DVD Home Theater System

HTS3276/98/93

Service
Service
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Service Manual

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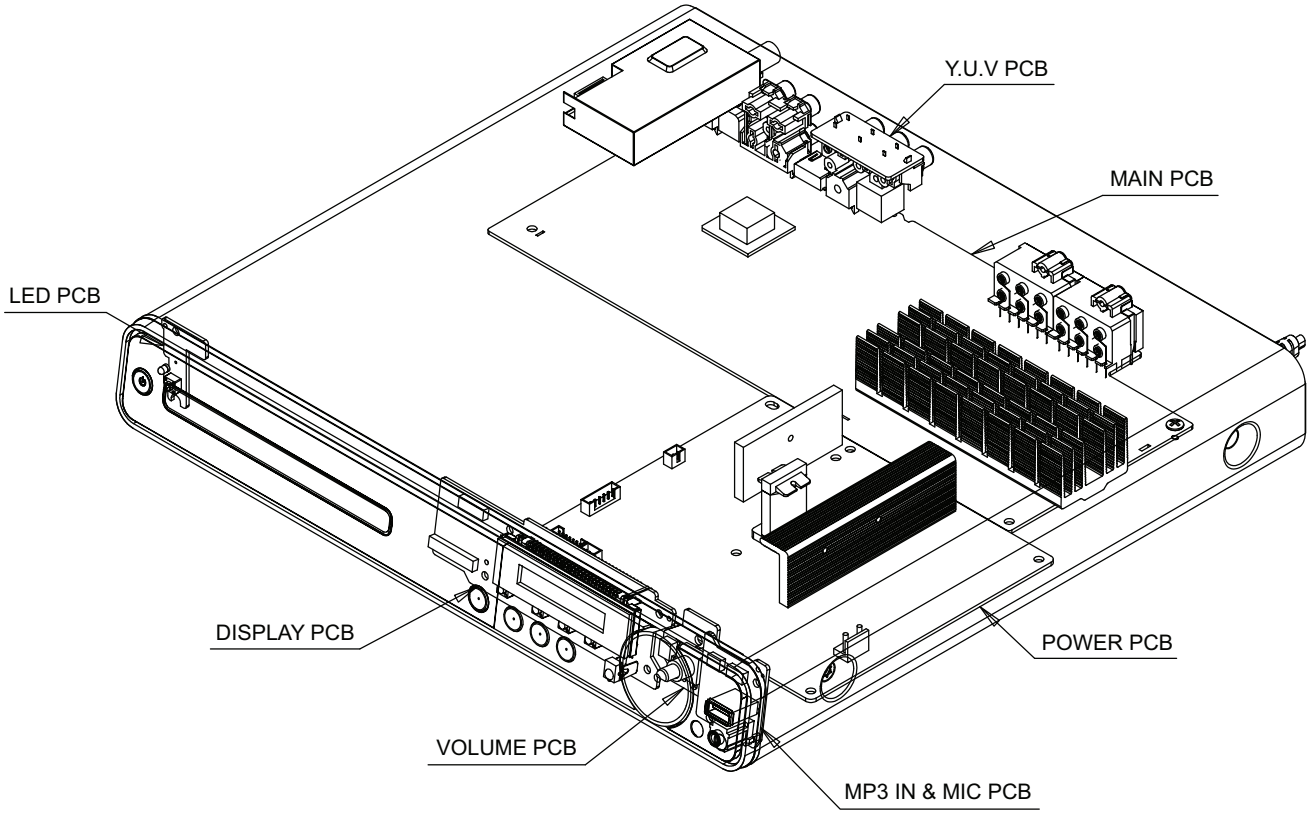
Version 1.1

PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions / Features	HTS3276 /98
Output Power - 420W	X
Voltage (110~240V)	X
MP3 LINK	X

SERVICE SCNARIO MATRIX:

Type/Versions / Board in used	HTS3276 /98
MAIN+Y.U.V Board	C
Power Board	C
DISP+LED+VOL Board	C
MP3 IN&MIC 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 Theater mode.....
- For HTS3276.....420 W
- For HTS3371, HTS3378.....1000 W

