..... 110-127 V / 220-240 V
..... ~50-60 Hz switchable
Power consumption..... 100W
Dimensions (WxHxD) ..... 435 x 58 x 360 (mm)
Weight ..... 3.7 kg

Speakers

System..... full range satellite
Speaker impedance..... 6 ohm (centre),
..... 3 ohm (Front/Rear)
Speaker drivers:
Centre..... 2x 2.5” woofer + 1 x 2” tweeter
Front/Rear ..... 3” full range
Frequency response..... 150 Hz - 20 kHz
Dimensions (WxHxD):
Centre..... 440 x 105 x 75 (mm)
Front ..... 103 x 203 x 71 (mm)
Rear..... 262 x 1199 x 264 (mm)
Weight:
Centre..... 1.39 kg
Front ..... 0.54 kg
Rear..... 3.53 kg

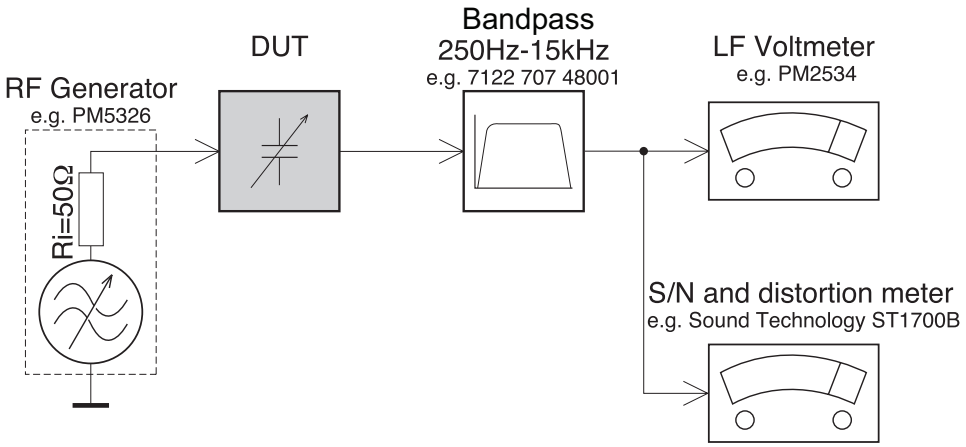
Subwoofer

Impedance..... 6 ohm
Speaker drivers ..... 165 mm (6.5”) woofer
Frequency response..... 40 Hz - 150 Hz
Dimensions (WxHxD) ..... 163 x 363 x 369 (mm)
Weight ..... 5.08 kg

Specifications subject to change without prior notice.

MEASUREMENT SETUP

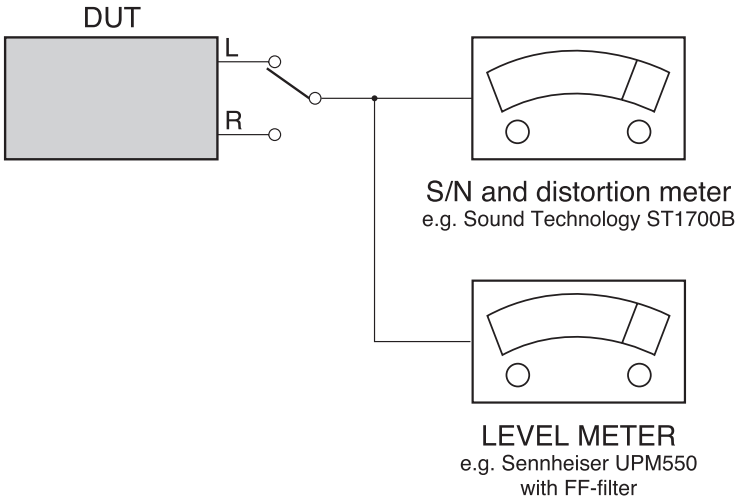
Tuner FM



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

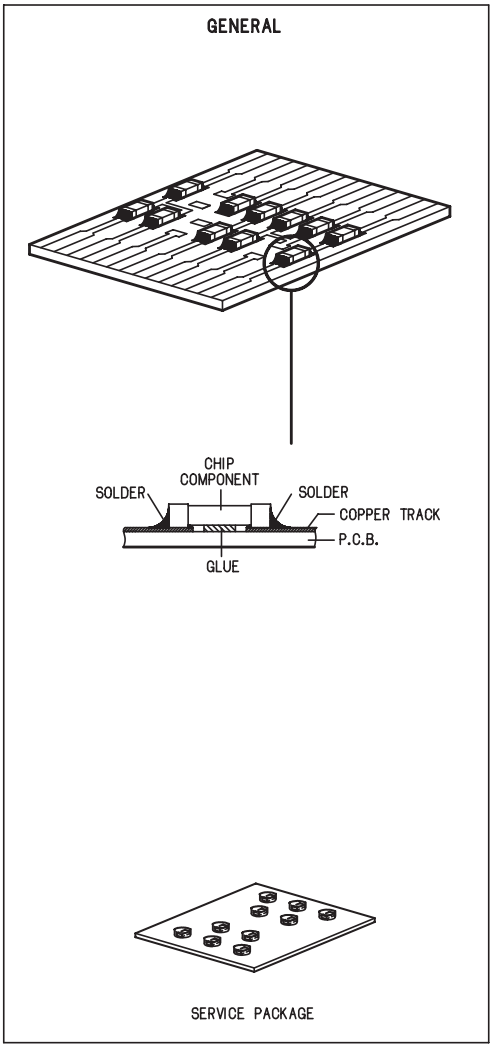
Service Tools:

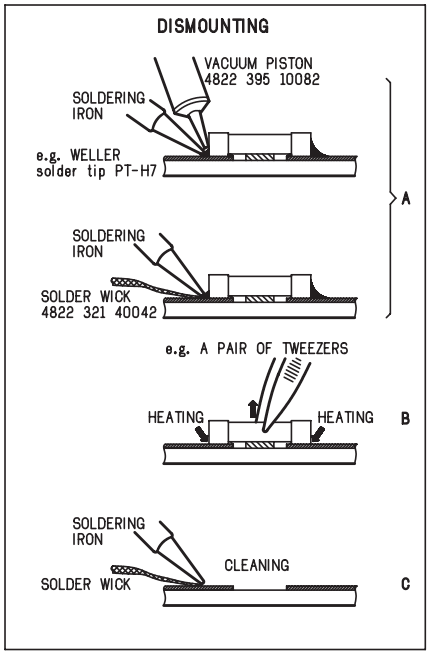
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 .....4822 395 50145
Torx driver T10 extended 4822 395 50423

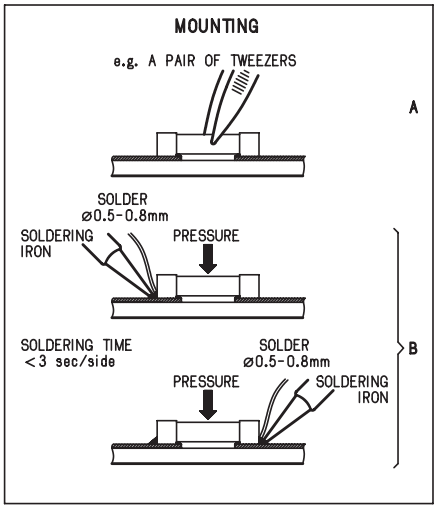
Compact Disc:

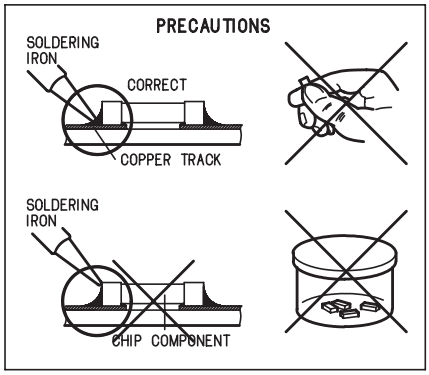
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

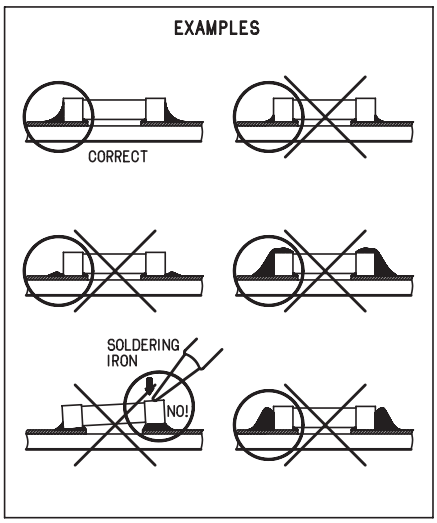
HANDLING CHIP COMPONENTS











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 unused 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

System , Region Code , etc. Setting Produre

1)System Reset

a) press “OPTIONS“ 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 sysytem reset

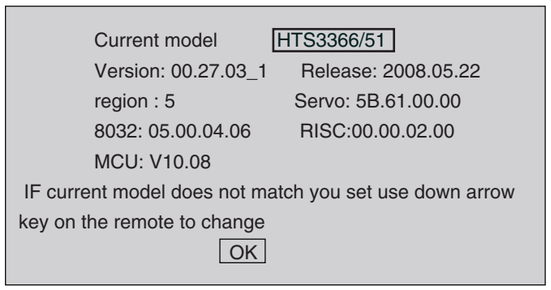
2)Region Code Change

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



4)Password Change

a) press “OPTIONS “ 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 Sofeware Version

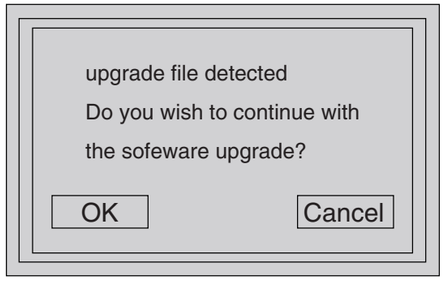
a) open the CD Door
b) press “INFO“ button on R/C
c) TV will show the version on screen

6)Trade model

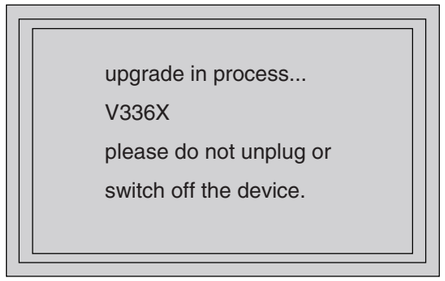
a) press “Open/Close “ button on R/C
b) Press “2” “5” “9” on R/C,VFD will display “TRA ON “ or “TRA OFF“

7) Upgrading new sofeware

a) copy “sofeware files” into a CD-R disc
b) open the CD Door,then insert 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:



f) select “OK”, OSD will show:



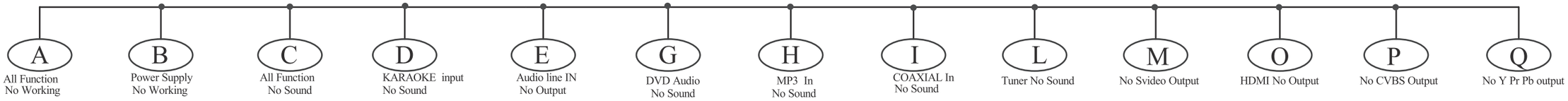
CAUTION!

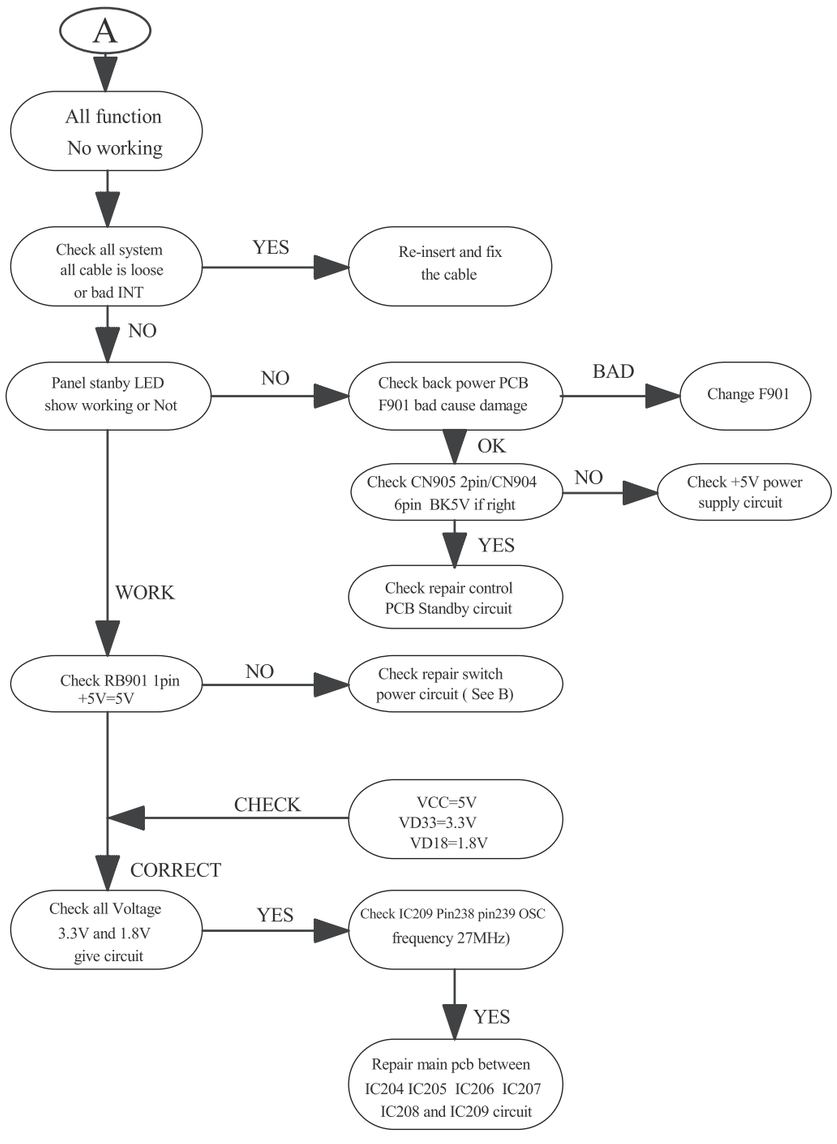
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

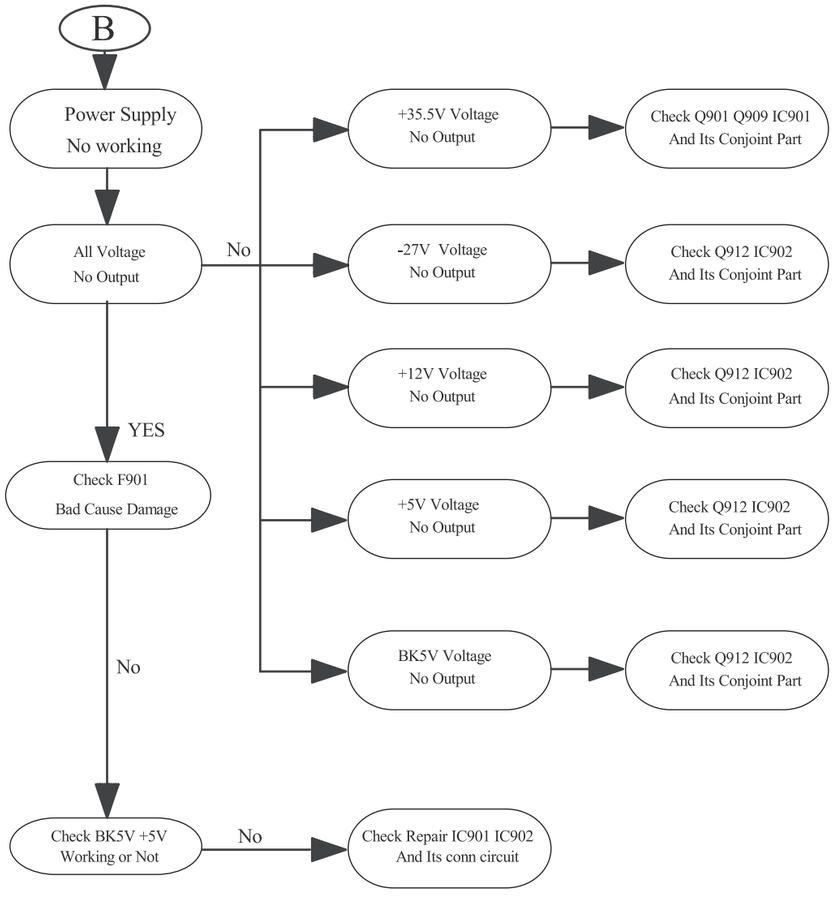
2 - 2

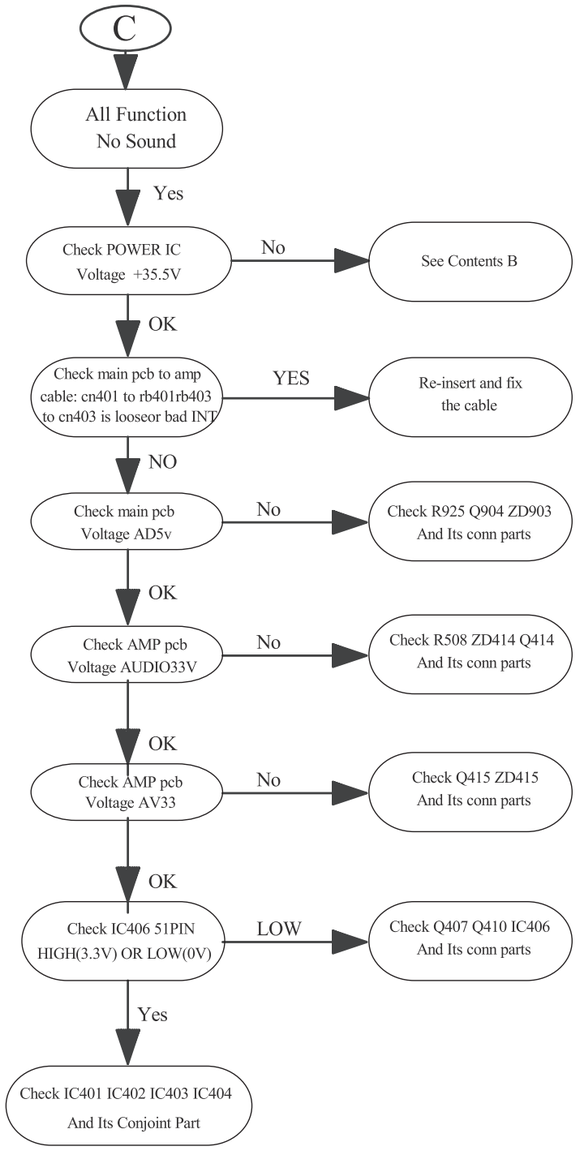
REPAIR INSTRUCTIONS (part one)

