DVD Home Theatre System

HTS3270/12/05

Service
Service
Service

Service Manual

TABLE OF CONTENTS

CLASS 1
LASER PRODUCT

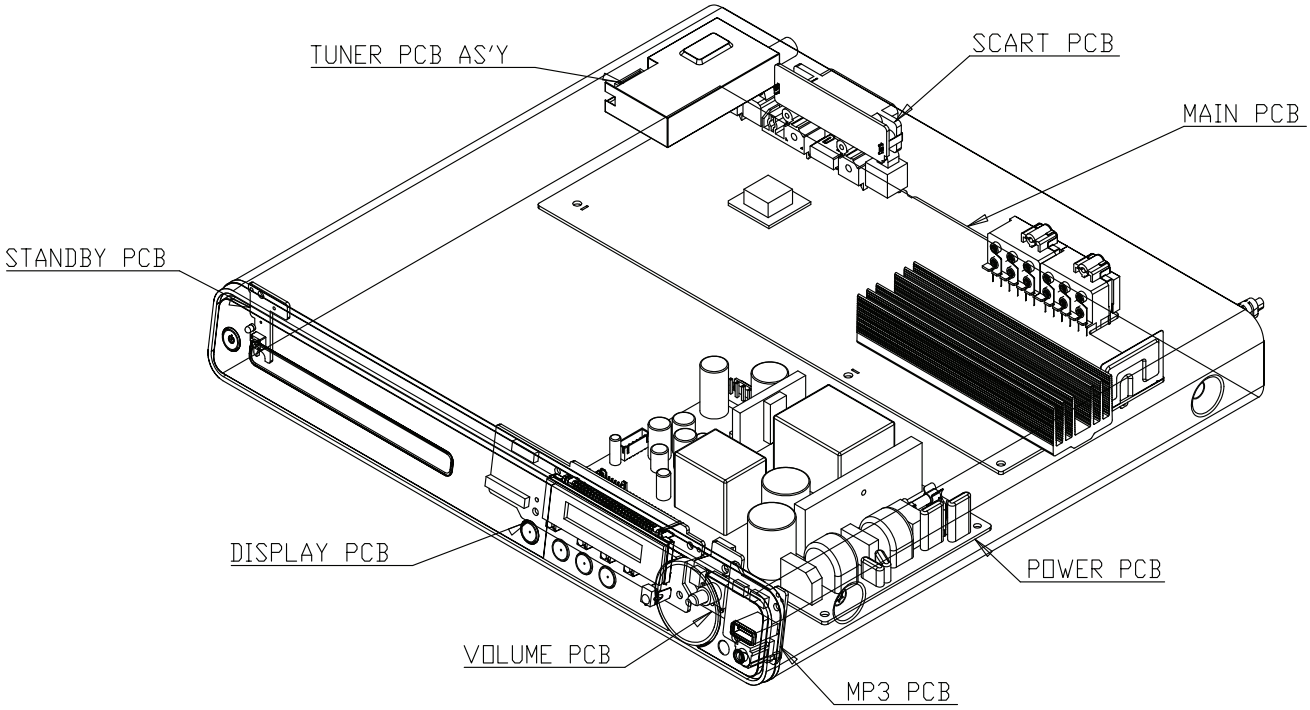
Published by ET-SL 0906 Service Audio Printed in The Netherlands Subject to modification

GB 3141 785 33330

Version 1.0

PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

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

SERVICE SCNARIO MATRIX:

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

*C = Component Level Repair

SPECIFICATIONS

Playback media

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

Amplifier

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

Disc

Laser Type..... Semiconductor
Disc diameter.....12cm / 8cm
Video 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 kHz)
2 6 dB quieting sensitivity.....FM 22 dBf
IF rejection ratio.....FM 60 dB
Signal-to-noise ratio.....FM 50 dB
Harmonic distortion.....FM 3%
Frequency response.....FM 180 Hz~10 kHz
...../ ±6dB
Stereo separation ..... FM 26 dB (1 kHz)
Stereo Threshold.....FM 29 dB

USB

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

Main Unit

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

Speakers

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

Subwoofer

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

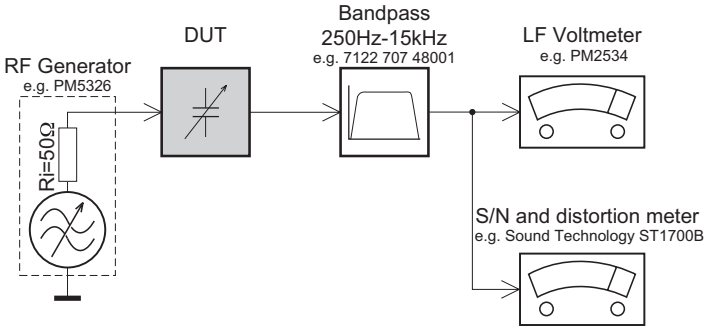
Laser specification

Type..... Semiconductor laser 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

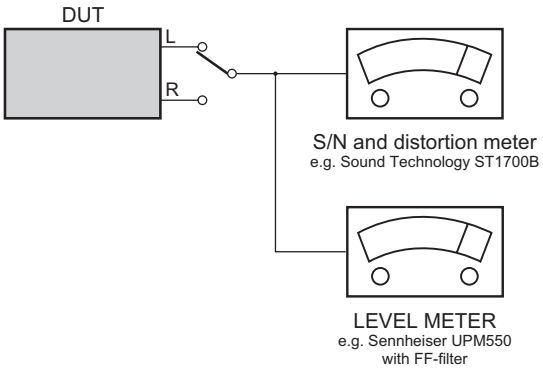
Tuner FM



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

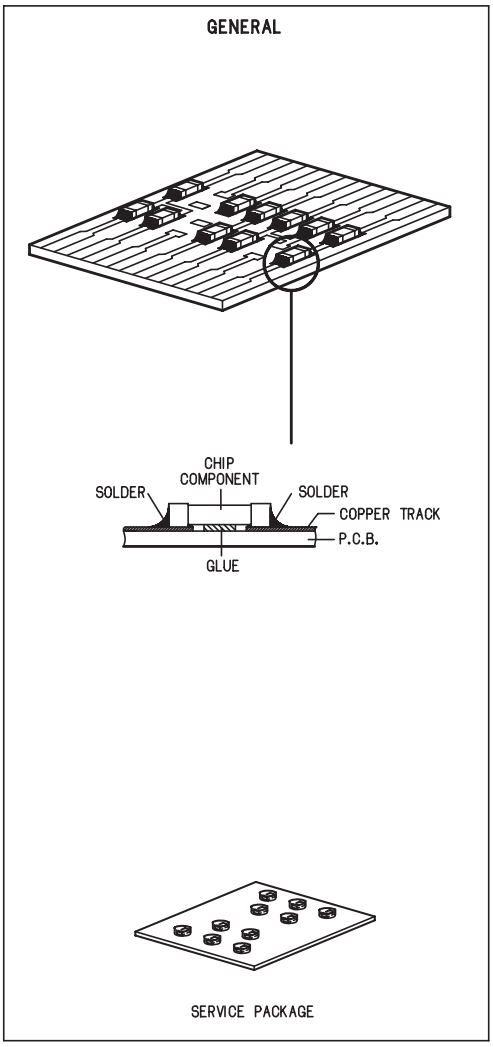
Service Tools:

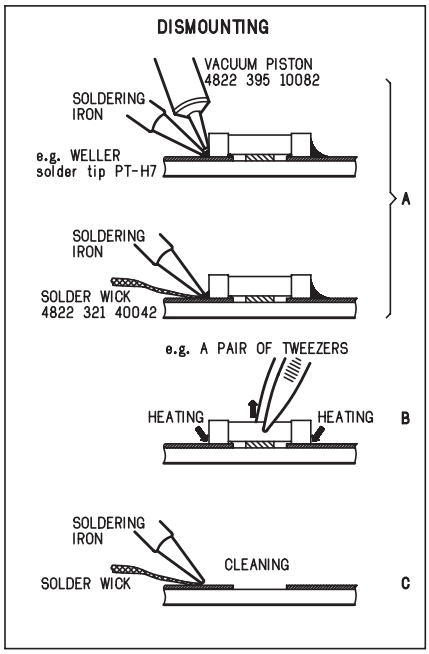
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 .....4822 395 50145
Torx driver T10 extended 4822 395 50423

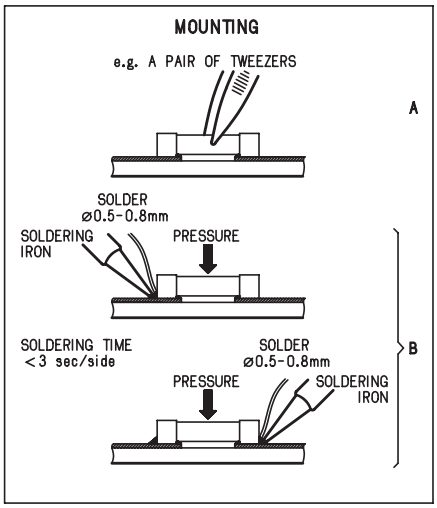
Compact Disc:

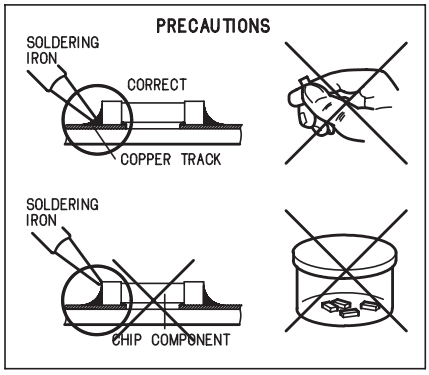
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

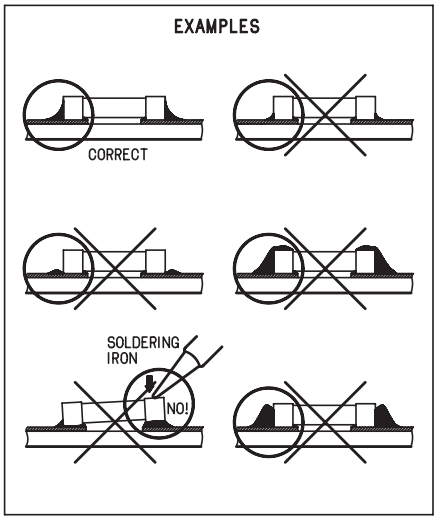
HANDLING CHIP COMPONENTS











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 un-used 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

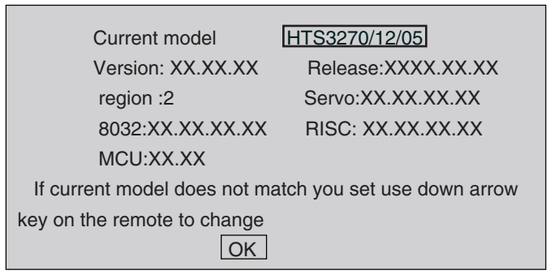
2)Region Code Change

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

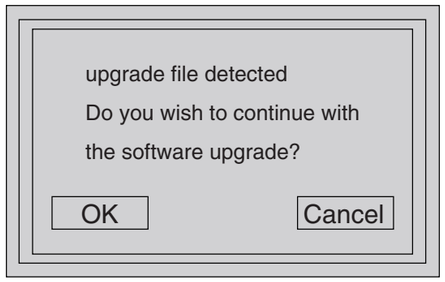
a) Open the CD Door
b) Press “INFO“ button on R/C
c) TV will show the version on screen

6)Trade model

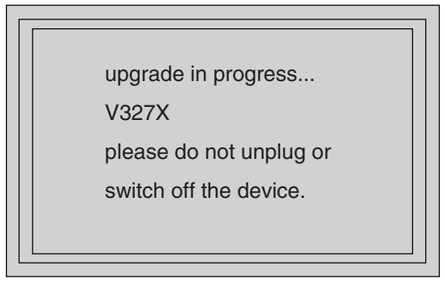
a) Press “Open/Close “ button on R/C
b) Press “2” “5” “9” on R/C,VFD will display “TRA ON “ or “TRA OFF“

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!

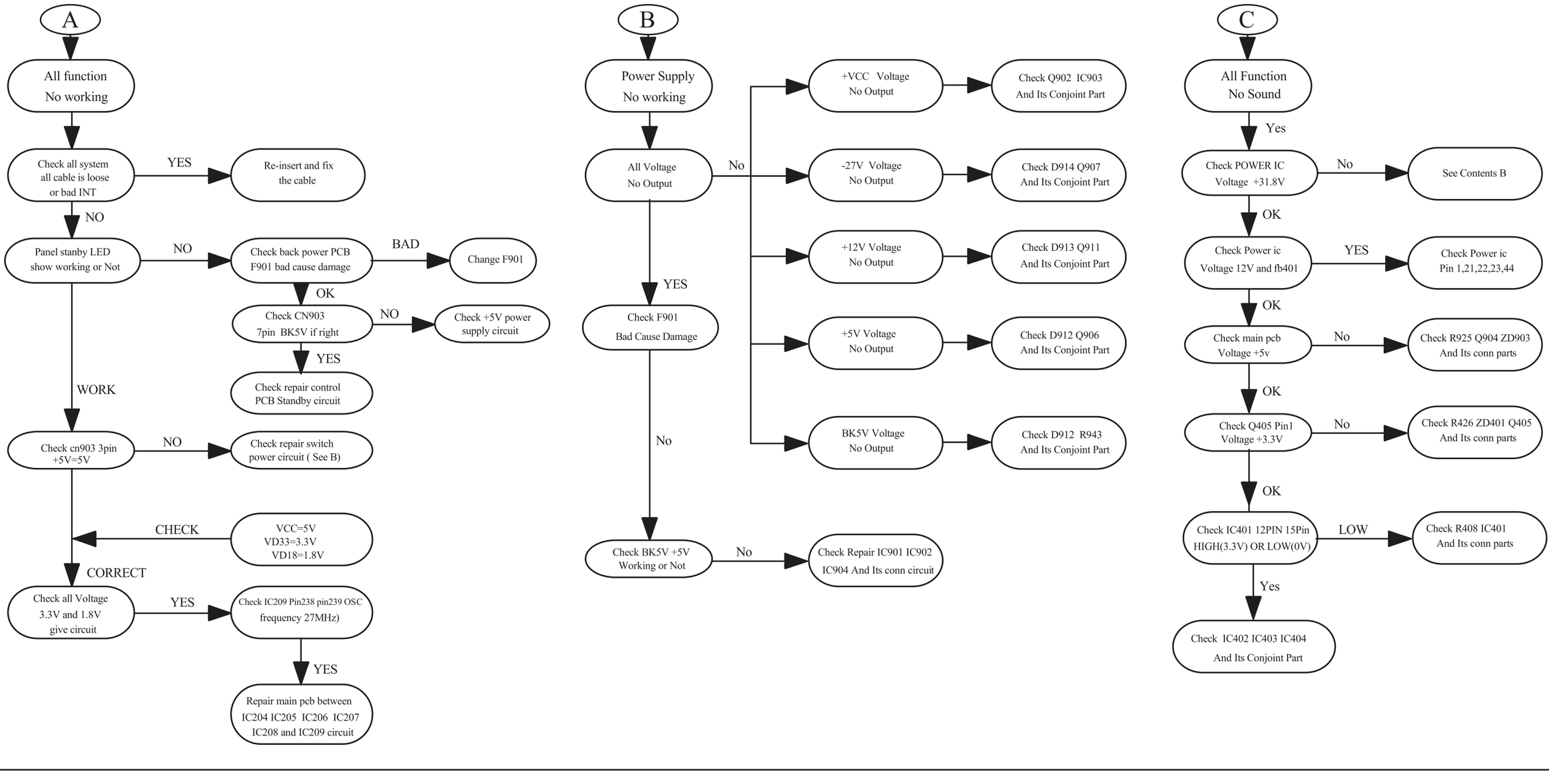
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