Frequency response.....40 Hz ~ 20 kHz
Signal-to-noise ratio.....> 60 dB (Aweighted)
Input sensitivity.....
AUX1 ..... 400 mV
AUX2 ..... 400 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 (50/100kHz)
26 dB quieting sensitivity.....FM 22 dBf
IF rejection ratio.....FM 60 dB
Signal-to-noise ratio.....FM 50 dB
Harmonic distortion.....FM 3%
Frequency response.....FM 180 Hz~10 kHz/ ±6dB
Stereo separation ..... FM 26 dB (1 kHz)
Stereo Threshold.....FM 29 dB

USB

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

Main Unit

Power supply.....
For HTS3276.....110-240V;~50-60Hz
For HTS3371/3378..... 110-127V/220-240V;
.....~50-60Hz switchable
Power consumption.....
For HTS3276..... 80 W
For HTS3371, HTS3378.....180 W
Standby power consumption .....< 1 W
Dimensions (WxHxD) ..... 360 x 57 x 331(mm)
Weight .....
For HTS3276.....2.87 Kg
For HTS3371, HTS3378.....3.01 Kg

Speakers

System..... full range satellite
Speaker impedance.....
.....For HTS3276: 4 ohm (center), 8 ohm(Front/Rear)
....For HTS3371, HTS3378: 4 ohm(center), 4 ohm (Front/Rear)
Speaker drivers .....
Center/Front/Rear..... 3” full range
Frequency response.....150 Hz ~ 20 kHz
Dimensions (WxHxD) .....
For HTS3276 .....
- Center..... 244 x 103 x 74 (mm)
- Front..... 262 x 1199 x 264 (mm)
- Rear..... 103 x 203 x 71 (mm)

For HTS3371 .....
- Center/Front/Rear ..... 100 x 100 x 75(mm)

For HTS3378 .....
- Center..... 244 x 103 x 74 (mm)
- Front..... 262 x 1199 x 264 (mm)
- Rear..... 262 x 1199 x 264 (mm)

Weight .....
For HTS3276 .....
- Center.....0.85 kg
- Front.....3.53 kg
- Rear.....0.54 kg

For HTS3371 .....
- Center.....0.67 kg
- Front.....0.48 kg
- Rear.....0.45 kg

For HTS3378 .....
- Center.....0.85 kg
- Front.....3.53 kg
- Rear.....3.53 kg

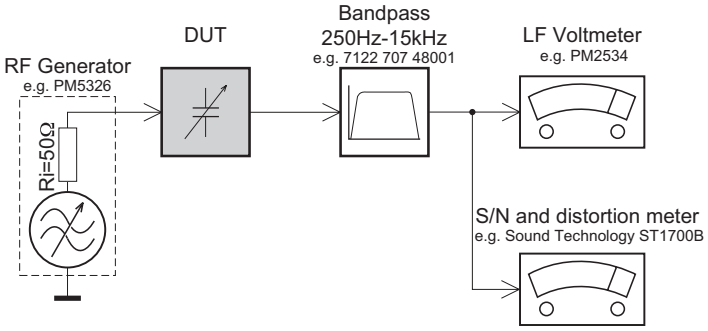
Subwoofer

Impedance..... 4 ohm
Speaker drivers .....165 mm (6.5”) woofer
Frequency response.....40 Hz ~ 150 Hz
Dimensions (WxHxD) .....
For HTS3276, HTS3371..... 163 x 36 3x369 (mm)
For HTS3378..... 242 x352 x 360 (mm)
Weight .....
For HTS3276, HTS3371.....4.7 Kg
For HTS3378..... 5.6 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