MAIN UNIT REPAIR CHART 1/3





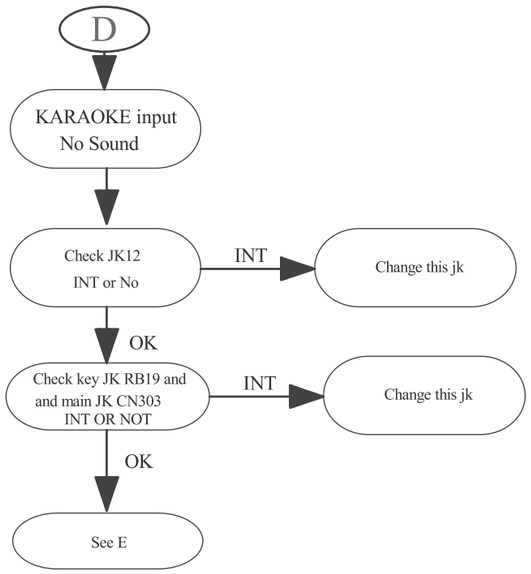


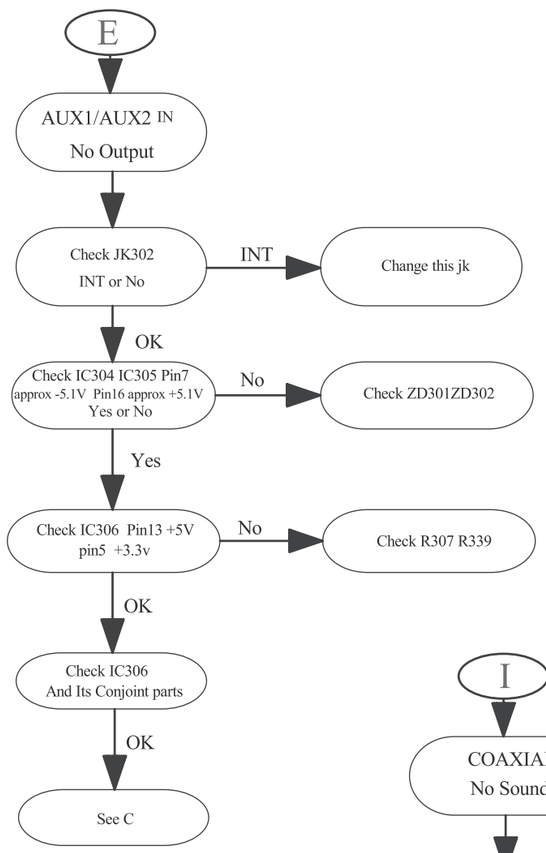


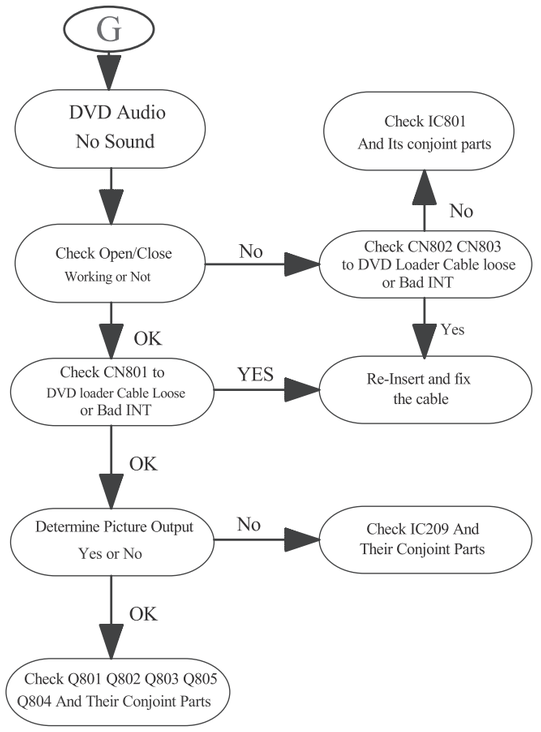
REPAIR INSTRUCTIONS (part two)

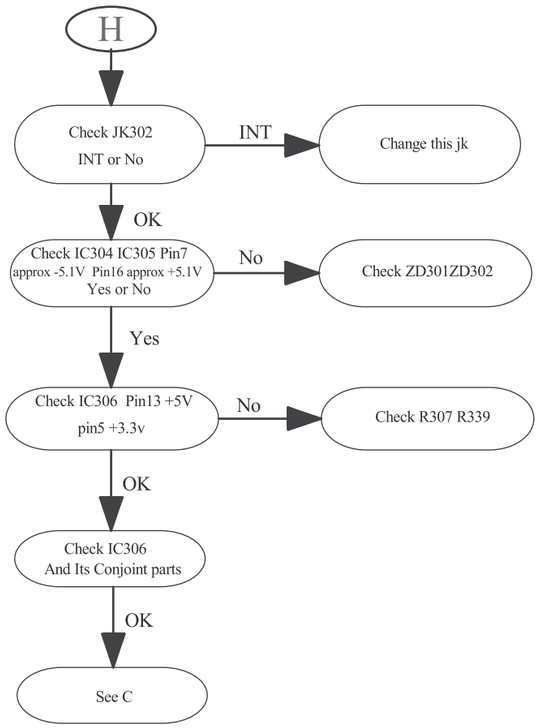
2 - 3

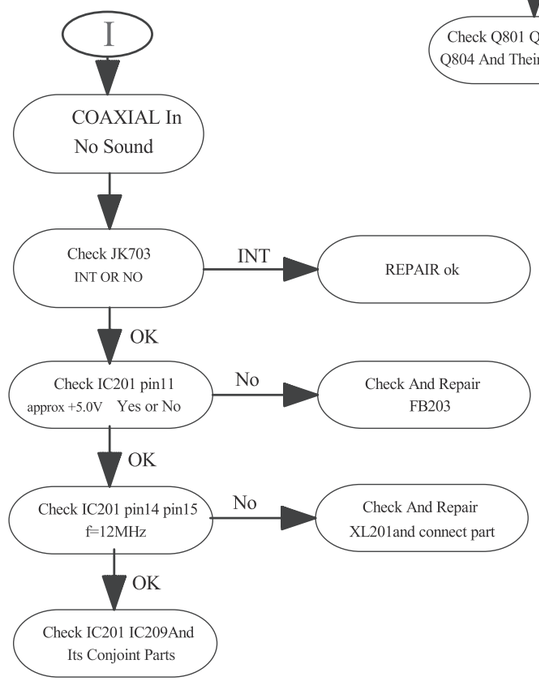
MAIN UNIT REPAIR CHART 2/3





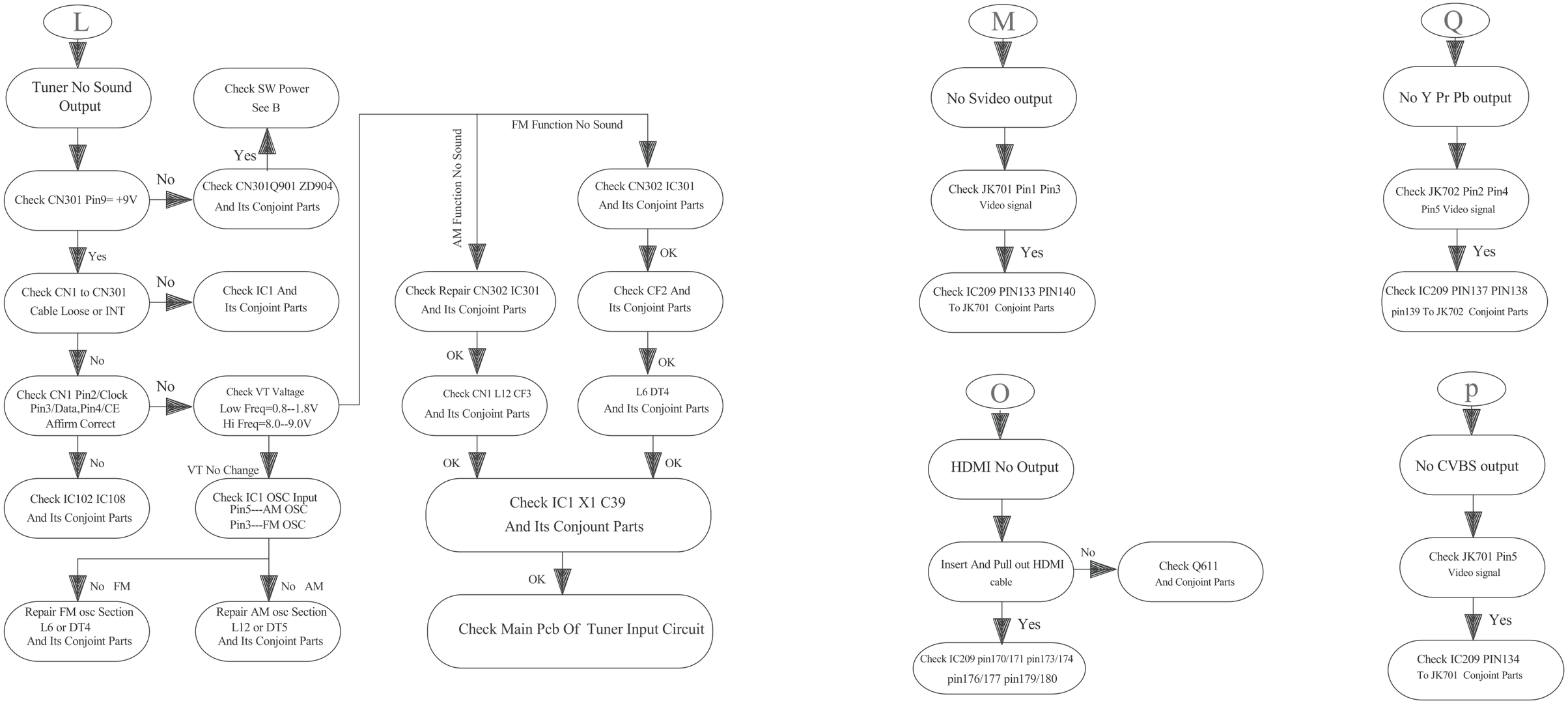






2 - 4

MAIN UNIT REPAIR CHART 3/3



DISASSEMBLY INSTRUCTIONS

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 right 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.

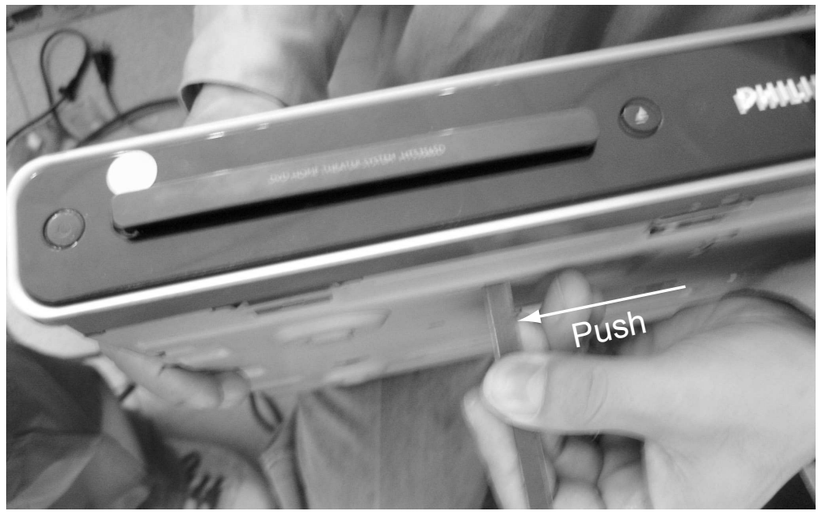


Figure 1

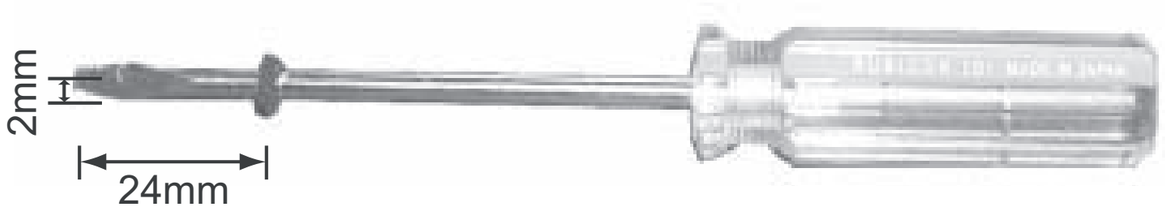


Figure 2

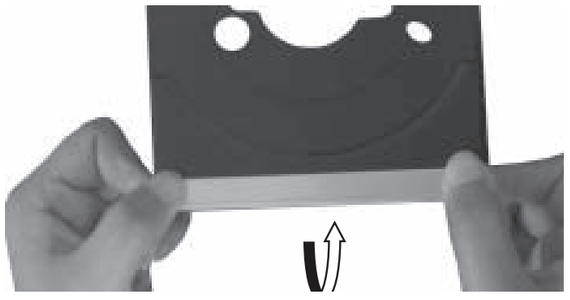


Figure 3

3) Loosen 7 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
   - 5 screws “B” at the back panel as shown in figure 5
4) Loosen 1 screw “C“ each left & right side on the front panel after move the top panel as shown in figure 6.
5)Loosen 6 screws “D” at bracket of front panel as shown in figure 7

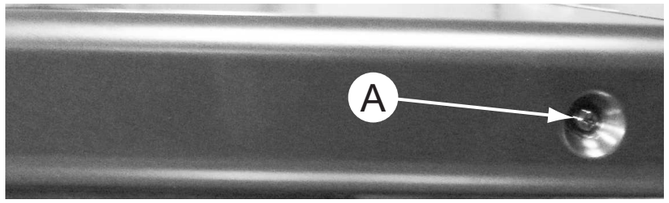


Figure 4

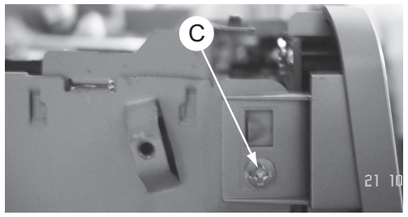


Figure 6

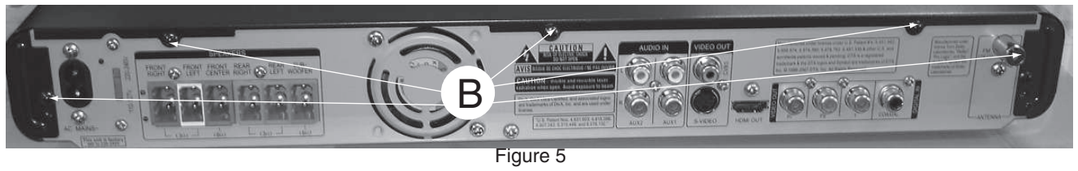


Figure 5

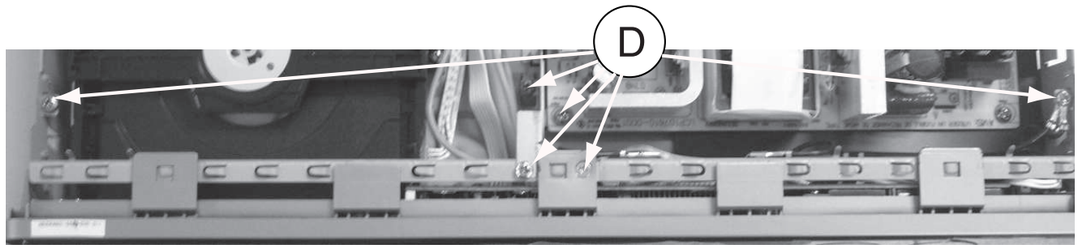


Figure 7

Dismantling of the AMP Board

1) Loosen 4 screws to remove the AMP Board.
   - 2 screws “ E “ on the top of AMP board as shown in figure 8
   - 2 screws “ F “ at the back panel as shown in figure 9

