DVD Home Theater System HTS3576/78

Service
Service
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Service Manual

TABLE OF CONTENTS

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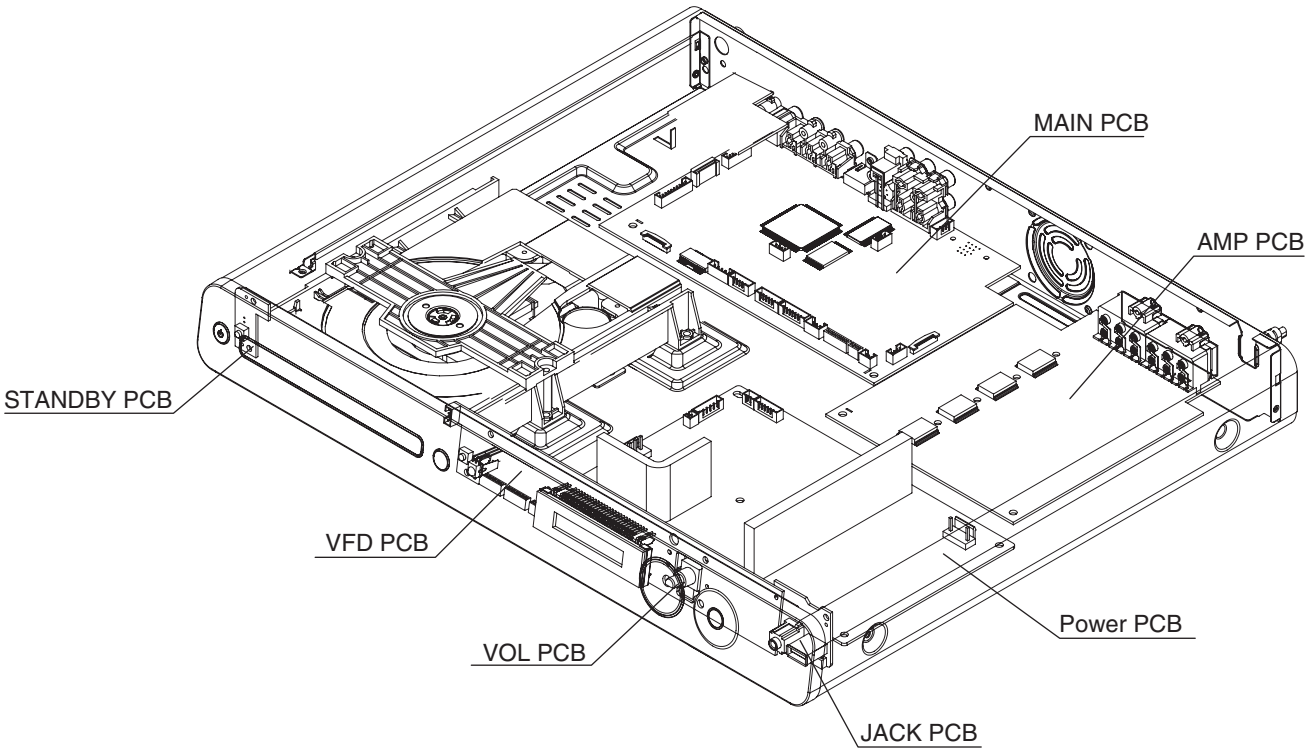
GB 3139 785 34900

Version 1.0

PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions / Features	HTS3576 /78
Output Power - 1200W	X
Voltage (110~127V)	X
Voltage (220~240V)	X

SERVICE SCNARIO MATRIX:

Type/Versions / Board in used	HTS3576 /78
MAIN Board	C
Power Board	C
VFD+JACK+VOL+STANDBY Board	C
AMP 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 fl ash drive.

Amplifier

Total output power.....
Home Theatre mode.....1200 W RMS (2 X 260 + 4 X 170)
Frequency response..... 40 Hz ~ 20 kHz
Signal-to-noise ratio.....> 60 dB (A-weighted)
Input sensitivity.....
AUX1 ..... 400 mV
AUX2 ..... 400 mV
MP3 LINK ..... 250 mV

Disc

Laser Type..... Semiconductor
Disc diameter..... 12 cm / 8 cm
Video decording..... 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 (50/100 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 .....High Speed USB (2.0)
Class support..... UMS (USB Mass Storage Class)
File system FAT12, FAT16, FAT32

Main Unit

Power supply.....110-127 V/220-240 V; ~50-60 Hz switchable
Power consumption..... 200 W
Standby power consumption ..... < 1 W
Dimensions (WxHxD) ..... 435 x 57 x 365 (mm)
Weight ..... 3.63 kg

Speakers

System..... full range satellite
Speaker impedance.....
Front/Rear ..... 4 Ohm
Centre..... 3 Ohm
Speaker drivers .....
Centre.....2 X 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..... 1.43 kg
- Front..... 0.58 kg
- Rear..... 3.55 kg

Subwoofer

Impedance..... 3 ohm
Speaker drivers ..... 203 mm (8”) woofer
Frequency response..... 40 Hz ~ 150 Hz
Dimensions (WxHxD) ..... 242 x 352 x 360 (mm)
Weight ..... 5.76 kg

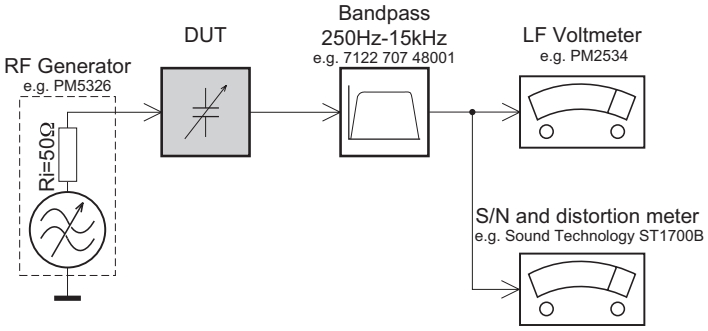
Laser specifi cation

Type..... Semiconductor laser GaAIAs (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

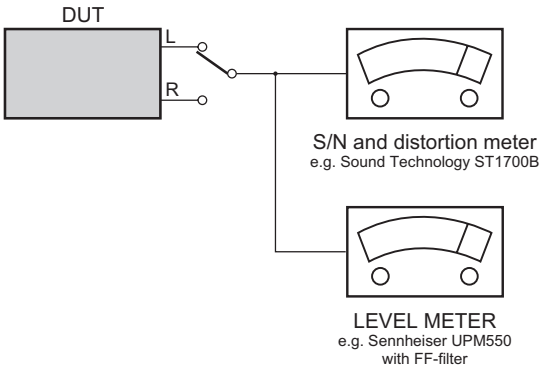
Tuner FM



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

CD

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



SERVICE AIDS

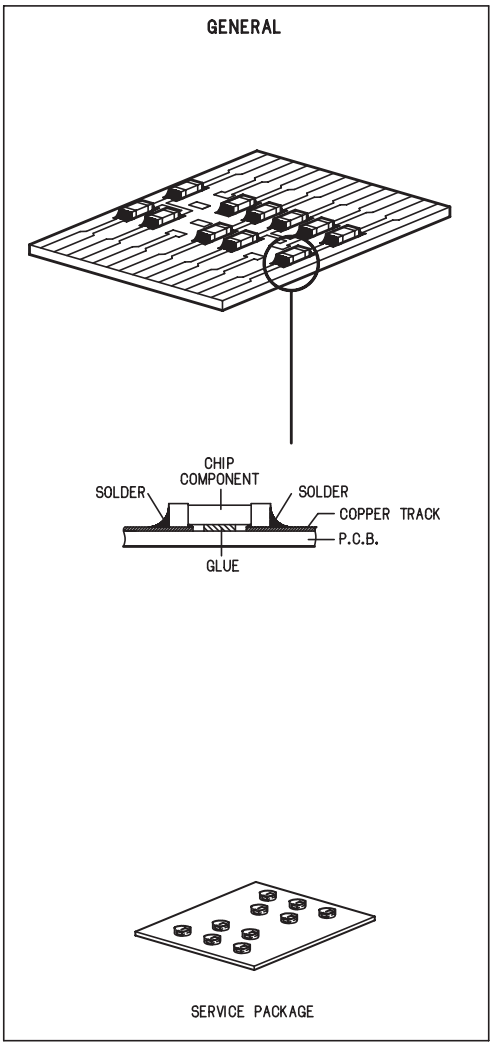
Service Tools:

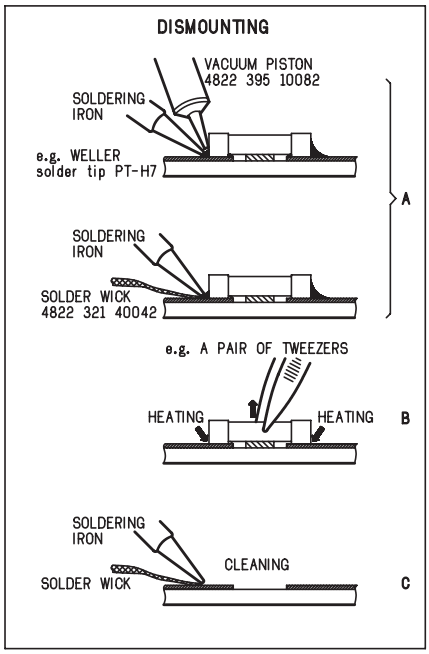
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 .....4822 395 50145
Torx driver T10 extended 4822 395 50423

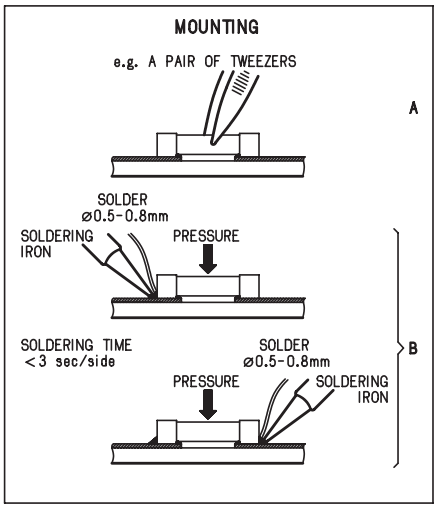
Compact Disc:

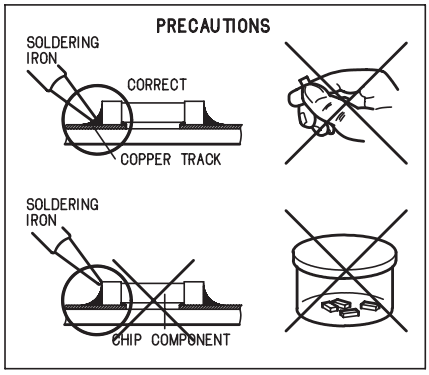
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

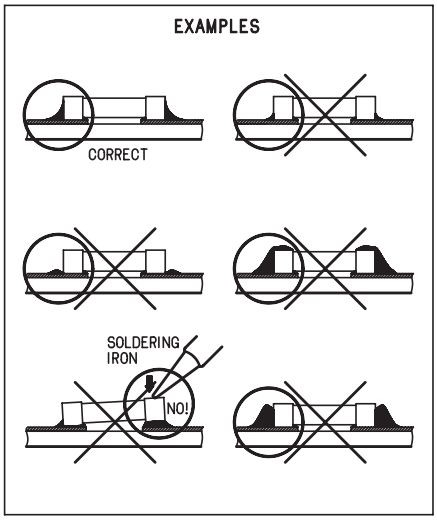
HANDLING CHIP COMPONENTS











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 “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.

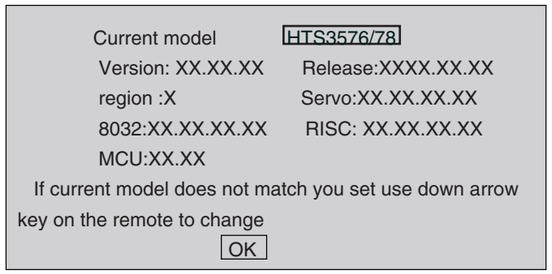
2)Region Code Change

a) In open mode, press”9” “9“ “9“ “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:



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

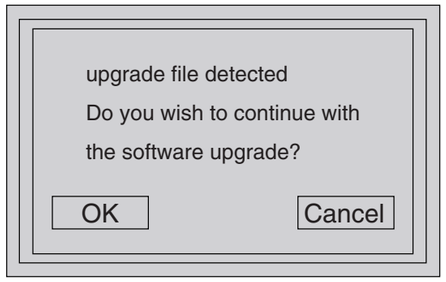
a) Press “Open/Close “ button on R/C.
b) Press “2” “5” “9” on R/C,VFD will display “TRA ON “ or “TRA OFF“.

8) Produce to Change Tuner Grid

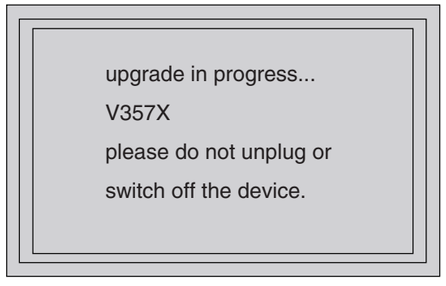
(only applicable for certain regions)
In some countries, the frequency step between adjacent channels in the FM band is 50kHz (100kHz in some areas).
a) Press “source” to select “FM”.
b) In “FM” playback mode, press & hold “play/pause” button until Grid 9” or “Grid 10” appears.
Note: repeating the same action will toggle back to it previous tuning grid setting.
* “Grid 10” is default for/98 version.

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:



f) Select “OK”, OSD will show:



CAUTION!

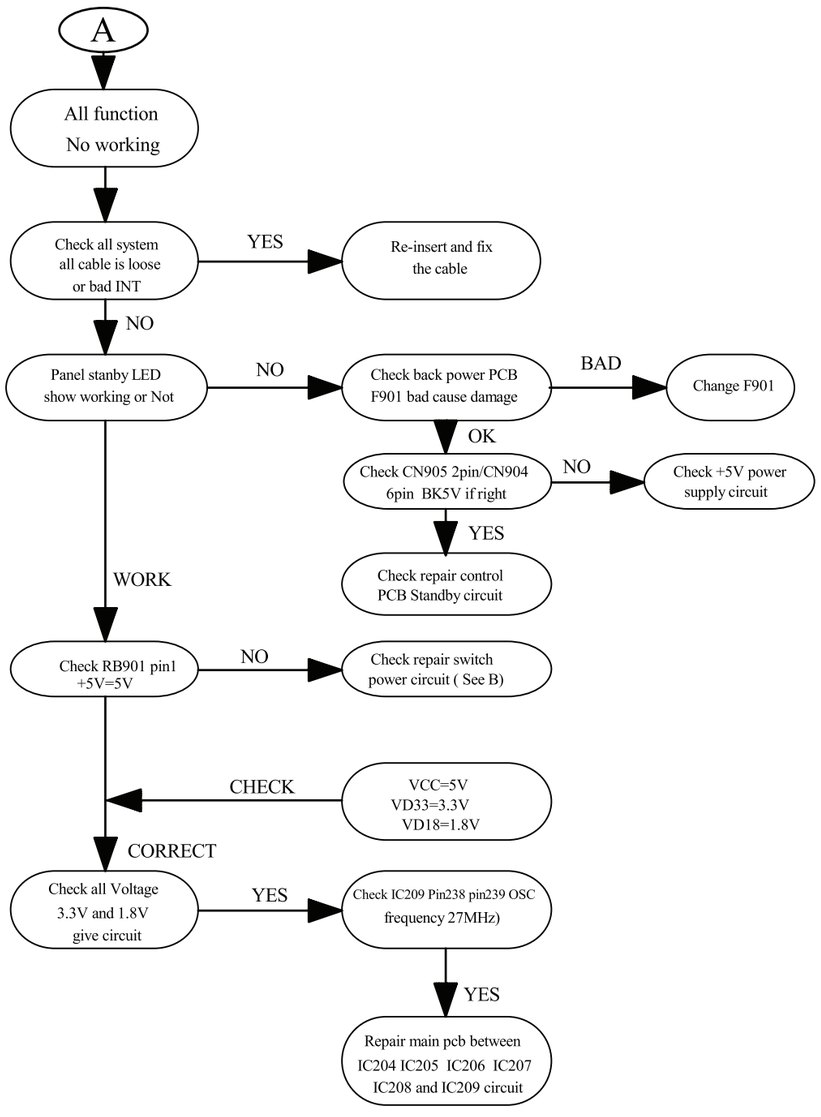
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

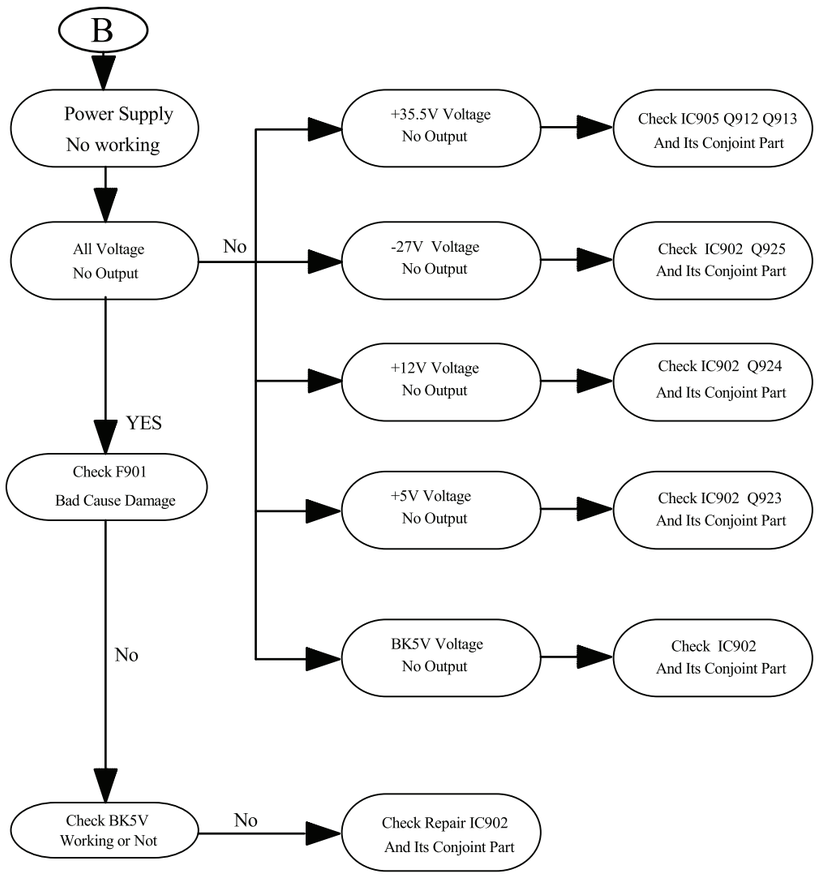
2 - 2

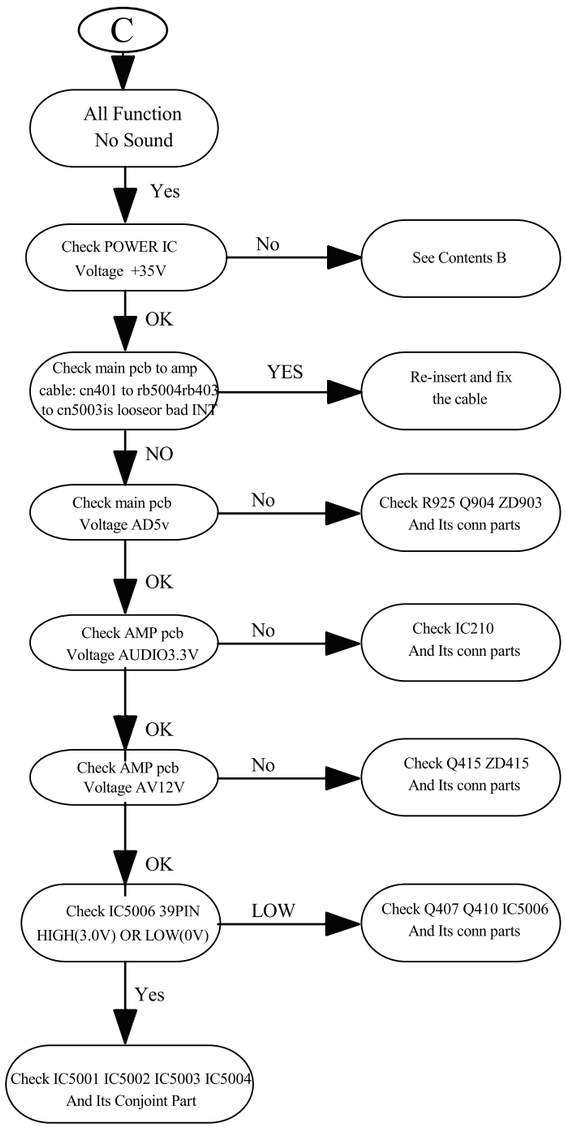
REPAIR INSTRUCTIONS (ONE)