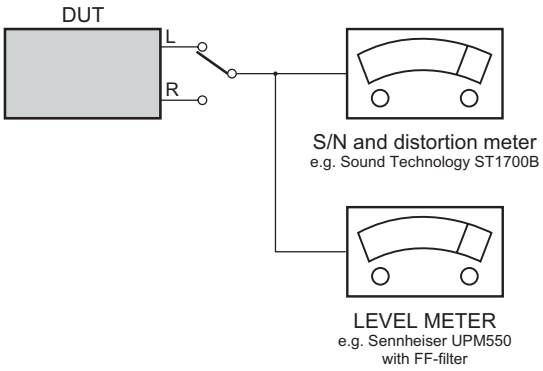
Tuner FM



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

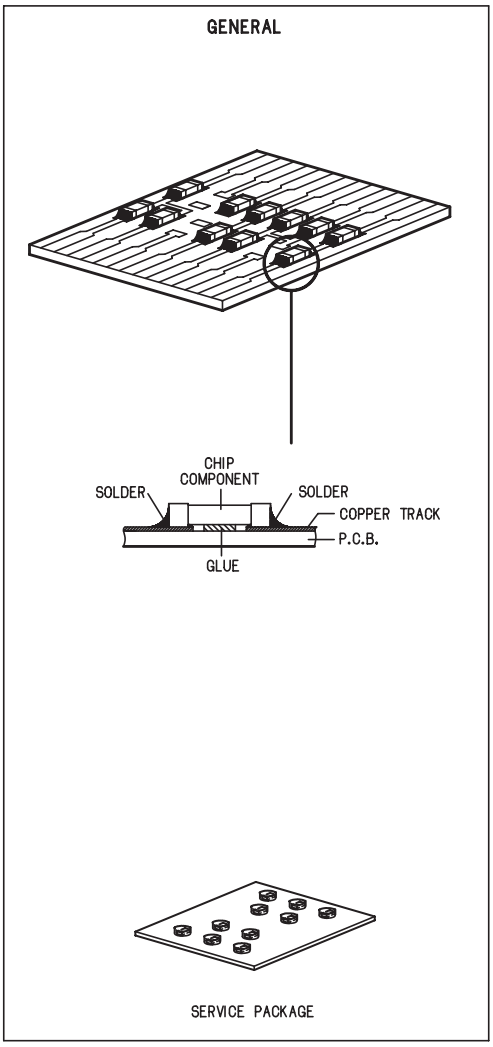
Service Tools:

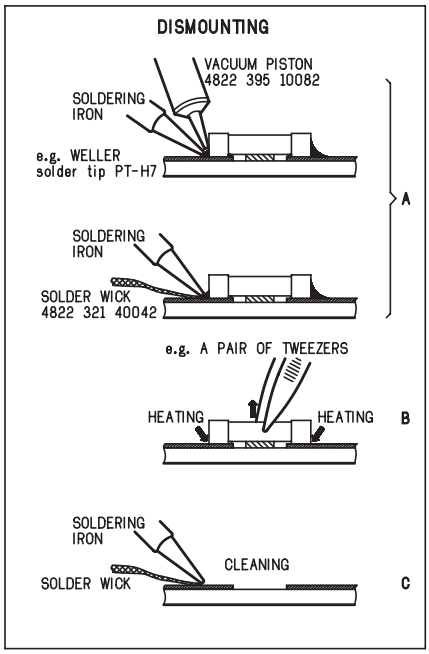
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 .....4822 395 50145
Torx driver T10 extended 4822 395 50423

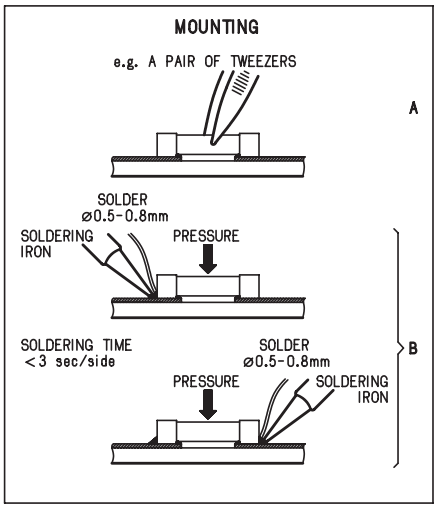
Compact Disc:

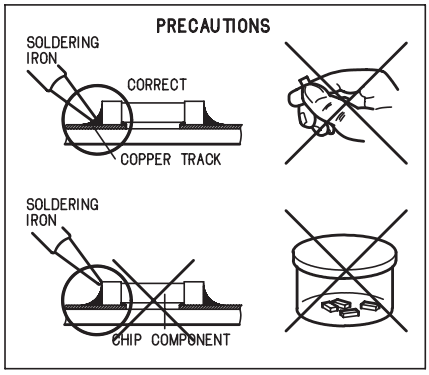
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

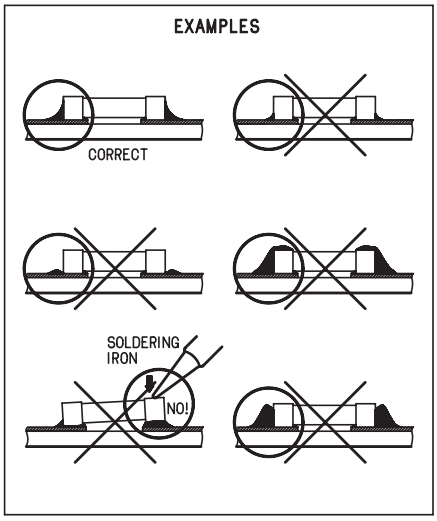
HANDLING CHIP COMPONENTS











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 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.

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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

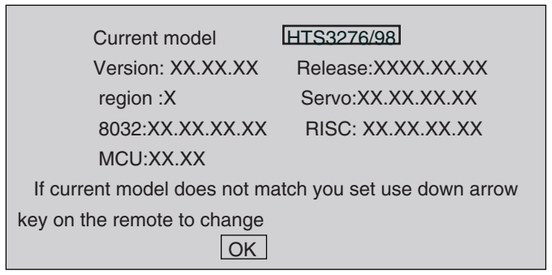
2)Region Code Change

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“

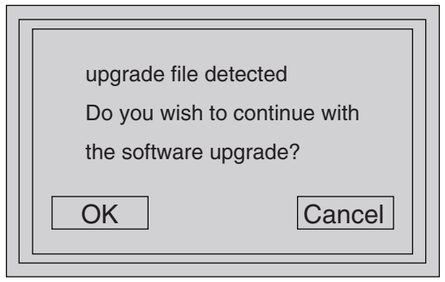
7) Produce to Change Tuner Grid

(only applicable for certain regions)
In some countries, the frequency step between adjacent channels in the FM band is 50kHz (100kHz in some areas).

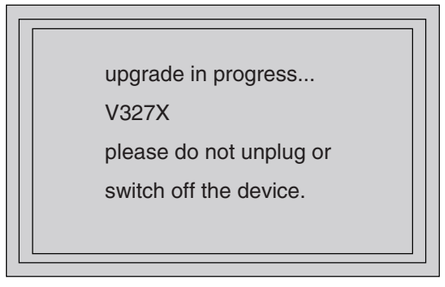
a) Press “source” to select “FM”.
b) In “FM” playback mode, press & hold “play/pause” button until Grid 9” or “Grid 10” appears.
Note: repeating the same action will toggle back to it previous tuning grid setting.
* “Grid 10” is default for/98 version.

8) 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!