2 - 2

REPAIR INSTRUCTIONS (ONE)

MAIN UNIT REPAIR CHART 1/3

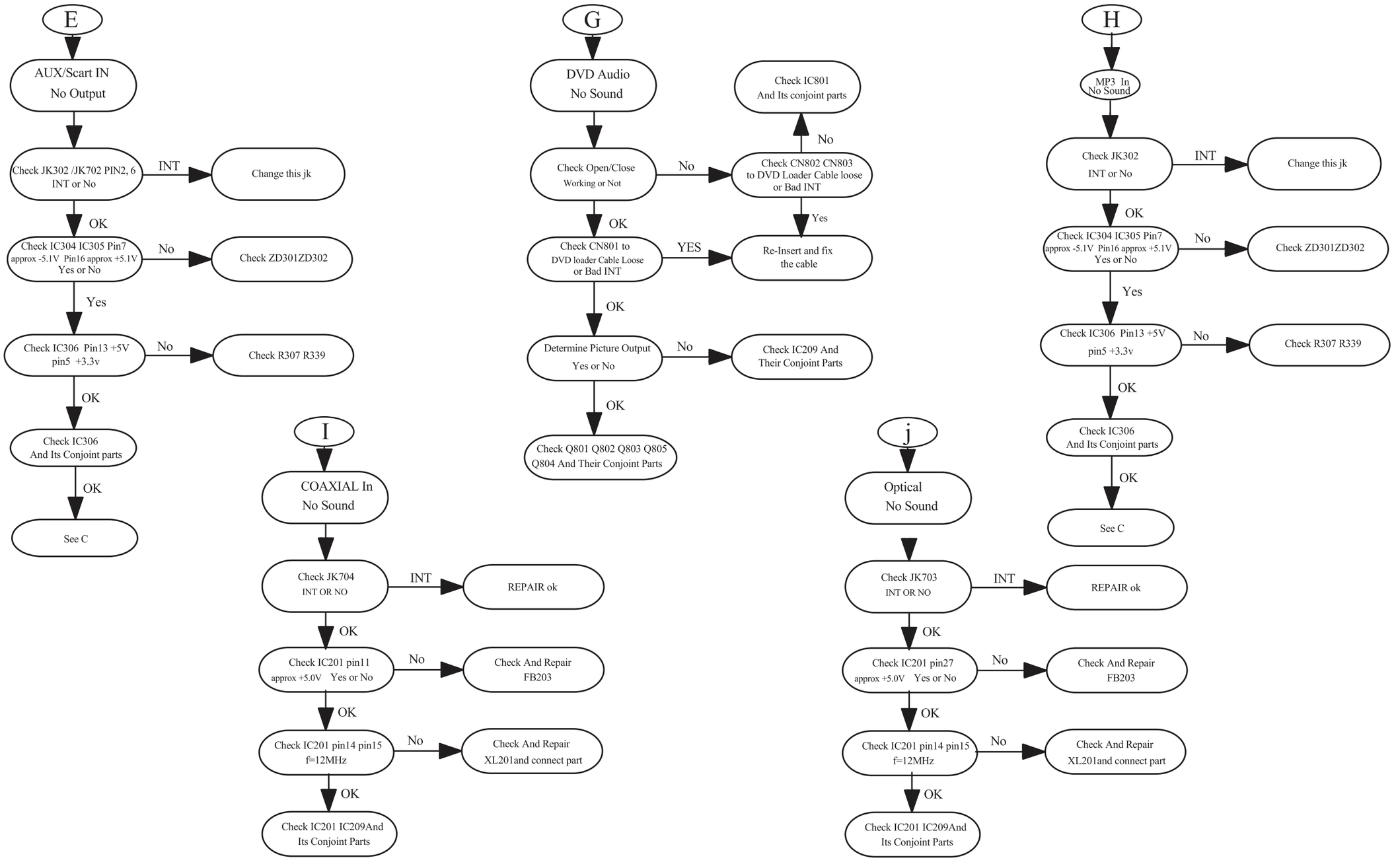
A All Function No Working
B Power Supply No Working
C All Function No Sound
E Audio line IN No Output
G DVD Audio No Sound
H MP3 In No Sound
I COAXIAL In No Sound
L Tuner No Sound
M HDMI No Output
N No CVBS Output
O No SCART output



2 - 3

REPAIR INSTRUCTIONS (TWO)

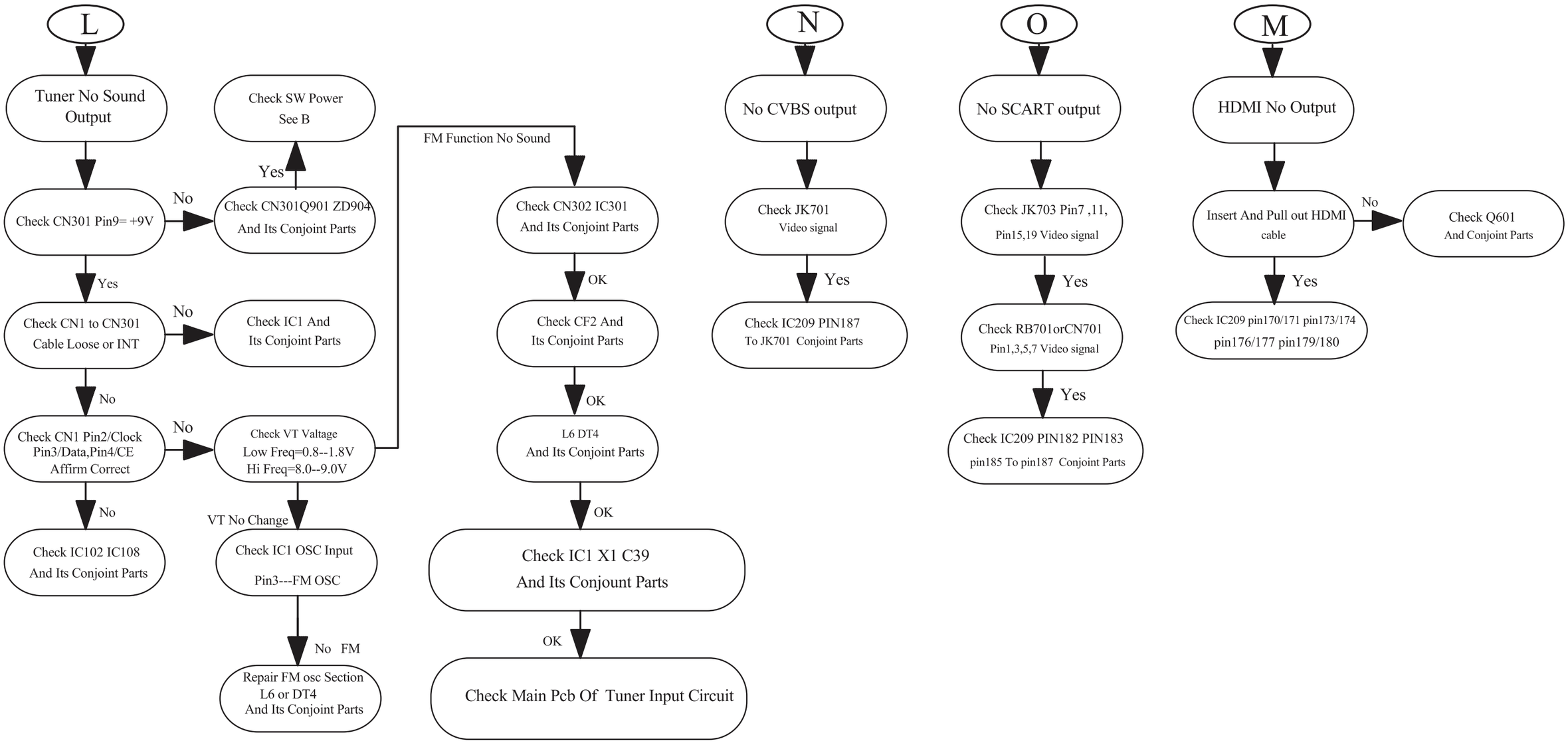
MAIN UNIT REPAIR CHART 2/3



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.