MAIN UNIT REPAIR CHART 1/3

A All Function No Working
B Power Supply No Working
C All Function No Sound
D KARAOKE input No Sound
E Audio line IN No Output
G DVD Audio No Sound
H MP3 In No Sound
I COAXIAL In No Sound
L Tuner No Sound
M No Optical Input
O HDMI No Output
P No CVBS Output
Q No Y Pr Pb output



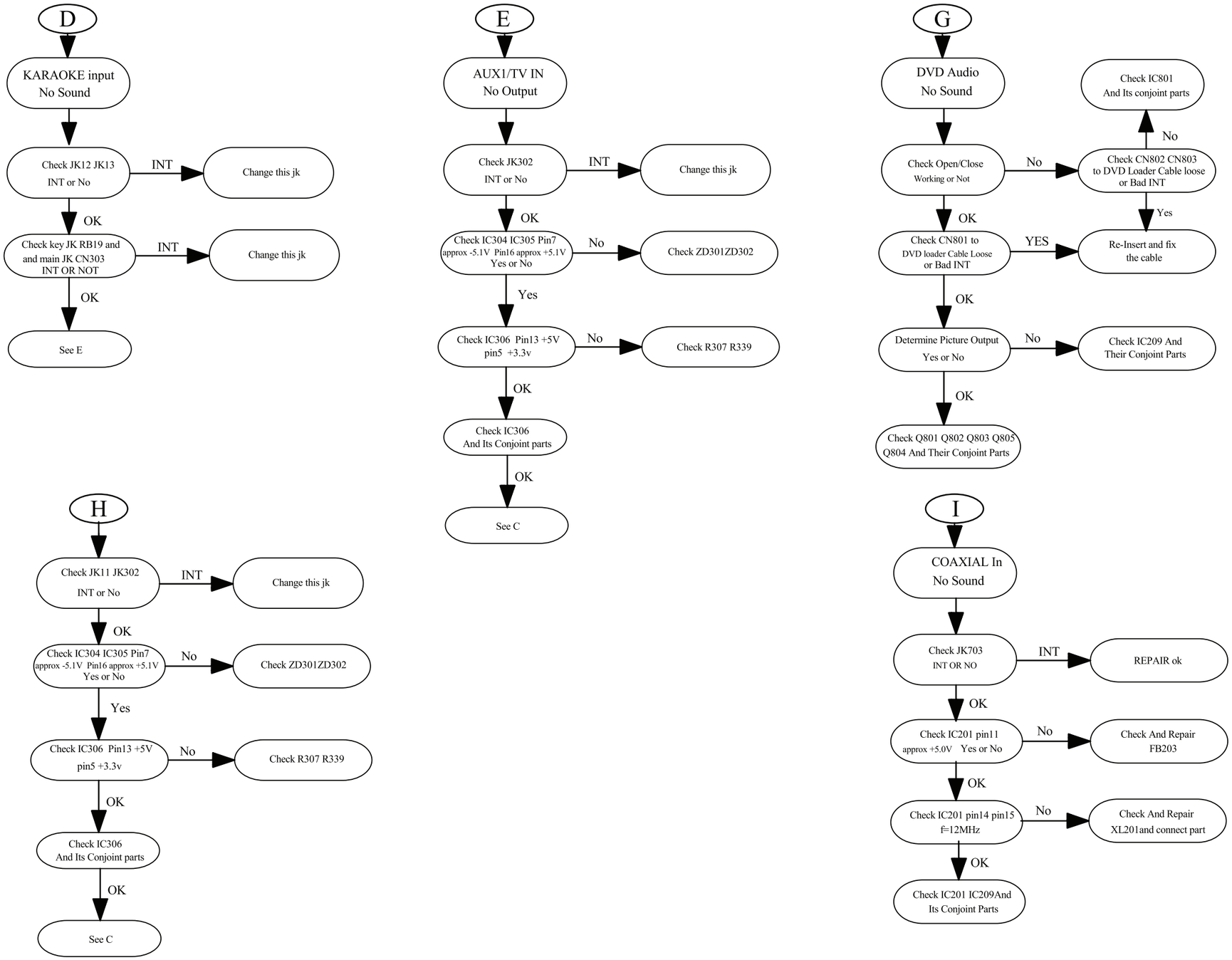




2 - 3

REPAIR INSTRUCTIONS (TWO)

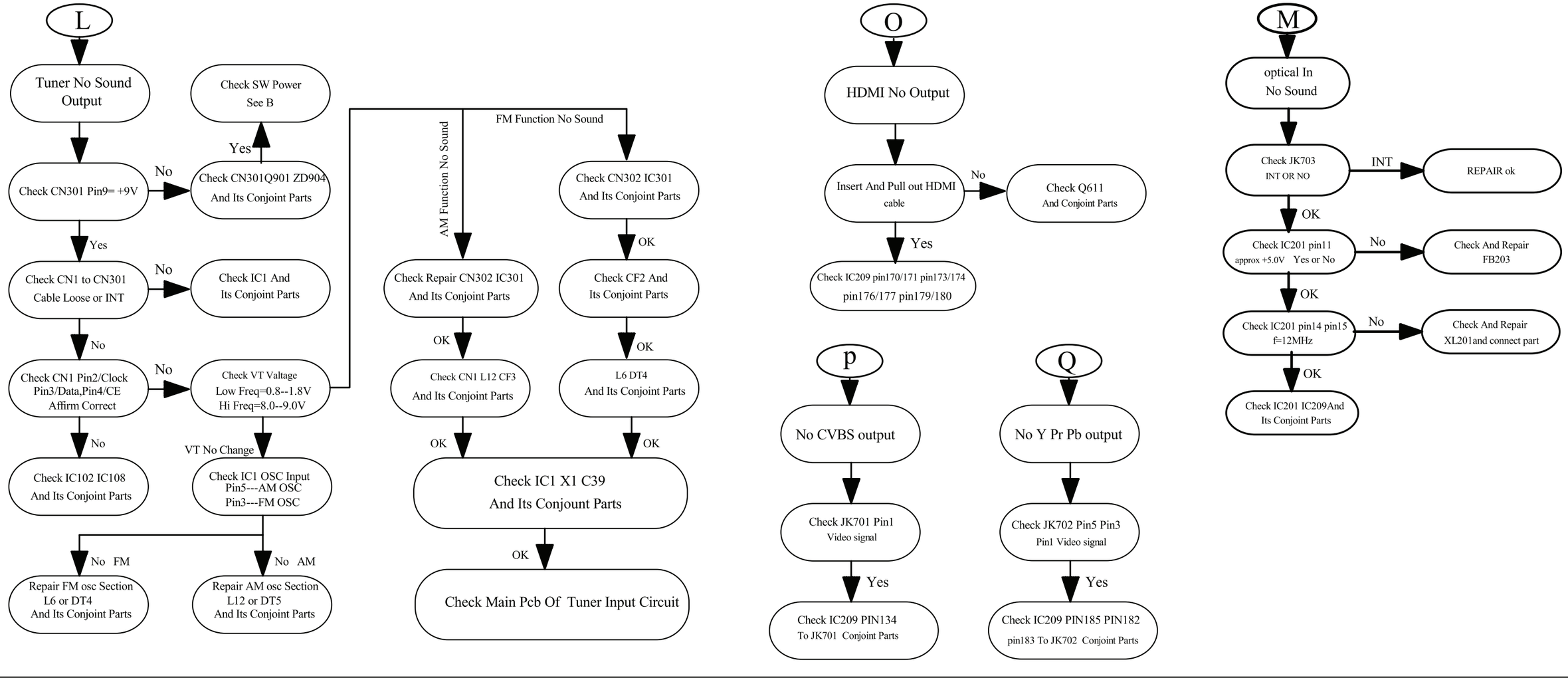
MAIN UNIT REPAIR CHART 2/3



2 - 4

REPAIR INSTRUCTIONS (THREE)

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 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.

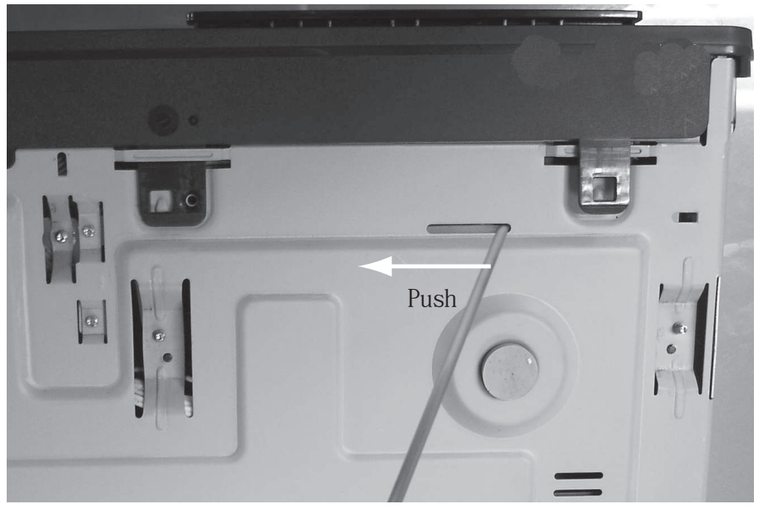


Figure 1

Figure 2

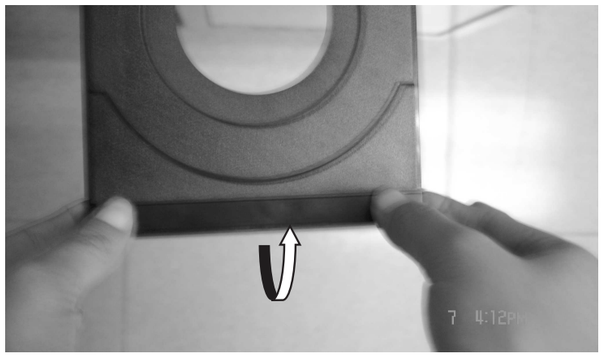


Figure 3

3 - 1

3) Loosen 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 5 screws “C“ at the front panel bracket as shown in figure 6,and loosen 1 screw “D“ at the front panel bottom as shown in figure 7 to remove front panel.

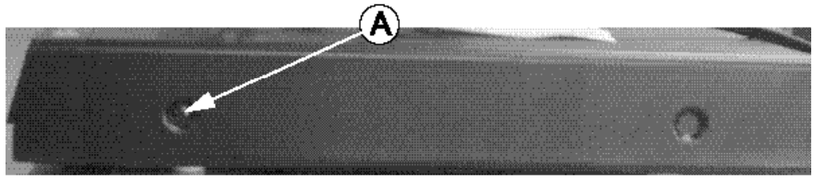


Figure 4

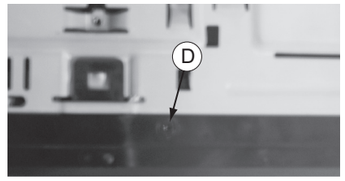


Figure 7

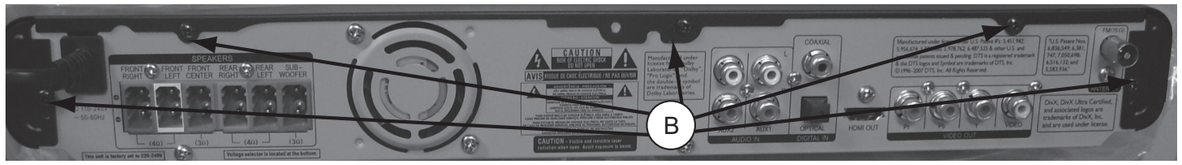


Figure 5

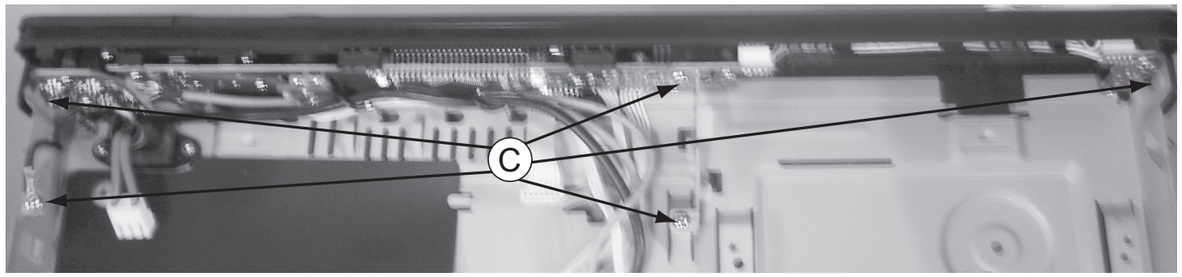


Figure 6

Dismantling of the DVD Module

1) Loosen 4 screws “ E “ at the DVD Module as shown in figure 8.

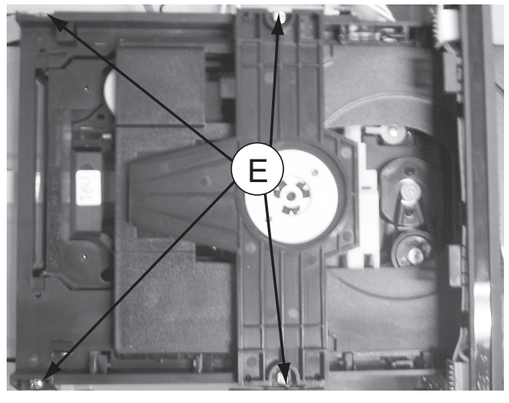


Figure 8

Dismantling of the VFD+JACK+VOL+STANDBY Board

1) Loosen 10 screws “F” on the top of VFD+JACK+VOL+STANDBY Board as shown in figure 9.

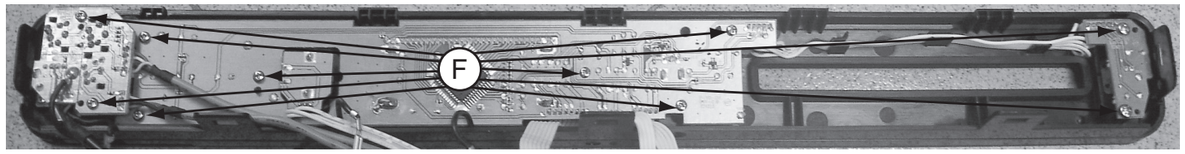


Figure 9

Dismantling of the Main Board

1) Loosen 2 screws “G” on the top of Main Board as shown in figure 10.
2) Loosen 6 screws “H“ at the back panel as shown in figure 11.

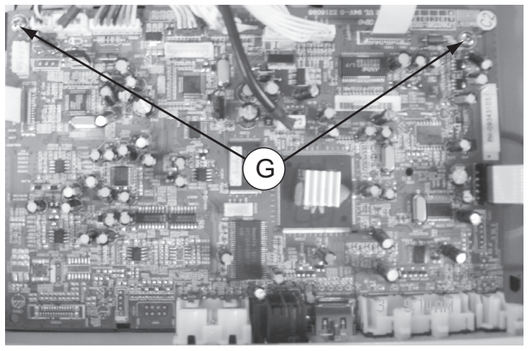


Figure 10

Figure 11

Dismantling of the Power Board

1) Loosen 5 screws “I” on the top of Power Board as shown in figure 12.

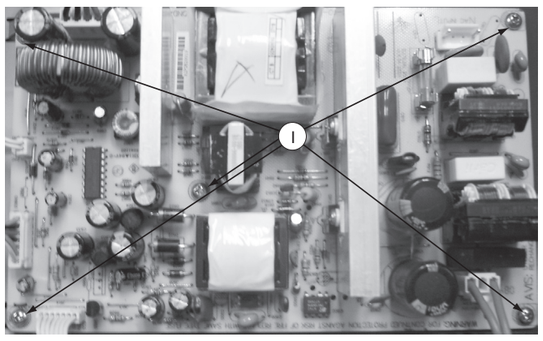


Figure 12

Dismantling of the AMP Board

1) Loosen 2 screws “J” on the top of AMP Board as shown in figure 13.
2) Loosen 2 screws “K“ at the back panel as shown in figure 14.

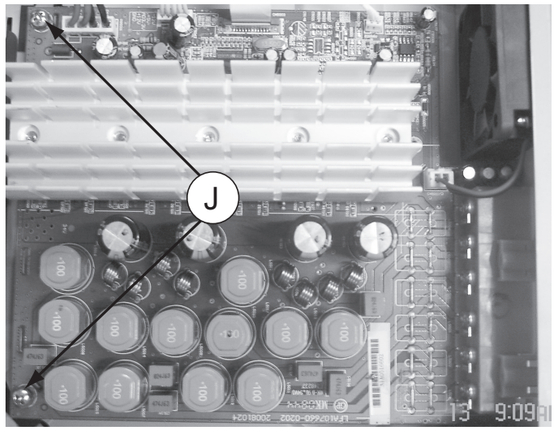


Figure 13

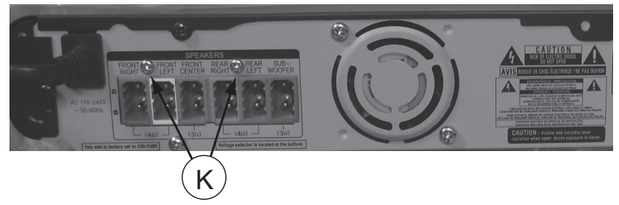
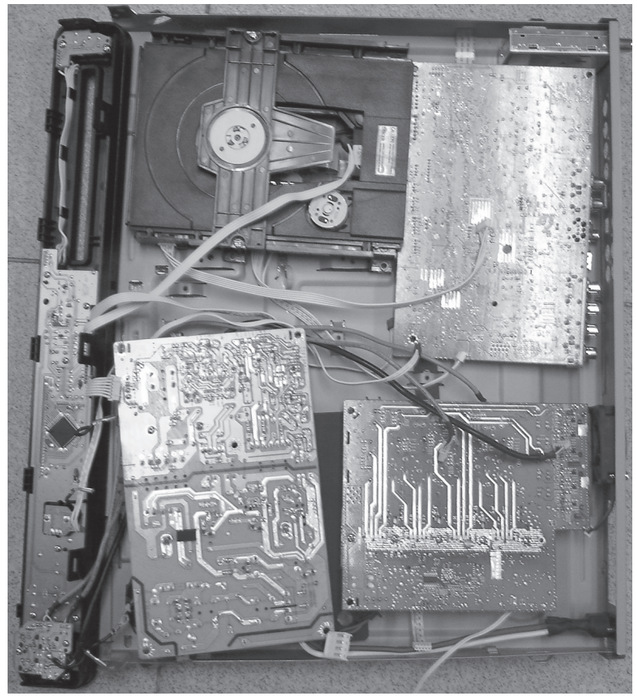


Figure 14

SERVICE POSITIONS

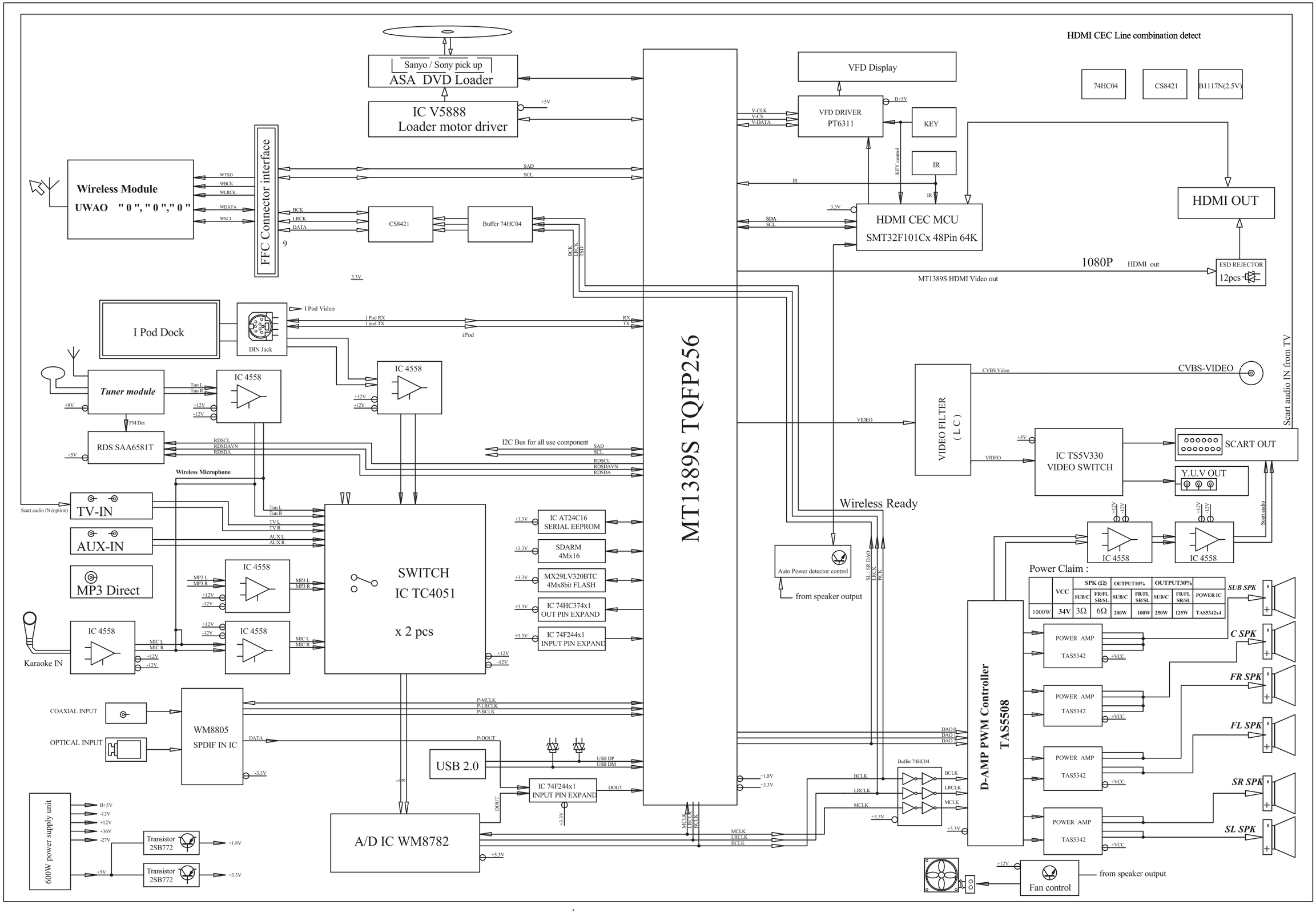
Service position A



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.