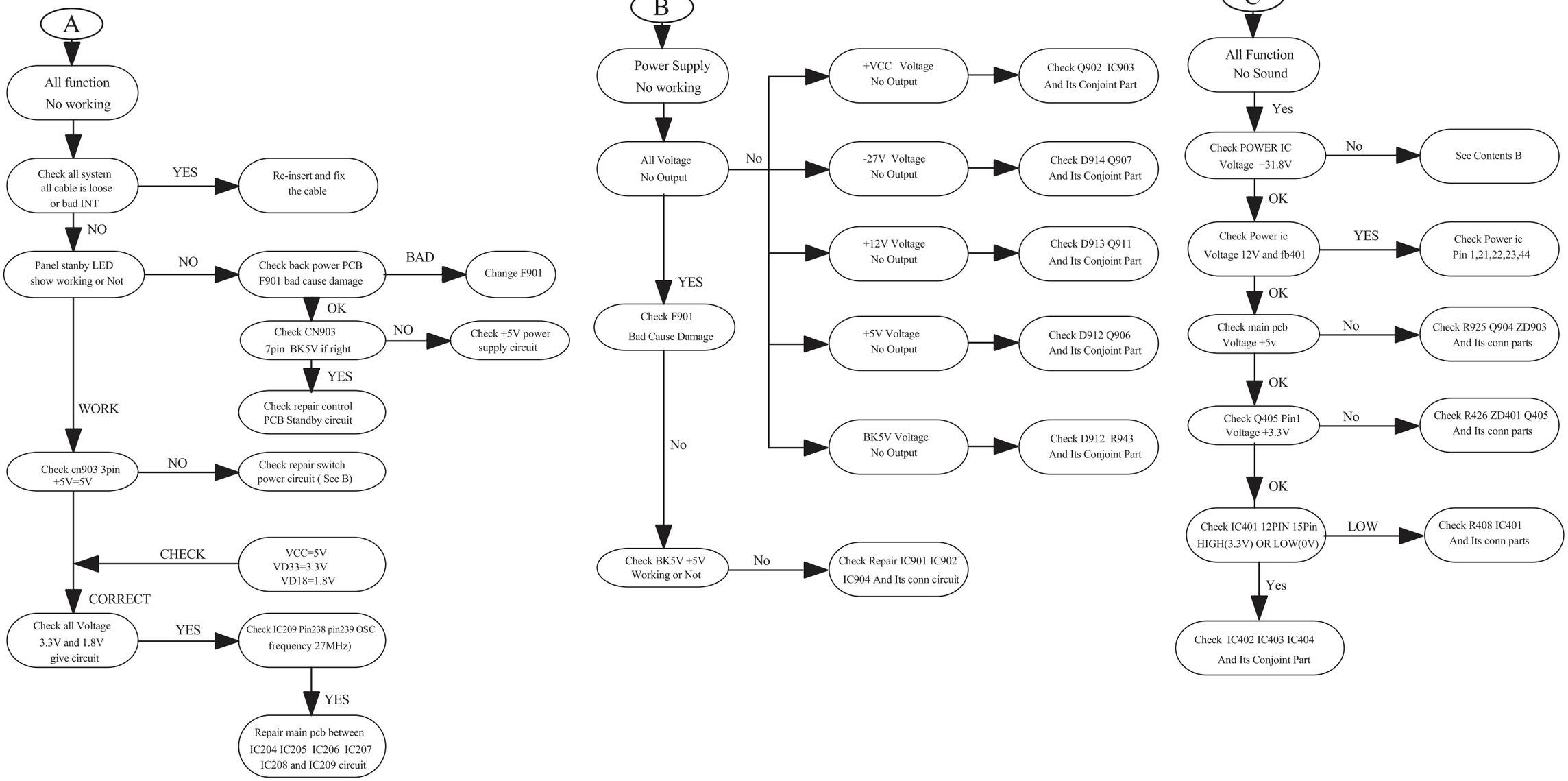
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

2 - 2

REPAIR INSTRUCTIONS (ONE)