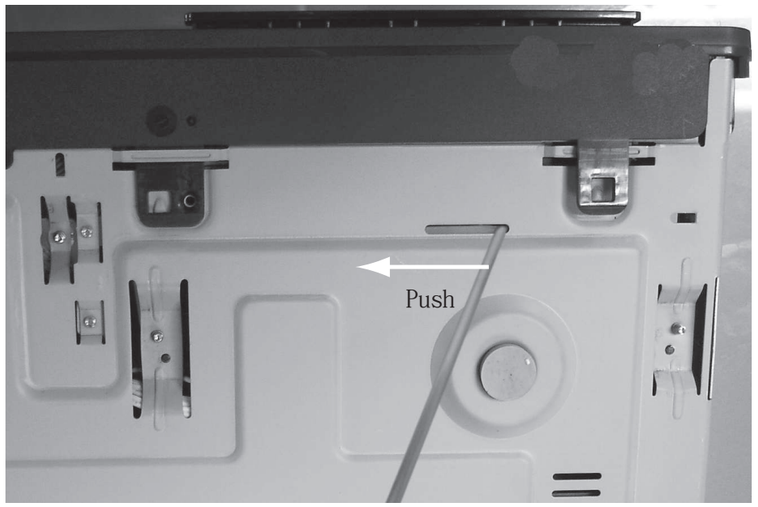


Figure 1

Figure 2

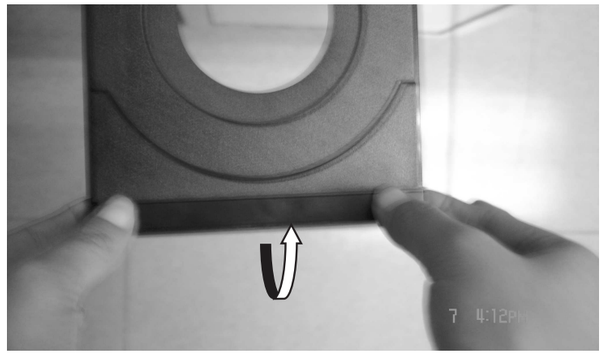


Figure 3

3 - 1

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

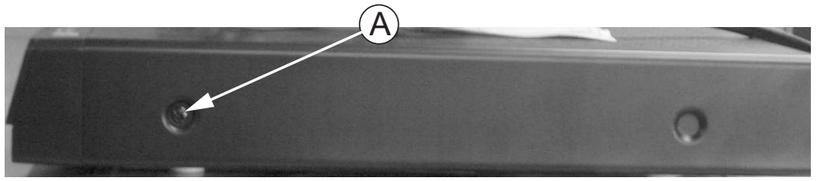


Figure 4

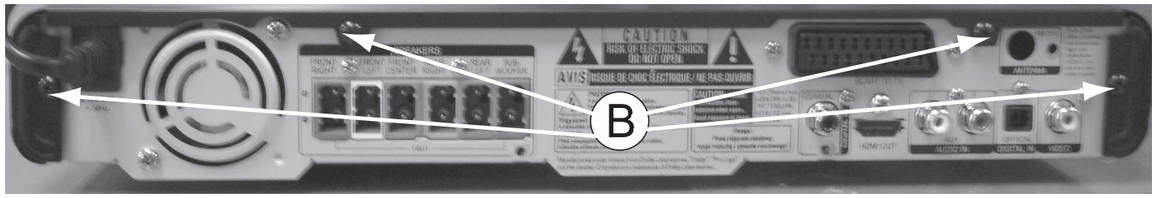


Figure 5

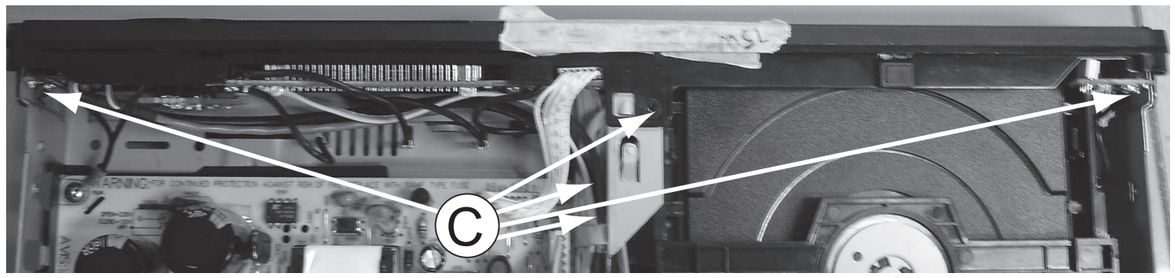


Figure 6

Dismantling of the DVD Module

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

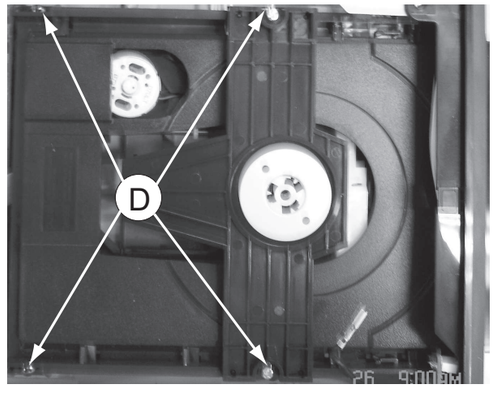


Figure 7

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

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

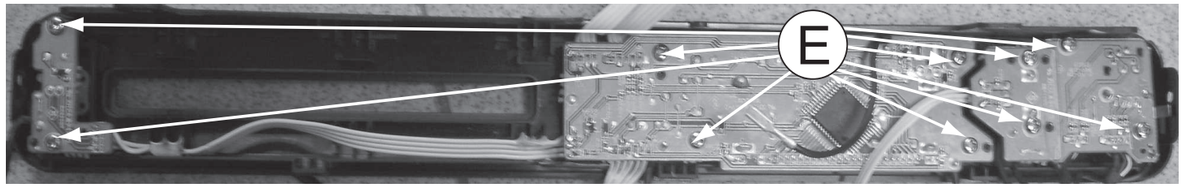


Figure 8

Dismantling of the Power Board

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

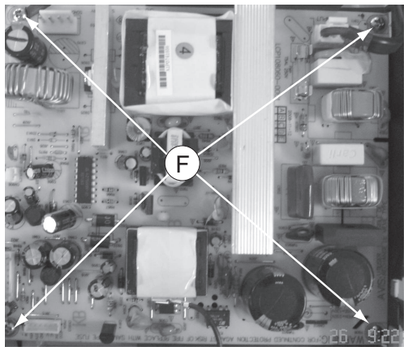


Figure 9

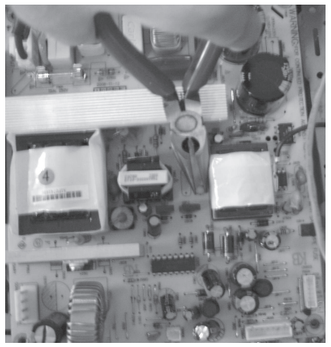


Figure 10

Dismantling of the MAIN+SCART Board

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

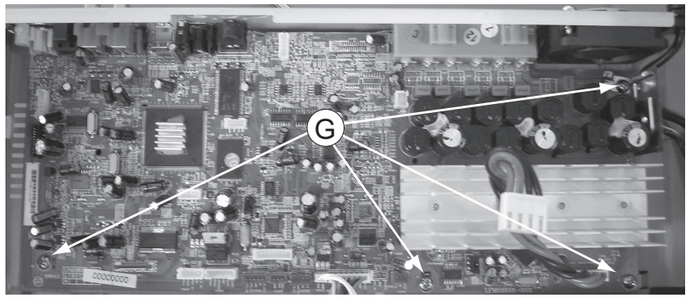


Figure 11

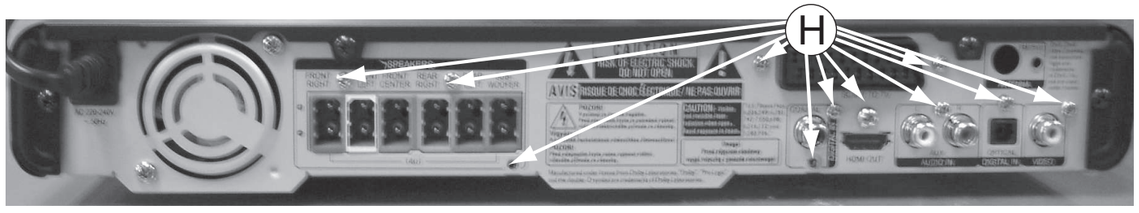
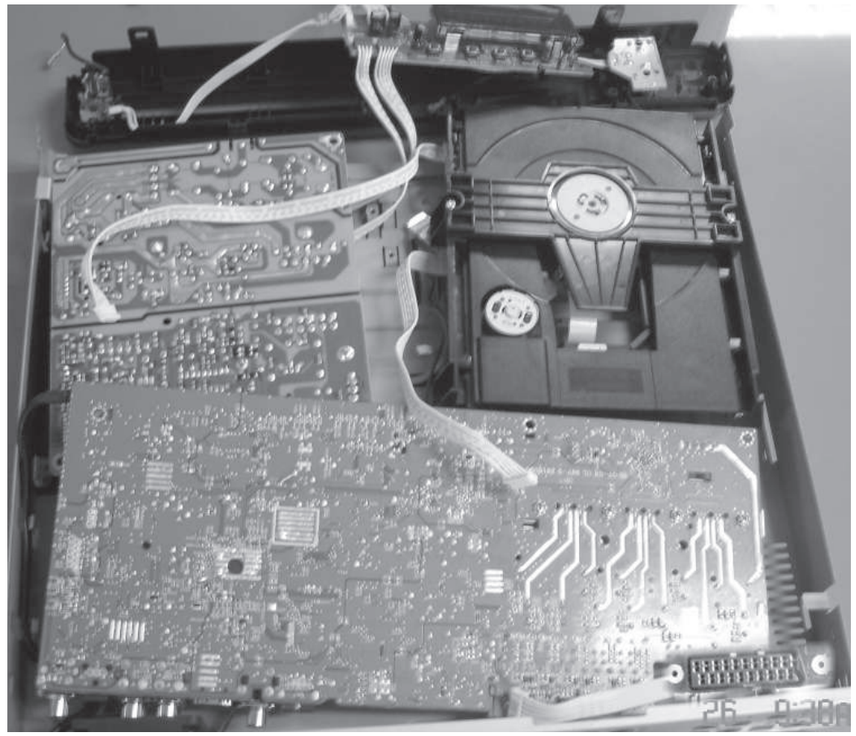


Figure 12

SERVICE POSITIONS

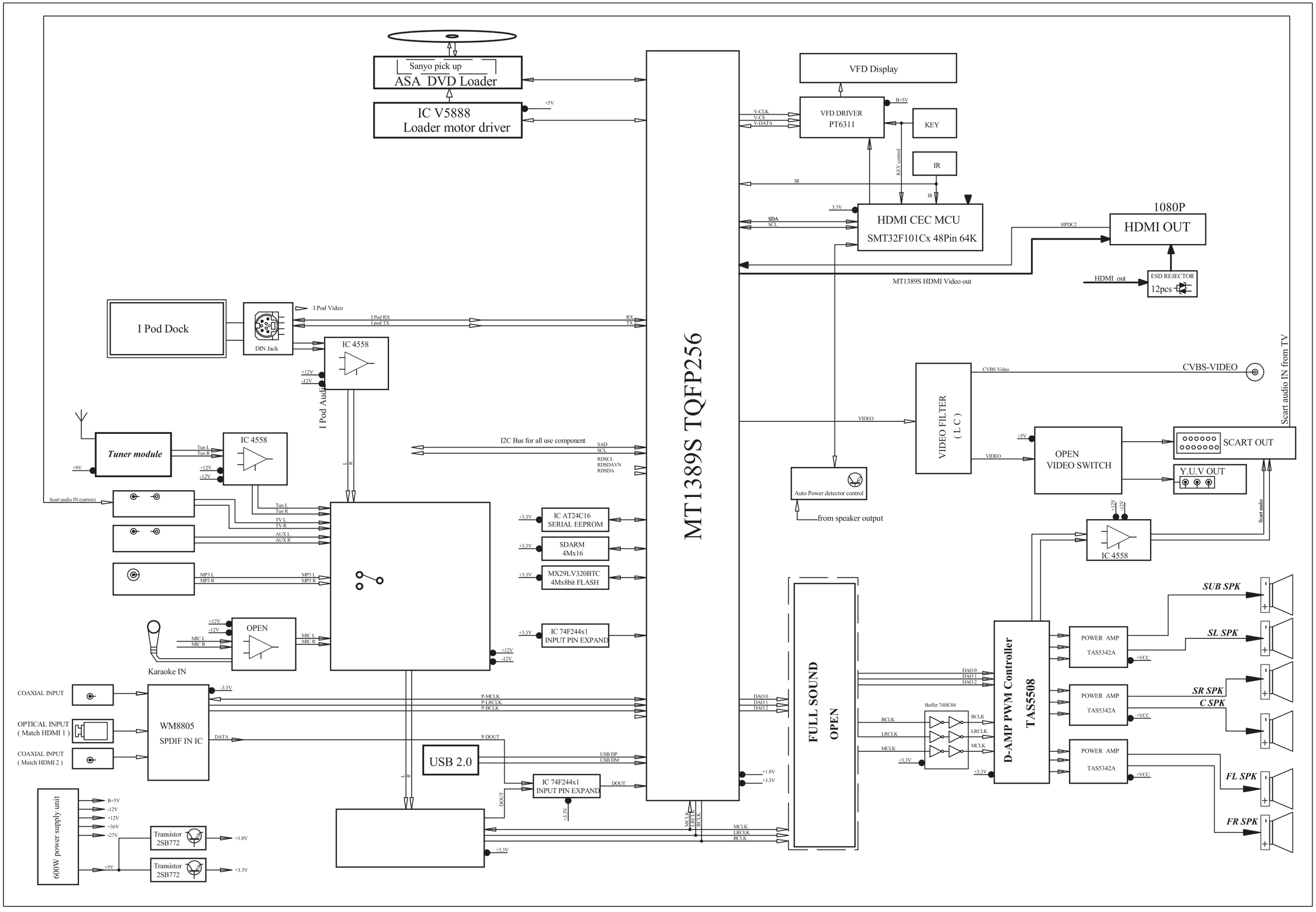
Service position A



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.

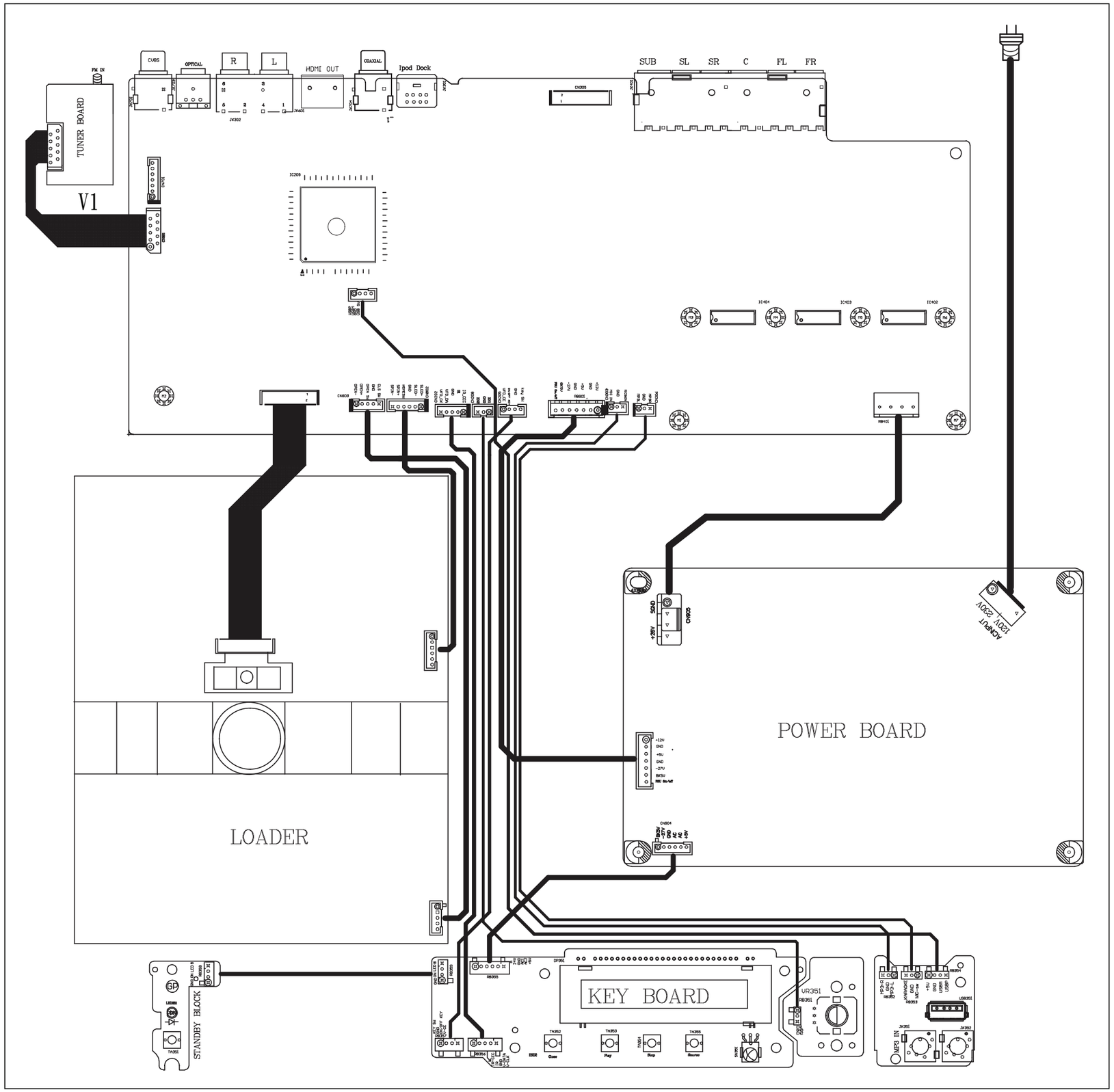
4 - 1

BLOCK DIAGRAM



4 - 2

WIRING DIAGRAM

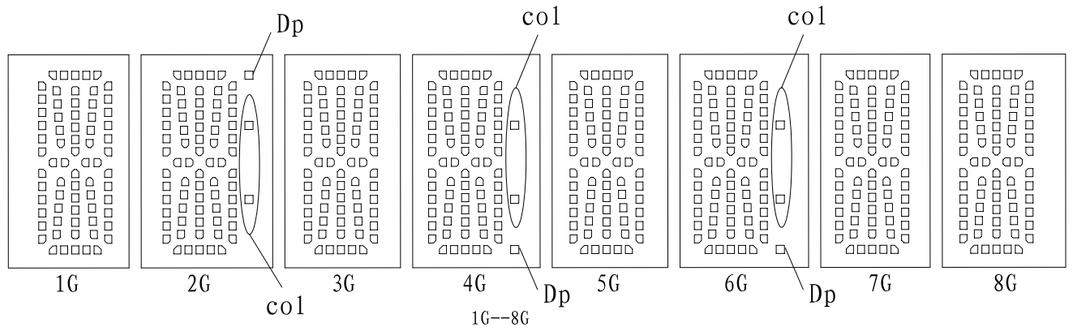


DISP+LED+VOL BOARD

TABLE OF CONTENTS

5 - 1

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

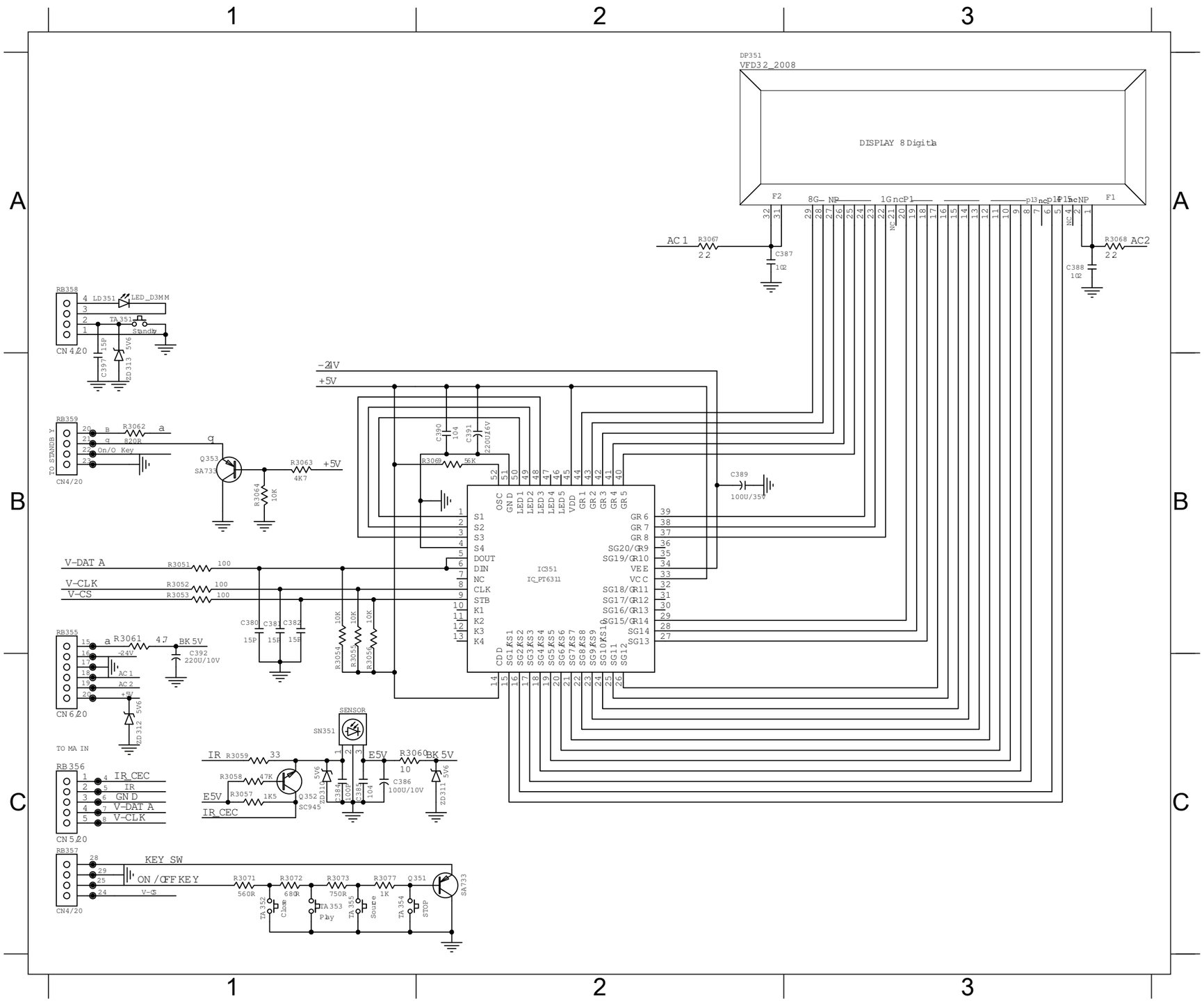
管脚序号(Pin NO.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
连接(Connection)	F1	F1	NP	NC	P15	P14	NC	P13	P12	P11	P10	P9	P8	P7	P6	P5
管脚序号(Pin NO.)	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
连接(Connection)	P4	P3	P2	P1	NC	1G	2G	3G	4G	5G	6G	7G	8G	NP	F2	F2