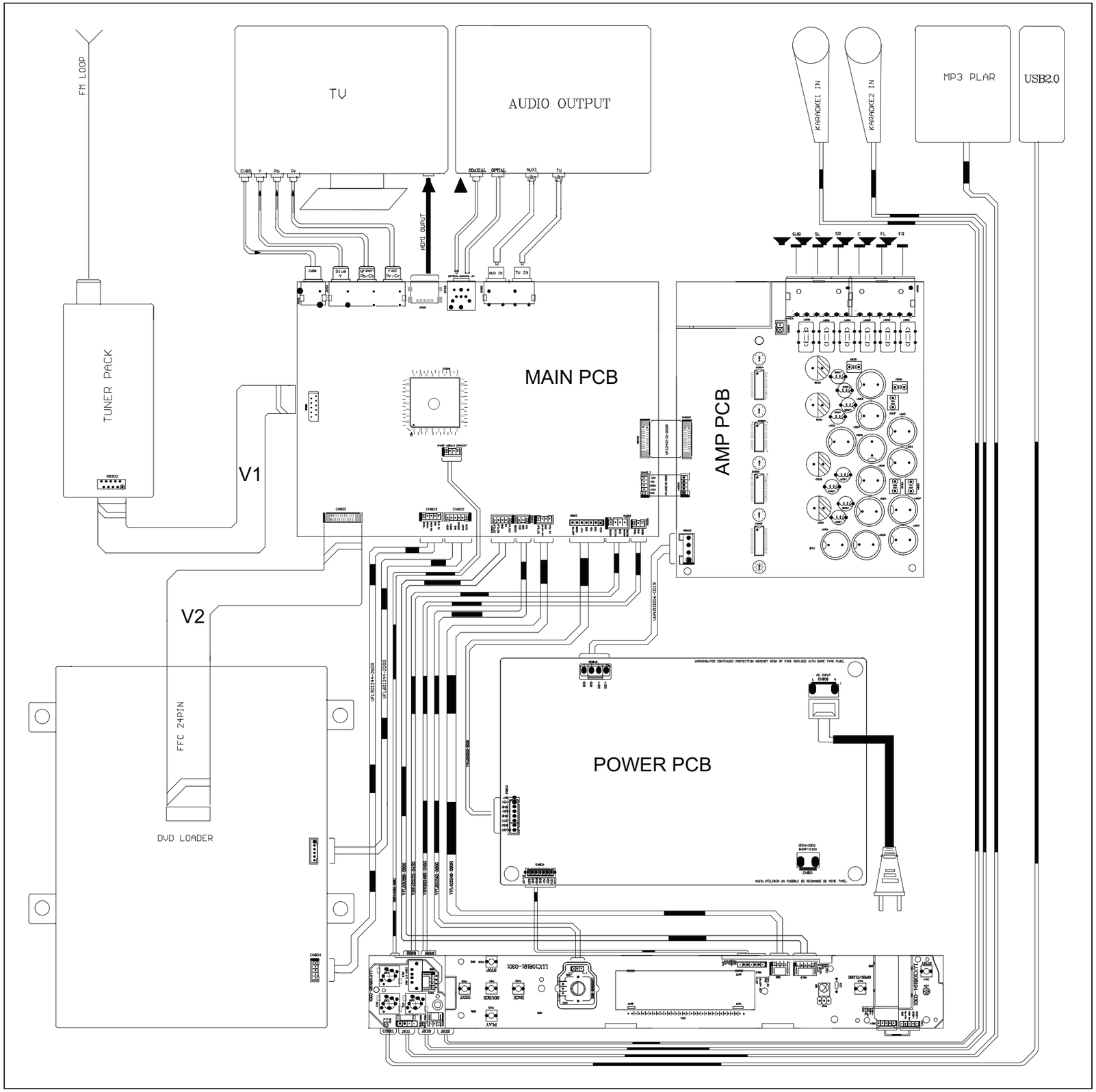
4 - 1

BLOCK DIAGRAM



4 - 2

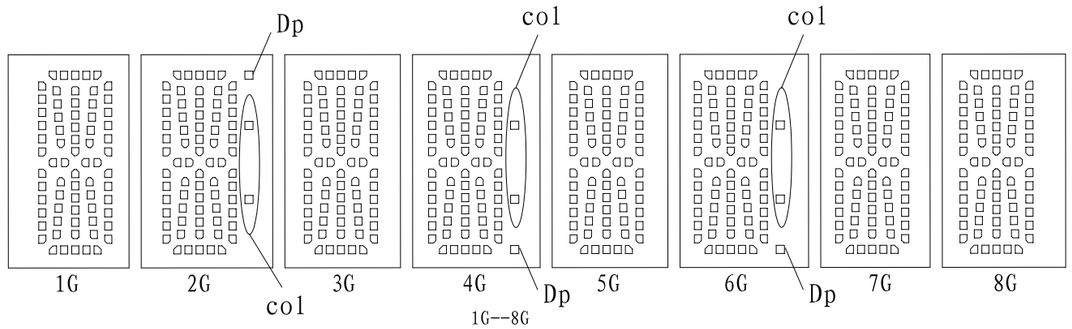
WIRING DIAGRAM



VFD+JACK+VOL+STANDBY BOARD

TABLE OF CONTENTS

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

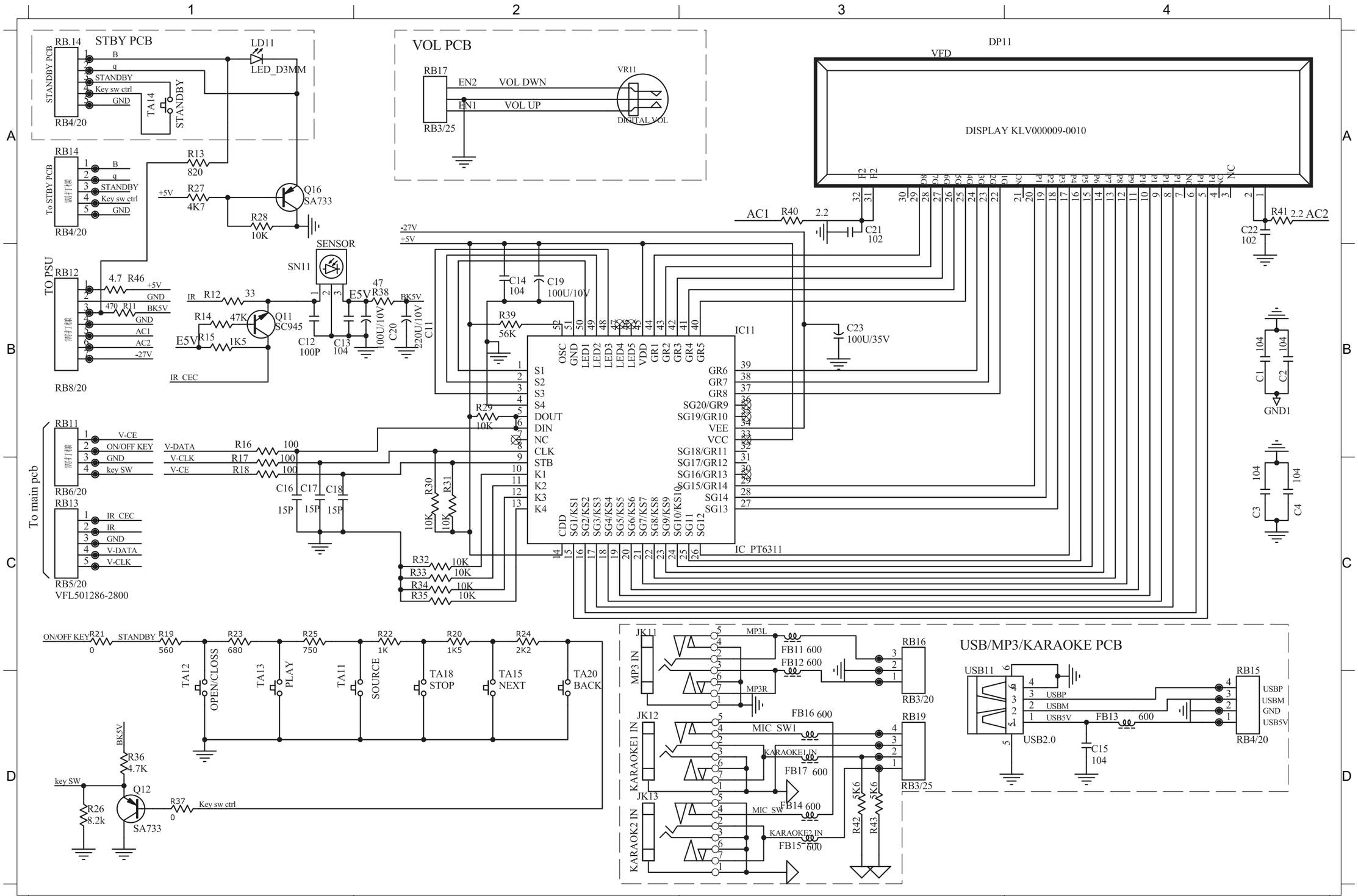
(Pin NO.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(Connection)	F1	F1	NP	NC	P15	P14	NC	P13	P12	P11	P10	P9	P8	P7	P6	P5
(Pin NO.)	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
(Connection)	P4	P3	P2	P1	NC	1G	2G	3G	4G	5G	6G	7G	8G	NP	F2	F2

(Notes) : Fn : (Filament Pin) nG : (Grid Pin)
Pn : (Anode Pin) NP : (No Pin)
NC : (No connection Pin)

5 - 2

CIRCUIT DIAGRAM

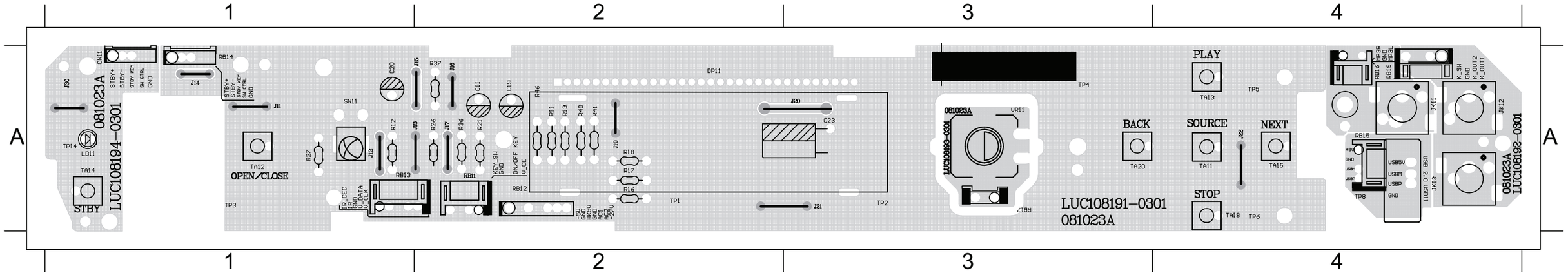
C11	B2	C15	D4	C19	B2	C23	B3	FB13	D4	FB17	D3	JK13	D2	Q16	A1	R14	B1	R18	C1	R22	C2	R27	A1	R31	C2	R35	C2	R40	A3	R46	B1	RB14	A1	RB19	D3	TA13	C1	TA20	D2
C12	B1	C16	C1	C20	B2	DP11	A3	FB14	D3	IC11	B3	LD11	A1	R11	B1	R15	B1	R19	C1	R23	C1	R28	A1	R32	C2	R37	D1	R41	A4	RB11	B1	RB15	C4	SN11	B1	TA14	A1	USB11	C3
C13	B1	C17	C1	C21	A3	FB11	C3	FB15	D3	JK11	C2	Q11	B1	R12	B1	R16	B1	R20	C2	R24	C2	R29	B2	R33	C2	R38	B2	R42	D3	RB12	B1	RB16	C3	TA11	C1	TA15	D2	VR11	A2
C14	B2	C18	C1	C22	A4	FB12	C3	FB16	D3	JK12	D2	Q12	D1	R13	A1	R17	C1	R21	C1	R25	C1	R30	C2	R34	C2	R39	B2	R43	D3	RB13	C1	RB17	A2	TA12	C1	TA18	D2		



5 - 3

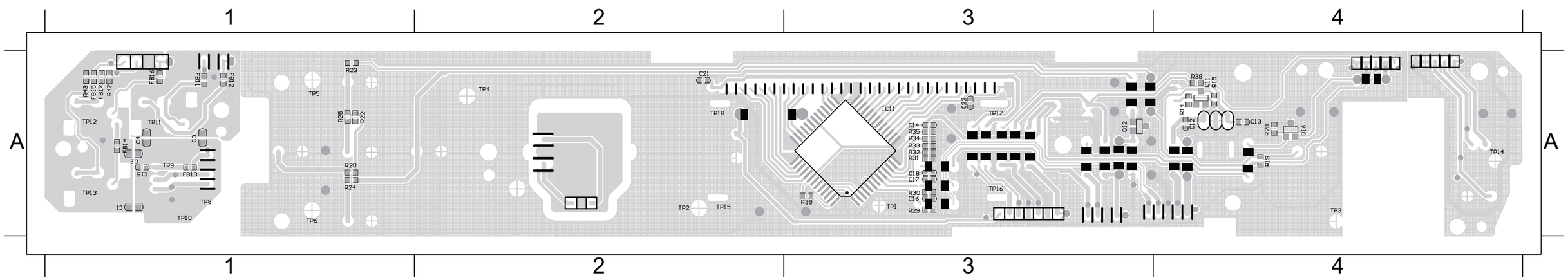
PCB LAYOUT - TOP VIEW

C11 A2 C20 A1 DP11 A2 J12 A1 J14 A1 J16 A2 J19 A2 J21 A3 J30 A1 JK12 A4 LD11 A1 R12 A1 R16 A2 R18 A2 R27 A1 R40 A2 R46 A2 RB12 A2 RB14 A1 RB16 A4 RB19 A4 TA11 A4 TA13 A4 TA15 A4 TA20 A3 VR11 A3
C19 A2 C23 A3 J11 A1 J13 A1 J15 A1 J17 A2 J20 A3 J22 A4 JK11 A4 JK13 A4 R11 A2 R13 A2 R17 A2 R21 A2 R37 A2 R41 A2 RB11 A2 RB13 A1 RB15 A4 RB17 A3 SN11 A1 TA12 A1 TA14 A1 TA18 A4 USB11A4



PCB LAYOUT - BOTTOM VIEW

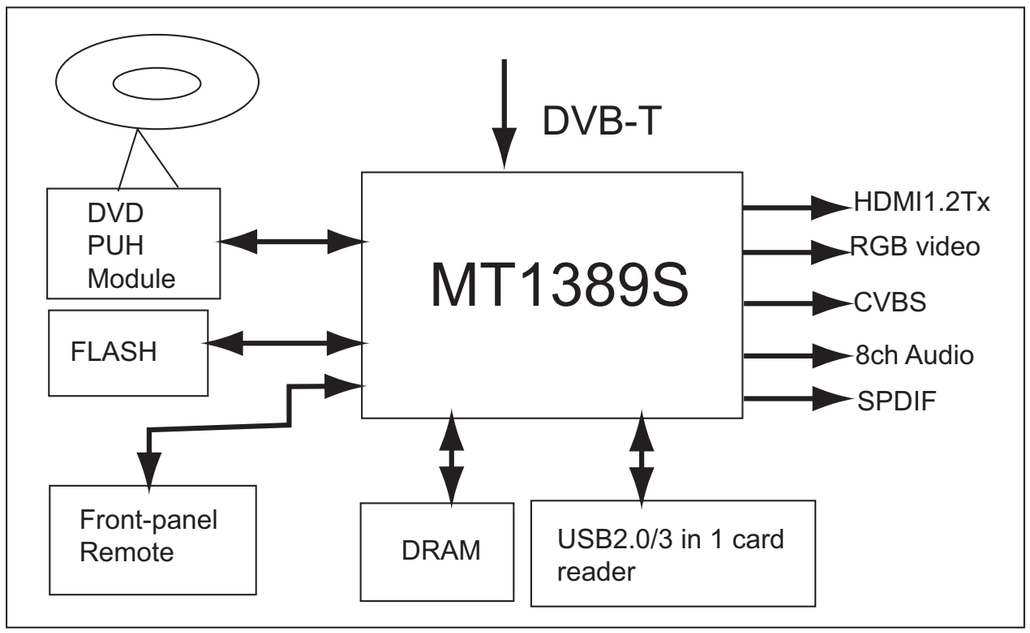
C12 A4 C14 A3 C16 A3 C18 A3 C22 A3 FB12 A1 FB14 A1 FB16 A1 IC11 A3 Q12 A3 R14 A4 R19 A4 R22 A1 R24 A1 R28 A4 R30 A3 R32 A3 R34 A3 R38 A4 R42 A1 TP1 A3 TP8 A1
C13 A4 C15 A1 C17 A3 C21 A2 FB11 A1 FB13 A1 FB15 A1 FB17 A1 Q11 A4 Q16 A4 R15 A4 R20 A1 R23 A1 R25 A1 R29 A3 R31 A3 R33 A3 R35 A3 R39 A3 R43 A1 TP2 A2 TP9 A1