MAIN UNIT REPAIR CHART 1/3

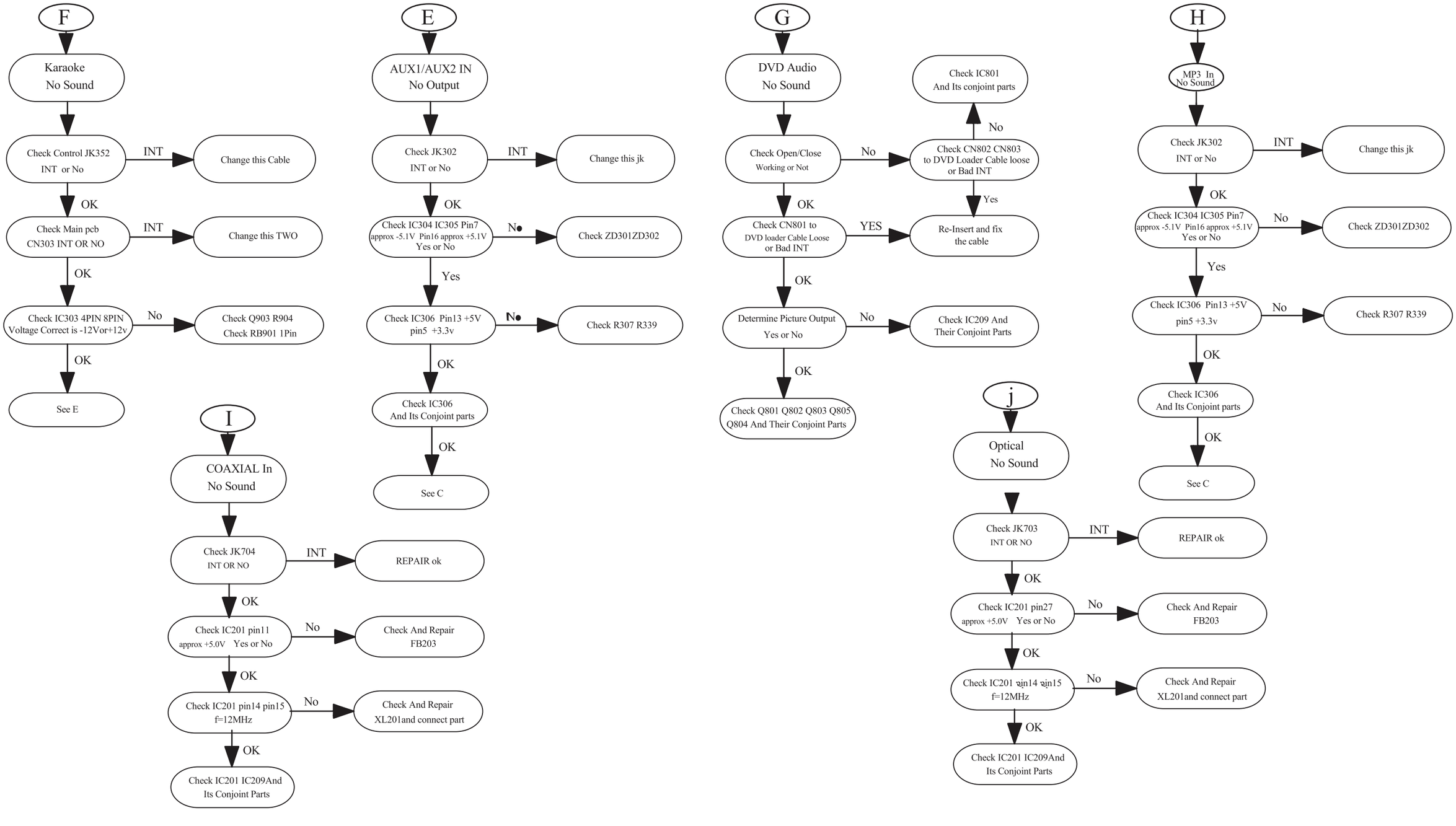
A All Function No Working
B Power Supply No Working
C All Function No Sound
E Audio line IN No Output
F Karaoke No Output
G DVD Audio No Sound
H MP3 In No Sound
I COAXIAL In No Sound
j Optical In No Sound
L Tuner No Sound
M HDMI No Output
N No CVBS Output
O No Y Pr Pb output



2 - 3

REPAIR INSTRUCTIONS (TWO)