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)

5 - 2

CIRCUIT DIAGRAM

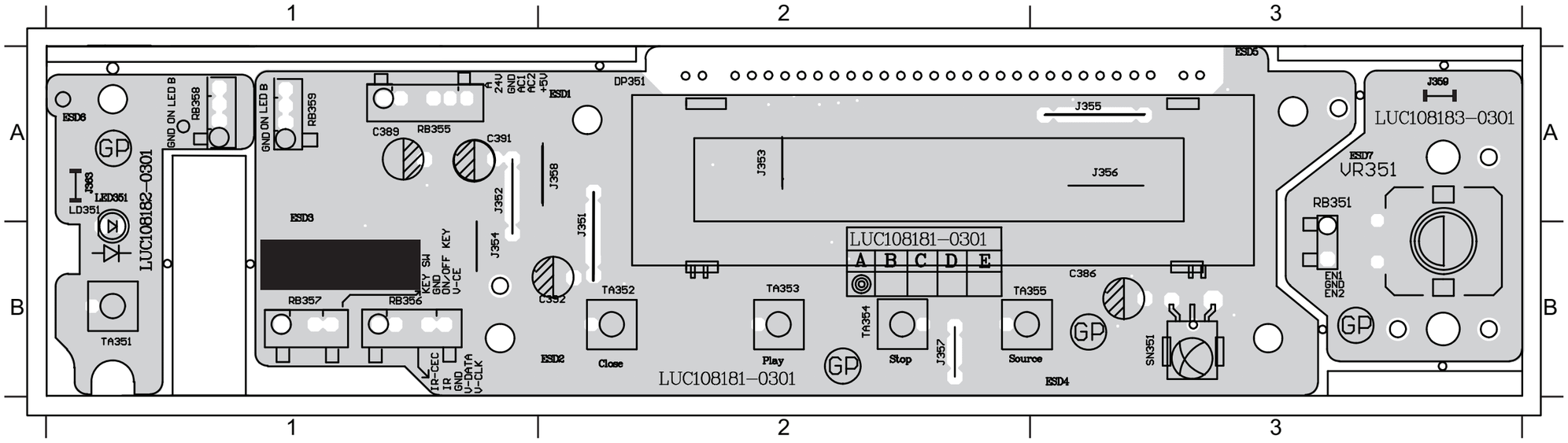
C380 B1 C384 C1 C387 A2 C390 B2 C395 C4 DP351 A2 Q351 C1 R3051 B1 R3054 B1 R3057 C1 R3060 C1 R3063 B1 R3068 A3 R3072 C1 RB351 C4 RB357 C1 TA351 A1 TA354 C1 ZD310 C1 ZD313 B1
C381 B1 C385 C1 C388 A3 C391 B2 C396 C4 IC351 B2 Q352 C1 R3052 B1 R3055 B1 R3058 C1 R3061 B1 R3064 B1 R3069 B2 R3073 C1 RB355 B1 RB359 B1 TA352 C1 TA355 C1 ZD311 C2
C382 B1 C386 C1 C389 B2 C392 B1 C397 B1 LD351 A1 Q353 B1 R3053 B1 R3056 B1 R3059 C1 R3062 B1 R3067 A2 R3071 C1 R3077 C1 RB356 C1 SN351 C1 TA353 C1 VR351 C4 ZD312 C1



5 - 3

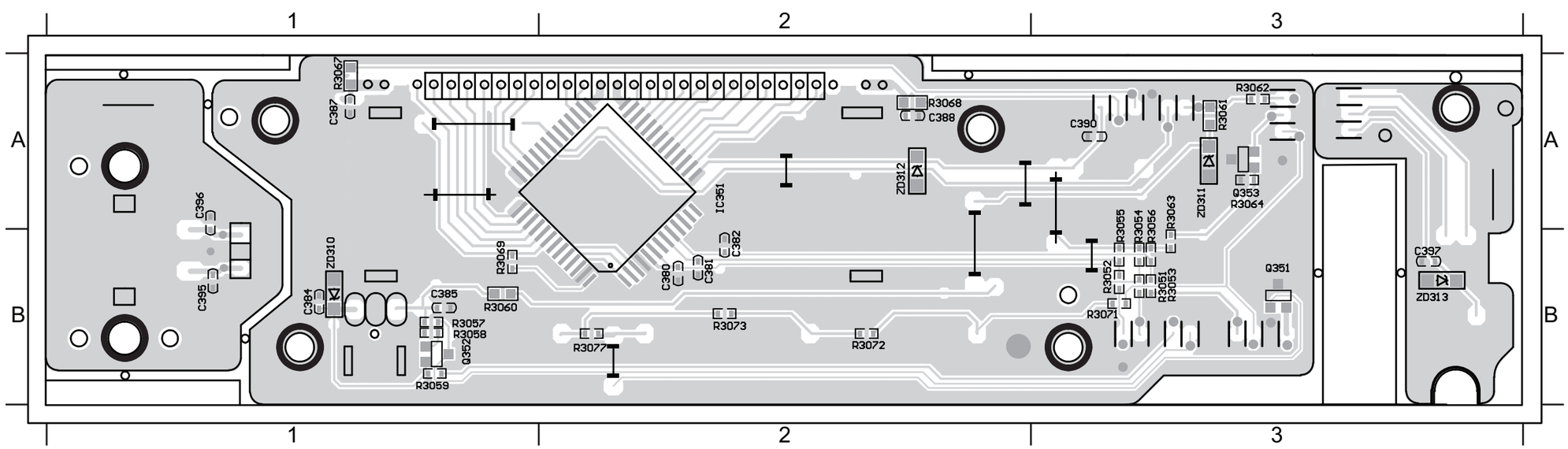
PCB LAYOUT - TOP VIEW

C386 A3 C391 A1 DP351 A2 ESD4 A3 ESD6 A1 J351 A2 J353 A2 J355 A3 J357 B2 J359 A3 LD351 A1 RB355 A1 RB357 B1 SN351 B3 TA352 B2 TA354 B2 VR351 A3
C389 A1 C392 B2 ESD1 A2 ESD5 B3 ESD7 A3 J352 B1 J354 B1 J356 A3 J358 A2 J363 A1 RB351 A3 RB356 B1 RB359 A1 TA351 B1 TA353 B2 TA355 B2



PCB LAYOUT - BOTTOM VIEW

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



MAIN BOARD

TABLE OF CONTENTS

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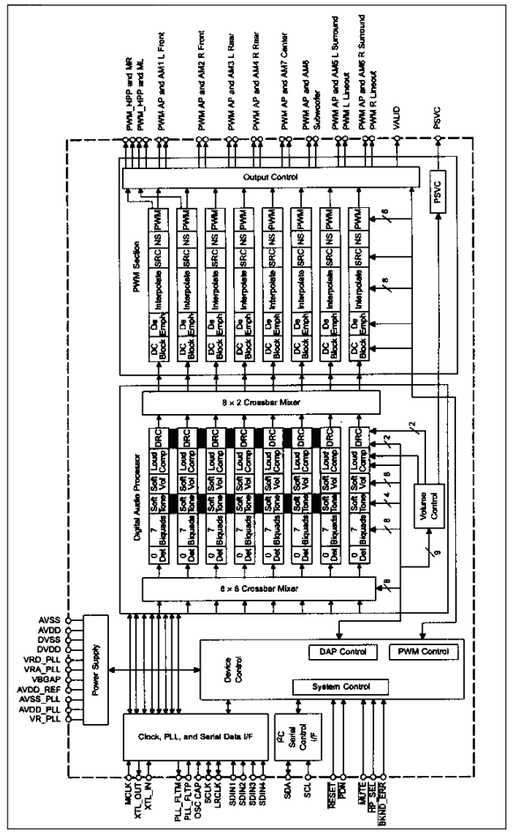

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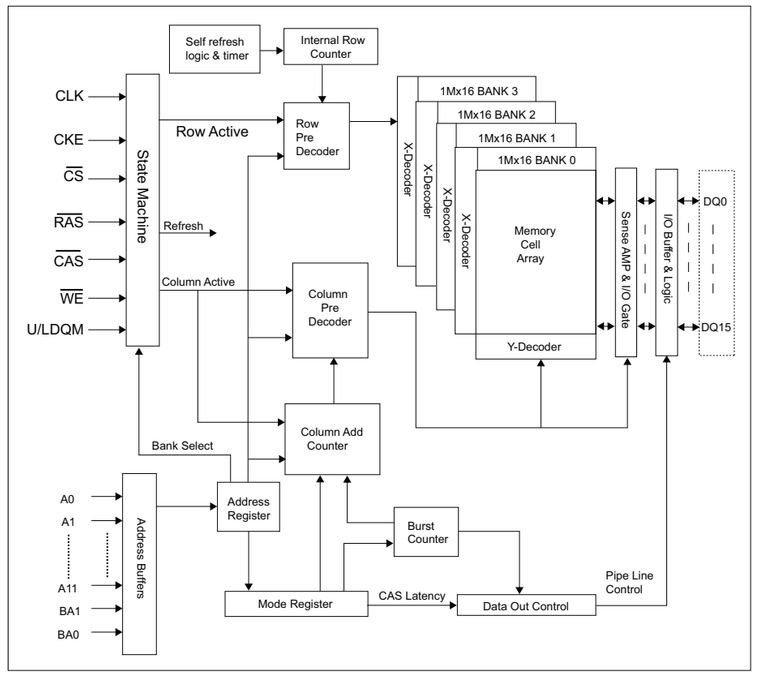

6 - 2

CIRCUIT DIAGRAM - part one

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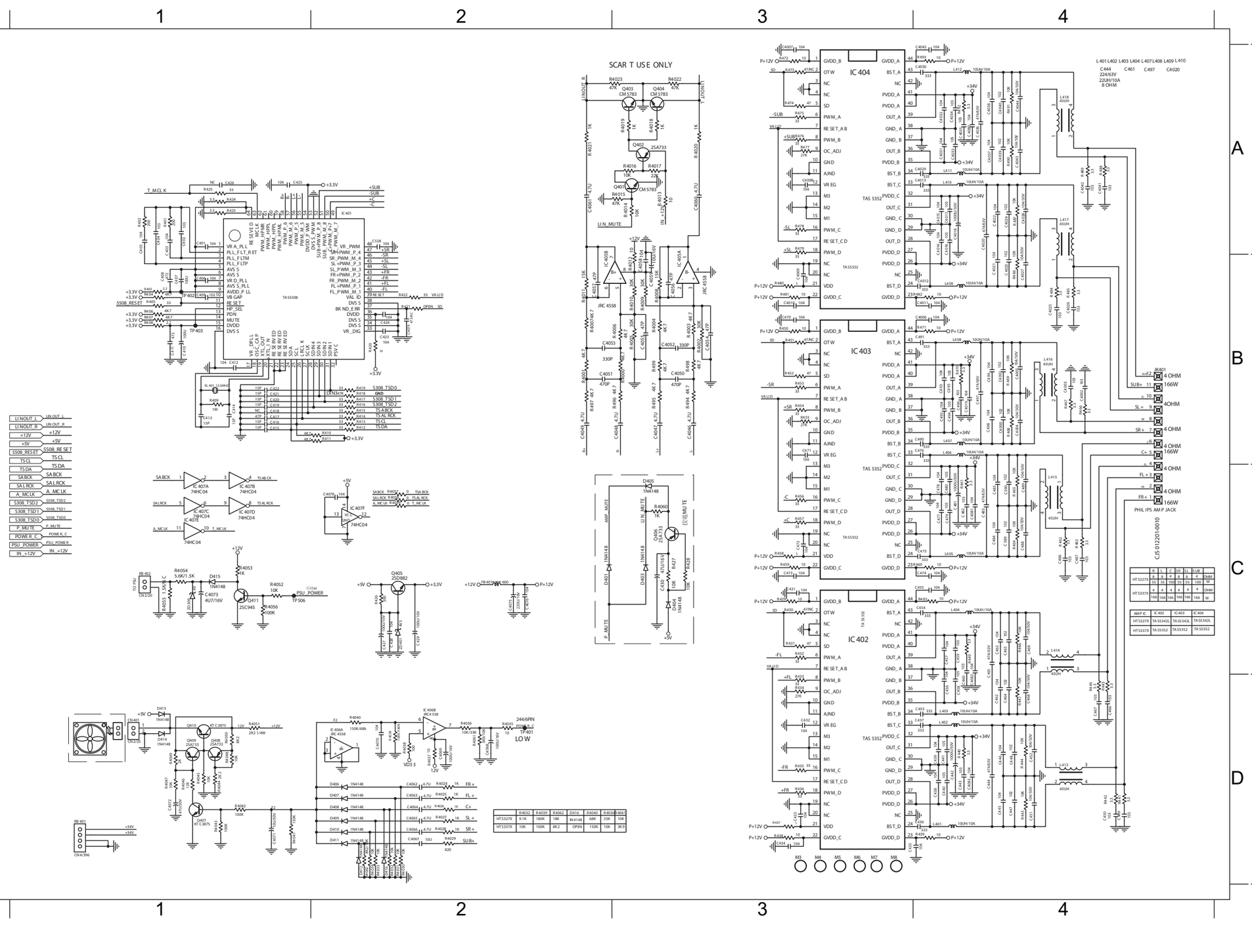
C402 A1 IC401 A2 R4015 A3 R477 A3 C4030 A4 C4044 A4 R493 A4 C417 B1 XL401 B1 R412 B2 C4009 B3 C470 B3 R4010 B3 R498 B3 C4025 B4 JK401 B4 R484 B4 D401 C2 IC402 C3 C454 C4 C481 C4 L405 C4 D414 D1 D406 D2 R4028 D2 R4040 D2 C435 D4 C449 D4 L402 D4
C403 A1 R4021 A2 R4016 A3 R478 A3 C4031 A4 C4045 A4 C406 B1 C419 B1 C4049 B2 R413 B2 C4010 B3 C471 B3 R4012 B3 R499 B3 C4026 B4 L406 B4 R485 B4 FB401 C2 Q406 C3 C455 C4 C482 C4 R448 C4 R4051 D1 D407 D2 R4029 D2 R4061 D2 C436 D4 C450 D4 L403 D4
C404 A1 C4007 A3 R4017 A3 R479 A3 C4032 A4 C4080 A4 C407 B1 C420 B1 C4051 B2 R414 B2 C4046 B3 IC403 B3 R450 B3 C4001 B4 C4027 B4 L407 B4 R486 B4 Q405 C2 R427 C3 C457 C4 C483 C4 R449 C4 RB401 D1 D408 D2 R4030 D2 R4062 D2 C437 D4 C451 D4 R439 D4
C405 A1 C4008 A3 R4018 A3 C4013 A4 C4035 A4 L410 A4 C408 B1 C421 B1 C4053 B2 R415 B2 C4047 B3 IC405 B3 R452 B3 C4002 B4 C476 B4 L408 B4 D416 C1 R426 C2 R428 C3 C461 C4 C484 C4 R460 C4 C4062 D2 D409 D2 R4031 D2 C432 D3 C438 D4 C452 D4 R440 D4
C425 A1 C4060 A3 R4019 A3 C4014 A4 C4036 A4 L411 A4 C409 B1 C422 B1 C4057 B2 R416 B2 C4048 B3 R4000 B3 R453 B3 C4003 B4 C490 B4 L409 B4 IC407 C1 ZD401 C2 R429 C3 C463 C4 C485 C4 R461 C4 C4063 D2 D410 D2 R4032 D2 C433 D3 C439 D4 C453 D4 R441 D4
R401 A1 IC404 A3 R4020 A3 C4015 A4 C4037 A4 L412 A4 C410 B1 R403 B1 C423 B2 R417 B2 C4050 B3 R4002 B3 R454 B3 C4004 B4 C491 B4 R466 B4 R4060 C1 C430 C3 R431 C3 C464 C4 C486 C4 R462 C4 C4064 D2 D411 D2 R4033 D2 C434 D3 C442 D4 C456 D4 R442 D4
R402 A1 Q401 A3 R4022 A3 C4018 A4 C4038 A4 R487 A4 C411 B1 R404 B1 C424 B2 R418 B2 C4052 B3 R4003 B3 R455 B3 C4005 B4 C492 B4 R467 B4 C4075 C2 C431 C3 R432 C3 C465 C4 C487 C4 R463 C4 C4065 D2 D412 D2 R4034 D2 R433 D3 C443 D4 C460 D4 R443 D4
R423 A1 Q402 A3 R4023 A3 C4020 A4 C4039 A4 R488 A4 C412 B1 R405 B1 R4001 B2 R419 B2 C4054 B3 R4004 B3 R480 B3 C4006 B4 C493 B4 R468 B4 C4076 C2 C472 C3 R456 C3 C469 C4 C488 C4 R464 C4 C4066 D2 IC406 D2 R4035 D2 R434 D3 C444 D4 C462 D4 R444 D4
R424 A1 Q403 A3 R472 A3 C4022 A4 C4040 A4 R489 A4 C413 B1 R406 B1 R4007 B2 R420 B2 C4055 B3 R4005 B3 R481 B3 C4011 B4 C496 B4 R469 B4 C4078 C2 C473 C3 R457 C3 C474 C4 C489 C4 R465 C4 C4067 D2 R4024 D2 R4036 D2 R435 D3 C445 D4 C466 D4 R445 D4
R425 A1 Q404 A3 R474 A3 C4024 A4 C4041 A4 R490 A4 C414 B1 R407 B1 R4011 B2 R421 B2 C4056 B3 R4006 B3 R494 B3 C4012 B4 C497 B4 R470 B4 C427 C2 D403 C3 R458 C3 C475 C4 C589 C4 R483 C4 C4068 D2 R4025 D2 R4037 D2 R436 D3 C446 D4 C467 D4 R446 D4
C4061 A2 R4013 A3 R475 A3 C4028 A4 C4042 A4 R491 A4 C415 B1 R408 B1 R410 B2 R422 B2 C4058 B3 R4008 B3 R495 B3 C4021 B4 C498 B4 R471 B4 C428 C2 D404 C3 R459 C3 C477 C4 C590 C4 C4072 D1 C4069 D2 R4026 D2 R4038 D2 R437 D3 C447 D4 C468 D4 R447 D4