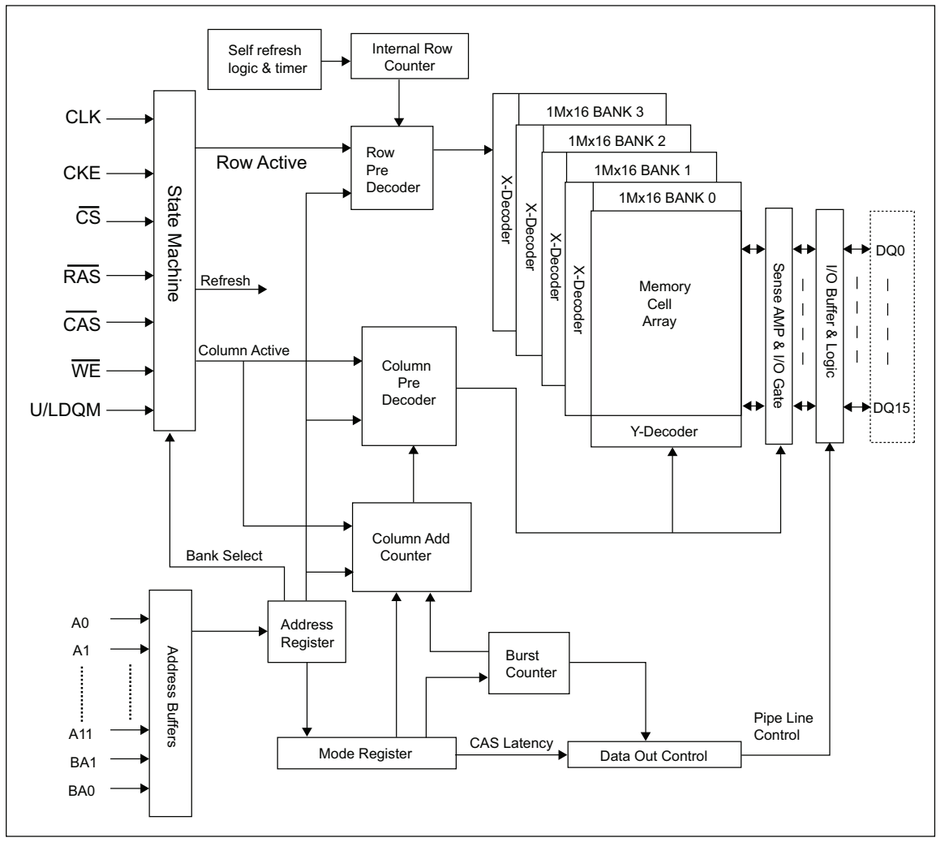
MAIN BOARD

TABLE OF CONTENTS

INTERNAL IC DIAGRAM - MT1389S



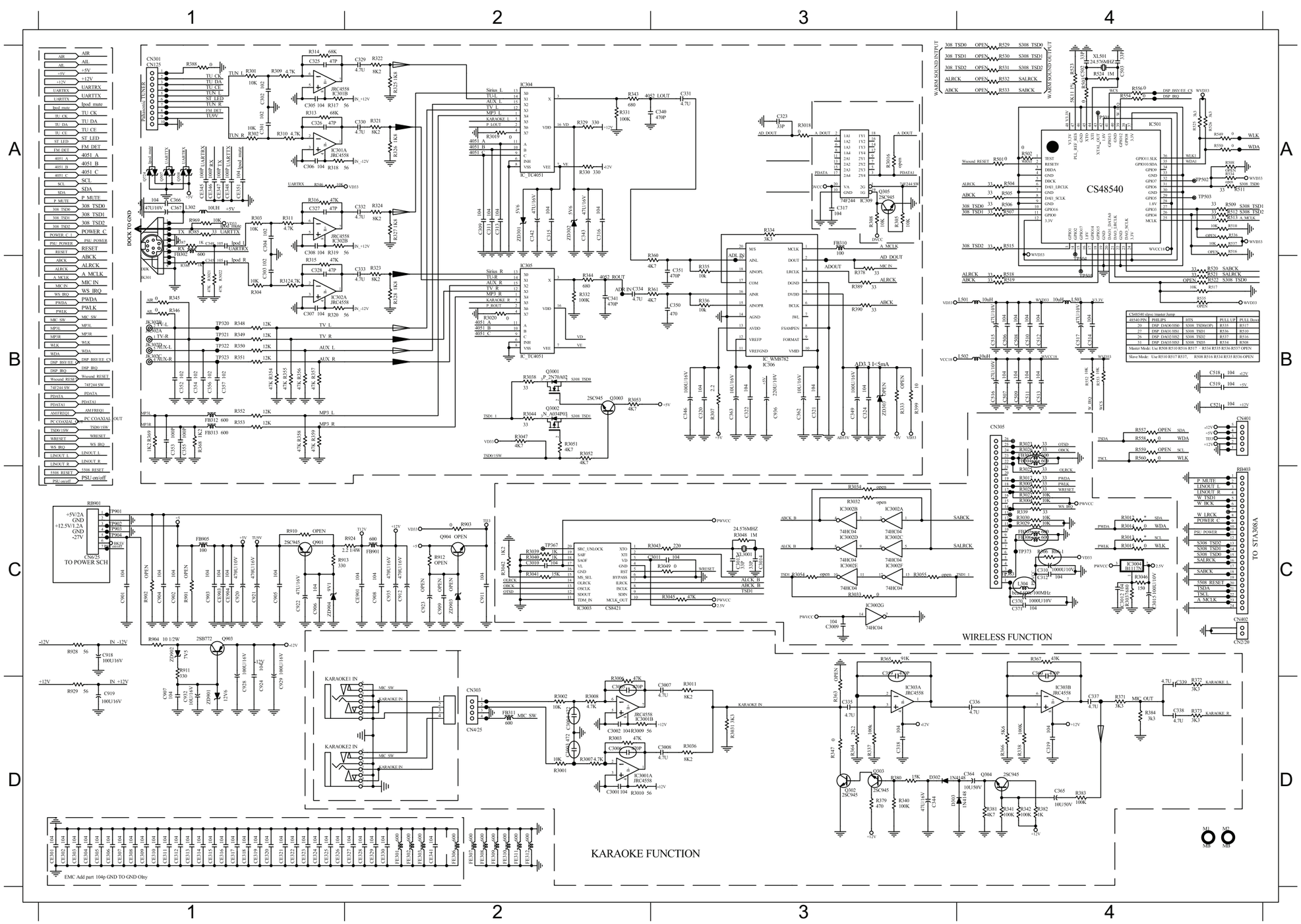
INTERNAL IC DIAGRAM - HY57V641620F



6 - 2

CIRCUIT DIAGRAM - part one

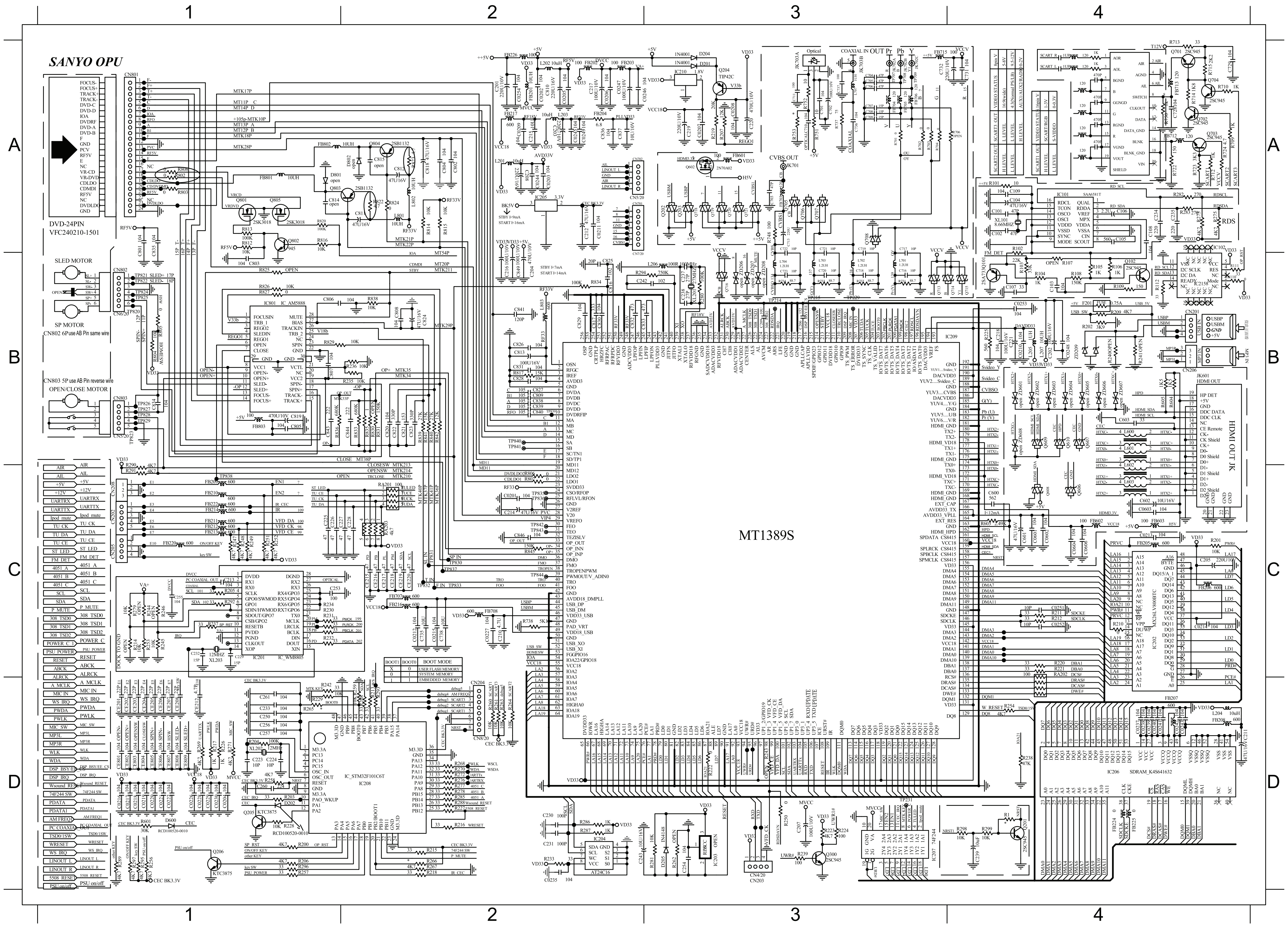
C3001 D2 C306 A1 C322 B3 C337 D4 C351 B3 C364 D4 C513 B4 C904 C1 C922 C1 CE305 D1 CE316 D1 CE327 D2 D302 D3 FE307 D2 IC306 B3 Q903 C1 R3018 A3 R313 A1 R332 B2 R345 B1 R356 B1 R369 B1 R388 A1 R509 A4 R523 A4 R903 C2 ZD302 A2
C3002 D2 C309 A2 C323 A3 C338 D4 C352 B1 C365 D4 C514 B4 C905 C1 C924 D1 CE306 D1 CE317 D1 CE328 D2 D303 D3 FE308 D2 IC309 A3 R3001 D2 R3019 A2 R314 A1 R334 A3 R346 B1 R357 B1 R371 D4 R389 B3 R510 A4 R524 A4 R904 C1 ZD901 D1
C3003 D2 C311 A2 C324 B3 C339 D4 C353 B1 C502 A4 C515 B4 C906 C1 C928 D1 CE307 D1 CE318 D1 CE329 D2 FB310 A3 FE309 D2 IC501 A4 R3002 D2 R302 A1 R317 A1 R335 B3 R347 D3 R358 B1 R372 D4 R390 B3 R512 A4 R537 A4 R911 C1 ZD902 C1
C3004 D2 C313 A2 C325 A1 C340 A2 C354 B1 C503 A4 C516 B4 C907 D1 C929 D1 CE308 D1 CE319 D1 CE330 D2 FB311 D2 FE310 D2 JK302 B1 R3003 D2 R3020 B2 R318 A1 R336 B3 R348 B1 R359 B1 R373 D4 R399 B3 R513 A4 R549 A4 R913 C1 ZD904 C1
C3005 D2 C315 A2 C326 A1 C341 B2 C355 B1 C506 B4 C517 B4 C908 C2 C932 D1 CE309 D1 CE320 D1 CE341 D2 FB312 B1 FE311 D2 L501 B4 R3006 D2 R3031 D3 R321 A2 R337 D3 R349 B1 R360 B3 R378 B3 R501 A4 R515 A4 R550 A4 R924 C2
C3006 D2 C316 A2 C329 A2 C342 A2 C356 B1 C507 B4 C518 B4 C911 C2 C935 C2 CE310 D1 CE321 D1 CE901 C2 FB313 B1 FE312 D2 L502 B4 R3007 D2 R3036 D3 R322 A2 R338 D4 R350 B1 R361 B2 R379 D3 R502 A4 R517 B4 R552 B4 R928 C1
C3007 D3 C317 A3 C330 A2 C343 A2 C357 B1 C508 B4 C519 B4 C912 C2 C936 B3 CE311 D1 CE322 D1 CE903 C1 FB901 C2 IC3001 D2 L503 B4 R3008 D2 R305 A3 R325 A2 R340 D3 R351 B1 R364 D3 R380 D3 R503 A4 R518 B4 R553 B4 R929 D1
C3008 D3 C318 D3 C331 A3 C344 D3 C359 C3 C509 B4 C521 B4 C918 C1 CE301 D1 CE312 D1 CE323 D1 CE904 C1 FB905 C1 IC301 A1 Q302 D3 R3009 D2 R307 B3 R326 A2 R341 D4 R352 B1 R365 C3 R381 D4 R504 A4 R519 B4 R554 A4 RB403 C4
C301 A1 C319 D4 C334 B2 C346 B3 C360 C4 C510 B4 C901 C1 C919 D1 CE302 D1 CE313 D1 CE324 D1 CN301 A1 FE301 D2 IC303 D4 Q303 D3 R301 A1 R308 A3 R329 A2 R342 D4 R353 B1 R366 D4 R382 D4 R505 A4 R520 B4 R556 A4 RB901 C1
C302 A1 C320 B3 C335 D3 C349 B3 C362 B3 C511 B4 C902 C1 C920 C1 CE303 D1 CE314 D1 CE325 D1 CN303 D2 FE302 D2 IC304 A2 Q304 D4 R3010 D2 R309 A1 R330 A2 R343 A2 R354 B1 R367 C4 R383 D4 R506 A4 R521 B4 R558 B4 XL501 A4
C305 A1 C321 B3 C336 D4 C350 B3 C363 B3 C512 B4 C903 C1 C921 C1 CE304 D1 CE315 D1 CE326 D1 CN401 B4 FE306 D2 IC305 B2 Q305 A3 R3011 D3 R310 A1 R331 A2 R344 B2 R355 B1 R368 B1 R384 D4 R507 A4 R522 B4 R560 B4 ZD301 A2



6 - 3

CIRCUIT DIAGRAM - part two

C0201	C2	C0216	D1	C0239	D4	C0602	C4	C213	C1	C229	C1	C257	D1	C709	A3	C737	A3	C816	B2	C831	B2	CE201	D1	CE802	D1	CN802	B1	FB207	D4	FB601	A3	IC204	D2	L204	D4	Q206	D1	Q803	A2	R211	C4	R227	D2	R247	C1	R267	D2	R288	D2	R605	B4	R802	A1	R823	A2	R845	C2
C0202	A2	C0217	D1	C0240	D4	C0603	C4	C214	C2	C230	D2	C260	D1	C710	A3	C738	C2	C817	B2	C832	B2	CE202	D1	CE803	D1	CN803	B1	FB208	D4	FB602	C4	IC205	A2	L205	B4	Q300	D3	Q804	A2	R212	C4	R228	D1	R248	C1	R268	D2	R289	D1	R701	A3	R803	A1	R824	A2	RA201	C2
C0203	A2	C0218	D1	C0241	D4	C0604	C4	C215	A2	C231	D2	C261	D1	C711	A3	C801	A1	C818	A2	C833	B3	CE203	D1	CE804	D1	CO254	A2	FB209	C1	FB603	C4	IC206	A2	L206	B3	Q602	A3	Q805	A1	R213	D2	R229	D1	R249	C1	R269	D1	R290	C1	R702	A3	R804	B1	R826	B1	RA202	C4
C0204	D1	C0219	D1	C0242	D4	C0606	C4	C216	B2	C232	C1	C600	C4	C713	A3	C802	A2	C819	B1	C834	B1	CE204	D1	CE805	D1	D201	A3	FB210	C1	FB703	A3	IC207	D3	L207	B4	Q609	B4	Q901	C1	R215	D2	R230	C1	R250	D3	R270	D2	R291	C1	R703	A3	R805	B1	R827	B1	RA203	C2
C0205	A2	C0220	D1	C0243	D4	C201	A2	C217	A2	C233	C1	C601	C4	C716	B3	C803	B1	C820	B2	C835	A1	CE205	D1	CE806	D1	D202	D1	FB211	C1	FB704	A3	IC208	D2	L701	B3	Q610	B4	R200	D1	R216	D2	R231	C1	R251	C1	R271	D1	R292	C1	R704	A3	R806	C2	R829	B1	XL201	B3
C0206	A2	C0221	D1	C0244	A2	C202	B4	C218	B4	C237	B3	C602	C4	C717	B3	C804	A2	C821	B2	C836	A2	CE206	D1	CE807	D1	D204	A3	FB212	C1	FB705	A3	IC209	B3	L702	B3	Q705	A3	R201	C4	R217	D1	R232	C1	R252	C1	R272	D2	R293	D2	R706	A4	R807	C2	R831	B2	XL202	D1
C0207	A3	C0222	D1	C0245	A2	C203	A2	C219	A3	C238	B3	C603	B4	C718	B3	C805	B1	C822	B2	C837	A2	CE207	D1	CE808	D1	D205	D3	FB213	C1	FB706	A3	IC210	A3	L703	B3	Q706	A3	R202	B4	R218	D2	R233	D2	R253	C1	R276	D2	R294	B3	R731	B3	R808	A1	R833	B2	XL203	C1
C0208	A3	C0226	D1	C0246	A2	C204	B2	C220	A3	C239	D4	C701	A3	C719	B3	C806	B1	C823	B2	C838	B2	CE212	D1	CE809	D1	D600	D1	FB214	C1	FB707	C2	IC801	B1	L704	B3	Q707	A3	R203	D1	R219	A3	R234	C1	R256	D1	R277	D2	R295	D1	R732	B3	R812	A1	R834	B2	ZD209	B4
C0209	A2	C0227	C2	C0247	A2	C205	C4	C221	B4	C242	B3	C702	A3	C720	B3	C807	B1	C824	B2	C839	B2	CE215	C2	CN201	B4	F201	B4	FB216	C2	FB708	C2	JK601	B4	L707	A3	Q708	A3	R204	D1	R220	C4	R235	B2	R257	D1	R278	D2	R296	D1	R733	B3	R813	A1	R835	B2		
C0210	B4	C0228	D1	C0248	B4	C206	B3	C223	D1	C243	D2	C703	A3	C721	B3	C808	B2	C825	B2	C840	B2	CE216	C2	CN202	C1	FB201	A2	FB217	A2	FB801	A1	JK701	A3	L801	A2	Q713	B3	R205	C1	R221	C4	R236	B2	R258	D1	R279	C1	R297	D1	R734	B3	R814	A2	R836	B1		
C0211	A2	C0229	D1	C0249	A2	C207	D3	C224	D1	C250	D1	C704	A3	C722	B3	C809	B2	C826	B2	C841	B2	CE217	C2	CN204	D2	FB202	A2	FB220	C1	FB802	A1	JK702	A3	L802	A2	Q714	B4	R206	D1	R222	D3	R237	C1	R259	D2	R280	B3	R298	D4	R737	A3	R815	A2	R838	B2		
C0212	C2	C0230	D1	C0251	C4	C208	A2	C225	C1	C253	C1	C705	A3	C723	B3	C810	A2	C827	B2	C843	B1	CE218	C2	CN205	C1	FB203	A2	FB222	C1	FB803	B1	JK703	A3	L803	B2	Q715	B4	R207	A3	R223	D3	R238	D4	R260	D2	R281	D3	R299	D4	R738	C2	R816	A1	R839	B2		
C0213	C4	C0235	D2	C0252	C4	C209	B3	C226	C1	C254	D3	C706	A3	C732	A4	C811	A2	C828	B2	C844	B2	CE219	C2	CN206	B4	FB204	A2	FB224	D4	IC201	C1	L201	A2	Q201	D4	Q716	B3	R208	D2	R224	D3	R239	D3	R261	D2	R285	D2	R601	D1	R748	A3	R817	B2	R840	B2		
C0214	C4	C0237	D4	C0253	B4	C210	C2	C227	C1	C255	C1	C707	A3	C735	C2	C812	A2	C829	B2	C846	C2	CE220	C2	CN208	C1	FB205	C4	FB225	D4	IC202	C4	L202	A2	Q204	A3	Q801	A1	R209	B4	R225	B4	R242	D1	R263	D2	R286	D2	R603	C4	R751	A3	R820	A1	R841	B2		
C0215	C2	C0238	D4	C0601	C4	C211	D4	C228	C2	C256	D1	C708	A3	C736	A3	C813	B2	C830	B2	C849	B2	CE801	D1	CN801	A1	FB206	C4	FB226	A2	IC203	D3	L203	A2	Q205	D1	Q802	A1	R210	C4	R226	D1	R245	C1	R264	D2	R287	D2	R604	B4	R752	A3	R822	A2	R842	B2		