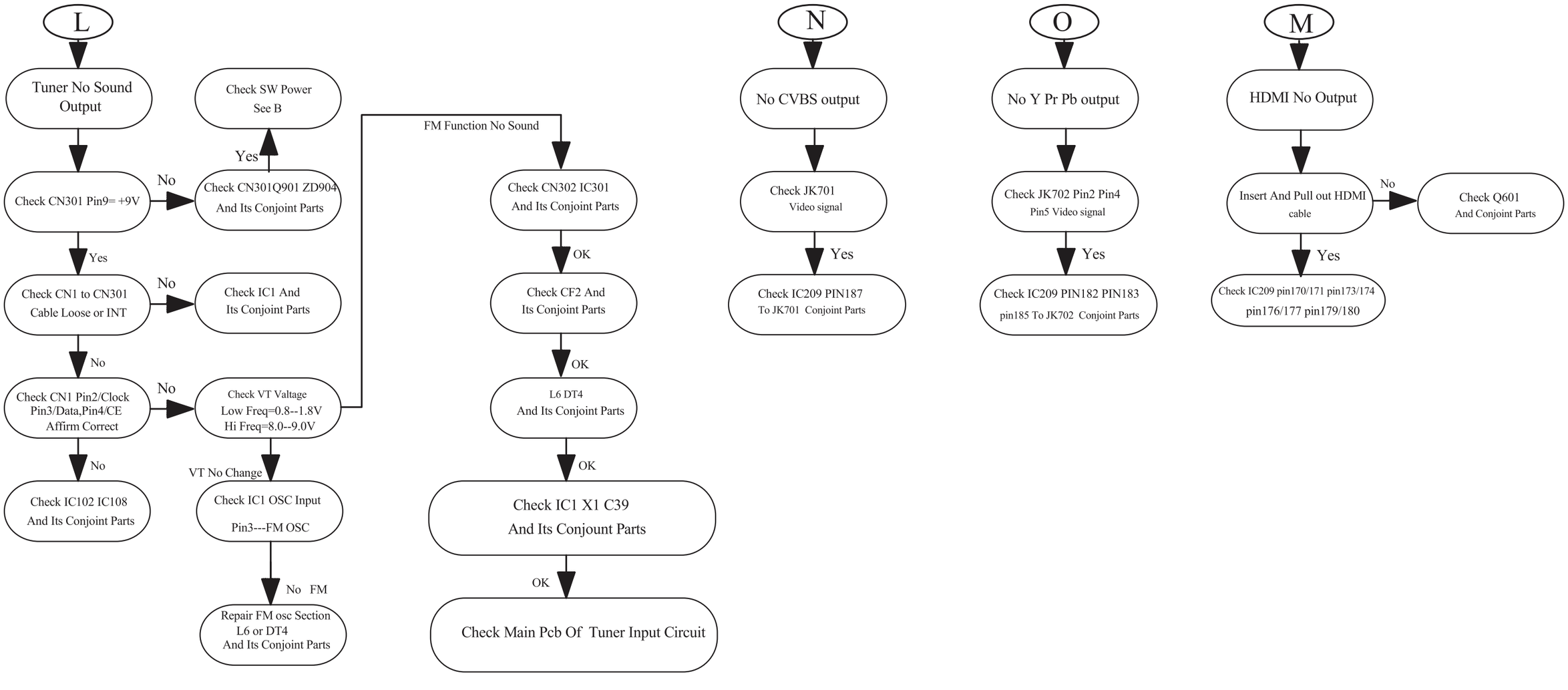
MAIN UNIT REPAIR CHART 2/3



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.