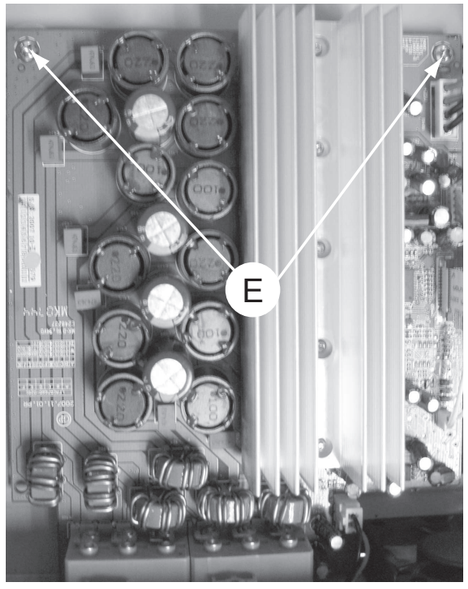


Figure 8

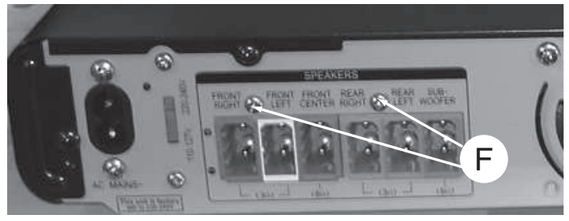


Figure 9

Dismantling of the Main Board

1) Loosen 2 screws " G " on the top of main board as shown in figure10
2) Loosen 7 screws "H" at the back panel as shown in figure 11

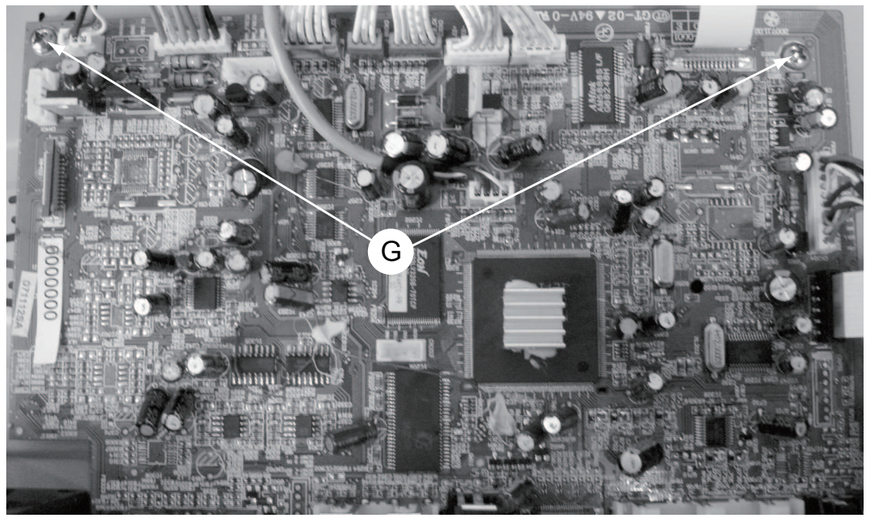


Figure 10

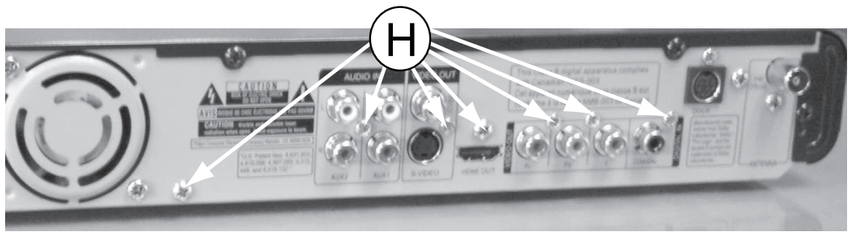


Figure 11

Dismantling of the Power Board

1) Loosen 4 screws " I" on the top of power board as shown in figure 12

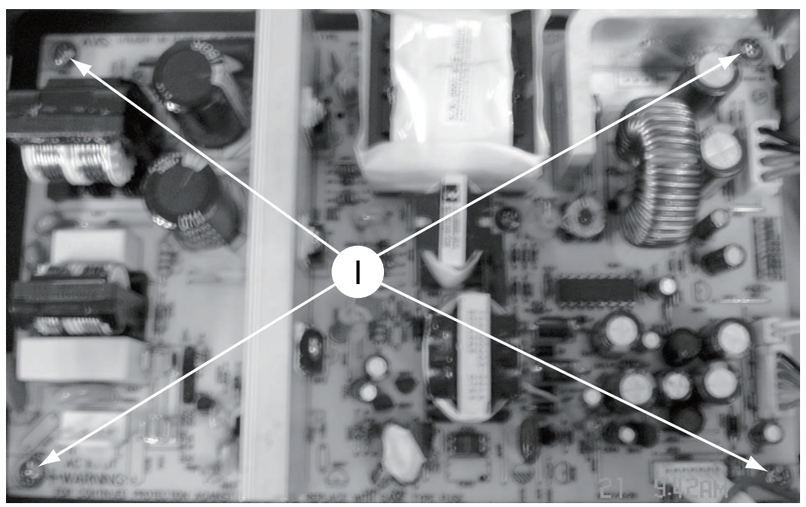


Figure 12

Dismantling of the VFD+JACK+VOL+STANDBY Board

1) Loosen 9 screws "J" on the top of control board as shown in 13

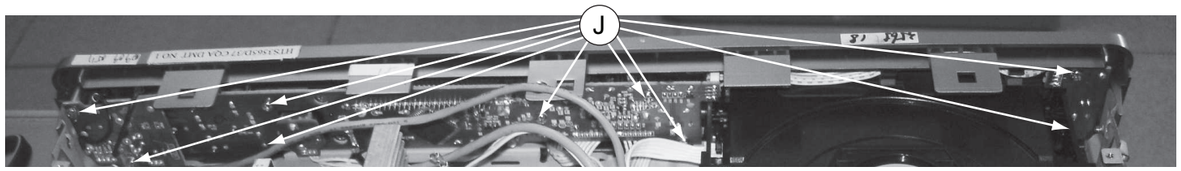


Figure 13

Dismantling of the DVD Module

1) Loosen 4 screws "K" as shown in figure 14.

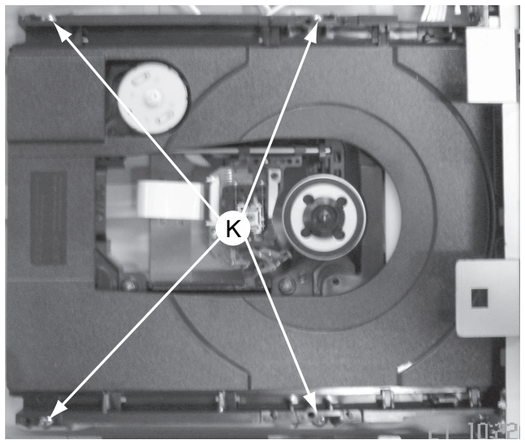
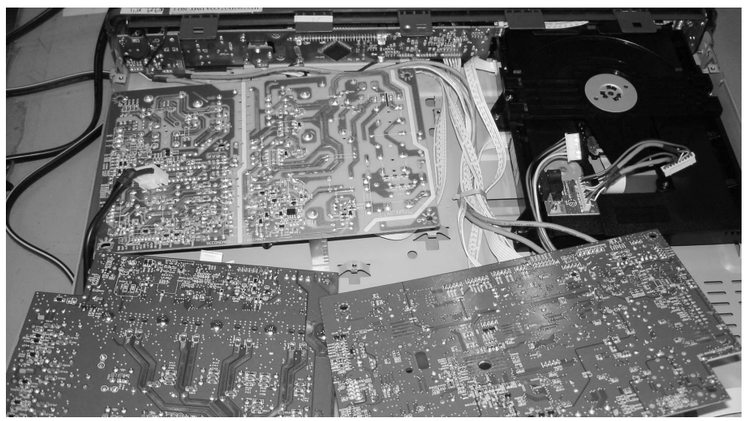


Figure 14

SERVICE POSITIONS

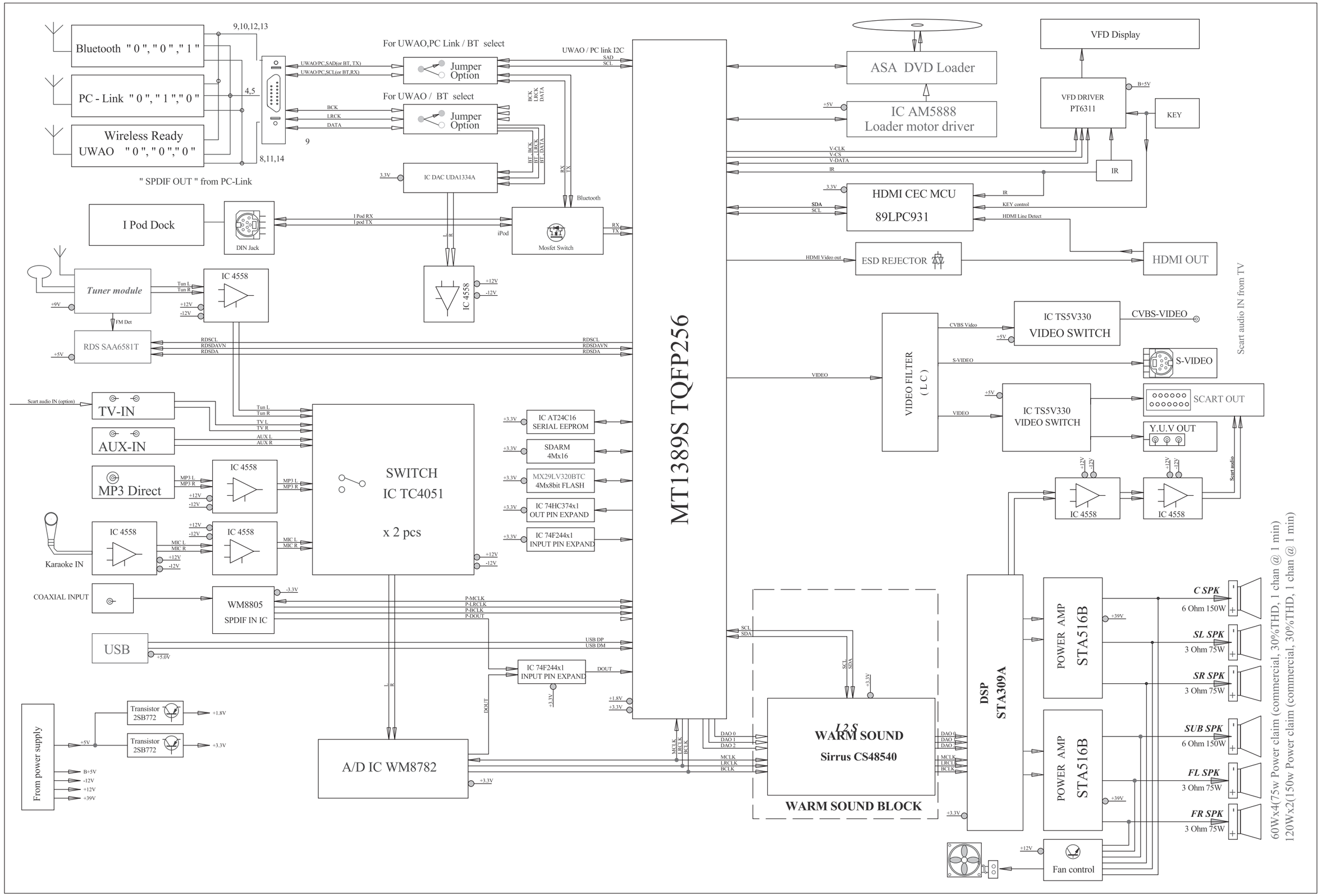
service position A (main unit)



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.

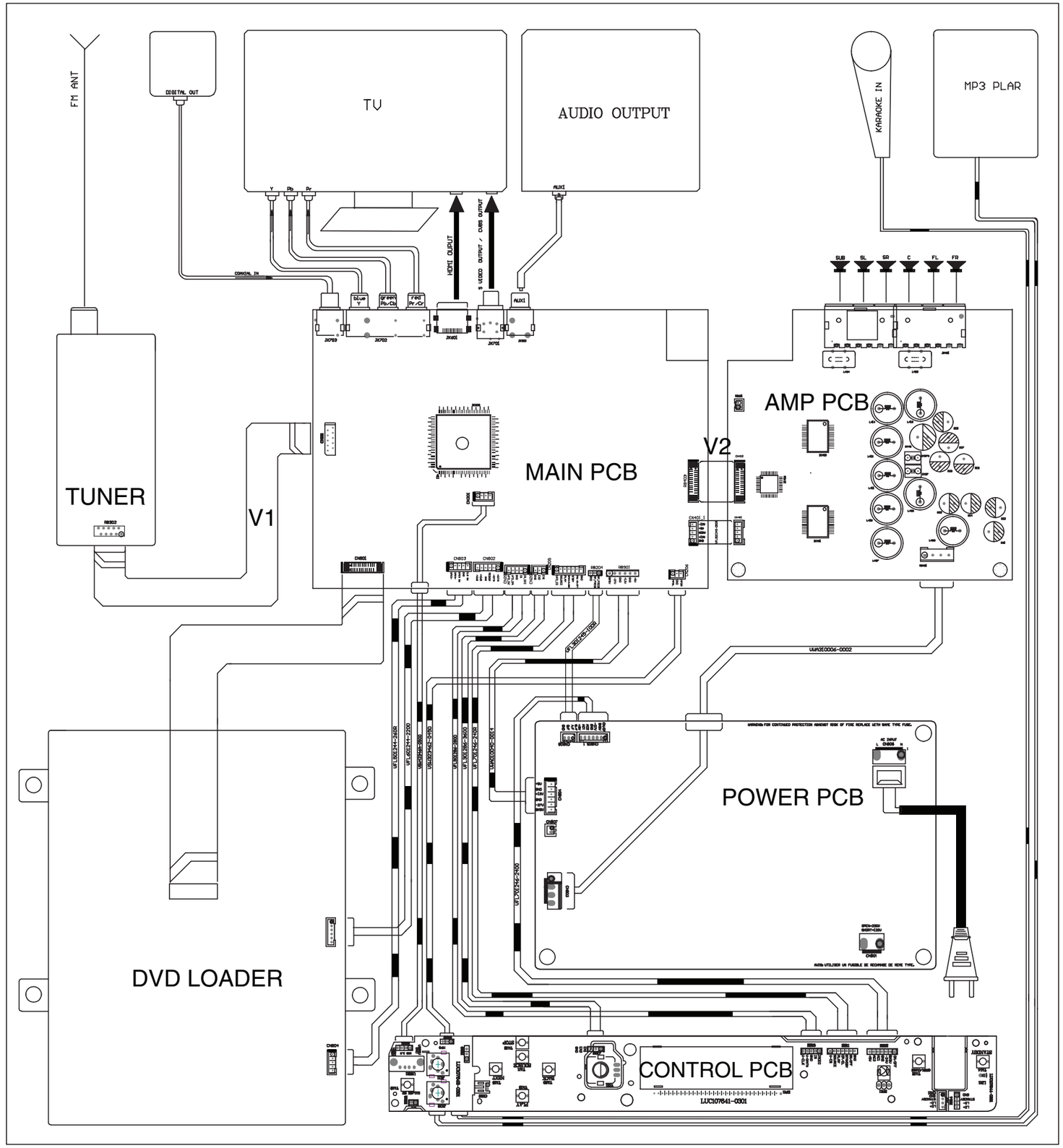
4 - 1

BLOCK DIAGRAM



4 - 2

WIRING DIAGRAM



CONTROL BOARD

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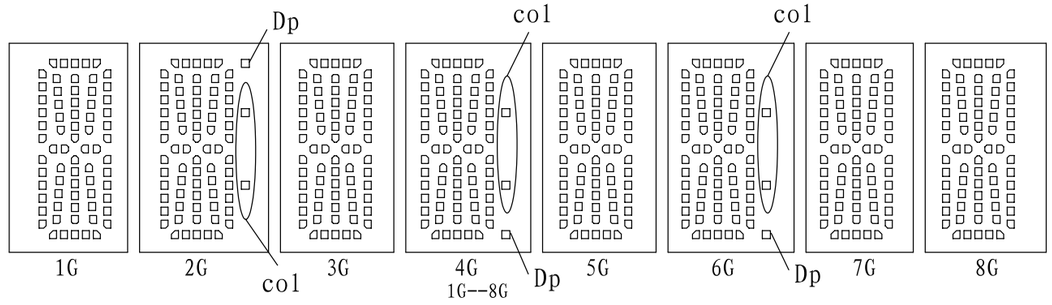
FTD DISPLAY PIN ASSIGNMENT



	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)