6 - 4

PCB LAYOUT - TOP VIEW

C0202	A2	C216	C3	C257	C3	C325	B3	C350	C4	C602	A2	C720	B1	C818	D1	C841	C1	CN201	C2	D600	C3	FB224	A2	FB905	D4	IC309	B1	L701	A2	Q610	A2	R208	C3	R227	D3	R252	C3	R280	B1	R3002	C4	R313	B3	R341	B4	R359	B3	R389	B3	R537	D4	R731	A2	R814	D1	R840	C2	XL501	C4
C0207	C2	C217	B1	C260	C3	C326	B3	C351	C4	C603	A2	C721	A2	C819	D1	C843	D2	CN202	D2	F201	C2	FB225	A2	FE312	A2	IC501	C4	L702	A2	Q706	A1	R209	C2	R228	D3	R253	B1	R281	B3	R3003	B4	R314	A3	R342	B4	R360	B3	R390	B3	R549	C4	R732	A2	R815	D1	R841	C2	ZD209	C2
C0208	D2	C218	B2	C261	C3	C329	B3	C352	A3	C701	A3	C722	A1	C820	C2	C844	D2	CN204	D3	FB201	C3	FB226	D1	IC201	B1	IC801	D2	L703	A2	Q707	A1	R210	C3	R229	C3	R257	D3	R285	D3	R3006	C4	R317	B3	R343	B3	R361	C4	R501	D4	R550	C4	R733	B1	R816	C1	R842	C2	ZD301	B4
C0211	D3	C219	C2	C3001	C4	C330	B3	C353	A4	C702	A2	C723	B1	C821	C2	C849	C1	CN205	D3	FB202	B1	FB310	B3	IC202	C3	JK302	A3	L704	B1	Q708	A1	R211	A2	R230	B1	R258	C3	R286	B3	R3007	C4	R318	B3	R344	B4	R364	B4	R502	D4	R552	C4	R734	B1	R817	C2	R845	D2	ZD302	B4
C0235	B3	C220	C2	C3002	B4	C331	B3	C354	A3	C703	A1	C732	B1	C822	C2	C912	C3	CN206	D4	FB203	B1	FB311	D2	IC203	B3	JK601	A2	L707	A1	Q801	C1	R212	A2	R231	B2	R259	C3	R287	B3	R3008	C4	R321	B3	R345	A3	R365	B4	R504	D4	R553	C4	R737	A1	R820	C1	R903	C3	ZD901	D4
C0247	B1	C221	B2	C3003	C4	C334	B4	C355	B3	C704	A2	C736	A1	C823	D2	C918	B4	CN208	D3	FB205	C3	FB312	A4	IC204	B3	JK701	A1	L801	D1	Q802	C1	R213	C3	R232	B1	R260	D3	R288	D3	R3009	B4	R322	B3	R346	A3	R366	B4	R505	D4	R554	C4	R738	C2	R822	D1	R904	D3	ZD904	C1
C201	C1	C229	B1	C3004	C4	C335	B4	C356	A3	C705	A1	C737	A2	C824	C2	C919	B4	CN301	B1	FB206	B3	FB313	B3	IC205	D3	JK702	A1	L802	D1	Q803	D1	R215	D3	R233	B3	R261	C3	R289	D3	R301	B1	R325	B3	R347	B4	R367	B4	R506	D4	R556	C4	R748	A1	R823	D1	R911	D4		
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C204	D3	C232	B1	C3007	B4	C338	B4	C360	B4	C708	A1	C805	D2	C829	C1	C922	C1	CN801	D1	FB209	D3	FB703	A1	IC208	C3	L202	D1	Q205	D3	Q901	C1	R218	D3	R236	D2	R268	C3	R292	B1	R3018	B1	R330	B4	R350	A3	R371	B4	R512	D4	R601	C3	R802	C1	R827	C2	R928	B4		
C205	C3	C237	C2	C3008	B4	C339	B4	C362	C3	C709	A1	C806	C2	C830	C1	C928	D3	CN802	D2	FB210	D3	FB704	A2	IC209	B2	L203	C2	Q206	D3	Q903	D4	R219	D2	R237	B1	R269	A3	R293	C3	R302	B3	R331	B3	R351	A3	R372	B4	R513	D4	R603	B2	R803	C1	R829	C2	R929	B4		
C207	C3	C238	B1	C301	A3	C340	B3	C363	C4	C710	A2	C809	C2	C831	C2	C929	B4	CN803	D2	FB211	D3	FB705	A1	IC210	D2	L204	A3	Q300	C3	R200	D2	R220	A2	R242	C3	R270	C3	R294	B2	R3031	B4	R332	B4	R352	A4	R373	B4	R515	D4	R604	A2	R804	C2	R831	D2	RA201	B2		
C208	B2	C239	A2	C302	A3	C341	B4	C364	B4	C711	A2	C810	D1	C832	C1	C932	D4	D201	D2	FB212	D3	FB706	A1	IC3001	C4	L205	B2	Q302	B4	R201	C2	R221	A2	R245	B1	R271	C3	R295	D3	R3036	B4	R334	C3	R353	B3	R379	B4	R518	D4	R605	A2	R805	D2	R833	D2	RA202	A2		
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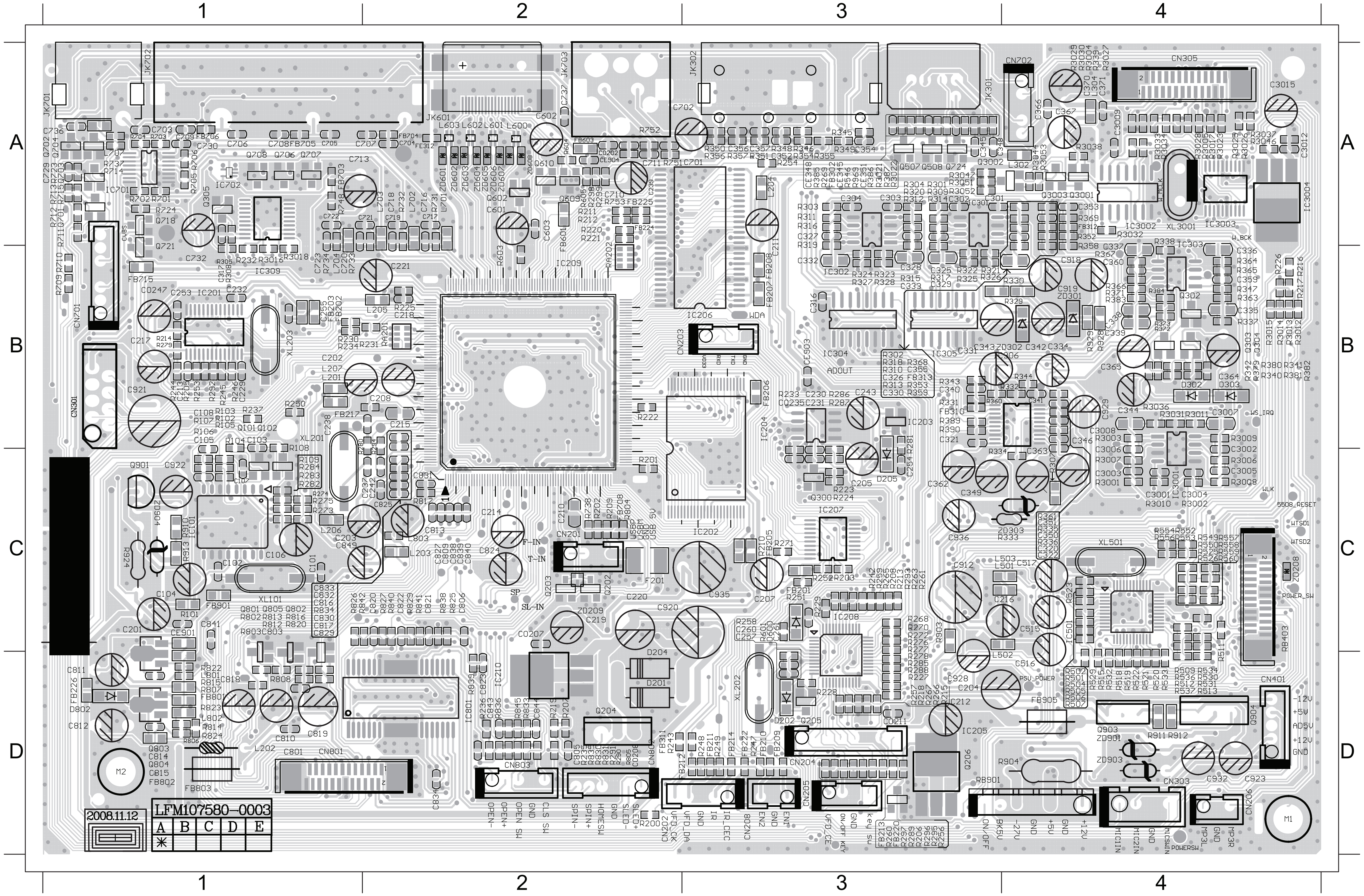
C211	A3	C243	B3	C317	B1	C343	B3	C515	C4	C716	A2	C812	D1	C834	D2	C936	C3	D204	D2	FB214	D3	FB801	D1	IC303	A4	L207	B1	Q304	B4	R203	C3	R223	C3	R248	D3	R276	C3	R297	D3	R307	C4	R336	C4	R355	A3	R381	B4	R520	D4	R702	A1	R807	D1	R835	D2	RB901	D3		
C213	B1	C253	B1	C320	C4	C344	B4	C516	D4	C717	A2	C813	C2	C838	C2	CE901	C1	D205	C3	FB217	B1	FB802	D1	IC304	B3	L501	C3	Q305	A1	R205	B1	R224	C3	R249	D3	R277	C3	R298	A2	R308	B1	R337	B4	R356	A3	R382	B4	R521	D4	R703	A1	R808	D1	R836	D2	XL201	B1		
C214	C2	C254	C3	C321	B3	C346	B4	C517	C4	C718	A2	C816	C1	C839	C2	CE903	B3	D302	B4	FB220	D3	FB803	D1	IC305	B3	L502	D3	Q602	A2	R206	D3	R225	B2	R250	B1	R278	D3	R299	A2	R309	A3	R338	A4	R357	A3	R383	B4	R522	D4	R704	A1	R812	C1	R838	C2	XL202	D3		
C215	B2	C255	B1	C322	C4	C349	C3	C601	A2	C719	A2	C817	C1	C840	C2	CE904	A2	D303	B4	FB222	D3	FB901	C1	IC306	B4	L503	C3	Q609	A2	R207	D2	R226	B4	R251	C3	R279	B1	R3001	C4	R310	B3	R340	B4	R358	A4	R384	B4	R523	C4	R706	A1	R813	C1	R839	D2	XL203	B1		



6 - 5

PCB LAYOUT - BOTTOM VIEW

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C0203 B3 C0214 B2 C0222 B3 C0239 B2 C0248 B3 C0604 B3 C227 B4 C311 B2 C503 C1 C513 C1 C802 D4 C837 B3 C907 D1 CE205 D2 CE219 B4 CE307 D2 CE315 A1 CE323 B2 CE341 B3 CE808 D3 FE302 B3 Q705 A4 R256 D2 R510 C1
C0204 B3 C0215 C3 C0226 C3 C0240 B2 C0249 C3 C0606 B3 C228 B4 C313 B2 C506 C1 C514 C1 C804 C3 C846 C3 C908 C2 CE206 D2 CE220 B4 CE308 C1 CE316 A1 CE324 B2 CE801 D3 CE809 D3 FE306 A3 Q713 A3 R264 D2 R517 D1
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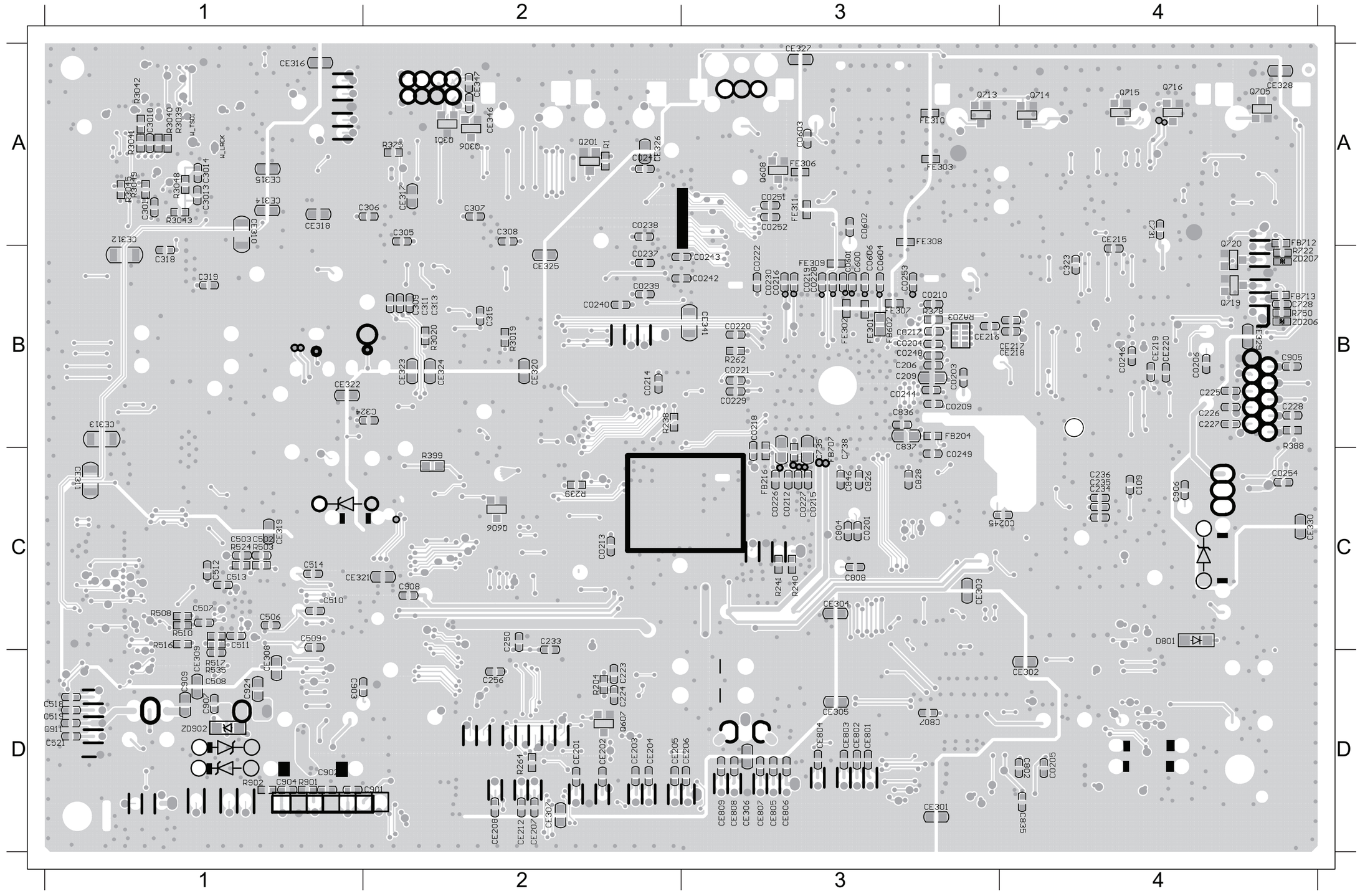
C0206 B4 C0217 B3 C0228 B3 C0242 B3 C0252 A3 C209 B3 C250 C2 C318 B1 C508 D1 C519 D1 C808 C3 C902 D1 C924 D1 CE212 D2 CE302 D4 CE310 A1 CE318 A1 CE326 A2 CE803 D3 FB204 B3 FE308 A3 Q715 A4 R3020 B2 RA203 B3
C0209 B3 C0218 B3 C0229 B3 C0243 B3 C0253 B3 C223 D2 C256 D2 C319 B1 C509 C1 C521 D1 C826 C3 C903 D1 CE201 D2 CE215 A4 CE303 C3 CE311 C1 CE319 C1 CE327 A3 CE804 D3 FB216 C3 FE309 B3 Q716 A4 R378 B3 ZD902 D1
C0210 B3 C0219 B3 C0230 B3 C0244 B3 C0601 B3 C224 D2 C305 A2 C323 B4 C510 C1 C600 B3 C828 C3 C904 D1 CE202 D2 CE216 B3 CE304 C3 CE312 A1 CE320 B2 CE328 A4 CE805 D3 FB602 B3 FE310 A3 R204 D2 R388 B4
C0212 C3 C0220 B3 C0237 B2 C0245 C3 C0602 A3 C225 B4 C306 A1 C324 B2 C511 C1 C735 B3 C835 D4 C905 B4 CE203 D2 CE217 B4 CE305 D3 CE313 B1 CE321 C1 CE329 B4 CE806 D3 FB707 B3 FE311 A3 R238 B2 R399 C2



POWER BOARD

TABLE OF CONTENTS

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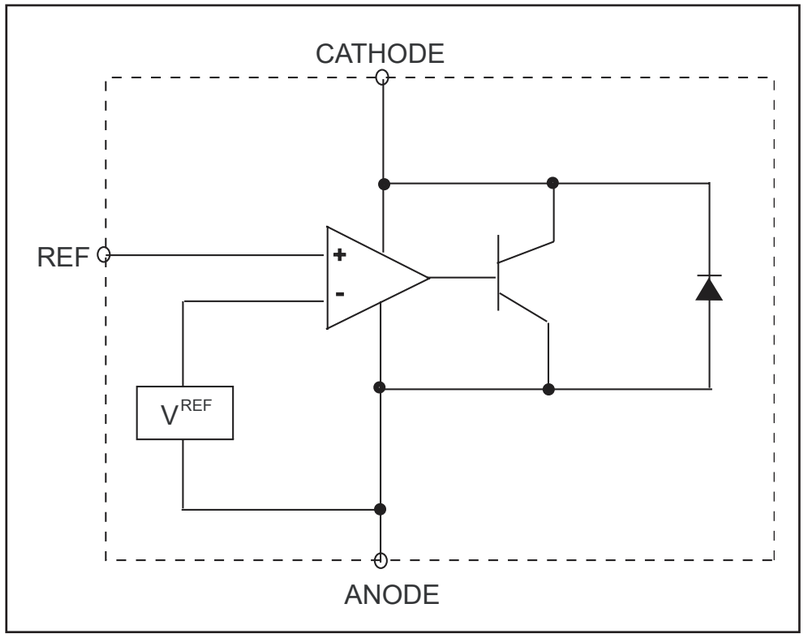

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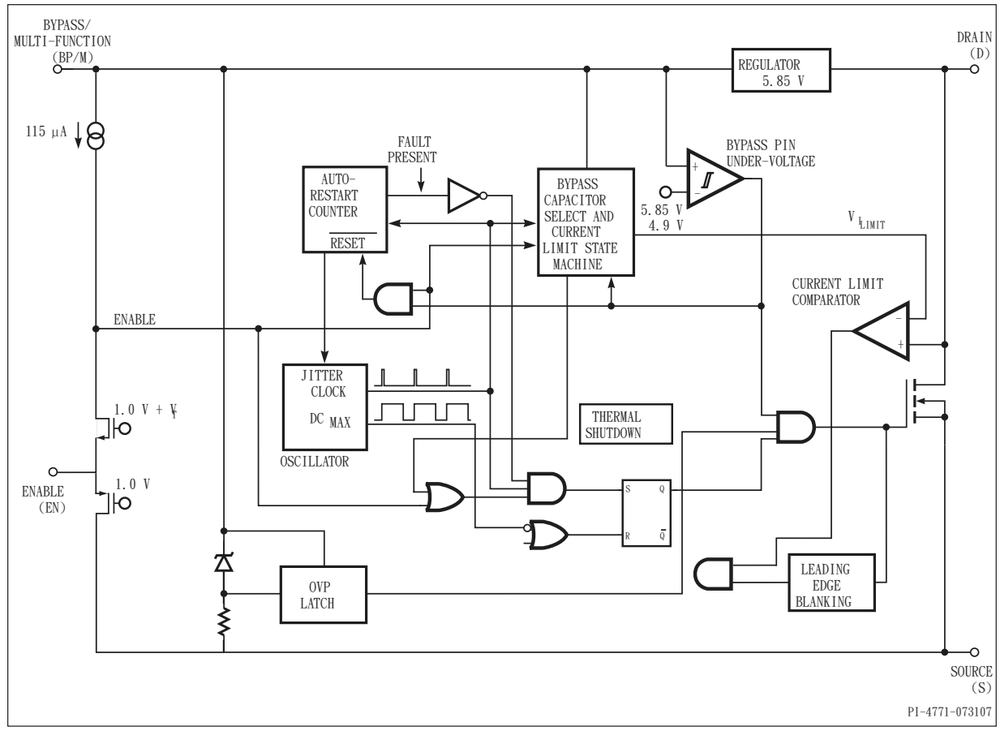