6 - 3

CIRCUIT DIAGRAM - part two

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C0202 A2 C0218 D1 C0241 D4 C0604 C4 C205 C4 C221 B4 C237 B3 C602 C4 C723 B3 C806 B1 C823 B2 C838 B2 CE208 D1 CE808 D1 D201 A3 FB210 C1 FB708 C2 IC207 D4 L207 B4 Q300 D3 Q804 A2 R207 A3 R223 D3 R242 D1 R261 D2 R280 B3 R297 D1 R722 A4 R804 B1 R826 B1 RA202 C4
C0203 A2 C0219 D1 C0242 D4 C0606 C4 C206 B3 C223 D1 C238 B3 C603 B4 C728 A4 C807 B1 C824 B2 C839 B2 CE212 D1 CE809 D1 D202 D1 FB211 C1 FB712 A4 IC208 D2 L701 B3 Q601 B4 Q805 A1 R208 D2 R224 D3 R245 C1 R263 D2 R281 D3 R298 D1 R724 A4 R805 B1 R827 B1 RA203 C2
C0204 D1 C0220 D1 C0243 D4 C101 A4 C207 D3 C224 D1 C239 D1 C701 A3 C729 A4 C808 B2 C825 A2 C840 B2 CE215 C2 CN201 B4 D204 A3 FB212 C1 FB713 A3 IC209 B3 L702 B3 Q602 A3 R101 A4 R209 B4 R225 B4 R247 C1 R267 D2 R282 A4 R299 D1 R731 B3 R806 C2 R829 B1 XL101 A4
C0205 A2 C0221 D1 C0244 A2 C102 A4 C208 A2 C225 C1 C242 B2 C702 A3 C730 A3 C809 B2 C826 B2 C841 B2 CE216 C2 CN202 C1 D205 D3 FB213 C1 FB715 A3 IC210 A3 L703 B3 Q611 B4 R102 A4 R210 C4 R227 D2 R248 C1 R268 D2 R283 A4 R601 D1 R732 B3 R807 C2 R831 B2 XL201 B3
C0206 A2 C0222 D1 C0245 A2 C103 B4 C209 B3 C226 C1 C243 D2 C703 A3 C731 A4 C810 A2 C827 B2 C843 B1 CE217 C2 CN203 D3 D600 D1 FB214 C1 FB801 A1 IC801 B1 L704 B3 Q701 A4 R103 B4 R211 C4 R228 D1 R249 C1 R269 D1 R285 D2 R603 C4 R733 B3 R808 A1 R833 B2 XL202 D1
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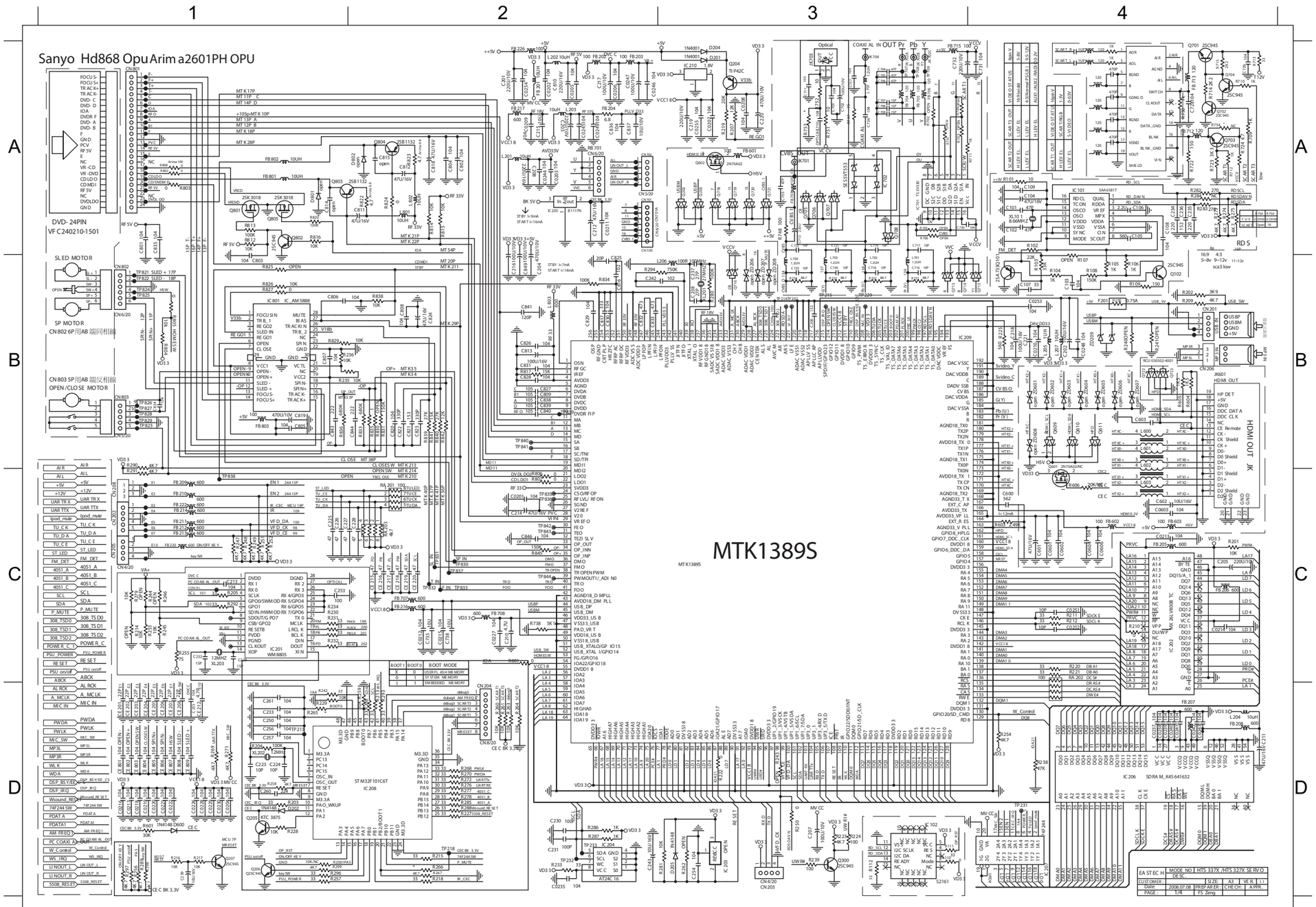
C0214 C4 C0237 D4 C0253 B4 C201 A2 C217 A2 C233 D1 C260 D1 C719 A3 C802 A2 C819 B1 C834 B1 CE204 D1 CE804 D1 CN801 A1 FB206 C4 FB602 C4 IC203 D3 L203 A2 Q204 A3 Q708 A3 R202 B4 R219 A3 R235 B1 R257 D1 R276 D2 R292 C1 R712 A4 R752 A3 R820 A1 R841 B2
C0215 C2 C0238 D4 C0601 C4 C202 B4 C218 B4 C234 A4 C261 D1 C720 B3 C803 B1 C820 B2 C835 A1 CE205 D1 CE805 D1 CN802 B1 FB207 D4 FB603 C4 IC204 D2 L204 D4 Q205 D1 Q801 A1 R203 D1 R220 C4 R236 B1 R258 D1 R277 D2 R293 D2 R713 A4 R801 C2 R822 A2 R842 B2
C0216 D1 C0239 D4 C0602 C4 C203 A2 C219 A3 C235 A4 C600 C4 C721 A3 C804 A2 C821 B2 C836 A2 CE206 D1 CE806 D1 CN803 B1 FB208 D4 FB703 A3 IC205 A2 L205 B4 Q206 D1 Q802 A1 R204 D1 R221 C4 R238 D4 R259 D2 R278 D2 R294 B2 R714 A4 R802 A1 R823 A2 R845 C2



6 - 4

CIRCUIT DIAGRAM - part three

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C302 A1 R302 A1 R388 A1 C342 A2 R330 A2 FB310 A3 R529 A4 C354 B1 R348 B1 R357 B1 R344 B2 C362 B3 R390 B3 RB901 C1 C907 D1 CE904 D1 R929 D1 CE301 D2 CE310 D2 CE319 D2 CE326 D3 FE307 D3
C305 A1 R309 A1 R546 A1 C343 A2 R343 A2 IC309 A3 R530 A4 C355 B1 R349 B1 R358 B1 C320 B3 C363 B3 R399 B3 R924 C2 C920 D1 FB223 D1 ZD901 D1 CE302 D2 CE311 D2 CE320 D2 CE327 D3 FE308 D3
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C326 A1 R314 A1 C313 A2 R321 A2 ZD302 A2 R305 A3 R533 A4 FB312 B1 R352 B1 C341 B2 C324 B3 R335 B3 R558 B4 C902 D1 C924 D1 Q903 D1 C908 D2 CE305 D2 CE314 D2 CE323 D2 CE330 D3 FE312 D3
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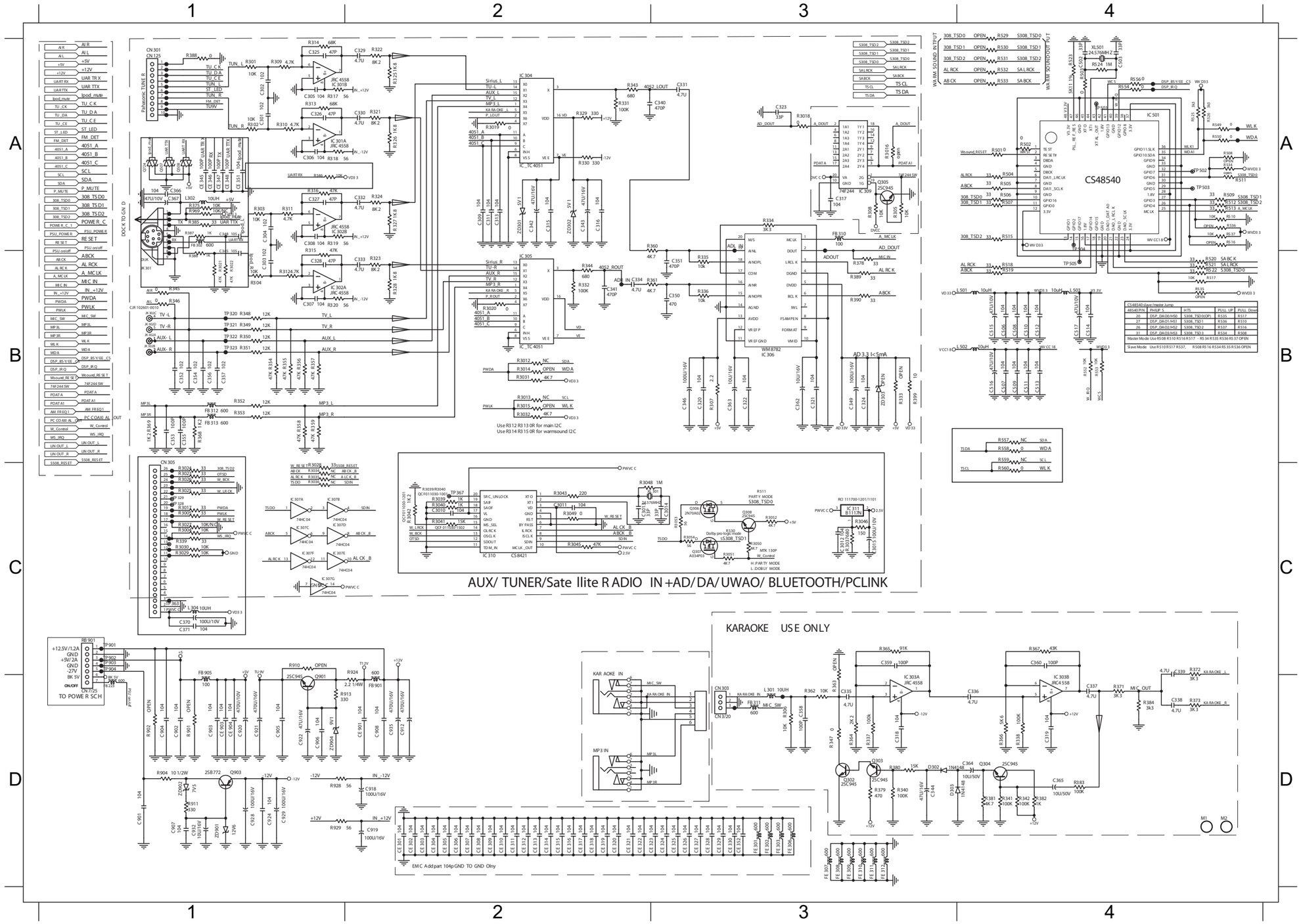
CN301 A1 R316 A1 C316 A2 R325 A2 C323 A3 R331 A3 R710 A4 JK302 B1 R354 B1 R3020 B2 C349 B3 R361 B3 R3028 C1 C904 D1 C929 D1 R911 D1 C918 D2 CE307 D2 CE316 D2 C318 D3 FE301 D3
IC301 A1 R317 A1 C329 A2 R326 A2 C331 A3 R334 A3 C352 B1 R345 B1 R355 B1 R328 B2 C350 B3 R378 B3 R3031 C1 C932 D1 R913 D1 C919 D2 CE308 D2 CE317 D2 CE324 D3 FE302 D3