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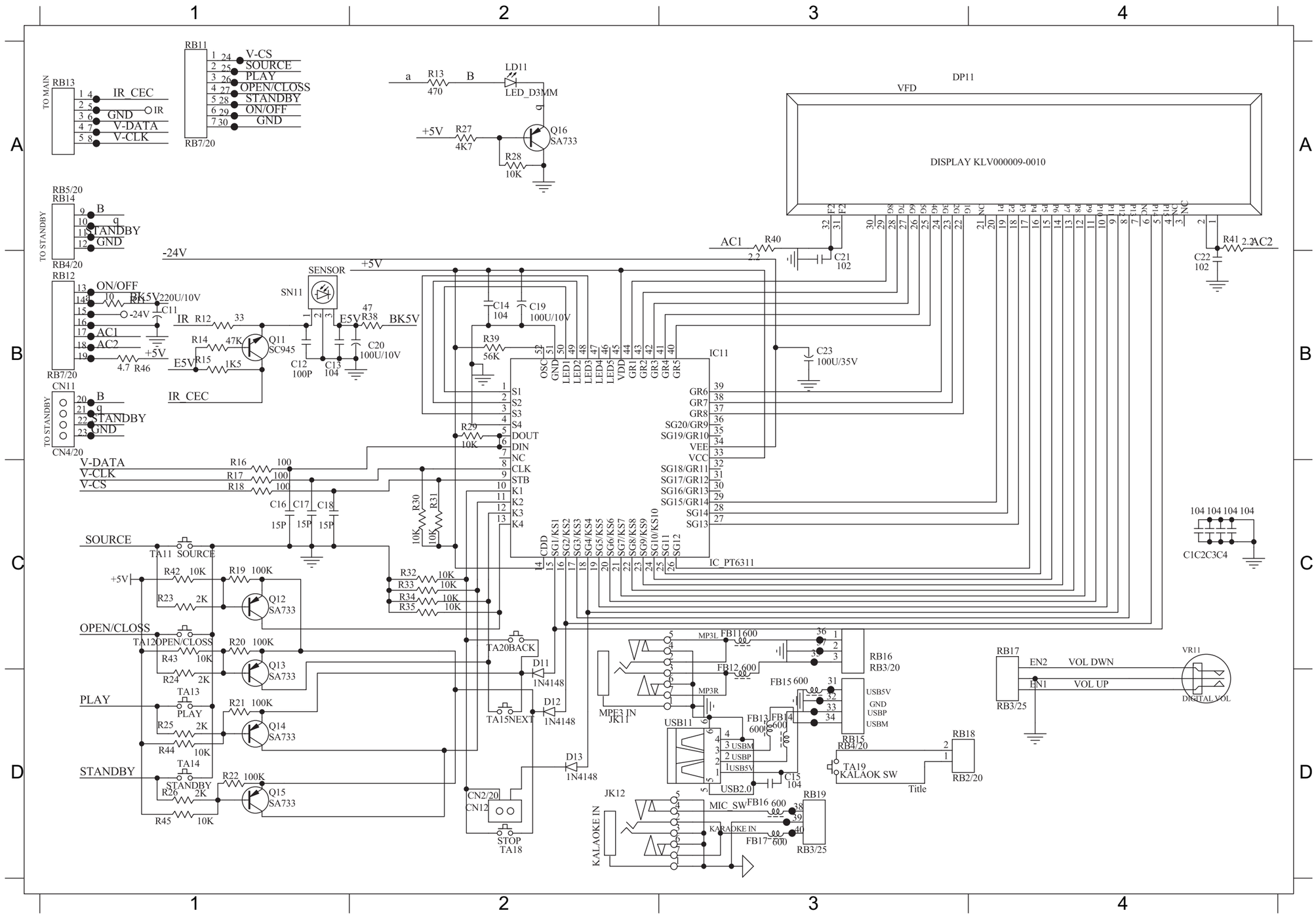
CIRCUIT DIAGRAM

C11	B1	C17	C1	C23	B3	FB11	C3	FB17	D3	Q12	C1	R12	B1	R18	C1	R24	D1	R30	C2	R38	B2	R44	D1	RB14	A1	SN11	B1	TA18	D2
C12	B1	C18	C1	CN12	D2	FB12	D3	IC11	B3	Q13	C1	R13	A2	R19	C1	R25	D1	R31	C2	R39	B2	R45	D1	RB15	D3	TA11	C1	TA19	D3
C13	B1	C19	B2	D11	D2	FB13	D3	JK11	D2	Q14	D1	R14	B1	R20	C1	R26	D1	R32	C2	R40	A3	R46	B1	RB16	C3	TA12	C1	TA20	C2
C14	B2	C20	B2	D12	D2	FB14	D3	JK12	D2	Q15	D1	R15	B1	R21	D1	R27	A2	R33	C2	R41	A4	RB11	A1	RB17	C4	TA13	D1	USB11	D3
C15	D3	C21	B3	D13	D2	FB15	D3	LD11	A2	Q16	A2	R16	C1	R22	D1	R28	A2	R34	C2	R42	C1	RB12	B1	RB18	D3	TA14	D1	VR11	D4
C16	C1	C22	B4	DP11	A3	FB16	D3	Q11	B1	R11	B1	R17	C1	R23	C1	R29	B2	R35	C2	R43	C1	RB13	A1	RB19	D3	TA15	D2		



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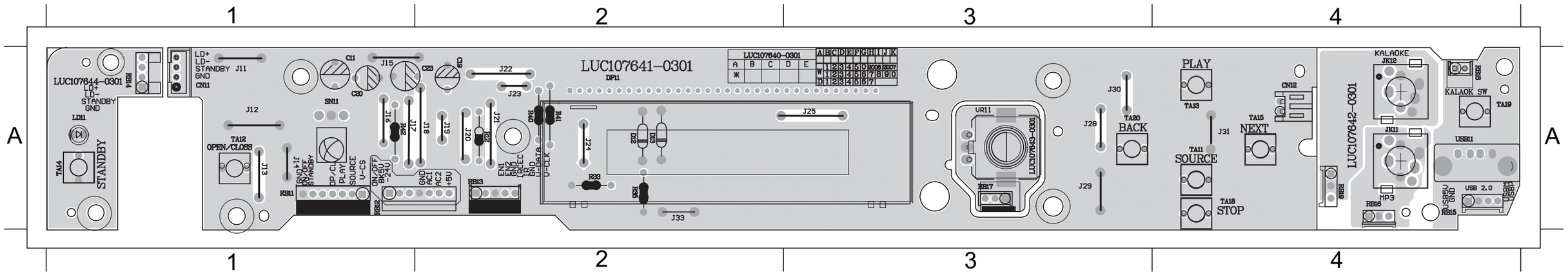
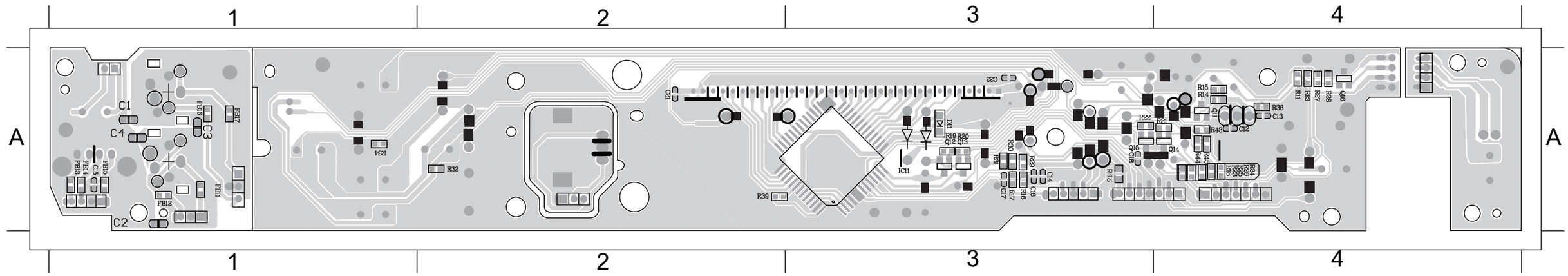
PCB LAYOUT - TOP VIEW

C11	A1	CN12	A2	J11	A1	J15	A1	J19	A2	J23	A2	J29	A3	JK11	A4	R33	A2	R42	A1	RB14	A1	RB18	A4	TA12	A1	TA18	A4	VR11	A3
C19	A2	D12	A2	J12	A1	J16	A1	J20	A2	J24	A2	J30	A3	JK12	A4	R35	A2	RB11	A1	RB15	A4	RB19	A4	TA13	A4	TA19	A4		
C20	A1	D13	A2	J13	A1	J17	A1	J21	A2	J25	A3	J31	A4	LD11	A1	R40	A2	RB12	A1	RB16	A4	SN11	A1	TA14	A1	TA20	A3		
C23	A1	DP11	A2	J14	A1	J18	A2	J22	A2	J28	A3	J33	A2	R12	A2	R41	A2	RB13	A2	RB17	A3	TA11	A4	TA15	A4	USB11	A4		



PCB LAYOUT - BOTTOM VIEW

C12	A4	C16	A3	C22	A3	FB13	A1	FB17	A1	Q13	A3	R11	A4	R16	A3	R20	A3	R24	A4	R28	A4	R32	A2	R43	A4		
C13	A4	C17	A3	D11	A3	FB14	A1	IC11	A3	Q14	A4	R13	A4	R17	A3	R21	A4	R25	A4	R29	A3	R34	A1	R44	A4		
C14	A3	C18	A3	FB11	A1	FB15	A1	Q11	A4	Q15	A3	R14	A4	R18	A4	R22	A3	R26	A4	R30	A3	R38	A4	R45	A4		
C15	A1	C21	A2	FB12	A1	FB16	A1	Q12	A3	Q16	A4	R15	A4	R19	A3	R23	A4	R27	A4	R31	A3	R39	A2	R46	A3		



MAIN BOARD

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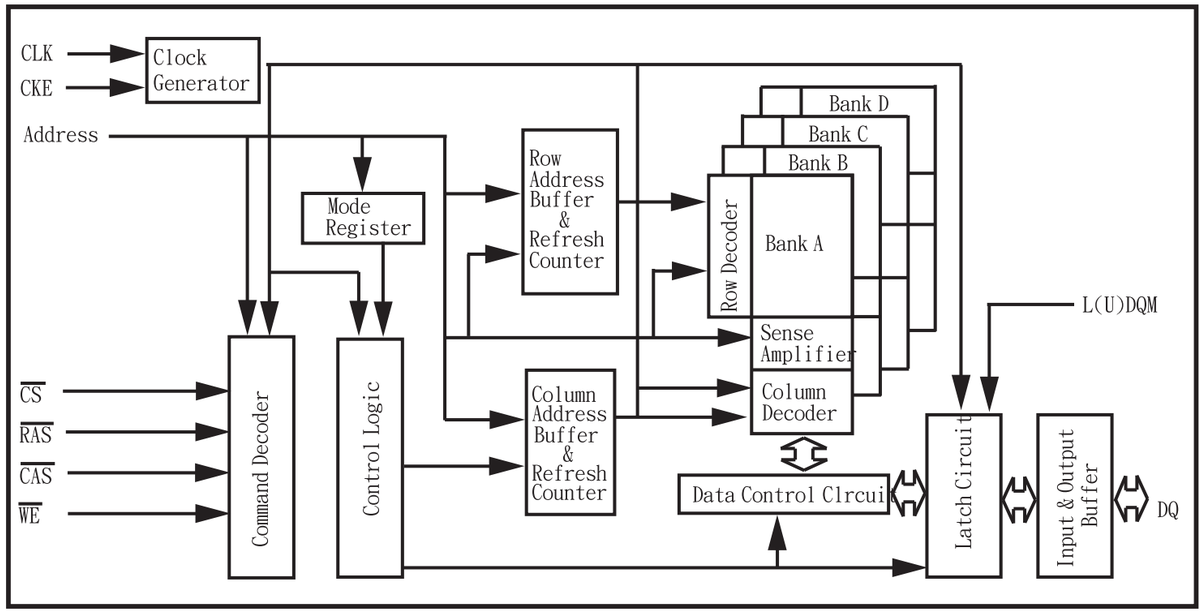
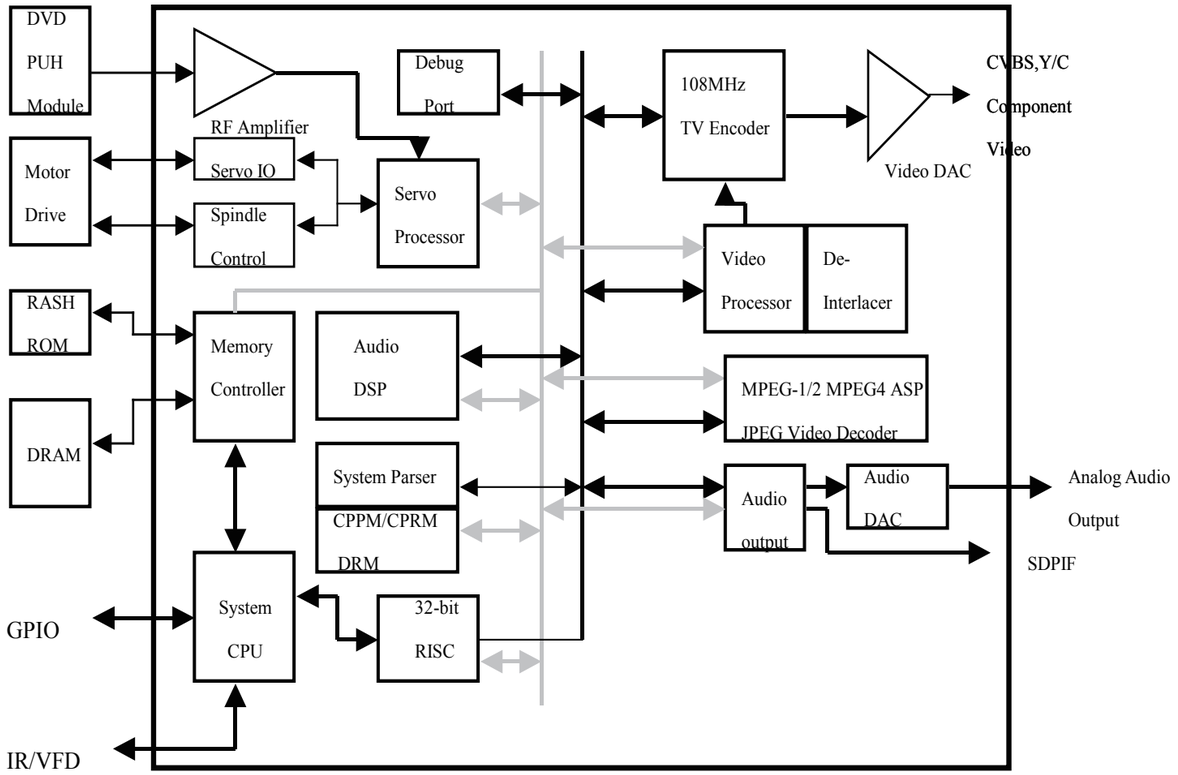
INTERNAL IC DIAGRAM - AS81F641642C



INTERNAL IC DIAGRAM - MT1389FXE/S



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CIRCUIT DIAGRAM - part one

AUX/TUNER/Satellite RADIO IN+AD/DA/UWAO/BLUETOOTH/PCLINK

KARAOKE USE ONLY

WIRELESS/Bluetooth/PCLINK

TO STA308A

Hed for cirrus DSP debug

EMC Add part 104p GND TO GND Ohy

注：600 SCB006030-6010，0R QCF165030-0000

C301	A1	C907	D1	FE303	D3	R355	B1								
C302	A1	C908	D2	FE306	D4	R356	B2								
C305	A2	C909	D2	FE307	D4	R357	B2								
C306	A1	C911	D2	FE308	D4	R358	B2								
C309	A2	C912	D2	FE309	D4	R359	B2								
C311	A2	C918	D2	FE310	D4	R360	B3								
C313	A2	C919	D2	FE311	D4	R361	B3								
C315	A3	C920	D1	FE312	D4	R362	D4								
C316	A3	C921	D1	IC301	A2	R364	D4								
C317	A4	C922	D2	IC303	D4	R365	C4								
C318	D4	C923	D2	IC304	A2	R366	D4								
C319	D5	C924	D1	IC305	B2	R367	C5								
C320	B3	C928	D1	IC306	B3	R368	C3								
C321	B4	C929	D1	IC309	A4	R371	D5								
C322	B3	C932	D1	IC501	A5	R372	D5								
C323	A3	C935	D2	JK302	B1	R373	D5								
C324	B4	C936	D2	L301	D3	R378	B4								
C325	A2	CE301	D2	L501	B4	R379	D4								
C326	A2	CE302	D2	L502	B4	R380	D4								
C329	A2	CE303	D2	L503	B5	R381	D4								
C330	A2	CE304	D2	Q302	D4	R382	D5								
C331	A3	CE305	D2	Q303	D4	R383	D5								
C334	B3	CE306	D2	Q304	D4	R384	D5								
C335	D4	CE307	D2	Q305	A4	R388	A1								
C336	D4	CE308	D2	Q507	A3	R399	B4								
C337	D5	CE309	D2	Q722	A3	R418	B1								
C338	D5	CE310	D2	Q723	A3	R419	B1								
C339	D5	CE311	D2	Q724	A3	R501	A4								
C340	A3	CE312	D2	Q901	D2	R502	A5								
C341	B3	CE313	D3	Q903	D1	R503	A5								
C342	A3	CE314	D3	Q904	D2	R504	A4								
C343	A3	CE315	D3	R301	A1	R505	A4								
C344	D4	CE316	D3	R3018	A4	R506	A4								
C346	B3	CE317	D3	R3019	A2	R507	A4								
C349	B4	CE318	D3	R302	A1	R509	A5								
C350	B3	CE319	D3	R3020	B2	R510	A5								
C351	B3	CE320	D3	R305	A4	R512	A5								
C352	B1	CE321	D3	R305	D4	R513	A5								
C353	B1	CE322	D3	R307	B3	R515	A4								
C354	B1	CE323	D3	R308	A4	R517	B5								
C355	B1	CE324	D3	R309	A1	R518	B4								
C356	B1	CE325	D3	R310	A1	R519	B4								
C357	B1	CE326	D3	R313	A2	R520	B5								
C358	D4	CE327	D3	R314	A2	R521	B5								
C359	C4	CE328	D3	R317	A2	R522	B5								
C360	C5	CE329	D3	R318	A1	R523	A5								
C362	B4	CE330	D3	R321	A2	R524	A5								
C363	B3	CE341	C1	R322	A2	R525	B5								
C364	D4	CE342	C1	R325	A2	R526	B5								
C365	D5	CE343	C1	R326	A2	R537	A5								
C502	A5	CE344	C1	R329	A3	R549	A5								
C503	A5	CE345	B3	R330	A3	R550	A5								
C506	B4	CE346	B3	R331	A3	R554	A5								
C507	B4	CE347	B3	R332	B3	R556	A5								
C508	B4	CE348	B3	R334	A3	R557	A5								
C509	B4	CE351	B3	R335	B3	R904	D1								
C510	B5	CE352	B3	R336	B3	R911	D1								
C511	B5	CE353	B3	R337	D4	R912	D2								
C512	B5	CE901	D2	R338	D5	R913	D2								
C513	B5	CE903	D1	R340	D4	R924	D2								
C514	B5	CE904	D1	R341	D4	R925	D2								
C515	B4	CN301	A1	R342	D4	R928	D2								
C516	B4	CN303	D3	R343	A3	R929	D2								
C517	B5	CN401	B5	R344	B3	RB403	C5								
C518	C5	D302	D4	R345	B1	RB901	C1								
C519	C5	D303	D4	R346	B1	XL501	A5								
C520	C5	FB310	A4	R347	D4	ZD301	A2								
C521	C5	FB311	D3	R348	B1	ZD302	A3								
C901	D1	FB312	B1	R349	B1	ZD901	D1								
C902	D1	FB313	B1	R350	B1	ZD902	D1								
C903	D1	FB901	D2	R351	B1	ZD903	D2								
C904	D1	FB905	D1	R352	B1	ZD904	D2								
C905	D1	FE301	D3	R353	B1										
C906	D2	FE302	D3	R354	B1										