7 - 2

CIRCUIT DIAGRAM

BD901	A1	TVR902	A1	R908	A2	C968	A3	D916	A3	R976	A3	R952	A4	C919	B1	Q910	B2	C966	B3	R930	B3	C980	B4	F901	C1	TVR901	C1	IC903	C2	C926	C3	C946	C3	Q923	C3	C984	C4	R938	C4	C906	D1	C944	D3	R987	D3
C904	A1	TVR903	A1	R944	A2	C969	A3	J912	A3	ZD908	A3	R953	A4	GT902	B1	Q912	B2	C967	B3	R961	B3	C981	B4	J905	C1	C915	C2	J909	C2	C928	C3	D922	C3	R922	C3	C985	C4	R980	C4	C965	D1	C989	D3	R988	D3
C905	A1	C910	A2	R949	A2	C970	A3	L907	A3	ZD909	A3	R954	A4	J902	B1	R941	B2	C975	B3	R963	B3	C988	B4	NTC901	C1	C916	C2	R914	C2	C929	C3	D923	C3	R923	C3	CN903	C4	R982	C4	CN901	D1	IC904	D3	C986	D4
C908	A1	C912	A2	R950	A2	C971	A3	L908	A3	ZD912	A3	R955	A4	L901	B1	R942	B2	D907	B3	R964	B3	CN906	B4	R901	C1	C927	C2	R933	C2	C930	C3	D924	C3	R924	C3	Q906	C4	R984	C4	J904	D1	J908	D3	CN904	D4
C909	A1	C950	A2	T903	A2	C972	A3	R909	A3	C958	A4	R960	A4	L902	B1	R943	B2	D908	B3	R965	B3	D917	B4	R902	C1	C937	C2	R934	C2	C931	C3	D926	C3	R925	C3	Q921	C4	R993	C4	J906	D1	J916	D3	J914	D4
CN902	A1	C951	A2	ZD904	A2	C976	A3	R956	A3	CN905	A4	R969	A4	R912	B1	T901	B2	L905	B3	R966	B3	IC905	B4	R903	C1	C938	C2	R945	C2	C932	C3	L903	C3	R926	C3	Q922	C4	R994	C4	J907	D1	R939	D3	ZD906	D4
R915	A1	D902	A2	C952	A3	D904	A3	R971	A3	D912	A4	R970	A4	C913	B2	T902	B2	Q911	B3	R967	B3	R979	B4	R904	C1	C939	C2	R990	C2	C933	C3	L904	C3	R928	C3	Q924	C4	R995	C4	C942	D2	R940	D3		
R916	A1	D906	A2	C953	A3	D909	A3	R972	A3	D914	A4	ZD910	A4	C941	B2	ZD903	B2	Q925	B3	R968	B3	R981	B4	R905	C1	C947	C2	R991	C2	C934	C3	Q905	C3	R936	C3	R911	C4	R998	C4	IC902	D2	R946	D3		
R917	A1	J903	A2	C954	A3	D911	A3	R973	A3	D919	A4	C917	B1	D903	B2	C921	B3	R920	B3	C974	B4	ZD907	B4	R906	C1	D918	C2	ZD902	C2	C935	C3	Q918	C3	R974	C3	R935	C4	C902	D1	R947	D2	R948	D3		
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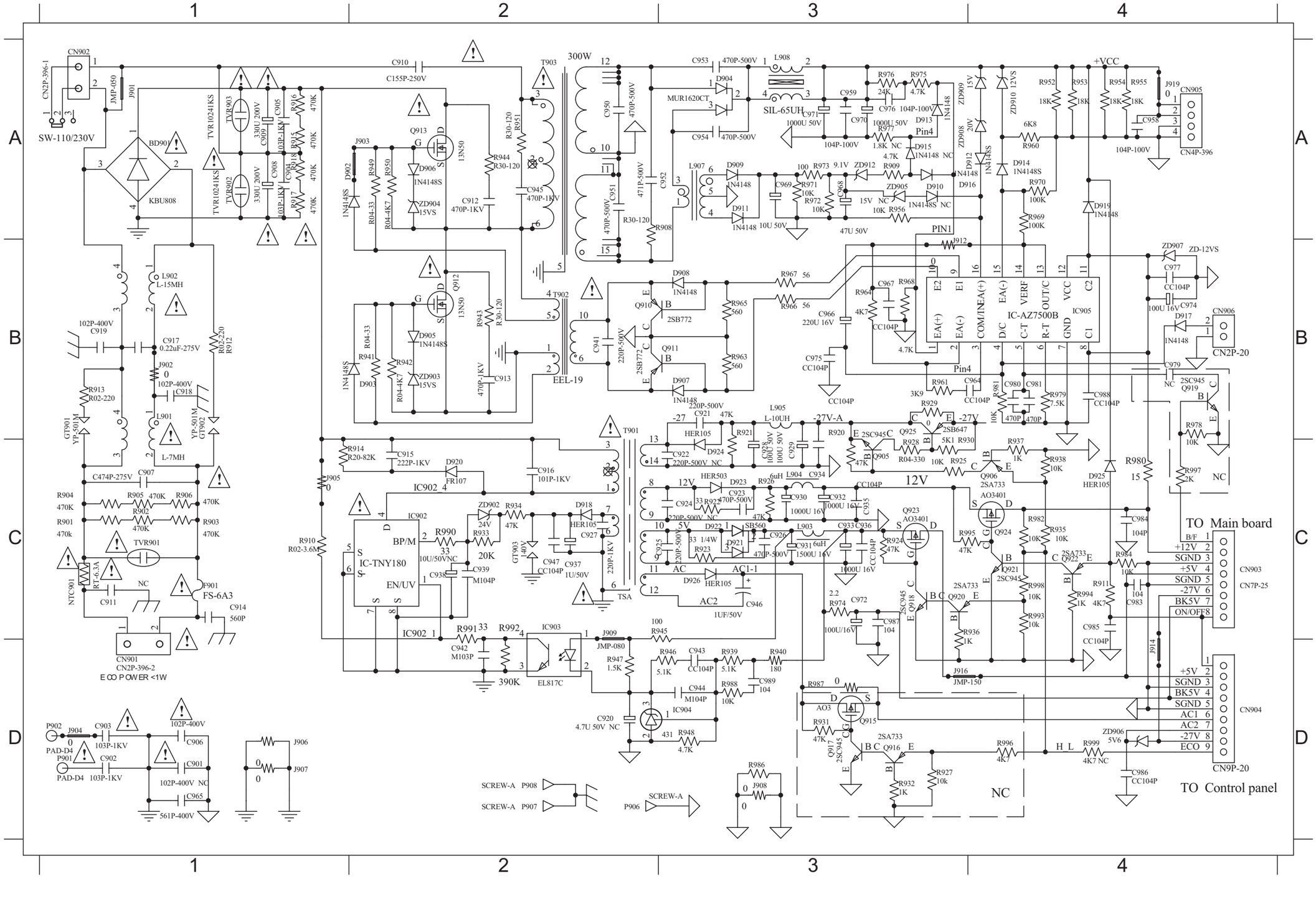

7 - 3

PCB LAYOUT - TOP VIEW

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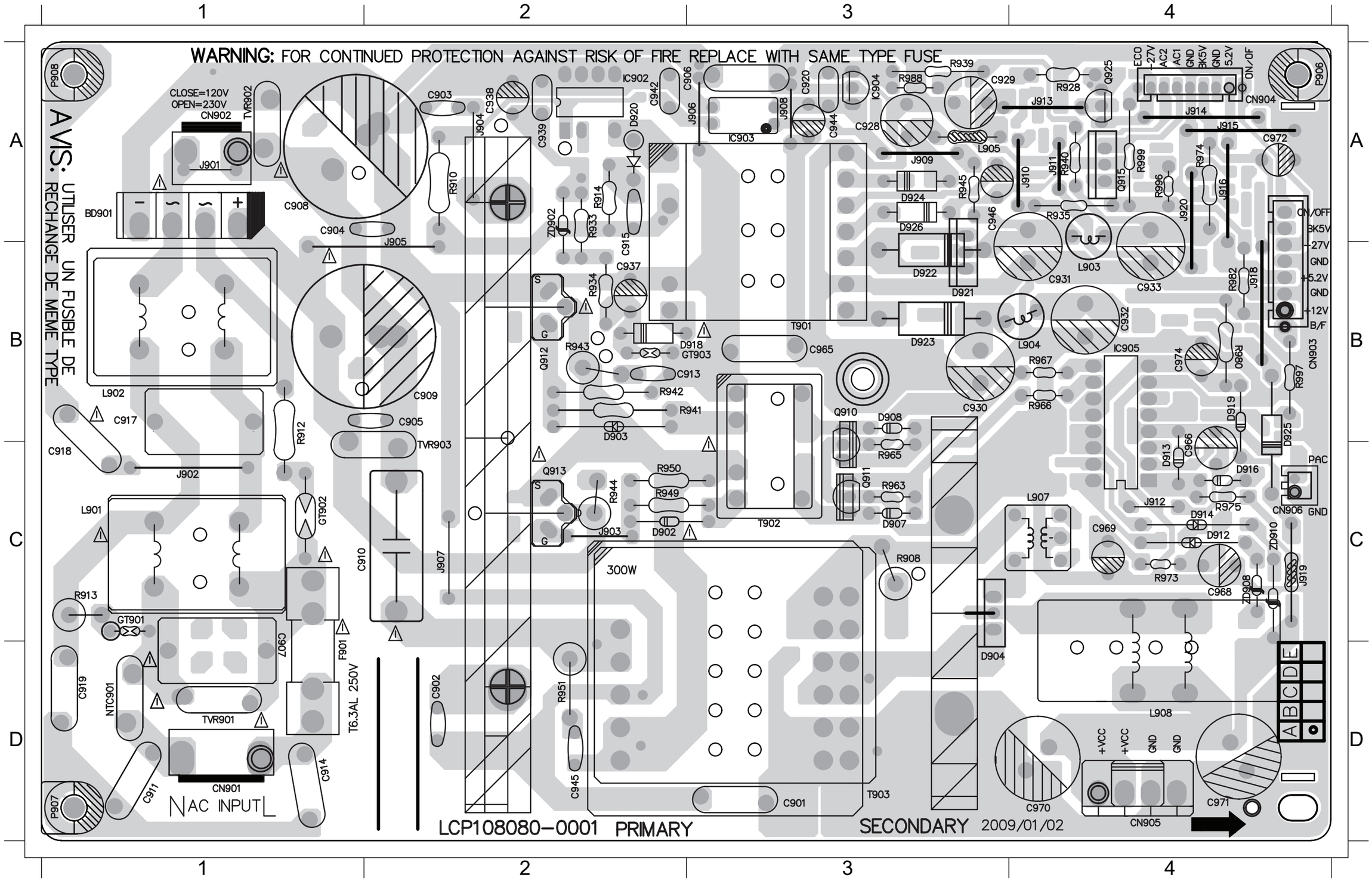
C902	D2	C908	A1	C918	C1	C932	B4	C944	A3	C970	D4	CN903	B4	D904	D3	D916	C4	D924	A3	IC904	A3	J906	A3	J912	C4	J919	C4	L905	A3	Q912	B2	R914	A2	R940	A4	R949	C2	R973	C4	T901	B3	ZD902	A2
C903	A2	C909	B2	C919	D1	C933	B4	C946	A3	C971	D4	CN904	A4	D907	C3	D918	B3	D926	A3	IC905	B2	J907	C2	J913	A4	J920	A4	L907	C4	Q913	C2	R928	A4	R941	B3	R950	C2	R974	A4	T902	C3	ZD908	C4
C904	A4	C910	B1	C928	A3	C937	B2	C965	B3	C972	A4	CN905	D4	D908	B3	D919	B4	F901	D1	J902	C1	J908	A3	J914	A4	L901	C1	L908	D4	Q925	A4	R933	A2	R942	B2	R963	C3	R975	C4	T903	D3	ZD910	C4
C905	B2	C913	B3	C929	A3	C938	A2	C966	B4	C974	B4	CN906	C4	D912	C4	D920	A2	GT902	C1	J903	C2	J909	A3	J915	A4	L902	B1	NTC901	D1	R908	C3	R934	B2	R943	B2	R965	C3	R980	B4	TVR901	D1		
C906	A3	C915	A2	C930	B3	C939	A2	C968	C4	CN901	D1	D902	C2	D913	C4	D922	B3	IC902	A2	J904	A2	J910	A4	J916	A4	L903	B4	Q910	B3	R910	A2	R935	A4	R944	C2	R966	B4	R982	B4	TVR902	A1		



7 - 4

PCB LAYOUT - BOTTOM VIEW

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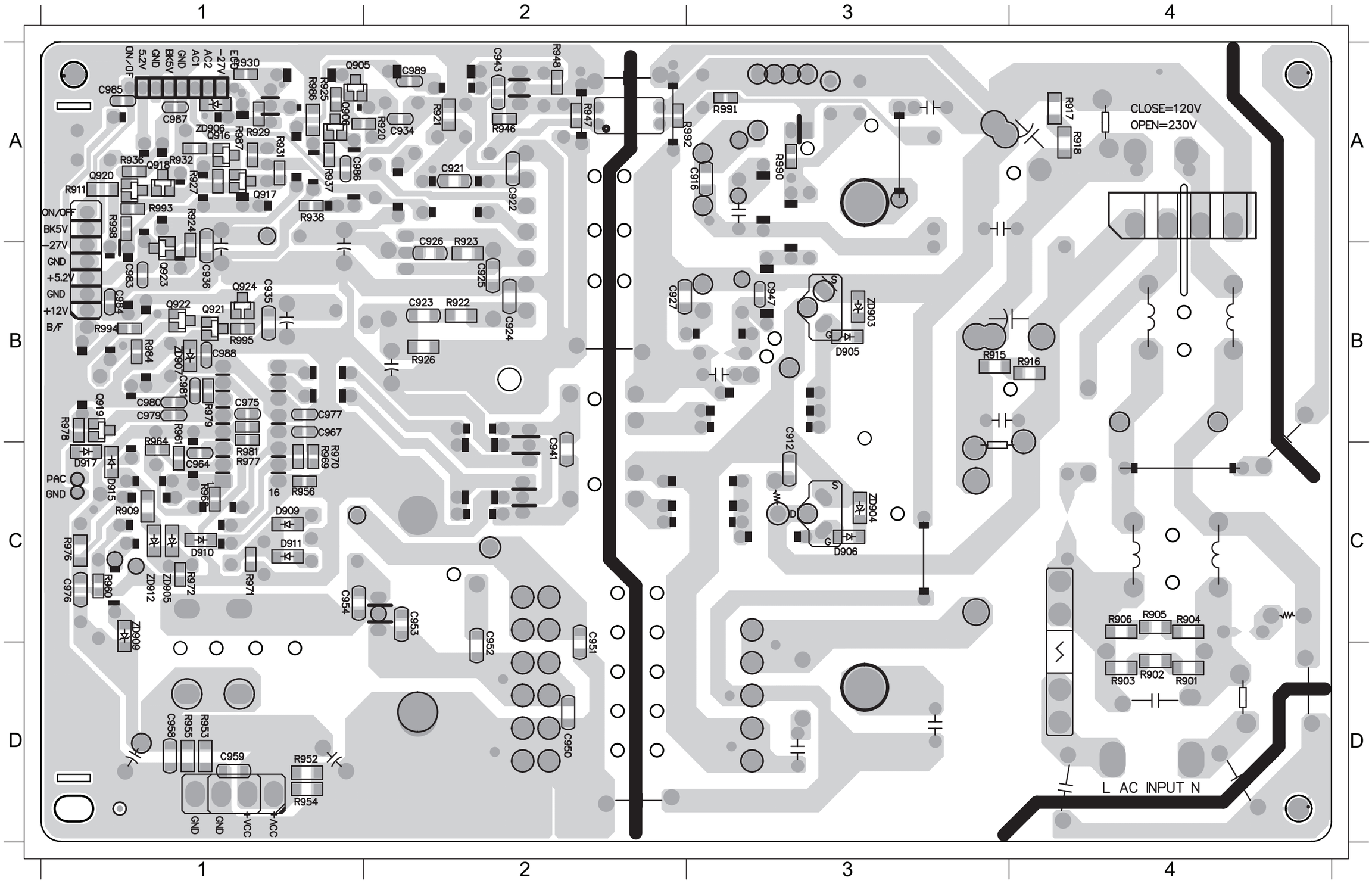
C916	A3	C934	A2	C947	B4	C954	C1	C975	B1	C983	B1	C989	A2	D917	C1	Q921	B1	R902	D4	R909	C1	R918	A4	R924	A1	R937	A1	R952	D1	R960	C1	R970	C1	R981	C1	R991	A3	ZD903	B4	ZD912	C1
C921	A2	C935	B1	C950	D2	C958	D1	C976	C1	C984	B1	D905	B4	Q905	A1	Q922	B1	R903	D4	R911	A1	R920	A2	R925	A1	R938	A1	R953	D1	R961	B1	R971	C1	R984	B1	R993	A1	ZD904	C3		
C923	B2	C936	B1	C951	C2	C959	D1	C977	B1	C985	A1	D906	C3	Q906	A1	Q923	B1	R904	C4	R915	B4	R921	A2	R926	B2	R946	A2	R954	D1	R964	C1	R972	C1	R986	A1	R994	B1	ZD906	A1		
C926	A2	C941	C2	C952	C2	C964	C1	C980	B1	C986	A1	D909	C1	Q918	A1	Q924	B1	R905	C4	R916	B4	R922	B2	R930	A1	R947	A2	R955	D1	R968	C1	R976	C1	R987	A1	R995	B1	ZD907	B1		



AMP BOARD

TABLE OF CONTENTS

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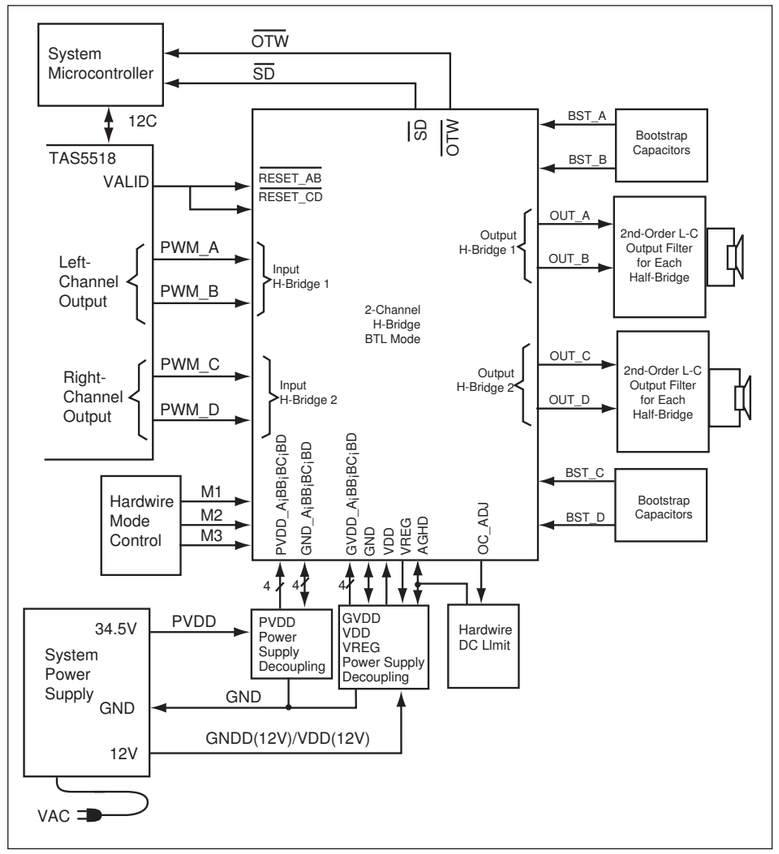