6 - 5

PCB LAYOUT - TOP VIEW

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C0208 D2 C211 A2 C260 C2 C352 A2 C4031 C3 C4061 D3 C437 C4 C482 C4 C729 A1 C827 C1 C935 C2 F201 C2 FB703 A1 IC304 B2 JK302A A1 L411 B3 Q701 A1 R201 C2 R230 B2 R267 D2 R291 D2 R318 A2 R358 B3 R4016 A2 R423 D4 R456 C4 R496 D3 R711 A1 R808 D1 R842 D1
C0211 D2 C213 B1 C261 C2 C353 B3 C4032 C3 C4068 D3 C438 C4 C483 B4 C730 A1 C829 C1 CE901 C1 FB201 C2 FB708 C2 IC305 B2 JK401 A3 L412 B3 Q702 A1 R202 C2 R231 B1 R268 C3 R292 B1 R321 B2 R359 B3 R4017 A2 R424 D4 R457 C4 R497 D3 R712 A1 R812 D1 R845 D2
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C0252 A2 C218 B1 C320 C3 C4006 C4 C4046 D4 C4076 D4 C453 C4 C496 C4 C803 C1 C834 D2 CN203 B2 FB207 B2 FB803 D1 IC403 C4 L201 B1 L707 A2 Q707 A1 R209 C2 R236 C1 R273 C1 R298 D2 R329 B2 R4000 D3 R4021 D3 R429 C4 R470 C4 R531 C3 R724 A1 R817 C1 R929 B3
C101 C1 C219 C2 C321 B2 C4007 C3 C4047 D4 C4078 D3 C454 C4 C497 A3 C806 C1 C838 C1 CN204 D2 FB208 B2 FB901 C1 IC404 C3 L202 D1 L801 C1 Q708 A1 R210 C2 R242 C2 R274 C1 R301 A2 R330 B2 R4001 D3 R4022 A2 R431 C4 R471 C4 R532 D3 R731 A1 R820 D1 RA201 B1
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C104 C1 C229 B1 C326 A2 C401 D4 C405 D4 C410 D4 C457 C4 C702 A1 C811 D1 C841 C1 CN208 D2 FB211 D2 GT01 B1 IC801 D1 L205 B1 Q101 D2 Q803 C1 R213 C2 R248 D2 R277 C2 R3028 A3 R334 B2 R4004 D3 R404 D3 R434 C4 R475 C3 R552 C3 R734 A1 R824 D1 RB901 D3
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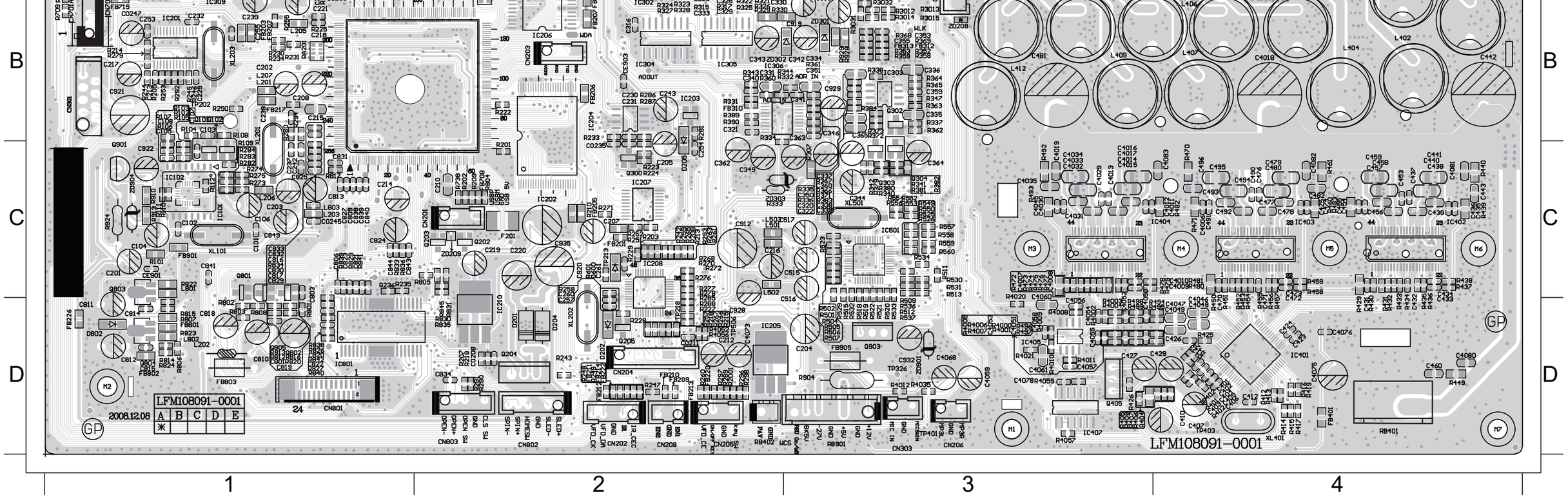

6 - 6

PCB LAYOUT - BOTTOM VIEW

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C4062	A1	R4031	A1	C4041	A2	R4028	A2	C0603	A3	R4060	A3	C4004	B1	C488	B1	C4005	B2	R469	B2	C0237	B3	CE324	B3	C0248	B4	C738	B4	FE307	B4	CE319	C2	C109	C4	CO254	C4	R403	D1	CE313	D2	CE208	D3	R299	D3
C4063	A1	R4036	A1	C4042	A2	R4029	A2	C305	A3	C356	A4	C445	B1	C489	B1	C4021	B2	R486	B2	C0238	B3	CE325	B3	C0249	B4	C836	B4	FE309	B4	CE320	C2	C234	C4	C408	D1	R409	D1	CE326	D2	CE212	D3	C0205	D4
C4070	A1	R4038	A1	C4064	A2	R4032	A2	C306	A3	C357	A4	C446	B1	C498	B1	C4022	B2	R487	B2	C0239	B3	CE352	B3	C0253	B4	C837	B4	Q207	B4	C0207	C3	C235	C4	C409	D1	R410	D1	FB223	D2	CE306	D3	C802	D4
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IC406	A1	R462	A1	D411	A2	R484	A2	D405	A3	FE310	A4	C465	B1	R465	B1	C4040	B2	C0221	B3	C324	B3	C0209	B4	C227	B4	FB204	B4	CE318	C1	CE314	C3	CE302	C4	C420	D1	C903	D2	CE203	D3	CE808	D3		
R4024	A1	C4002	A2	D412	A2	R485	A2	FB601	A3	R350	A4	C468	B1	R468	B1	C4043	B2	C0222	B3	C735	B3	C0210	B4	C228	B4	FB602	B4	R421	C1	FB216	C3	CE303	C4	C421	D1	C904	D2	CE204	D3	CE809	D3		
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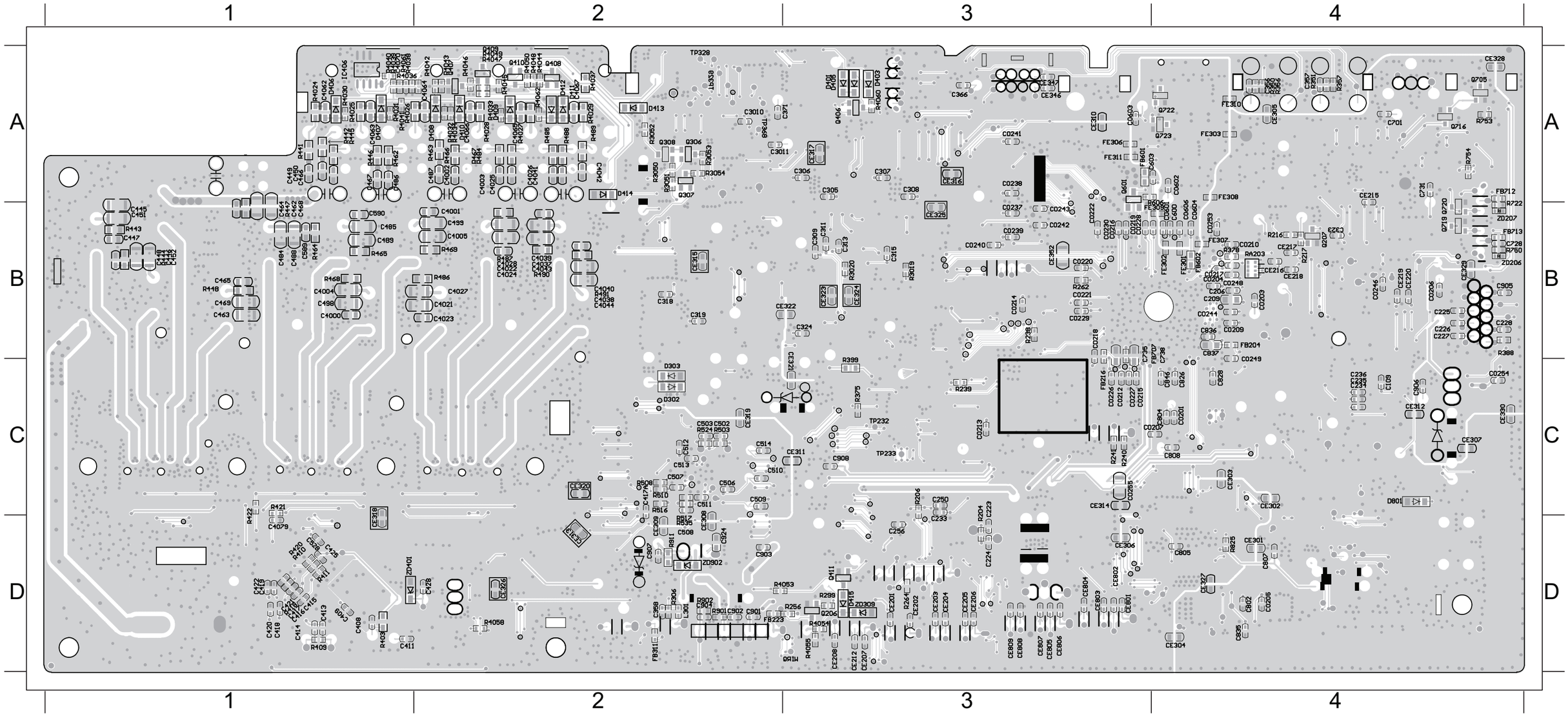
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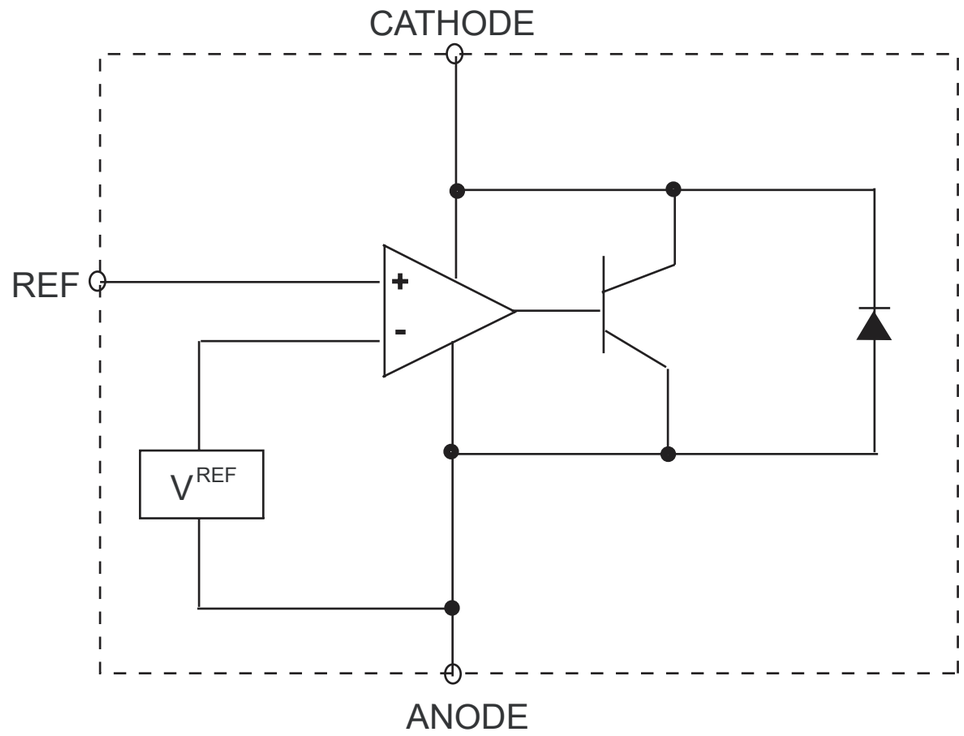
POWER BOARD

TABLE OF CONTENTS

INTERNAL IC DIAGRAM - AZ431



7 - 2

CIRCUIT DIAGRAM

BD901A1 C910 A1 C918 D2 C930 B2 C939 C3 C949 C3 C957 A3 C967 D2 CN903C4 D908 A3 D917 B3 IC905 B3 L907 A4 Q910 B4 R903 C1 R914 D2 R922 A2 R932 B3 R940 A1 R948 C3 R957 B4 R964 A2 R980 B3 T901 C2 ZD906A4
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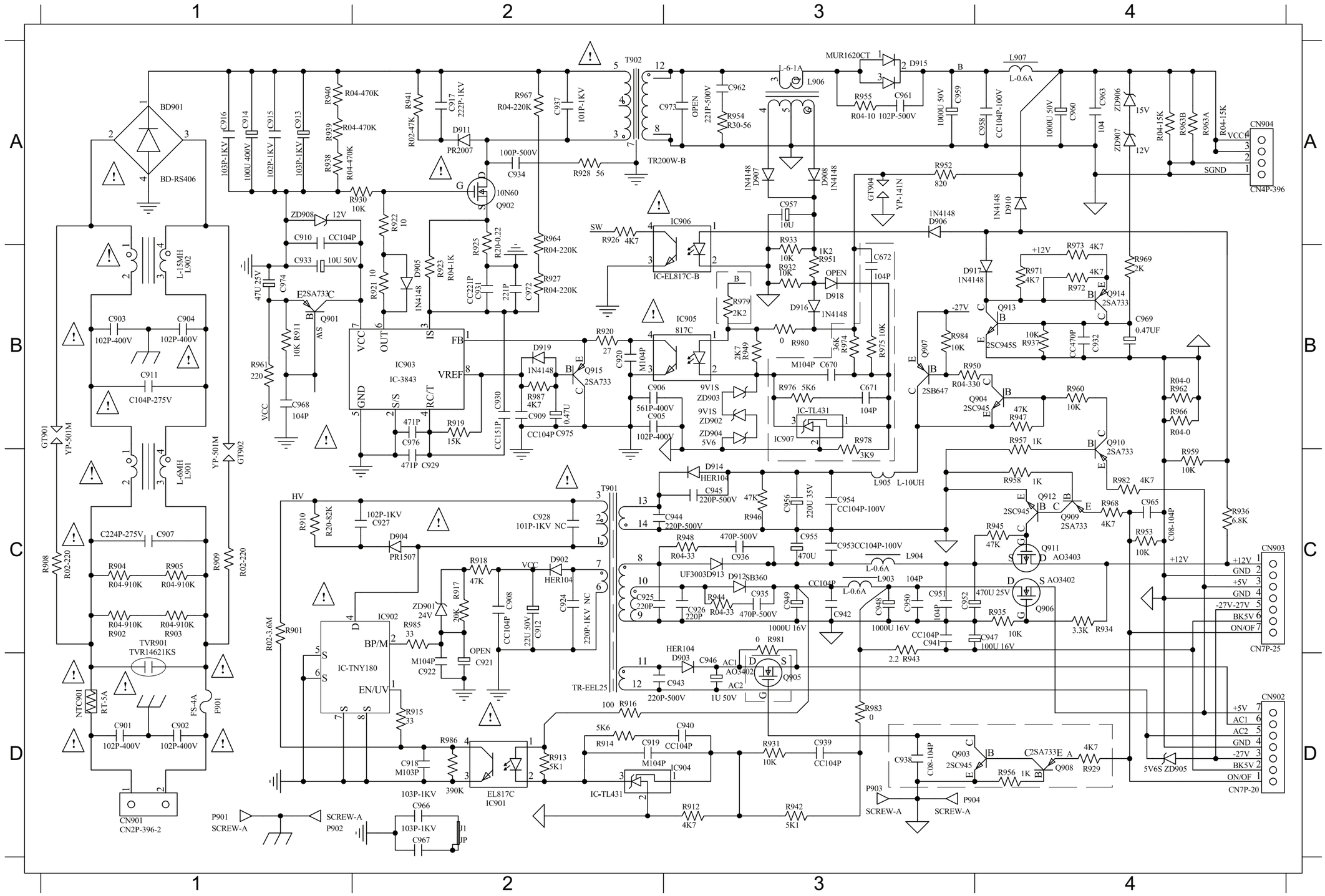