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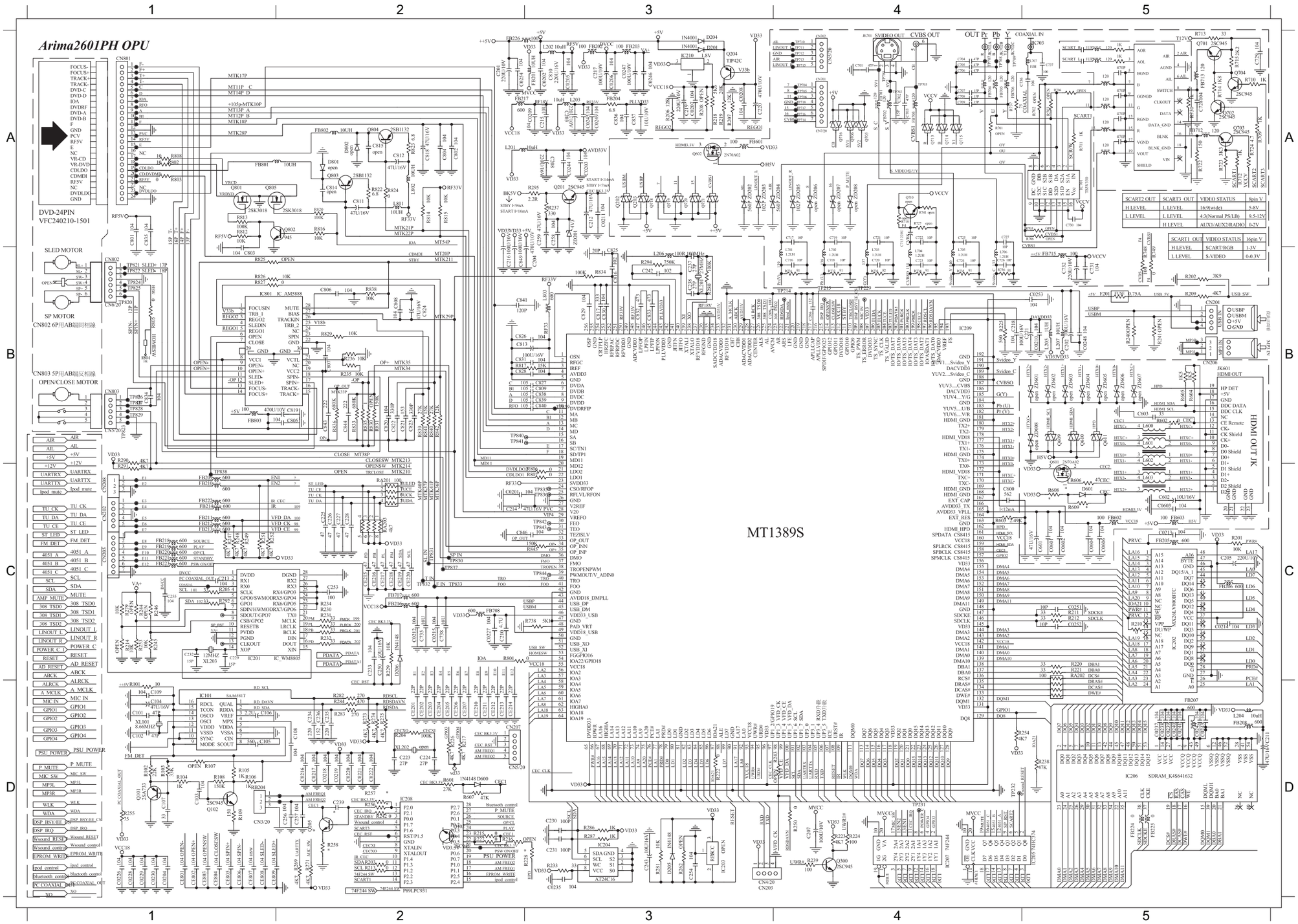
CIRCUIT DIAGRAM - part two



C0201	C2	C253	C2	CE205	D2	IC206	D5	R247	C1
C0202	A3	C254	D3	CE206	D2	IC207	D4	R248	C1
C0203	A3	C255	C1	CE207	D2	IC208	D2	R249	C1
C0204	D1	C259	A3	CE210	D2	IC209	B4	R250	D4
C0205	A3	C600	C4	CE211	D2	IC210	A3	R251	C1
C0206	A3	C601	C5	CE212	D2	IC801	B1	R252	C1
C0207	A3	C602	C5	CE213	D2	JK601	B5	R253	C1
C0208	A3	C603	B5	CE214	D2	JK701	A4	R269	D2
C0209	A3	C701	A4	CE215	C2	JK702	A4	R271	D2
C0210	B5	C702	A4	CE216	C2	JK703	A5	R274	D2
C0211	A3	C703	A4	CE217	C2	L201	A2	R279	C1
C0212	C2	C704	A4	CE218	C2	L202	A3	R280	B3
C0213	C5	C705	A4	CE219	C2	L203	A3	R281	D3
C0214	C5	C706	A4	CE220	C2	L204	D5	R286	D3
C0215	C2	C707	A4	CE801	D1	L205	B5	R287	D3
C0216	D2	C708	A4	CE802	D1	L206	B3	R290	B1
C0217	D2	C709	A4	CE803	D1	L207	B5	R291	C1
C0218	D2	C713	B5	CE804	D1	L701	B4	R292	C1
C0219	D2	C716	B4	CE805	D1	L702	B4	R294	B3
C0220	D2	C717	A4	CE806	D1	L703	B4	R295	A3
C0221	D2	C718	B4	CE807	D1	L704	B4	R601	D2
C0222	D2	C719	A4	CE808	D1	L705	B4	R602	B5
C0226	D1	C720	B4	CE809	D1	L706	B4	R603	C4
C0227	C2	C721	A4	CN201	B5	L707	A5	R604	B5
C0228	D1	C722	A4	CN202	C1	L801	A2	R605	B5
C0229	D1	C723	B4	CN205	C1	L802	A2	R606	C5
C0230	D1	C724	B4	CN206	B5	L803	B3	R701	A4
C0235	D3	C725	A4	CN208	C1	Q201	A3	R703	A5
C0237	D5	C726	B4	CN801	A1	Q202	A3	R706	A5
C0238	D5	C727	A4	CN802	B1	Q203	A3	R731	B4
C0239	D5	C732	B5	CN803	B1	Q204	A3	R732	B4
C0240	D5	C735	C2	CO254	A2	Q300	D4	R733	B4
C0241	D5	C736	A4	D201	A3	Q601	C5	R734	B4
C0242	D5	C737	A5	D204	A3	Q602	A3	R735	B4
C0243	D5	C738	C2	D205	D3	Q611	B5	R736	B4
C0244	A3	C801	A1	D600	D2	Q705	A4	R737	A4
C0245	A3	C802	A2	F201	B5	Q706	A4	R738	C3
C0246	A3	C803	B1	FB201	A3	Q713	A4	R748	B5
C0247	A3	C804	A2	FB202	A3	Q714	A4	R749	B5
C0248	B5	C805	B2	FB203	A3	Q715	A4	R801	C2
C0249	A3	C806	B2	FB204	A3	Q716	A4	R802	A1
C0251	C5	C807	B2	FB205	C5	Q801	A1	R803	A1
C0252	C5	C808	B2	FB206	C5	Q802	A2	R804	B1
C0253	B5	C809	B3	FB207	D5	Q803	A2	R805	B1
C0254	A2	C810	A3	FB208	D5	Q804	A2	R806	C3
C0601	C5	C811	A2	FB209	C1	Q805	A1	R807	C3
C0602	C5	C812	A2	FB210	C1	R201	C5	R808	A1
C0603	C5	C813	B3	FB211	C1	R202	B5	R812	A1
C0604	C5	C816	B3	FB212	C1	R203	D2	R813	A1
C0606	C5	C817	B3	FB213	B5	R205	C1	R814	A2
C201	A2	C818	A2	FB214	C1	R206	A3	R815	A2
C202	B5	C819	B2	FB216	C2	R207	A3	R816	A2
C203	A3	C820	B2	FB217	A2	R209	B5	R817	B2
C204	B3	C821	B2	FB218	C1	R210	C5	R820	A2
C205	C5	C822	B2	FB219	C1	R211	C5	R822	A2
C206	B4	C823	B2	FB220	C1	R212	C5	R823	A2
C207	D4	C824	B2	FB221	C1	R213	D2	R824	A2
C208	A3	C825	B3	FB222	C1	R215	D2	R826	B1
C209	B3	C826	B3	FB223	C1	R217	D2	R827	B1
C210	C2	C827	B3	FB224	D5	R218	A3	R829	B2
C211	D5	C828	B3	FB225	D5	R219	A3	R831	B2
C213	C1	C829	B3	FB226	A2	R220	C5	R833	B2
C214	C2	C830	B3	FB601	A3	R221	C5	R834	B3
C215	A3	C831	B3	FB602	C5	R222	D3	R835	B2
C216	B2	C832	B3	FB603	C5	R223	D4	R836	B2
C217	A3	C833	B3	FB701	A4	R224	D4	R838	B2
C218	B4	C834	B1	FB702	A4	R225	B4	R839	B2
C219	A3	C835	A1	FB703	A4	R226	D2	R840	B2
C220	A3	C836	A3	FB704	A4	R227	D2	R841	B2
C221	B5	C837	A3	FB705	A4	R228	D3	R842	B2
C225	C2	C838	B3	FB706	A4	R230	C2	R845	C3
C226	C2	C839	B3	FB707	C2	R231	C2	RA201	C2
C227	C2	C840	B3	FB708	C2	R232	C2	RA202	C5
C228	C2	C841	B2	FB715	B5	R233	D3	RA203	C2
C229	C1	C843	B2	FB801	A1	R234	C2	XL201	B3
C230	D3	C844	B2	FB802	A2	R235	B2	XL203	C1
C231	D3	C846	C3	FB803	B1	R236	B2	ZD201	A3
C232	C1	C849	B2	IC201	C1	R237	A3		
C237	B3	CE201	D2	IC202	C5	R238	D5		
C238	B3	CE202	D2	IC203	D3	R239	D4		
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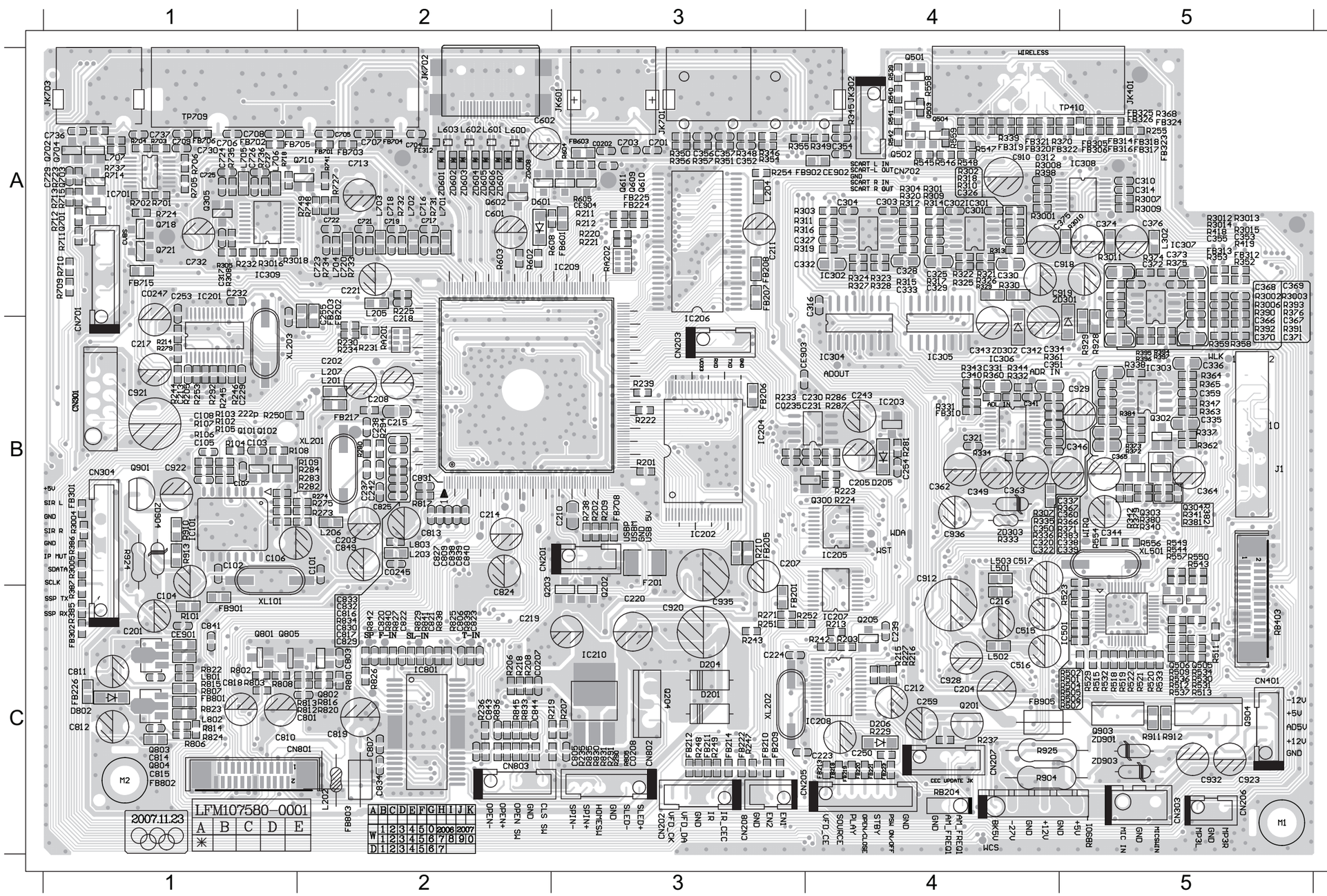
PCB LAYOUT - TOP VIEW



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C0208	C3	C704	A2	CN802	C3	L503	B4	R3018	A1	R537	C5
C0235	B3	C705	A2	CN803	C2	L701	A2	R302	A4	R549	B5
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C201	C1	C708	A1	D205	B4	L704	A2	R308	A1	R556	B5
C202	B2	C709	A1	F201	B3	L705	A1	R309	A4	R557	B5
C203	B2	C713	A2	FB201	C3	L706	A1	R310	A4	R602	A2
C204	C4	C716	A2	FB202	A2	L707	A1	R313	A4	R603	A2
C205	B4	C717	A2	FB203	A2	L801	C1	R314	A4	R604	A3
C207	B3	C718	A2	FB205	B3	L802	C1	R317	A4	R605	A3
C208	B2	C719	A2	FB206	B3	L803	B2	R318	A4	R701	A1
C210	B3	C720	A2	FB207	A3	Q201	C4	R321	A4	R703	A1
C211	A3	C721	A2	FB208	A3	Q202	C3	R322	A4	R706	A1
C213	B1	C722	A2	FB209	C3	Q203	C3	R325	A4	R731	A2
C214	B2	C723	A2	FB210	C3	Q204	C3	R326	A4	R732	A2
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C330	A4	C830	C2	FB803	C2	R220	A3	R360	B5	R833	C2
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C364	B5	CN201	B3	L201	B2	R279	B1	R513	C5	ZD901	C5
C365	B5	CN202	C3	L202	C2	R280	B2	R515	C5	ZD903	C5
C515	C4	CN205	C3	L203	B2	R281	B4	R517	C5	ZD904	B1
C516	C4	CN206	C5	L204	A3	R286	B4	R518	C5		
C517	B4	CN208	C3	L205	A2	R287	B4	R519	C5		
C601	A2	CN301	B1	L206	B2	R290	C3	R520	C5		
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PCB LAYOUT - BOTTOM VIEW