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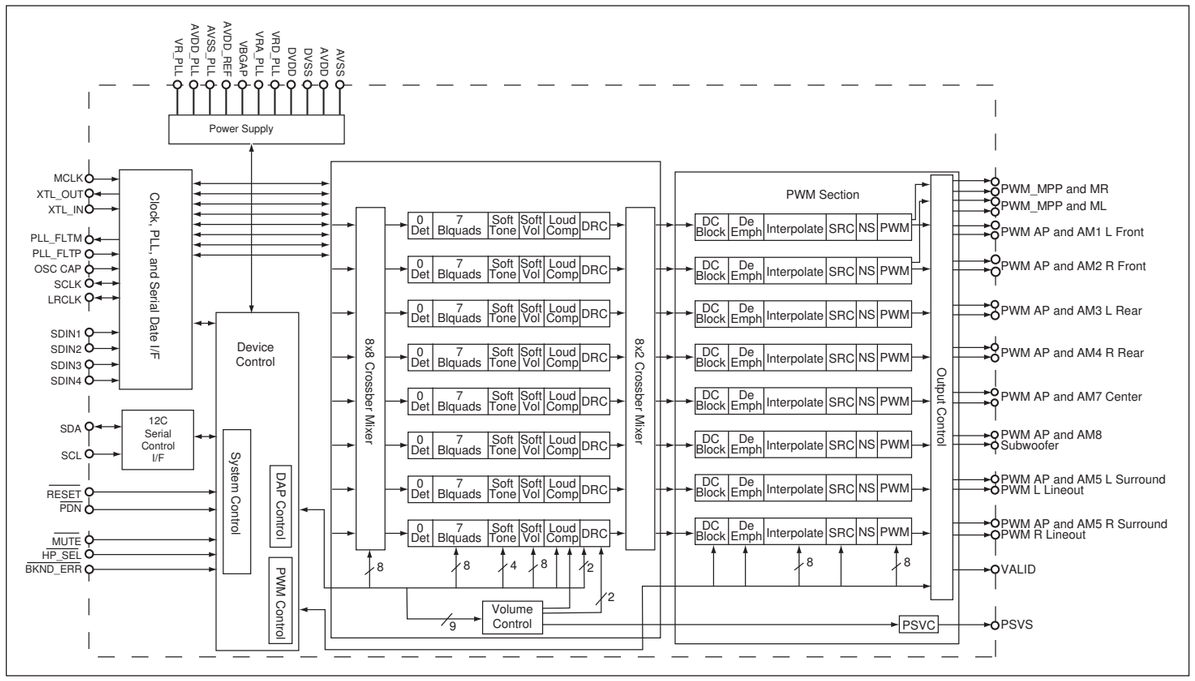

8 - 2

CIRCUIT DIAGRAM

C5001 A1 C5017 C1 C5038 B3 C5053 C2 C5067 D2 C5081 B3 C5095 B2 C5109 B3 C5123 B3 C5138 B2 C5162 D1 C5178 C4 C5192 A4 C5224 D2 FB5003 C1 L5006 A4 L5024 B2 R5003 A1 R5019 B3 R5049 B1 R5064 D4 R5102 C2 R5116 D2 R5131 C1 R5148 C3 R5162 D4 R5177 A3 R5193 A4
C5002 A1 C5018 B3 C5039 B4 C5054 C2 C5068 D4 C5082 B3 C5096 B2 C5110 B3 C5124 B3 C5139 B4 C5163 D1 C5179 D1 C5193 A4 C5310 D2 IC5001 B1 L5007 B1 L5025 B4 R5004 A1 R5029 D3 R5050 B2 R5079 D1 R5103 C2 R5117 D2 R5133 C2 R5149 D3 R5163 D4 R5178 A3 R5194 A4
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C5004 A1 C5027 D3 C5042 C1 C5056 C3 C5070 B1 C5084 B4 C5098 B2 C5112 B4 C5127 B1 C5150 C1 C5165 D1 C5181 A4 C5195 B4 CN5003 D1 IC5003 B3 L5009 B2 L5027 B2 R5006 A2 R5035 D3 R5052 B2 R5083 D2 R5105 C3 R5120 C1 R5135 C4 R5151 D3 R5165 C1 R5180 A4 RB5001 C1
C5005 A2 C5028 C3 C5043 C1 C5057 C3 C5071 B1 C5085 B4 C5099 B2 C5113 B4 C5128 A3 C5151 C2 C5166 C3 C5182 A3 C5196 B4 D5005 C4 IC5004 B4 L5011 B2 L5028 B2 R5007 A2 R5036 C3 R5053 B3 R5084 D2 R5106 C3 R5121 C2 R5136 D1 R5152 D4 R5167 A3 R5181 A4 RB5002 D3
C5006 A2 C5029 D3 C5044 C1 C5058 C3 C5072 B1 C5086 B1 C5100 B2 C5114 B1 C5129 B2 C5152 D2 C5167 D1 C5183 A3 C5197 B4 D5006 C3 IC5006 C2 L5012 B3 L5029 B3 R5008 A3 R5037 D3 R5054 B4 R5093 C1 R5107 C3 R5122 C3 R5138 D1 R5153 D3 R5168 A4 R5182 A4 RB5004 C1
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C5008 A3 C5031 C3 C5046 C1 C5060 C4 C5074 B2 C5088 B1 C5102 B3 C5116 B1 C5131 B3 C5154 D2 C5169 D1 C5185 A3 C5210 A3 D5008 C3 IC5008 D2 L5014 B2 Q5006 C4 R5010 A3 R5039 D3 R5057 C1 R5095 C2 R5109 C3 R5124 C1 R5140 D2 R5155 D4 R5170 A4 R5184 C2
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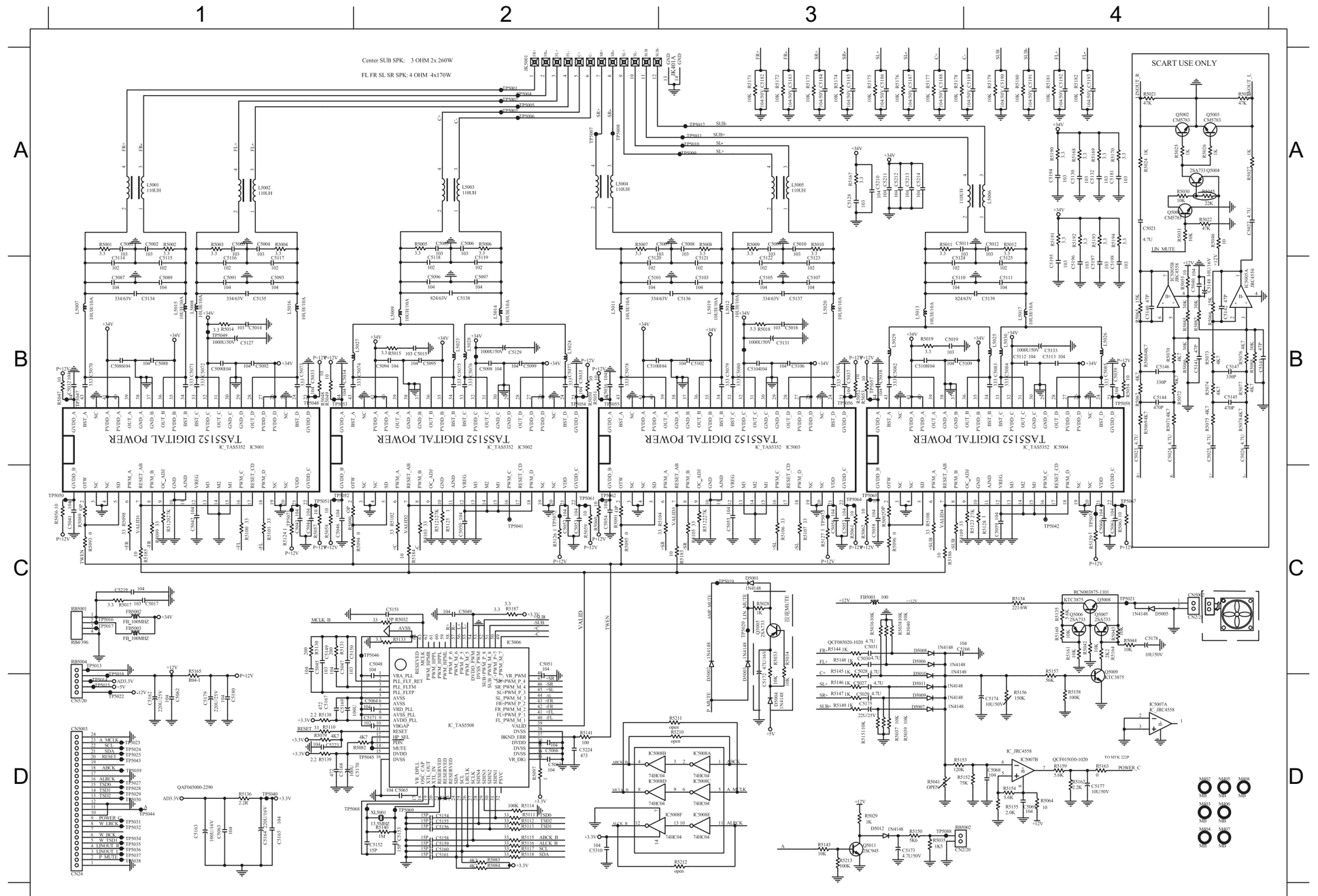
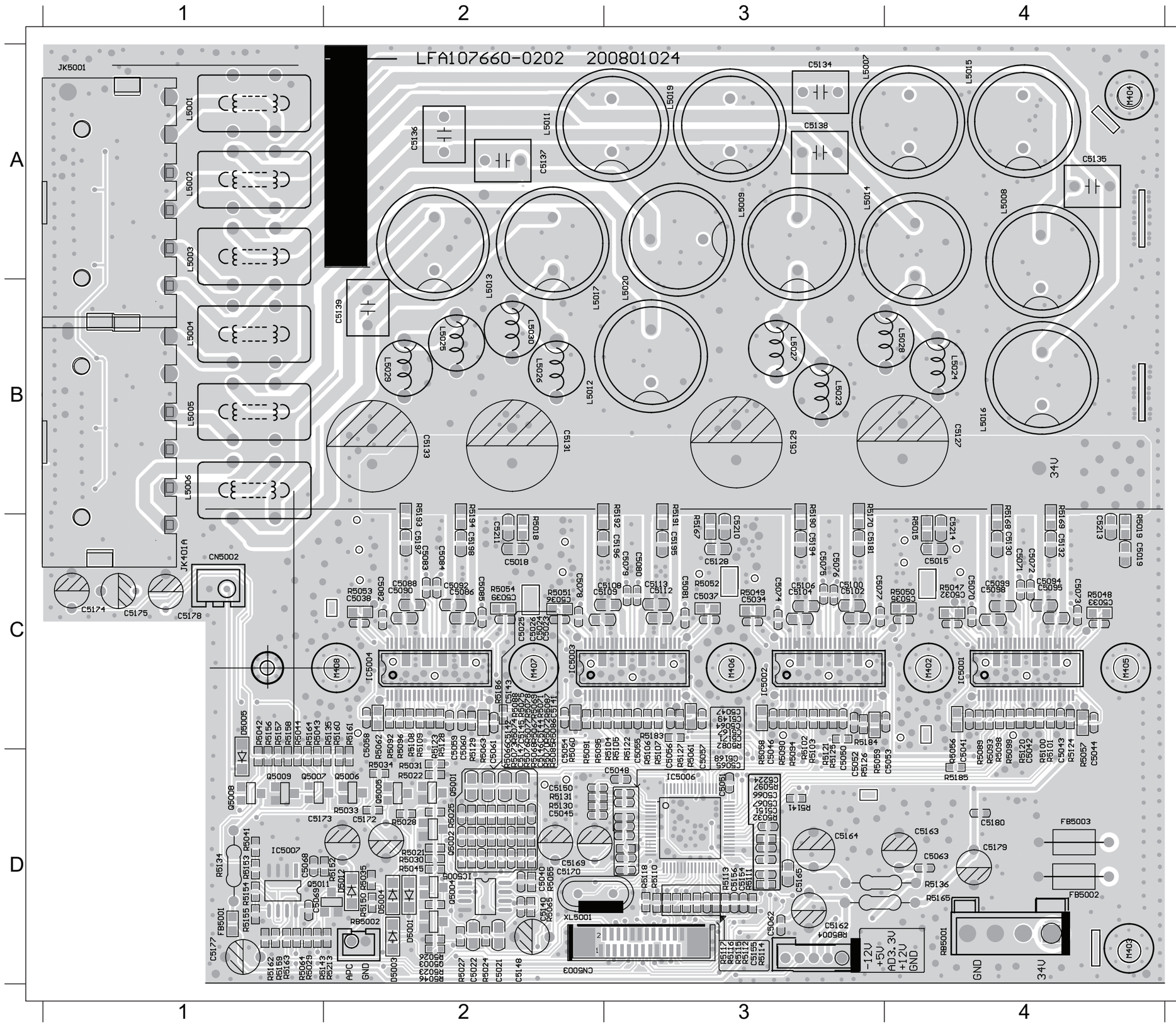


8 - 3

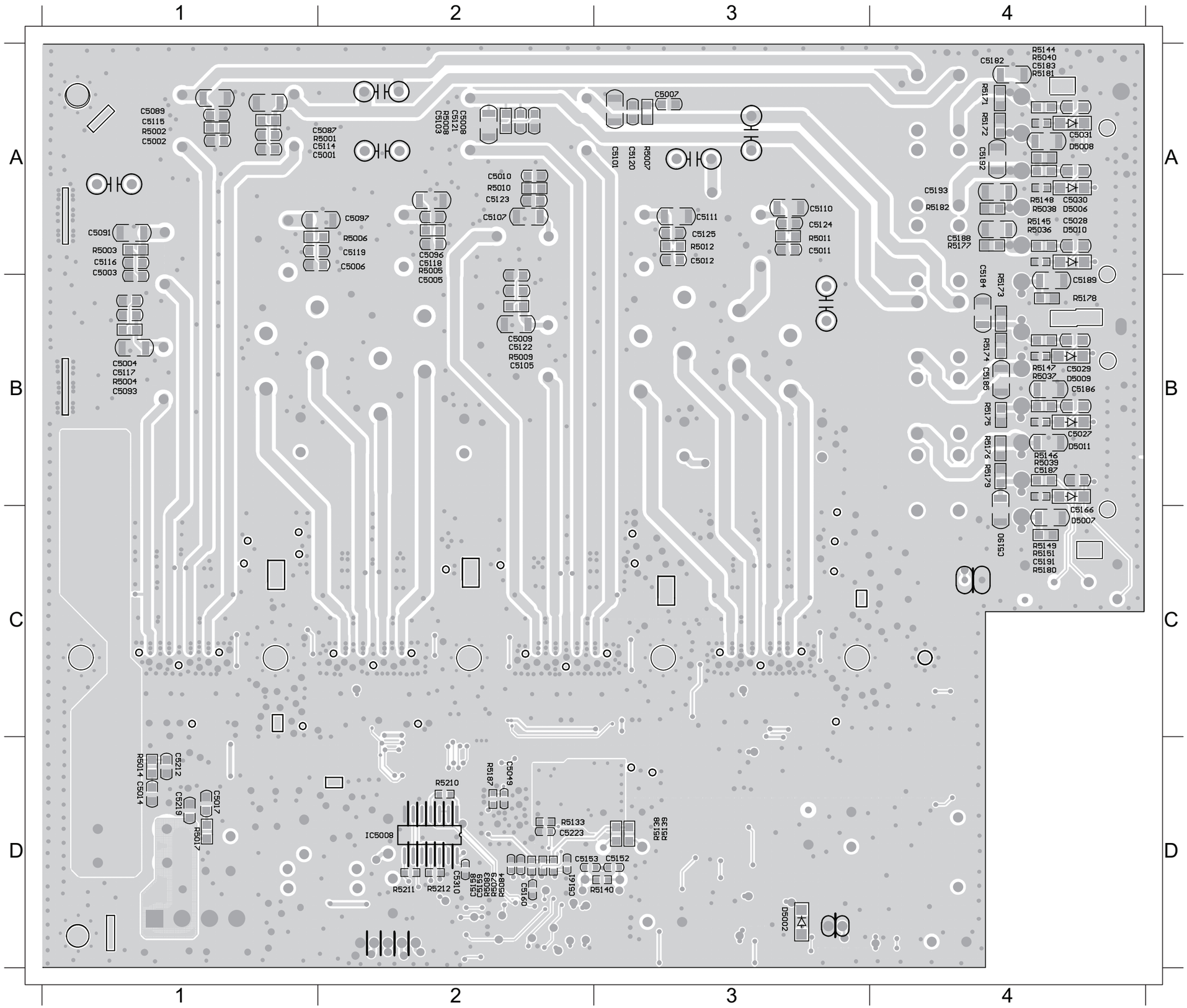
PCB LAYOUT - TOP VIEW



JK5001	A1	C5082	C2	R5059	C3	R5143	D1
L5001	A1	C5083	C2	R5061	C3	R5153	D1
L5002	A1	C5084	C2	R5082	C3	R5154	D1
L5003	A1	C5085	C2	R5094	C3	R5155	D1
C5136	A2	C5086	C2	R5102	C3	R5159	D1
C5137	A2	C5088	C2	R5103	C3	R5162	D1
L5011	A2	C5090	C2	R5104	C3	R5163	D1
L5013	A2	C5092	C2	R5105	C3	C5045	D2
C5134	A3	C5109	C2	R5106	C3	C5150	D2
C5138	A3	C5197	C2	R5107	C3	C5169	D2
L5007	A3	C5198	C2	R5121	C3	C5170	D2
L5009	A3	C5211	C2	R5122	C3	CN5003	D2
L5014	A3	IC5003	C2	R5125	C3	D5012	D2
L5019	A3	IC5004	C2	R5127	C3	Q5006	D2
C5135	A4	R5018	C2	R5167	C3	R5035	D2
L5008	A4	R5051	C2	R5183	C3	R5130	D2
L5015	A4	R5053	C2	R5184	C3	R5131	D2
L5004	B1	R5054	C2	C5015	C4	R5150	D2
L5005	B1	R5060	C2	C5019	C4	R5152	D2
L5006	B1	R5062	C2	C5032	C4	R5213	D2
C5131	B2	R5063	C2	C5033	C4	RB5002	D2
C5133	B2	R5095	C2	C5035	C4	XL5001	D2
C5139	B2	R5096	C2	C5041	C4	C5048	D3
L5012	B2	R5108	C2	C5042	C4	C5051	D3
L5017	B2	R5109	C2	C5043	C4	C5052	D3
L5025	B2	R5123	C2	C5044	C4	C5056	D3
L5026	B2	R5128	C2	C5053	C4	C5062	D3
L5029	B2	R5129	C2	C5070	C4	C5065	D3
L5030	B2	R5135	C2	C5071	C4	C5066	D3
R5193	B2	R5160	C2	C5072	C4	C5067	D3
R5194	B2	R5161	C2	C5073	C4	C5151	D3
C5129	B3	R5186	C2	C5094	C4	C5154	D3
L5020	B3	C5034	C3	C5095	C4	C5155	D3
L5023	B3	C5037	C3	C5098	C4	C5156	D3
L5027	B3	C5046	C3	C5099	C4	C5162	D3
R5170	B3	C5047	C3	C5130	C4	C5164	D3
R5190	B3	C5050	C3	C5132	C4	C5165	D3
R5191	B3	C5055	C3	C5213	C4	C5168	D3
R5192	B3	C5057	C3	C5214	C4	C5224	D3
C5127	B4	C5058	C3	IC5001	C4	IC5006	D3
L5016	B4	C5064	C3	R5015	C4	R5032	D3
L5024	B4	C5074	C3	R5019	C4	R5097	D3
L5028	B4	C5076	C3	R5047	C4	R5110	D3
R5168	B4	C5077	C3	R5048	C4	R5111	D3
R5169	B4	C5079	C3	R5050	C4	R5112	D3
C5174	C1	C5080	C3	R5056	C4	R5113	D3
C5175	C1	C5081	C3	R5057	C4	R5114	D3
C5178	C1	C5100	C3	R5093	C4	R5115	D3
CN5002	C1	C5102	C3	R5098	C4	R5116	D3
D5005	C1	C5104	C3	R5099	C4	R5117	D3
R5042	C1	C5106	C3	R5100	C4	R5118	D3
R5043	C1	C5108	C3	R5101	C4	R5126	D3
R5044	C1	C5112	C3	R5120	C4	R5141	D3
R5156	C1	C5113	C3	R5124	C4	RB5004	D3
R5157	C1	C5128	C3	C5068	D1	C5063	D4
R5158	C1	C5149	C3	C5069	D1	C5163	D4
R5164	C1	C5167	C3	C5173	D1	C5179	D4
C5018	C2	C5171	C3	C5177	D1	C5180	D4
C5036	C2	C5181	C3	FB5001	D1	FB5002	D4
C5038	C2	C5194	C3	IC5007	D1	FB5003	D4
C5039	C2	C5195	C3	Q5007	D1	R5136	D4
C5054	C2	C5196	C3	Q5008	D1	R5165	D4
C5059	C2	C5210	C3	Q5009	D1	R5185	D4
C5060	C2	IC5002	C3	Q5011	D1	RB5001	D4
C5061	C2	R5049	C3	R5029	D1		
C5075	C2	R5052	C3	R5064	D1		
C5078	C2	R5058	C3	R5134	D1		