7 - 3

PCB LAYOUT - TOP VIEW

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7 - 4

PCB LAYOUT - BOTTOM VIEW

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C965	A1	R957	A1	C928	A2	R913	A2	R986	A2	R940	A3	C951	B1	R945	B1	R948	B2	Q915	B3	D908	C1	R951	C1	R971	C1	D917	C2	C934	C3	R930	C3	C963	D1		
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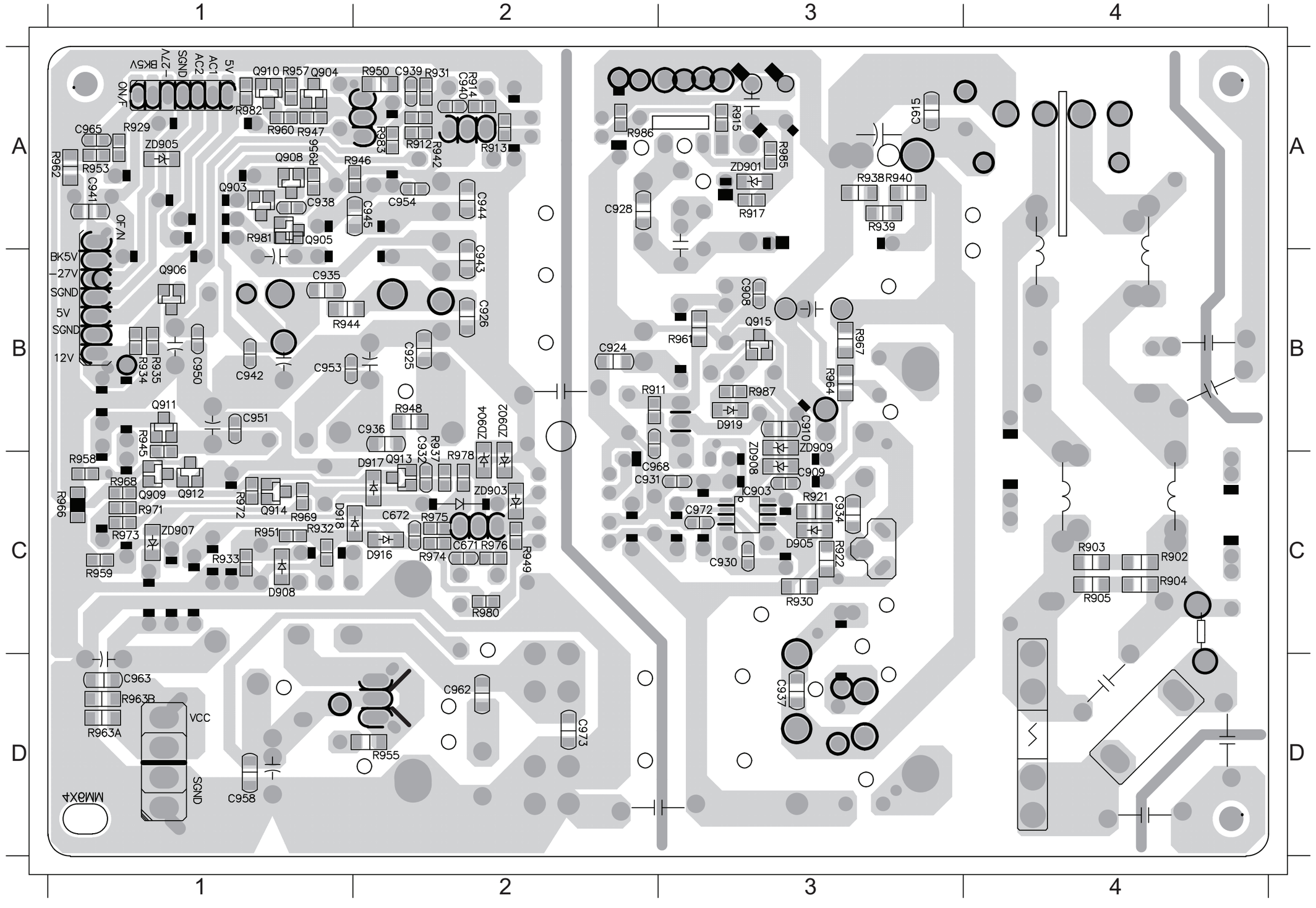
Q910	A1	R962	A1	C940	A2	R931	A2	R915	A3	ZD901	A3	Q906	B1	C936	B2	ZD904	B2	R964	B3	Q912	C1	R959	C1	R973	C1	R949	C2	D905	C3	R903	C4	C962	D2		
R946	A1	R981	A1	C945	A2	R942	A2	R917	A3	C935	B1	Q911	B1	R911	B2	C908	B3	R967	B3	Q914	C1	R966	C1	ZD907	C1	R980	C2	IC903	C3	R904	C4	R955	D2		
R947	A1	R982	A1	C954	A2	R950	A2	R938	A3	C942	B1	R934	B1	R935	B2	C910	B3	R987	B3	R932	C1	R968	C1	C968	C2	ZD903	C2	R921	C3	R905	C4	C930	D3		



8 - 1

MP3 IN BOARD

TABLE OF CONTENTS

8 - 2

CIRCUIT DIAGRAM

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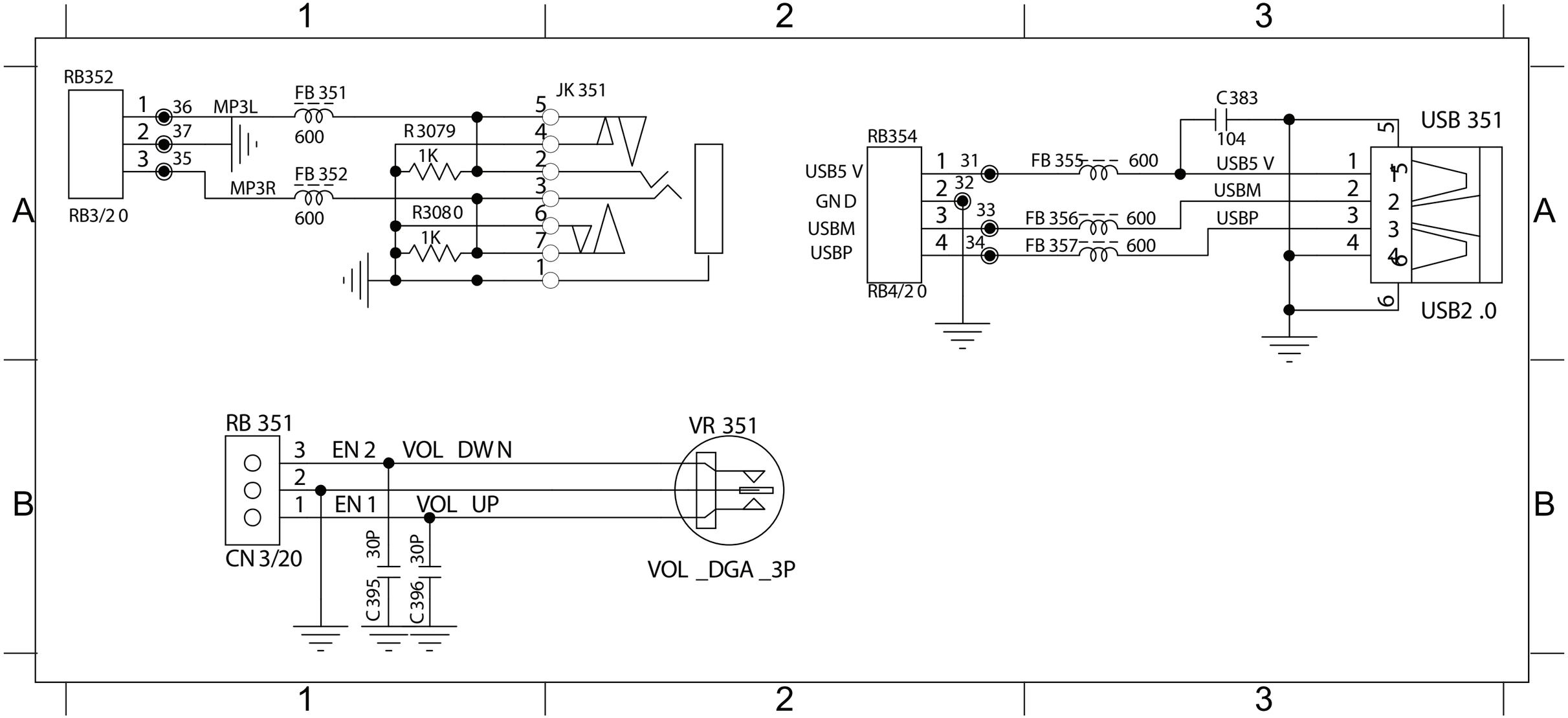

PCB LAYOUT - TOP VIEW

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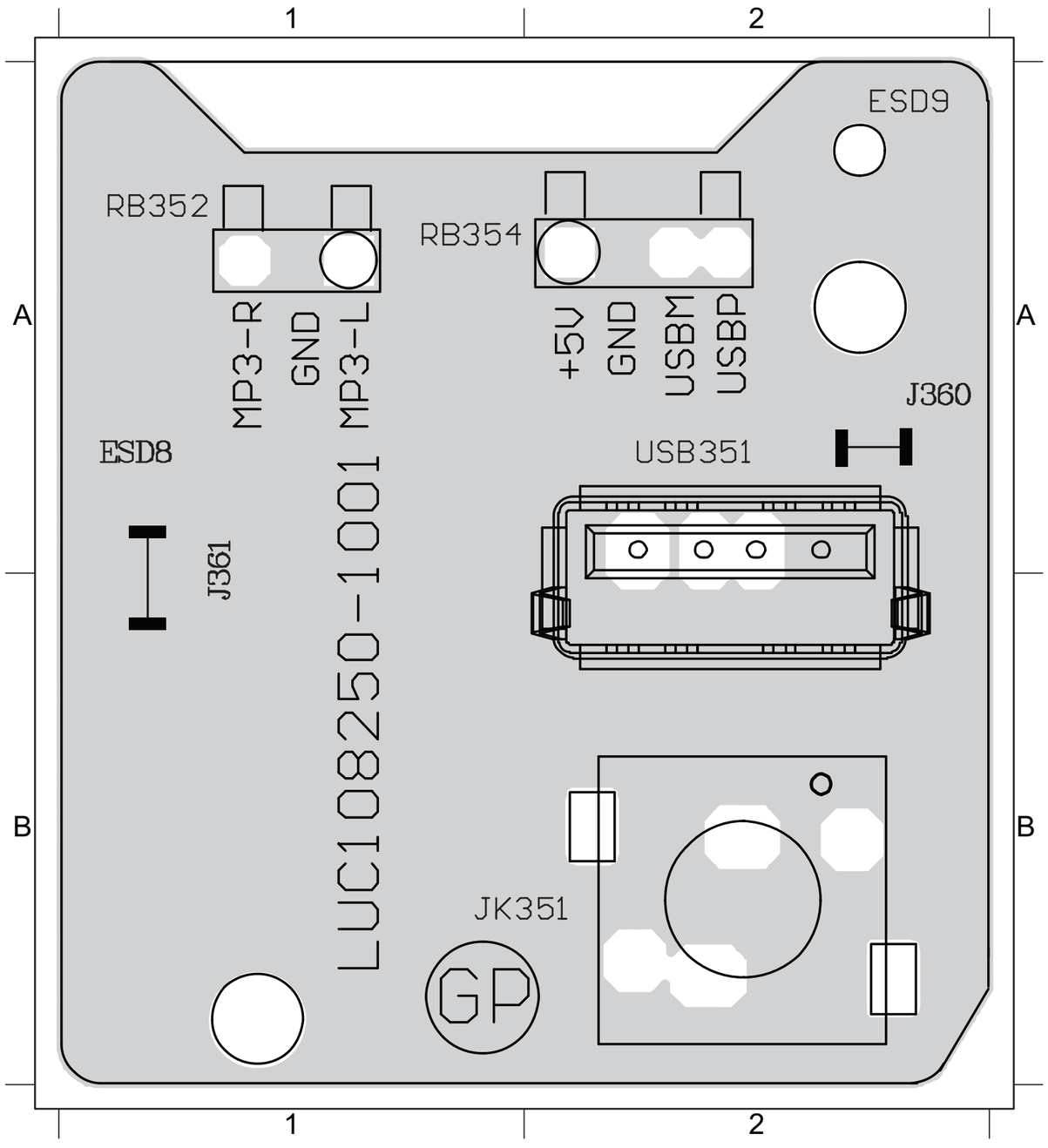