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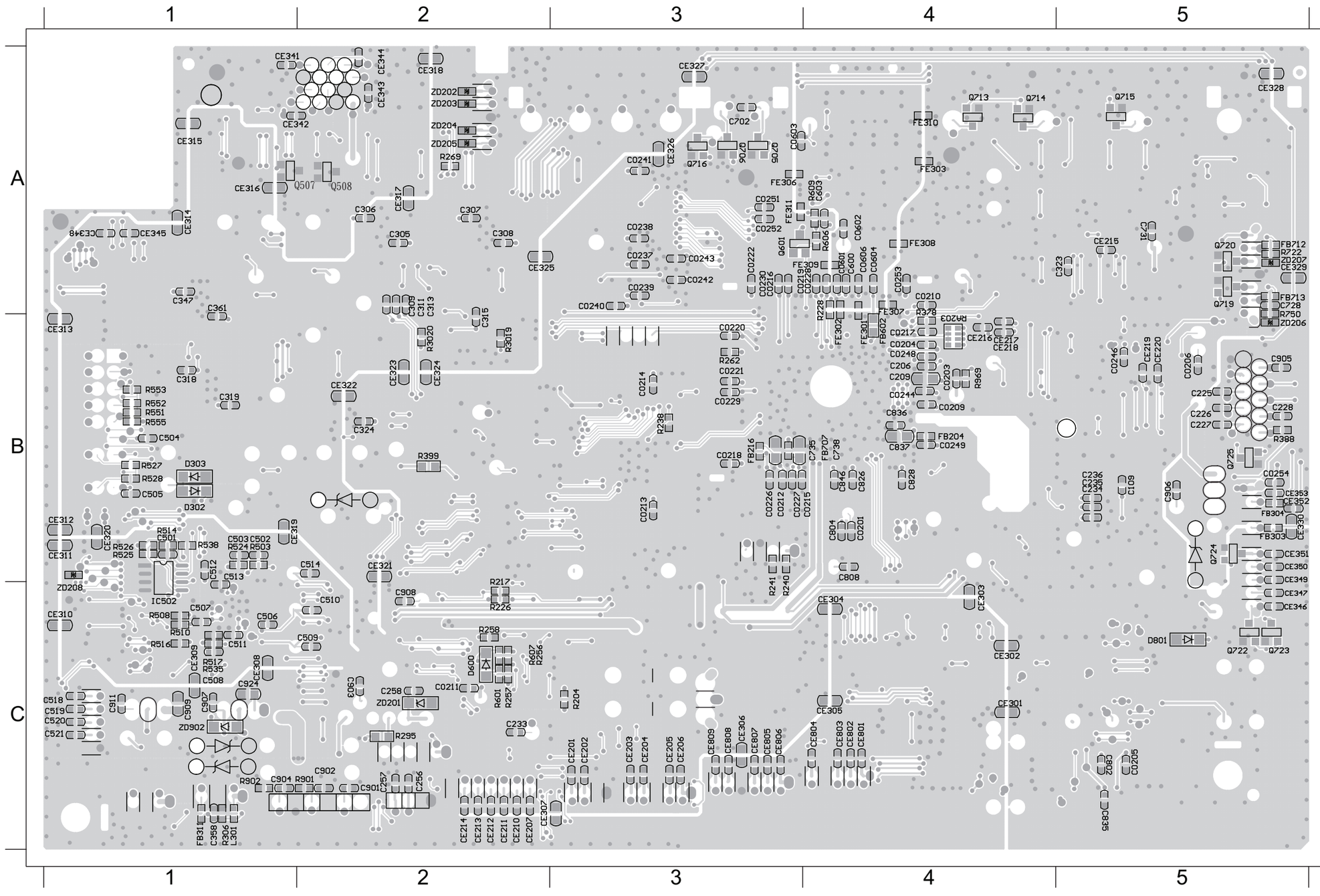

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C0221	B3	C600	A4	CE317	A2	Q715	A5
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POWER BOARD

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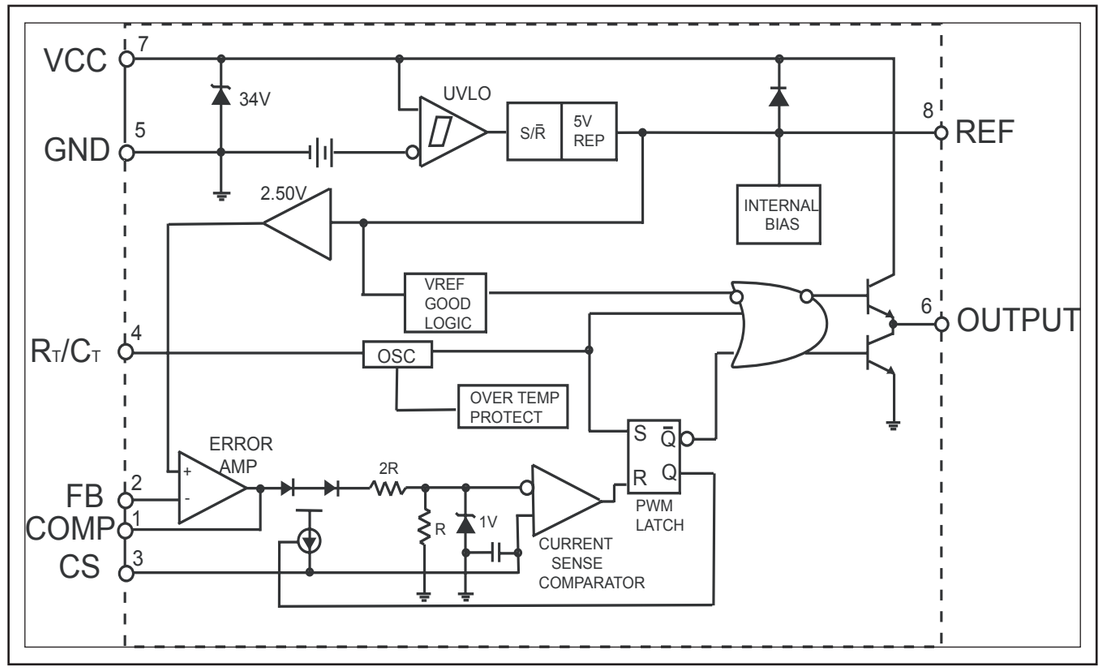
INTERNAL IC DIAGRAM - AP3843GMTR



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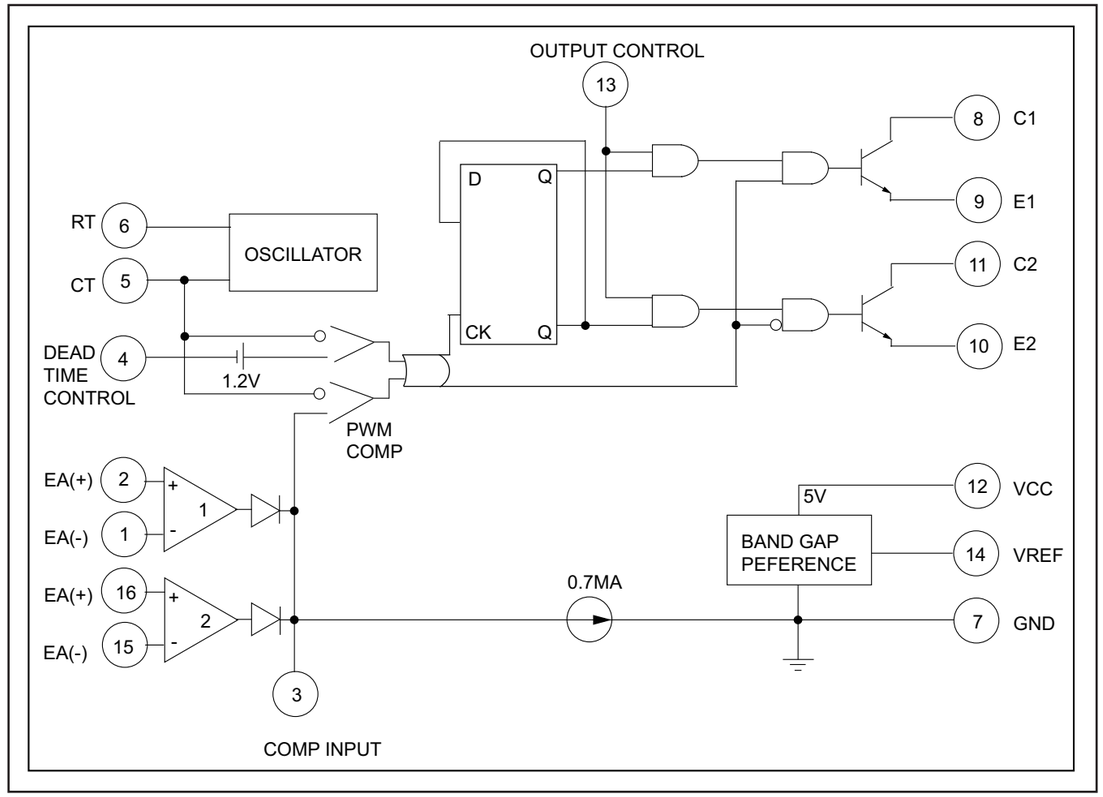

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CIRCUIT DIAGRAM

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C904	A2	C922	B1	C935	B3	C951	B3	C963	C1	C977	B1	D905	A3	D920	B2	IC904	C2	Q905	B1	R9002	B1	R917	B4	R928	A1	R945	B3	R962	C2	R977	B4	R991A	C1	ZD902	A3		
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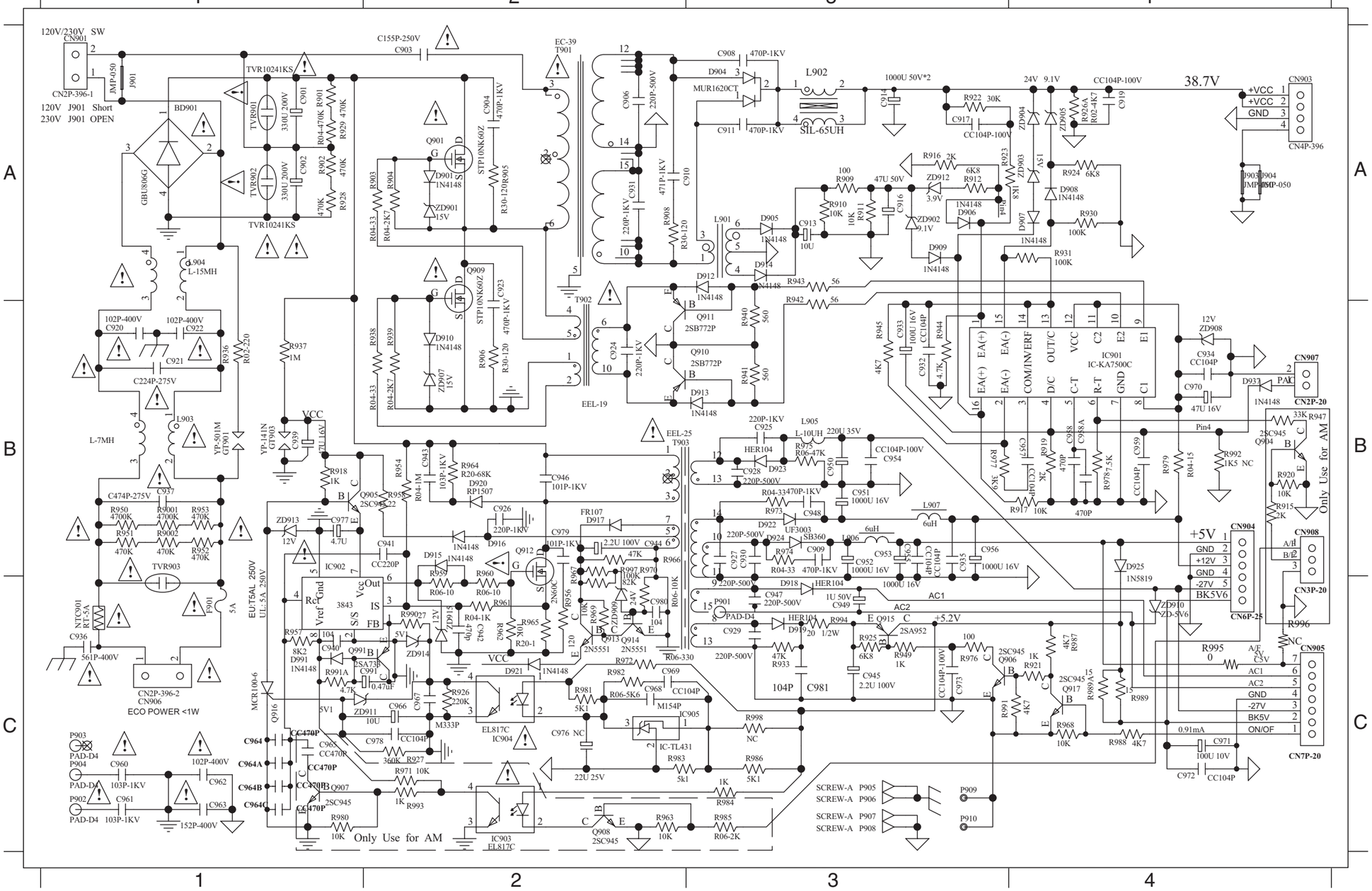
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PCB LAYOUT - TOP VIEW

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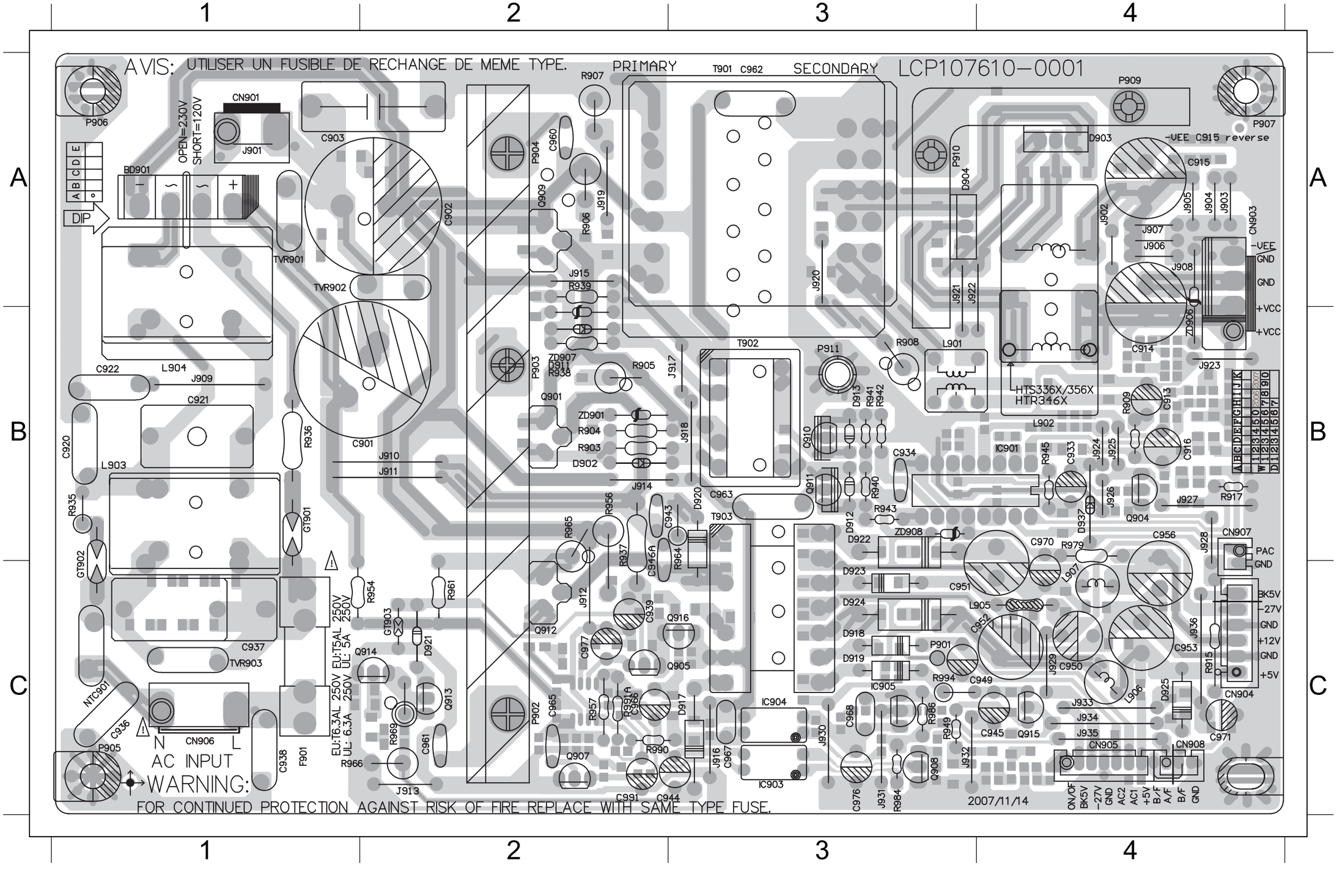
C916	B4	C943	B2	C953	C4	C968	C3	CN905	C4	D918	C3	D937	B4	J904	A4	J916	C3	J925	B4	J934	C4	L907	C4	Q913	C2	R908	B3	R941	B3	R964	B3	R994	C3	ZD901	B2		
C920	B1	C944	C2	C956	B4	C970	B4	CN906	C1	D919	C3	F901	C1	J909	B1	J917	B3	J926	B4	J936	C4	NTC901	C1	Q914	C2	R909	B4	R942	B3	R965	B2	T901	A3	ZD907	B2		