8 - 4

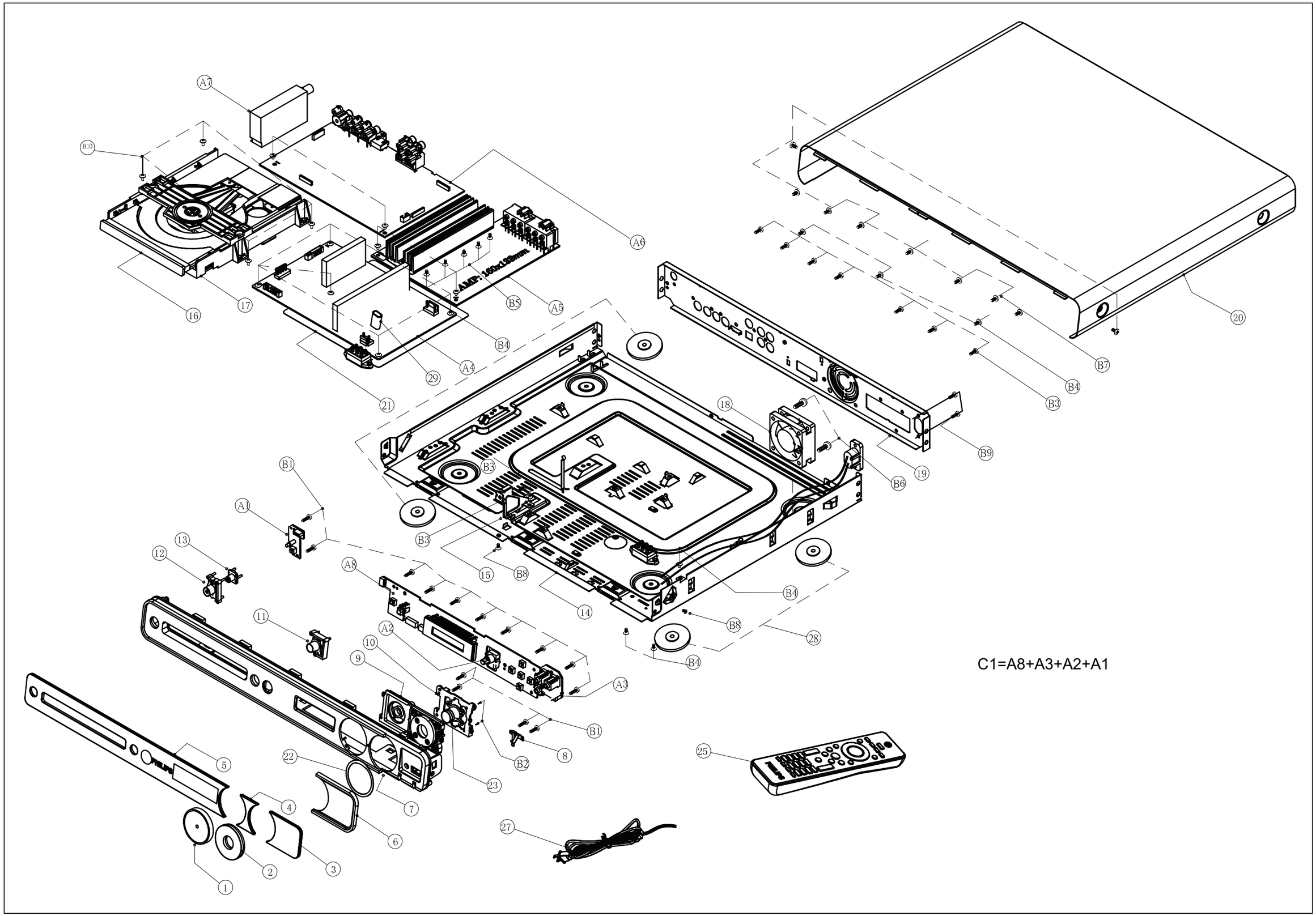
PCB LAYOUT - BOTTOM VIEW



C5001	A1	R5181	A4
C5002	A1	R5182	A4
C5003	A1	C5004	B1
C5087	A1	C5093	B1
C5089	A1	C5117	B1
C5091	A1	R5004	B1
C5114	A1	C5005	B2
C5115	A1	C5009	B2
C5116	A1	C5105	B2
R5001	A1	C5122	B2
R5002	A1	R5009	B2
R5003	A1	C5027	B4
C5006	A2	C5029	B4
C5008	A2	C5185	B4
C5010	A2	C5186	B4
C5096	A2	C5187	B4
C5097	A2	C5189	B4
C5103	A2	D5009	B4
C5107	A2	D5011	B4
C5118	A2	R5037	B4
C5119	A2	R5039	B4
C5121	A2	R5146	B4
C5123	A2	R5147	B4
R5005	A2	R5173	B4
R5006	A2	R5174	B4
R5008	A2	R5175	B4
R5010	A2	R5176	B4
C5007	A3	R5178	B4
C5011	A3	R5179	B4
C5012	A3	C5166	C4
C5101	A3	C5190	C4
C5110	A3	C5191	C4
C5111	A3	D5007	C4
C5120	A3	R5149	C4
C5124	A3	R5151	C4
C5125	A3	R5180	C4
R5007	A3	C5014	D1
R5011	A3	C5017	D1
R5012	A3	C5212	D1
C5028	A4	C5219	D1
C5030	A4	R5014	D1
C5031	A4	R5017	D1
C5182	A4	C5049	D2
C5183	A4	C5153	D2
C5184	A4	C5158	D2
C5188	A4	C5159	D2
C5192	A4	C5160	D2
C5193	A4	C5161	D2
D5006	A4	C5223	D2
D5008	A4	C5310	D2
D5010	A4	IC5008	D2
R5036	A4	R5079	D2
R5038	A4	R5083	D2
R5040	A4	R5084	D2
R5144	A4	R5133	D2
R5145	A4	R5187	D2
R5148	A4	C5152	D3
R5171	A4	R5138	D3
R5172	A4	R5139	D3
R5177	A4	R5140	D3

9 - 1

Mechanical Exploded View



C1=A8+A3+A2+A1

PART LIST

Loc.	Part No.	Description
MAIN UNIT		
1	996510021087	VOLUME KNOB
10	996510021586	SOURCE BUTTON BKT
11	996510021601	OPEN/CLOSS BUTTON
12	996510021561	STANDBY BUTTON
13	996510021064	STANDBY LENS
14	996510021569	BTM CABINET
16	996510025415	DVD DOOR ABS BLK
17	996510021248	DVD LOADER
18	996510021564	FAN 12V 0.55A
19	996510025427	BACK PANEL SECC
2	996510021567	FUNCTION BUTTON
20	996510025419	TOP CAB SECC
23	996510021568	SOURCE BUTTON
25	996510021186	REMOTE CONTROL
27	996510001638	POWER CORD
28	996510021942	RUBBER FOOT D14xH4.2
29	996510023858	RUBBER CUSHION L12XW7XT4.0
3	996510021595	DOOR LENS
4	996510021566	MINI LENS
5	996510021592	DISPLAY LENS
6	996510021588	FLAP DOOR
7	996510021597	FRONT PANEL
9	996510021602	FUNCTION_BTN_BKT
A7	996510017572	TUNERPACK KST-MT001FS0
FM	996510008251	FM ANT
V1	996510007429	GP FFCCBLE 10P100mmUL20798 P=1
V2	996510021598	FFC CABLE 24P 60mm
V2	996510025411	FFC CABLE 24P 60mm
VIDEO	996500013058	RCA CABLE 2P 1.2M
A4	996510021617	POWER PCB ASSY 1200W
A5	996510021605	AMP PCB ASSY
A6	996510021606	MAIN PCB ASSY
C1	996510021573	VFD+JACK+VOL+STDBY PCB ASSY
HDMI	996510020159	HDMI CABLE 1500 20276#30 BLK
SPEAKER		
CENTER	996510001599	RUBBER FOOT -CENTER SPK
FLFR	996510001601	RUBBER FOOT - REAR SPK
RLRR	996510012224	RUBBER FOOT - REAR
SPKC	996510025417	SPEAKER BOX- CENTER
SPKML	996510025409	SPEAKER BOX - FRONT LEFT
SPKMR	996510025418	SPEAKER BOX- FRONT RIGHT
SPKRL	996510025416	SPEAKER BOX- REAR LEFT
SPKRR	996510025412	SPEAKER BOX- REAR RIIGHT
SPKSUB	996510025414	SPEAKER BOX - SUB
SUB	996510013306	RUBBER FOOT -SUB
SCREW		
B8	--	M3x0.5Px6mm
B2	--	T2x0.63PxL5mm NICKEL
B1	--	T2.6x0.91PxL8mm NICKEL
B3	--	T3.0x1.06PxL8mm NICKEL
B5	--	T3.0x1.06PxL10mm NICKEL
B6	--	PAN HEAD STEEL L10xP2.12xT5.0mm
B10	--	M3.0x0.5PxL8mm NICKEL
B9	--	T3.5xL10.0xP1.41mm NICKEL PLATE
B4	--	M3.0x0.5PxL6mm NICKEL
B7	--	M3x6x0.5P
LSCREW	996510017273	SCREW

Loc.	Part No.	Description
MAIN+Y.U.V PCB		
CN201	996500015859	CONNECTOR 4PIN P2.0MM
CN202	996510012494	CONNECTOR 5 PIN RED
CN204	996500017367	CONNECTOR 8P
CN205	996510012495	CONNECTOR 4P
CN206	996500015900	CONNECTOR 3 PIN P=2.0MM
CN208	996500015897	CONNECTOR 3 PIN RED P=2.0MM
CN301	996510012497	FPC/FFC CONN. 10P
CN303	996500015861	CONNECTOR B4B-XH-A 4 PIN
CN401	996500015895	CONNECTOR 5 PIN P=2.0MM
CN802	996500015901	CONNECTOR 6 PIN P=2.0MM
CN803	996500015895	CONNECTOR 5 PIN PITCH=2.0mm
D201	996510010358	DIODE 1N4007
D204	996510010358	DIODE 1N4007
IC201	996510012499	IC 28P
IC202	996510021937	IC48P KH29LV320DBTC-70G TSOPKH
IC203	994000005209	IC 3P AZ809NSTR-E1 SOT23
IC204	996510004289	IC 8P TU24C16CS2 SOIC TURBO
IC205	996500027091	IC 3PIN AP1117E33LA SOT223 3.
IC206	996510016601	IC 54P HY57V641620F(L/S)TP-6
IC207	996510012500	IC 20 PIN SN74HC244PWR TSSOPTI
IC208	996510021936	IC 48P STM32F101C6A LQFP
IC209	996510021082	IC 256P MT1389FXE/SN LQFP
IC210	996500027090	IC 3 PIN AP1117E18LA 1.8V SOT2
IC3001	996510020341	IC 8P D4558 SOP SILICORE
IC301	996510020341	IC 8P CO4558A SO8 CERAMATE
IC303	996510020341	IC 8P CO4558A SO8 CERAMATE
IC304	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC305	996510012503	IC 16P CD4051BM SOIC
IC306	996510021056	IC 20P WM8781GEDS SSOP WOLFS
IC309	996510012500	IC 20 PIN SN74HC244PWR TSSOP TI
IC501	996510012505	IC 48P CS48540-CQZ LQFP CIRRUS
IC801	996510012506	IC 28P AM5888S L/F HSOP AMTEK
JK206A	996510021571	FIBER OPTICAL RECEIVER
JK206B	996510021591	RCA JACK 1P ORANGE W/GND
JK302	996510004283	RCA JACK 4P AUDIO
JK601	996510012507	HDMI JACK 19P PDVBT8-19 FLBS4N
JK701	996510012481	RCA JACK 1P YELLOW W/GND
JK702	996500012609	RCA JACK R/G/B
JK703	996510021563	RCA JACK + TOSL. JACK ASSY
Q201	994000000915	XISTR NPN 2SC1623
Q204	996510012508	XISTR PNP TIP42C
Q205	996510000578	XISTR NPN KTC3875-Y
Q206	996510000578	XISTR NPN KTC3875-Y SOT23
Q300	996510000578	XISTR NPN 2SC1623
Q302	996510000578	XISTR NPN 2SC1623
Q303	996510000578	XISTR NPN 2SC1623
Q304	996510000578	XISTR NPN 2SC1623
Q305	996510000578	XISTR NPN 2SC1623
Q602	996500041281	FET 2N7002 60V/115MA
Q801	996510004117	FET 2SK3018 30V/0.1A SC-70
Q802	994000000915	XISTR NPN 2SC1623
Q803	996500026927	XISTR PNP 2SB1132RT100 ROHM HF
Q804	996500026927	XISTR PNP 2SB1132RT100
Q805	996510004117	FET 2SK3018 30V/0.1A
Q901	996510000615	XISTR NPN 2SC945P NEC
Q903	996500026946	XISTR PNP 2SB772P/Q NEC PB<10
XL501	996510000566	CRYST 24.576MHZ +/-20PPM
ZD901	994000005204	DIODE ZENR 12.6-13.1V 0.5W
ZD904	996500028741	DIODE ZENR 9.1-9.5V 0.5W PB<10
POWER PCB		
BD901	996510011372	BRIDGE KBU808 8A 800V
C902	996500018042	COND DISC 0.01UF 1KV 20%
C906	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C907	996510012548	GOND SAFETY 0.47uF 275V 10% X2
C908	996500027123	CAP.E 330UF 200V 20% 105'C D18
C910	996500027124	COND METAL 1.5UF 250V DC /-10
C913	996500020264	COND DISC 470PF 1KV 10%
C915	996500027125	COND DISC 0.0022UF 1KV 20% Y5P

Loc.	Part No.	Description
C917	994000005343	COND SAFETY 0.22UF 275V 20%
C965	994000005344	CAP.SAFETY Y1 560PF 400V 10%
CN901	996510018268	CONNECTOR 4P P=3.96mm180' NICK
CN902	996500017458	CONNECTOR 3P CL3962WVO
CN903	996510021055	CONNECTOR B7B-XH-A 7 PIN
CN904	996500017358	CONNECTOR 7P
CN905	996510016729	CONNEC 4P P=3.96mm 180' NICKEL
CN906	996500015898	CONNECTOR 2 PIN PITCH=2.0MM
D902	996500026949	DIODE SW 1N4148 PB<1000PPM
D903	996500026949	DIODE SW 1N4148 PB<1000PPM
D904	994000005346	RECTIFIER UF1602CT TO-220AB 3P
D907	996500026949	DIODE SW 1N4148 PB<1000PPM
D908	996500026949	DIODE SW 1N4148 PB<1000PPM
D918	996510012516	DIODEHER105 DO-411A400V50nSFMS
D920	994000000938	DIODE PR1507 1.5A 1000V
D922	996500041297	DIODE SB560 DO-201AD CTC 5A 60
D923	996500038438	DIODE HER503 5A 200V
F901	994000001053	FUSE 6.3A 250V
GT902	996510021084	SURGE PROTECTOR DSP-501N-A21F
IC902	996510021079	IC 8P(P3=N.C) TNY180PN DIP-8C
IC903	994000000946	OPTICAL SENSOR 4P
IC904	996500029312	IC 3 PIN TL431 TO-92 CHANG JI
IC905	996510008293	IC 16P AZ7500BP-E1
L901	996510013776	LINE FILTER ET-24
L902	996510013747	LINE FILTER ET-28
L903	996500016694	6UH 13.5TS 2UEW
L907	996500027102	TOROID COIL S1=1TS D0.65MMX2 P
L908	994000005341	COMMON COIL 65UH +/-10% 2XD1.2
NTC901	996510008294	NTC THERMISTOR
Q905	994000000915	XISTR NPN 2SC1623
Q906	994000000921	XISTR PNP 2SA812 HFE:200-400
Q910	996500026946	XISTR PNP 2SB772P/Q NEC PB<10
Q912	996510012517	MOSFETFQP13N50C
TO220F	AIRCHILD	
Q923	996510018395	FET AO3401 SOT23 -30V/-4.2A
Q925	996510010356	XISTR PNP 2SB647 TO-92MOD
R908	996510012519	RES. 120 OHM 3W 5% MOF
R943	996510012519	RES. 120 OHM 3W 5% MOF
T901	996510021236	TRASFO. EEL-25 7+7P 40W
T902	994000001057	SW. MODEL TRANSFORMER
T903	996510021575	SW. TRASFO FERRITE
TVR901	996510011373	METAL OXIDE VARISTOR 50A560V
TVR902	996510021072	SURGEORBER :VCR-10D241KSP
ZD902	996500027139	DIODE ZENR 23.6-24.7V 0.5W PB<
ZD908	996500029604	DIODE ZENR 19.5-20.4V 0.5W
ZD910	996500026940	DIODE ZENR 11.9-12.4V 0.5W

AMP PCB

CN5002	996500015862	CONNECTOR B2B-XH-A 2 PIN
IC5001	996510021081	IC 44P TAS5352ADDV HTSSOP TI
IC5002	996510021081	IC 44P TAS5352ADDV
IC5003	996510021081	IC 44P TAS5352ADDV
IC5004	996510021081	ICz 44P TAS5352ADDV
IC5006	996510021092	IC 64P TAS5508APAG TQFP TI
IC5007	996510020341	IC 8P D4558 SOP SILICORE
IC5008	996500023948	IC 14PIN 74HCU04D PHILIPS TSOP
JK5001	996510013837	GPSPK JAC12P RD-WT-GRN-GRY-BLU
L5007	996510021061	INDUCTOR 10uH 20% 10A
L5008	996510021061	INDUCTOR 10uH 20%
L5009	996510021061	INDUCTOR 10uH 20%
L5011	996510021061	INDUCTOR 10uH 20%
L5012	996510021061	INDUCTOR 10uH 20%
L5013	996510021061	INDUCTOR 10uH 20%
L5014	996510021061	INDUCTOR 10uH 20%
L5015	996510021061	INDUCTOR 10uH 20%
L5016	996510021061	INDUCTOR 10uH 20%
L5017	996510021061	INDUCTOR 10uH 20%
L5019	996510021061	INDUCTOR 10uH 20%
L5020	996510021061	INDUCTOR 10uH 20%
L5023	996510021604	AIR COIL 30NH I=10A
L5024	996510021604	AIR COIL 30NH I=10A
L5025	996510021604	AIR COIL 30NH I=10A
L5026	996510021604	AIR COIL 30NH I=10A
L5027	996510021604	AIR COIL 30NH I=10A
L5028	996510021604	AIR COIL 30NH I=10A
L5029	996510021604	AIR COIL 30NH I=10A
L5030	996510021604	AIR COIL 30NH I=10A
Q5006	994000000921	XISTR PNP 2SA812 HFE:200-400
Q5007	994000000921	XISTR PNP 2SA812 SOT-23
Q5008	996510000578	XISTR NPN KTC3875-Y
Q5009	996510000578	XISTR NPN KTC3875-Y SOT23
Q5011	996510000578	XISTR NPN KTC3875-Y SOT23
XL5001	996510021233	X'TAL 13.5MHz 15ppm 20pF

VFD+JACK+VOL+STDBY PCB

IC11	996500029614	IC 52 PIN PT6311(PTC)
JK11	996510004129	KARAOKE JACK D3.6MM 7P
LD11	996510020167	LED 3 DIA ULTRA RED TINT CLEAR
Q11	994000000915	XISTR NPN 2SC1623
Q12	994000000921	XISTR PNP 2SA812 HFE:200-400
SN11	996510021562	IRT RECEIVER IRM-3638TF4
USB11	996510013742	USB JACK 4P

REVISION LIST

Version 1.0
*Initial release