PCB LAYOUT - BOTTOM VIEW

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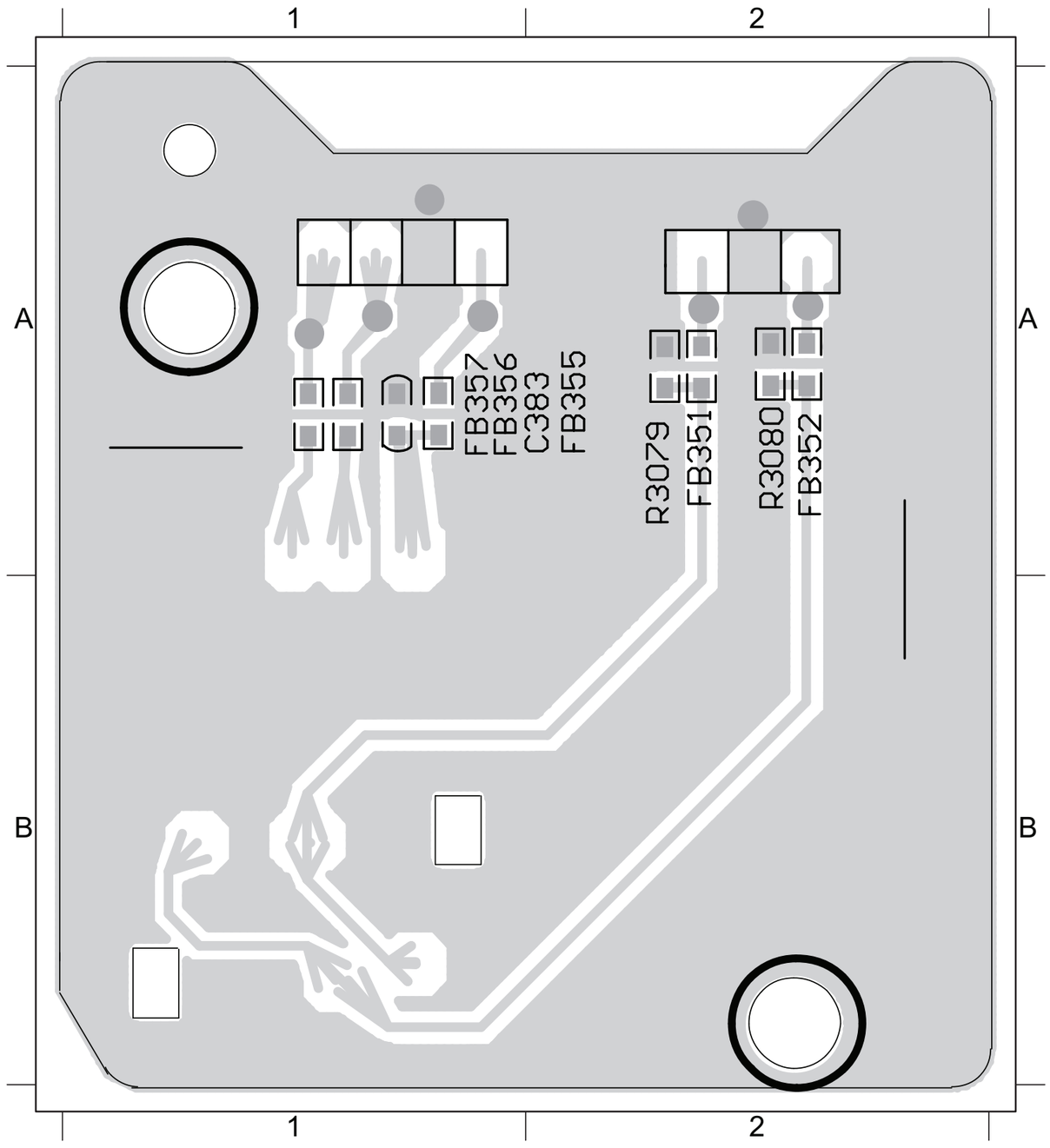

9 - 1

SCART BOARD

TABLE OF CONTENTS

9 - 2

CIRCUIT DIAGRAM

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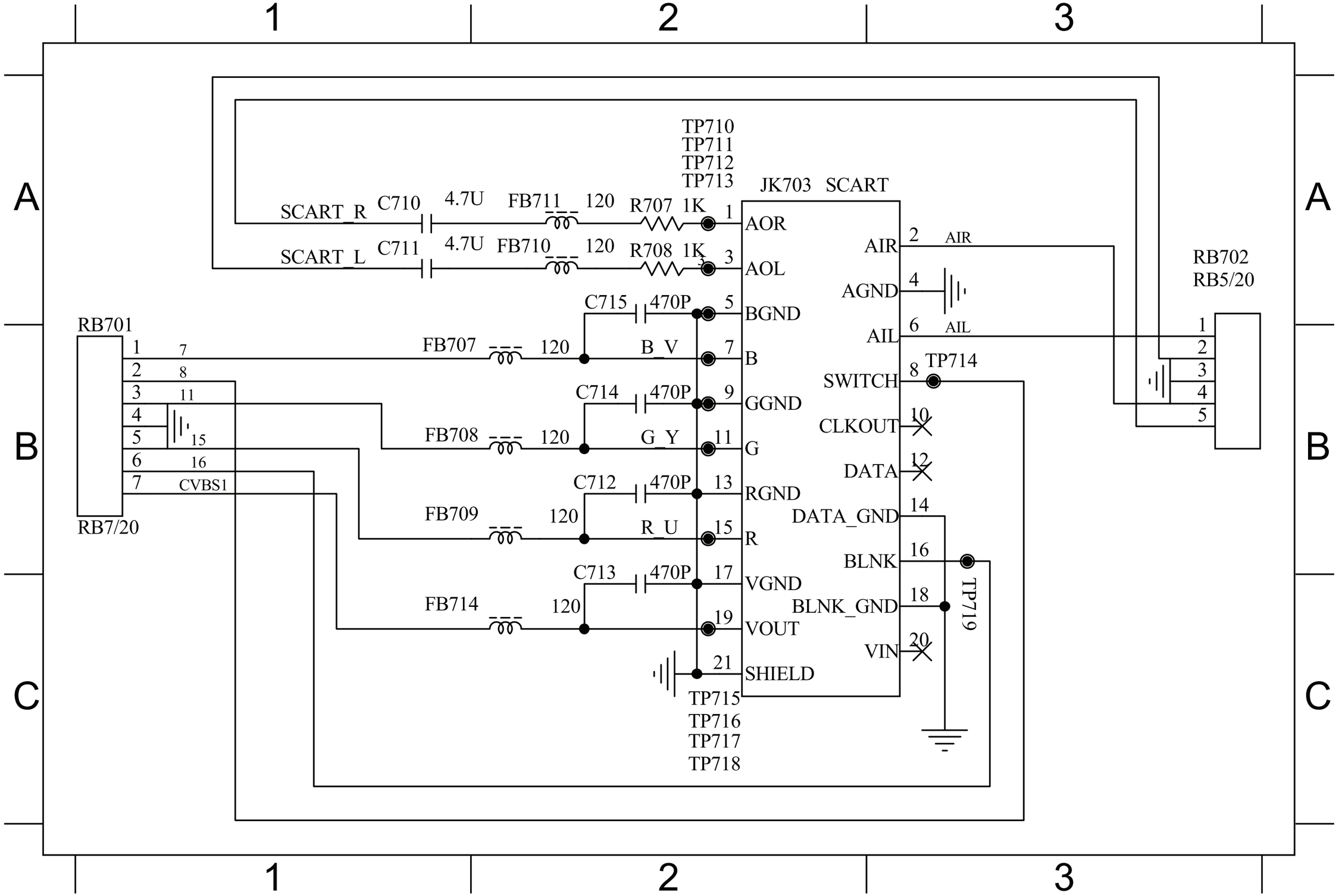
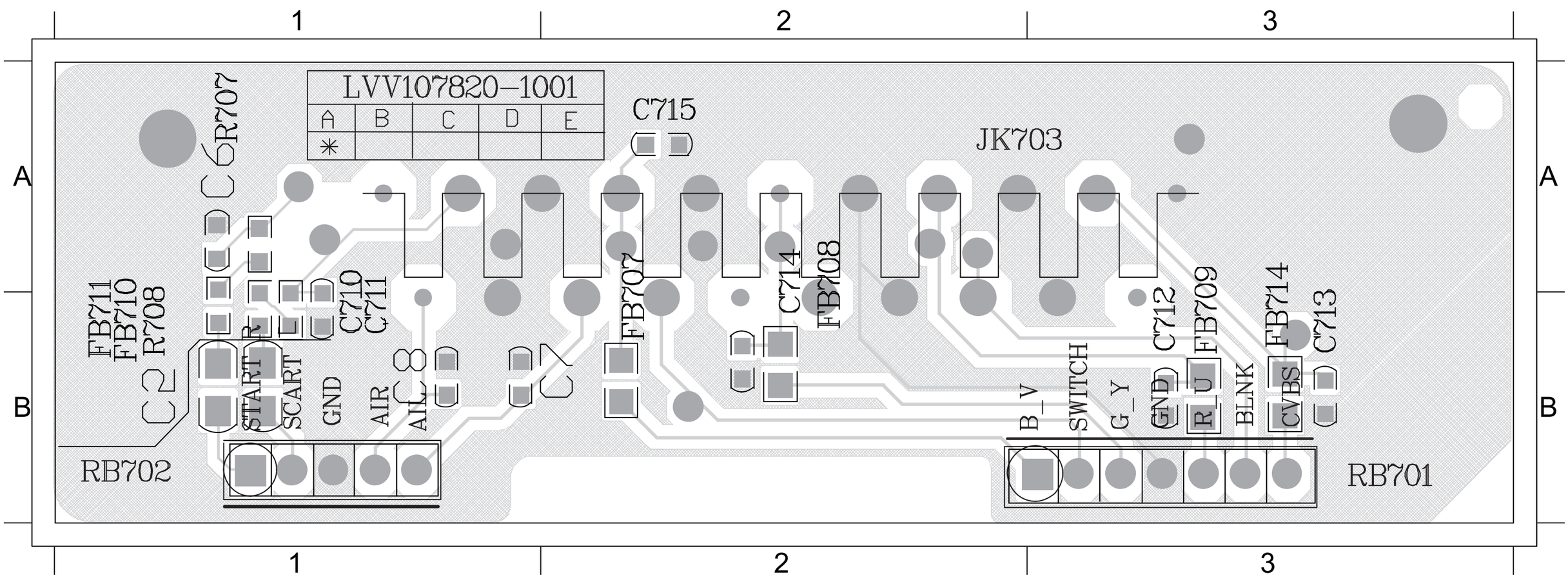
C711	A1	C713	B2	C715	A2	FB708	B1	FB710	A2	FB714	C2	R707	A2	RB701	B1				



9 - 3

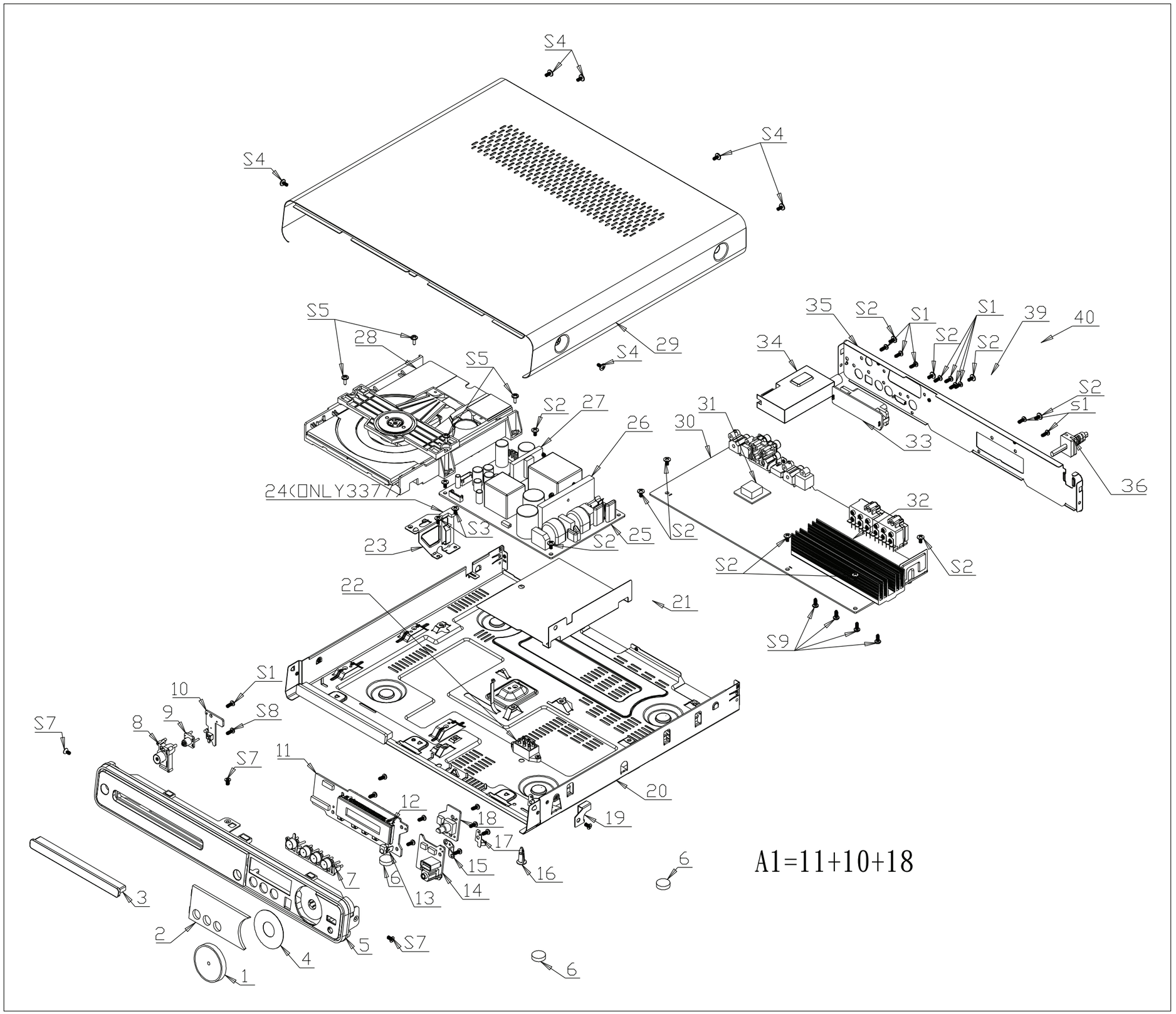
PCB LAYOUT - SCART PCB VIEW

C710	A1	C712	B3	C714	A2	FB707	A2	FB709	B3	FB711	A1	JK703	A2	R708	A1	RB702	B1		
C711	A1	C713	B3	C715	A2	FB708	A1	FB710	A1	FB714	A1	R707	A1	RB701	B3				



10 - 1

Mechanical Exploded View



10 - 2

MECHANICAL & ACCESSORIES PARTS LIST

Loc.	12NC	Description
MAIN UNIT		
1	996510021087	VOLUME KNOB
2	996510021093	DISPLAY LENS
3	996510021227	DVD DOOR
5	996510021057	FRONT PANEL
7	996510021068	FUNCTION KNOB
8	996510021069	STANDBY KNOB
9	996510021064	STANDBY LENS
14	996510021066	MP3 IN PCB ASSY
25	996510021228	POWER PCB ASSY 420W
28	996510021248	DVD LOADER
30	996510021237	MAIN PCB ASSY
33	996510021058	SCART PCB ASSY
34	996510018486	TUNER PACK KST-MT004FS1-6D
36	⚠ 996510001638	POWER CORD /12
36	⚠ 996510002665	POWER CORD /05
A1	996510021089	DISP+LED+VOL PCB ASSY
FM	996510008251	FM ANT
Scart	996510001650	SCART CABL
RC	996510021067	REMOTE CONTROL 39 KEYS
V1	996510007429	FFC CABLE 10P100mm UL20798 P1
LOUDSPEAKER SYSTEM		
SPKC	996510021235	SPEAKER BOX - CENTER
SPKML	996510021239	SPEAKER BOX - FRONT LEFT
SPKMR	996510021234	SPEAKER BOX- FRONT RIGHT
SPKRL	996510021231	SPEAKER BOX- REAR LEFT
SPKRR	996510021224	SPEAKER BOX- REAR RIIGHT
SPKSUB	996510021226	SPEAKER BOX - SUB

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

REVISION LIST

Version 1.0
*Initial release

11 - 1