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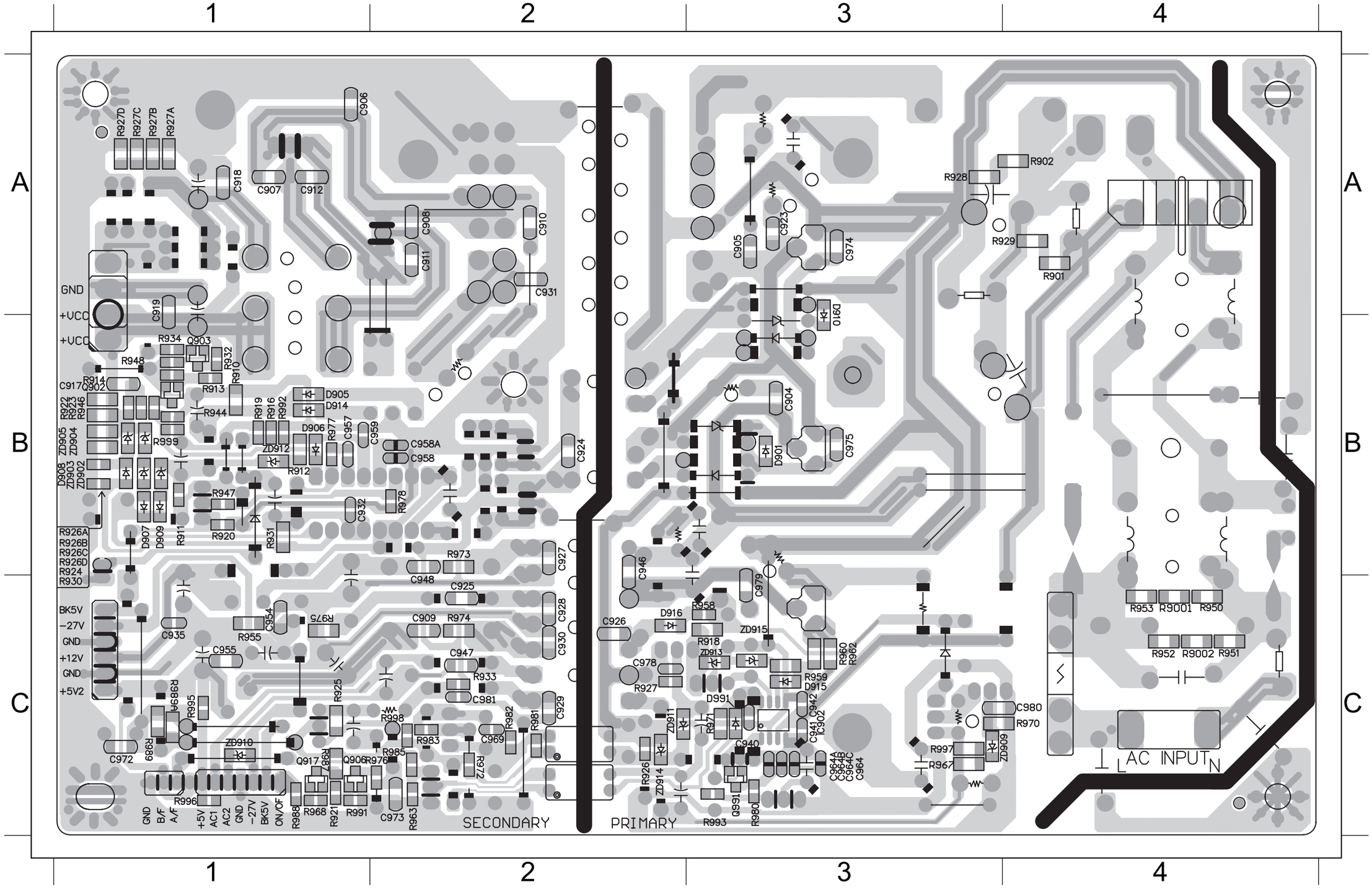
PCB LAYOUT - BOTTOM VIEW

C906	A1	C923	A3	C917	B1	D909	B1	R919	B1	R926C	B1	ZD902	B1	C927	B2	R973	B2	C955	C1	R955	C1	R989A	C1	C926	C2	C978	C2	R981	C2	C941	C3	D915	C3	R959	C3	ZD909	C3	R951	C4
C919	A1	D910	A3	C932	B1	D914	B1	R922	B1	R926D	B1	ZD903	B1	C946	B2	R978	B2	C972	C1	R968	C1	R991	C1	C928	C2	D916	C2	R982	C2	C942	C3	D991	C3	R960	C3	ZD913	C3	R952	C4
C908	A2	R928	A3	C957	B1	R910	B1	R923	B1	R930	B1	ZD904	B1	C948	B2	C904	B3	Q906	C1	R975	C1	R995	C1	C929	C2	R927	C2	R983	C2	C964	C3	IC902	C3	R962	C3	C980	C4	R953	C4
C910	A2	R901	A4	D905	B1	R911	B1	R924	B1	R931	B1	ZD905	B1	C958	B2	D901	B3	Q917	C1	R987	C1	ZD910	C1	C930	C2	R972	C2	ZD911	C2	C964A	C3	Q991	C3	R967	C3	R9001	C4	R970	C4
C911	A2	R902	A4	D907	B1	R912	B1	R926A	B1	R944	B1	ZD912	B1	C958A	B2	C935	C1	R921	C1	R988	C1	C909	C2	C969	C2	R974	C2	ZD914	C2	C964B	C3	R918	C3	R993	C3	R9002	C4		
C931	A2	R929	A4	D908	B1	R916	B1	R926B	B1	R977	B1	C924	B2	C959	B2	C954	C1	R925	C1	R989	C1	C925	C2	C973	C2	R976	C2	C940	C3	C964C	C3	R958	C3	R997	C3	R950	C4		



AMP BOARD

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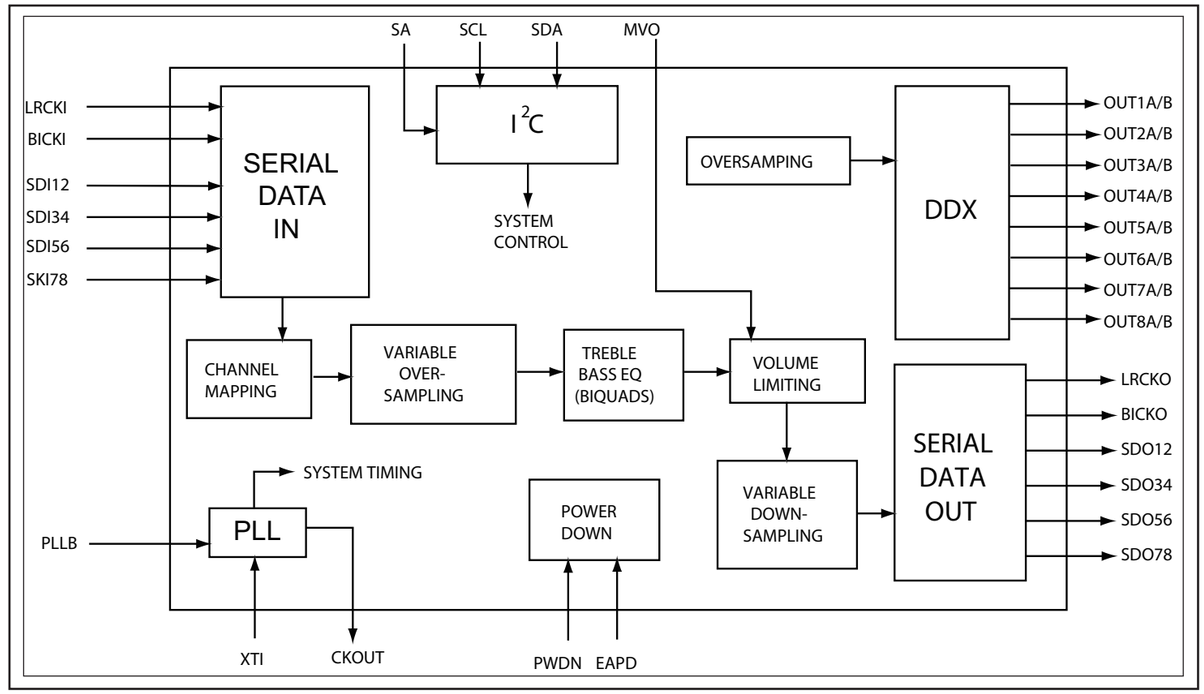
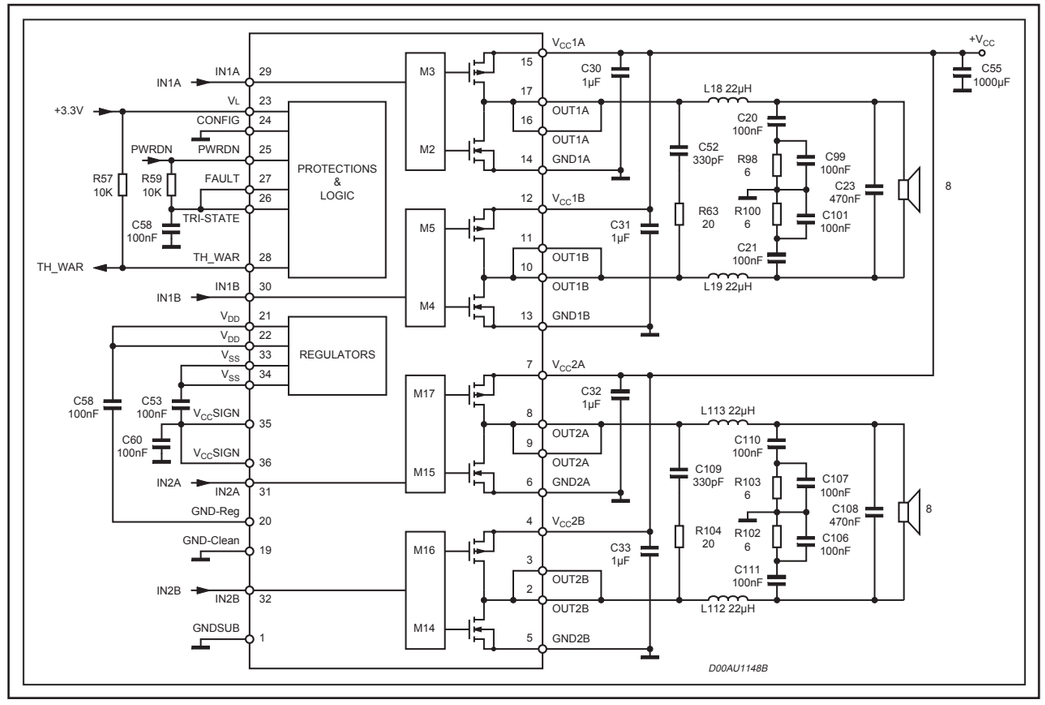
INTERNAL IC DIAGRAM - STA309A



INTERNAL IC DIAGRAM - STA516B



CIRCUIT DIAGRAM

C15	D4
C16	D4
C401	B1
C402	A1
C403	A1
C404	B1
C405	B1
C406	A1
C407	A2
C408	B2
C409	B2
C410	A2
C411	A2
C412	B2
C413	B2
C414	A2
C415	A2
C416	B2
C425	A1
C425A	A1
C426	A1
C427	A2
C427A	A2
C428	A2
C438	D3
C439	D3
C440	D3
C441	D3
C442	D3
C443	B1
C445	C1
C446	D4
C448	B1
C449	B2
C450	B1
C451	B1
C452	B1
C453	B2
C454	B2
C455	B2
C461	D4
C462	C2
C463	C2
C464	C2
C465	C2
C468	B1
C469	B2
C470	B1
C471	B1
C472	B2
C473	B2
C476	B1
C477	B1
C478	B2
C479	B2
C482	B2
C483	B2
C490	D2
C496	D1
C497	C1
C498	C1
C499	C1
C500	C1
C501	C1
C502	C2
C503	C2
C504	C2
C505	C2
C506	C2
C507	C2
C508	C2
C513	D4
C515	D1
C516	D2
C517	D2
C518	C1
C519	D1
C520	C1
C521	C1
C522	C1
C523	C2
C526	C1
C528	C2
C529	D2
C530	D2
C531	D2
C533	D2
C534	D2
C535	D2
C536	D2
C537	D2
C538	D2
C539	D2
C540	D2
C541	D2
C542	D3
C545	D4
C601	D3
C602	D3
CE401	B3
CE402	B3
CE403	B3
CE404	B3
CE405	B3
CE406	B3
CE407	B3
CE408	B3
CE409	C3
CE410	C3
CE411	C3
CE412	C3
CN401	B1
CN402	C4
CN403	D1
D403	A3
D403	A4
D404	C1
D404	C1
D405	C2
D406	D2
D407	D2
D408	D2
D410	C4
D411	D3
D412	D3
D413	D3
D414	D3
D415	D3
D416	D3
D420	D2
EC1	A3
EC2	A3
EC3	A3
EC4	A3
EC5	A3
EC6	A3
EC7	A3
EC8	A3
FB1	C2
FB401	C3
FB402	A1
FB403	A1
FB404	A1
FB405	A1
FB406	A1
FB407	A1
IC401	B1
IC402	B2
IC404	D3
IC406	C2
JK401	A2
JK401A	A2
L402	A2
L404	A2
L407	B1
L408	B1
L409	B1
L410	B2
L411	B2
L412	B2
L413	B2
L414	B2
Q407	C1
Q410	D2
Q411	D4
Q412	D4
Q413	C1
Q414	C1
Q415	C1
Q416	C4
Q418	D4
Q601	D3
R1	A1
R2	A1
R3	A1
R4	A1
R401	D4
R402	D4
R403	D4
R404	D4
R405	D4
R406	B1
R407	B2
R408	B2
R409	B2
R412	D4
R413	B1
R414	B1
R419	B1
R420	B2
R421	B2
R422	B2
R423	B2
R424	B2
R429	D4
R430	D3
R431	D3
R432	D3
R433	D3
R444	C1
R445	C1
R446	C1
R447	C2
R448	C2
R451	D4
R452	D4
R453	D4
R454	D4
R455	D2
R456	D2
R458	D4
R461	D4
R462	D4
R466	D3
R467	D3
R472	D1
R473	D4
R474	D4
R479	C2
R482	B1
R483	B1
R484	B2
R485	B2
R490	B4
R495	B4
R497	B4
R5	A2
R501	B4
R502	C1
R508	C1
R509	C1
R510	C1
R511	C1
R513	C4
R514	D4
R515	D1
R516	D1
R517	D1
R518	D1
R519	D1
R520	D1
R522	D2
R523	D2
R525	D2
R526	D3
R527	D3
R528	D3
R529	D3
R530	D3
R531	D3
R533	D4
R6	A2
R601	D3
R602	D3
R603	D3
R604	D3
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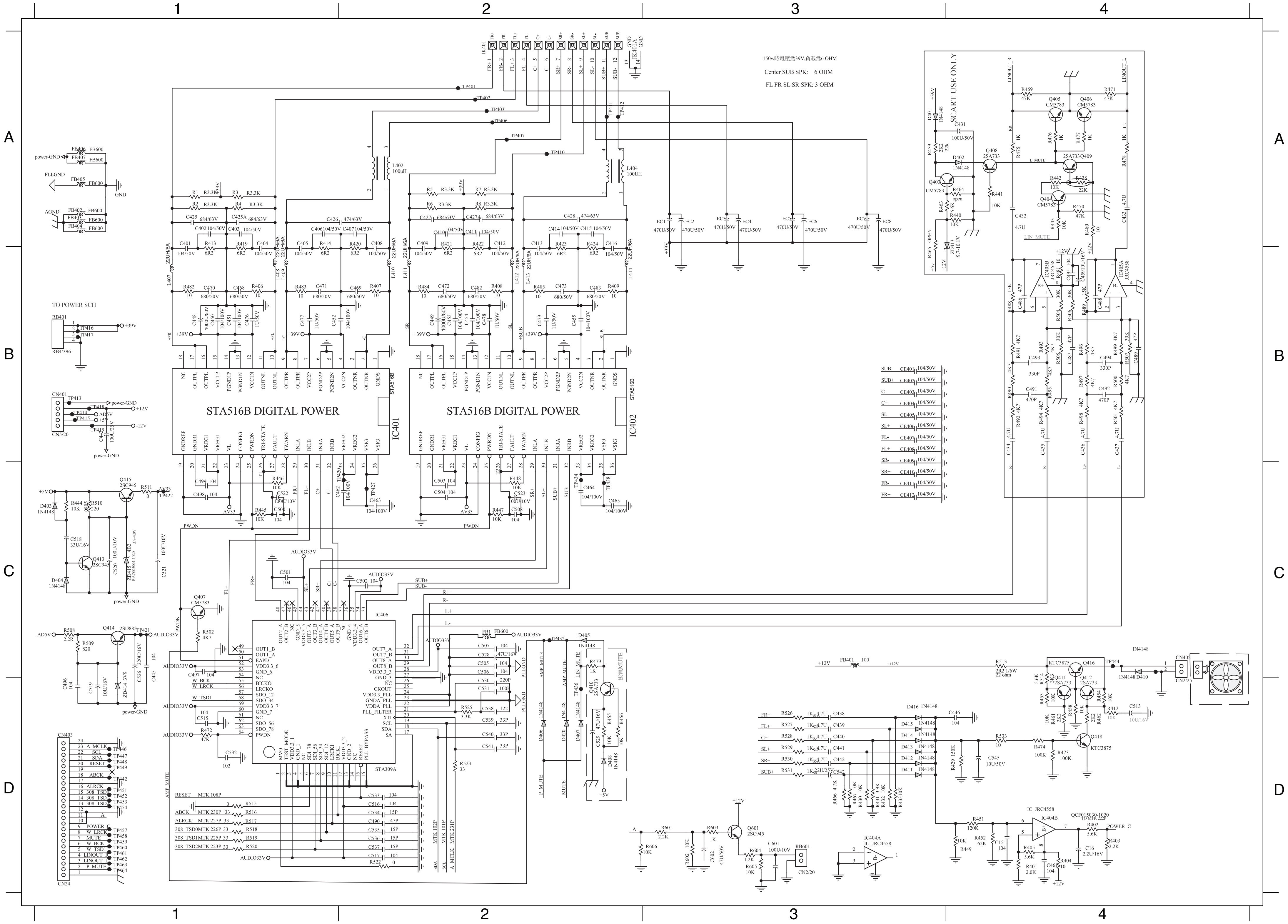
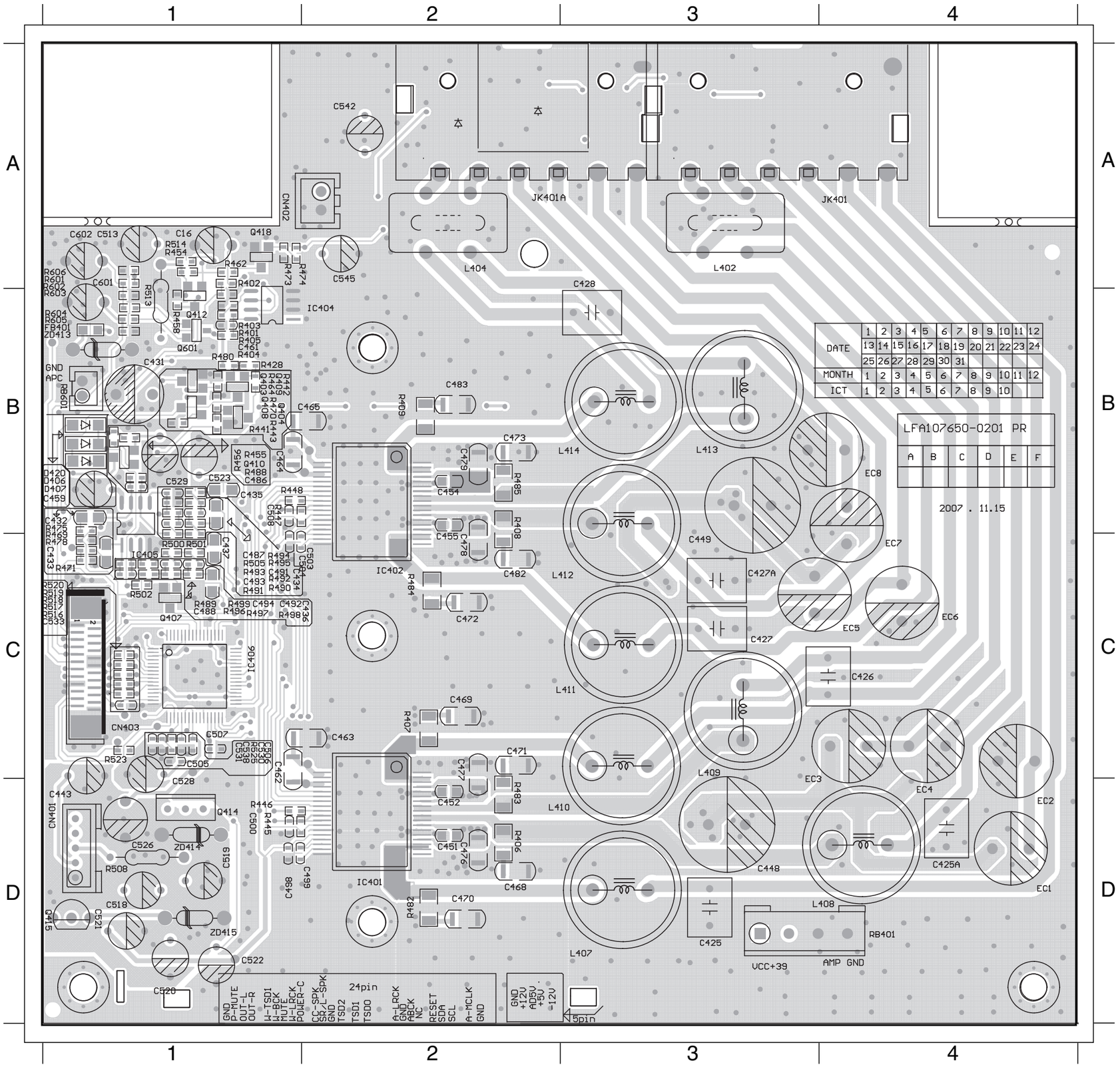
R7	A2
R8	A2
RB401	B1
RB601	D3
ZD414	D1
ZD415	C1

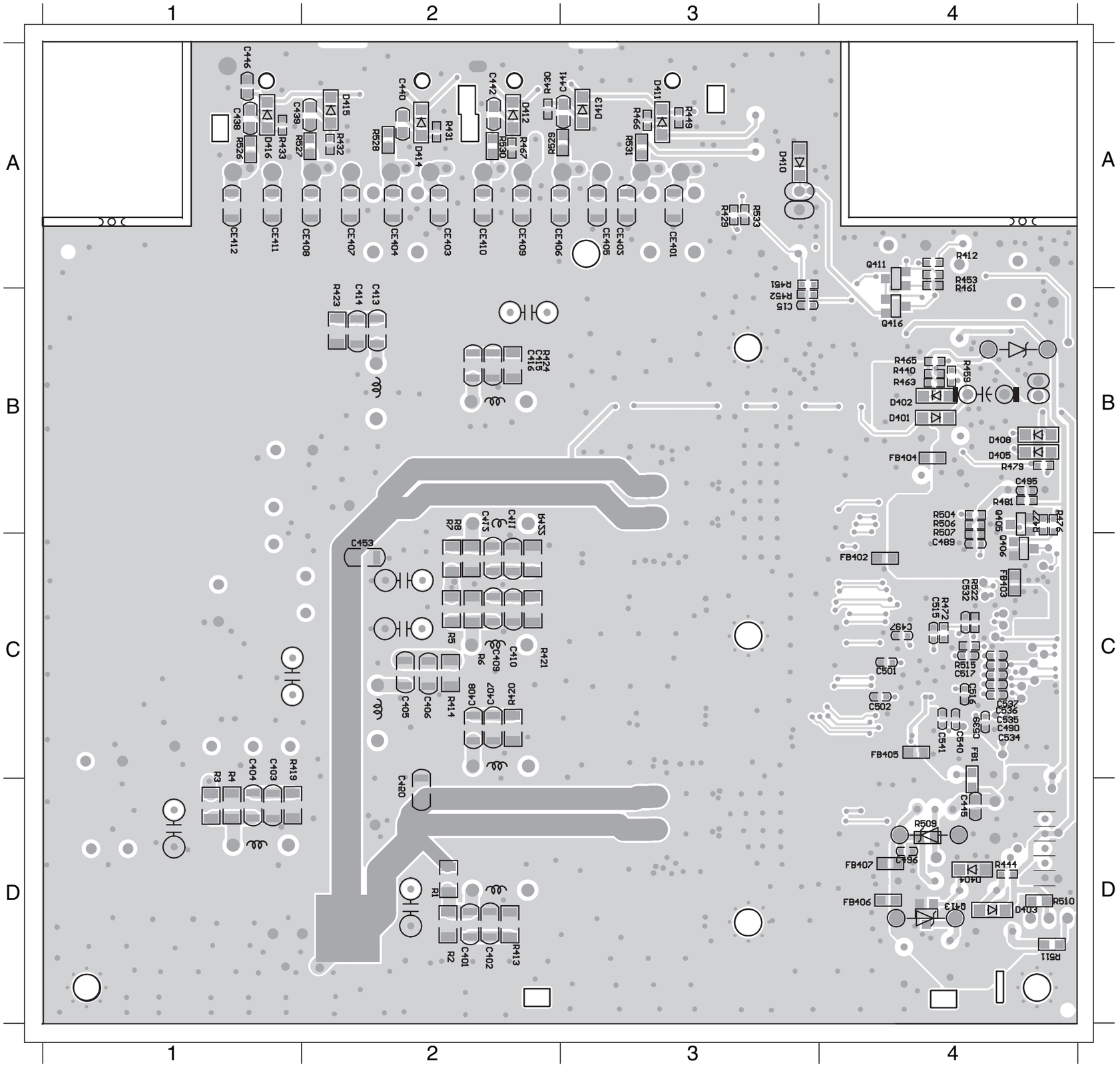


PCB LAYOUT - TOP VIEW



C16	A1	C545	A2	R455	B1
C425	D3	C601	A1	R456	B1
C425A	D4	C602	A1	R458	B1
C426	C4	CN401	D1	R462	A1
C427	C3	CN402	A1	R473	A1
C427A	C3	CN403	C1	R474	A1
C428	B3	D406	B1	R482	D2
C443	D1	D407	B1	R483	D2
C448	D3	D420	B1	R484	C2
C449	C3	EC1	D4	R485	B2
C451	D2	EC2	C4	R490	B1
C452	D2	EC3	C4	R495	B1
C454	B2	EC4	C4	R497	C1
C455	B2	EC5	C4	R501	C1
C461	B1	EC6	C4	R502	C1
C462	C1	EC7	C4	R508	D1
C463	C2	EC8	B4	R513	B1
C464	B1	FB401	B1	R514	A1
C465	B1	IC401	D2	R516	C1
C468	D2	IC402	C2	R517	C1
C469	C2	IC404	B1	R518	C1
C470	D2	IC406	C1	R519	C1
C471	C2	JK401	A4	R520	C1
C472	C2	JK401A	A2	R523	C1
C473	B2	L402	A3	R525	C1
C476	D2	L404	A2	R601	A1
C477	C2	L407	D3	R602	B1
C478	C2	L408	D4	R603	B1
C479	B2	L409	D3	R604	B1
C482	C2	L410	D3	R605	B1
C483	B2	L411	C3	RB401	D4
C498	D1	L412	C3	RB601	B1
C499	D1	L413	B3	ZD414	D1
C500	D1	L414	B3	ZD415	D1
C503	C1	Q407	C1		
C504	C1	Q410	B1		
C505	C1	Q412	B1		
C506	C1	Q414	D1		
C507	C1	Q415	D1		
C508	B1	Q418	A1		
C513	A1	Q601	B1		
C518	D1	R401	B1		
C519	D1	R402	A1		
C520	D1	R403	B1		
C521	D1	R404	B1		
C522	D1	R405	B1		
C523	B1	R406	D2		
C526	D1	R407	C2		
C528	C1	R408	B2		
C529	B1	R409	B2		
C530	C1	R445	D1		
C531	C1	R446	D1		
C533	C1	R447	B1		
C538	C1	R448	B1		
C542	A2	R454	A1		

PCB LAYOUT - BOTTOM VIEW



C15	B3	D405	B4	R531	A3
C401	D2	D408	B4	R533	A3
C402	D2	D410	A3	R6	C2
C403	D1	D411	A3	R7	C2
C404	D1	D412	A2	R8	C2
C405	C2	D413	A3		
C406	C2	D414	A2		
C407	C2	D415	A2		
C408	C2	D416	A1		
C409	C2	FB1	C4		
C410	C2	FB402	C4		
C411	C2	FB403	C4		
C412	C2	FB404	B4		
C413	B2	FB405	C4		
C414	B2	FB406	D4		
C415	B2	FB407	D4		
C416	B2	Q411	A4		
C438	A1	Q413	D4		
C439	A2	Q416	B4		
C440	A2	R1	D2		
C441	A3	R2	D2		
C442	A2	R3	D1		
C445	D4	R4	D1		
C446	A1	R412	A4		
C450	D2	R413	D2		
C453	C2	R414	C2		
C490	C4	R419	D1		
C496	D4	R420	C2		
C497	C4	R421	C2		
C501	C4	R422	C2		
C502	C4	R423	B2		
C515	C4	R424	B2		
C516	C4	R429	A3		
C517	C4	R430	A2		
C534	C4	R431	A2		
C535	C4	R432	A2		
C536	C4	R433	A1		
C537	C4	R444	D4		
C539	C4	R451	A3		
C540	C4	R452	B3		
C541	C4	R453	A4		
CE401	A3	R461	A4		
CE402	A3	R466	A3		
CE403	A2	R467	A2		
CE404	A2	R472	C4		
CE405	A3	R479	B4		
CE406	A2	R5	C2		
CE407	A2	R509	D4		
CE408	A2	R510	D4		
CE409	A2	R511	D4		
CE410	A2	R515	C4		
CE411	A1	R522	C4		
CE412	A1	R526	A1		
D403	B4	R527	A2		
D403	B4	R528	A2		
D404	D4	R529	A2		
D404	D4	R530	A2		

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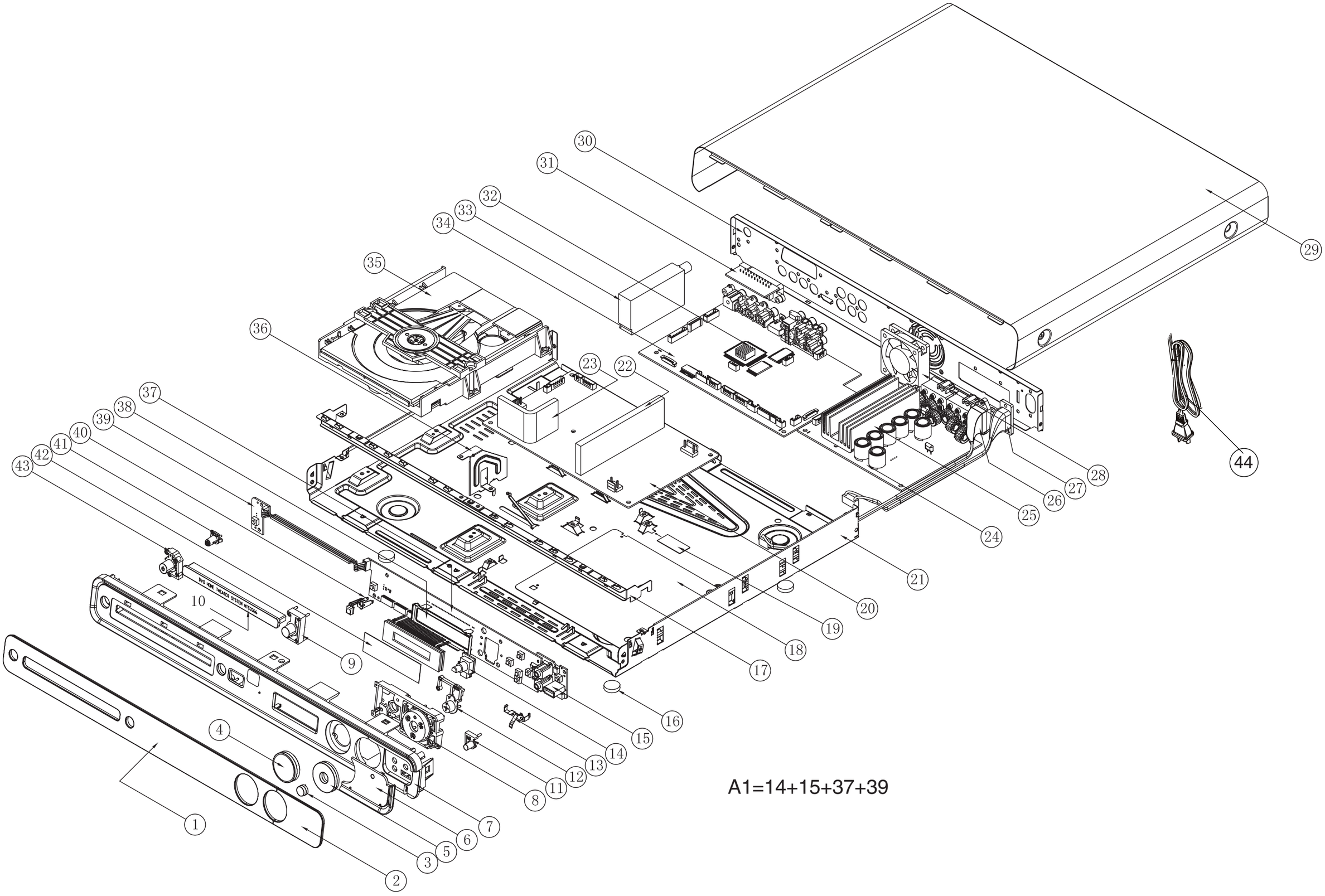
MECHANICAL EXPLODED VIEW



A1=14+15+37+39

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MECHANICAL PART LIST

Loc.	12NC.	Description

MECHANICAL PART LIST

1	996510012484	DISPLAY LENS PMMA
2	996510012485	USB DOOR LENS
3	996510010835	SOURCE BUTTON PC PMMA
4	996510010833	VOLUME KNOB PMMA PC
5	996510010832	FUNCTION BUTTON
6	996510010829	USB DOOR
7	996510012486	FRONT PANEL
8	996510010837	FUNCTION BRACKET
9	996510010834	EJECT KEY
10	996510012857	DVD DOOR
11	996510012488	MIC LEVEL BUTTON
12	996510010838	SOURCE BRACKET
16	996510010842	RUBBER FOOT
18	996510010826	PVC SHEET
19	996510010827	PVC SHEET
20	996510015350	POWER PCB
21	996510012217	BOTTOM PANEL
24	996510015061	AMP PCB ASSY
28	996510017571	FAN DC12V1.2W APEED:4000RPM
29	996510012858	TOP COVER
30	996510012859	REAR PANEL
33	996510011275	TUNER PACK
34	996510018478	MAIN PCB ASSY FULL SOUND MIC
35	996510017573	DVD LOADER ASA:WXD8829C+DM3381
41	996510010840	STANDBY LENS
43	996510010836	POWER KEY
44	996510002650	POWER CORD
A1	996510014546	VFD+JACK+VOL+STANDBY PCB
FM	996510008251	FM ANT
LSCREW	996510017273	SCREW
RC	996510012491	REMOTE CONTROL
V1	996510007429	GP FFCCBLE 10P100mmUL20798 P=1
V2	996510011292	FFC CABLE 24P 50mm
VIDEO	996500013058	RCA CABLE 2P 1.2M

Speaker

RFC	996510001599	RUBBER FOOT -CENTER SPK
RFF	996510001601	RUBBER FOOT - REAR SPK
RFR	996510012224	RUBBER FOOT - REAR
RFS	996510010854	RUBBER FOOT -SUB
SPKC	996510017274	SPEAKER BOX -CENTER
SPKFL	996510017275	SPEAKER BOX -FRONT LEFT
SPKFR	996510017276	SPEAKER BOX - FRONT RIGHT
SPKRL	996510017277	SPEAKER BOX- REAR LEFT
SPKRR	996510017278	SPEAKER BOX- REAR RIGHT
SUBW	996510017279	SUBWOOFER

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REVISION LIST

Version 1.0
*Initial release