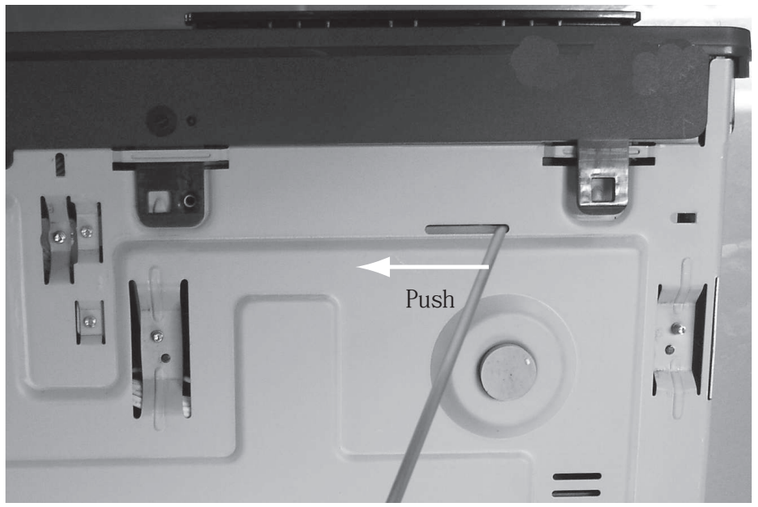


Figure 1

Figure 2

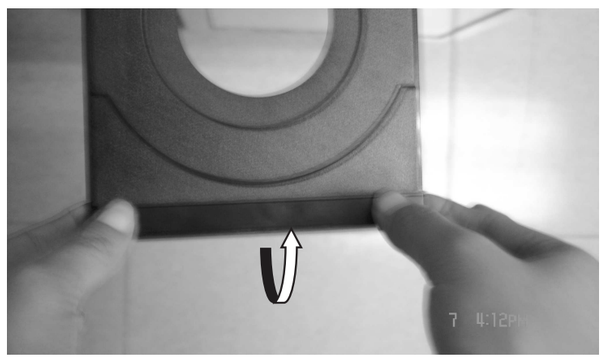


Figure 3

3 - 1

3) Loosen 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 6 screws “C“ at the front panel bracket as in figure 6A & figure 6B to remove the front panel.

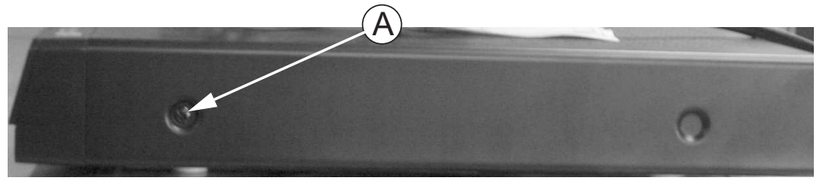


Figure 4

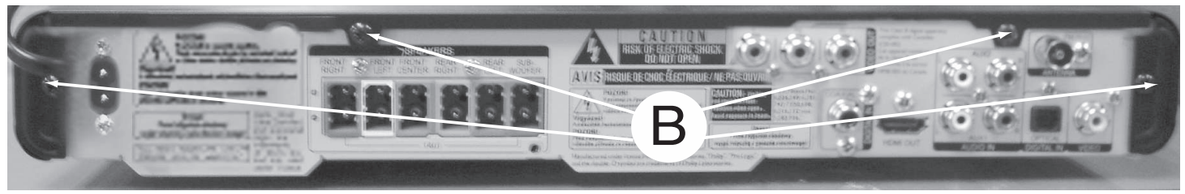


Figure 5

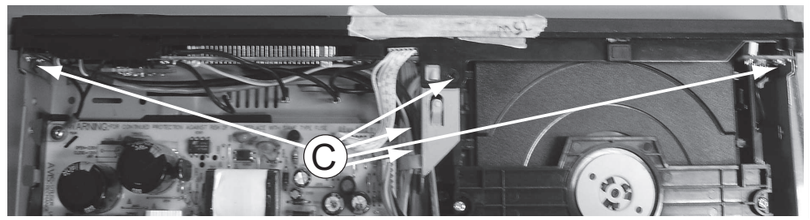


Figure 6A

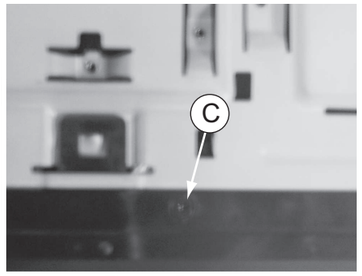


Figure 6B

Dismantling of the DVD Module

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

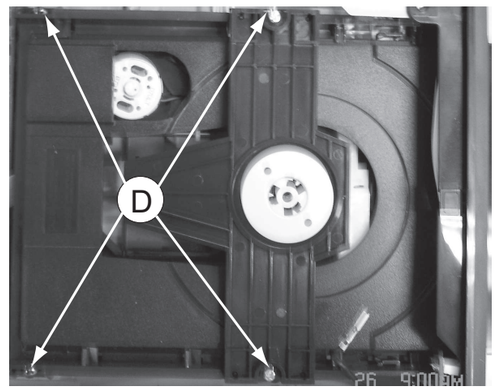


Figure 7

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.

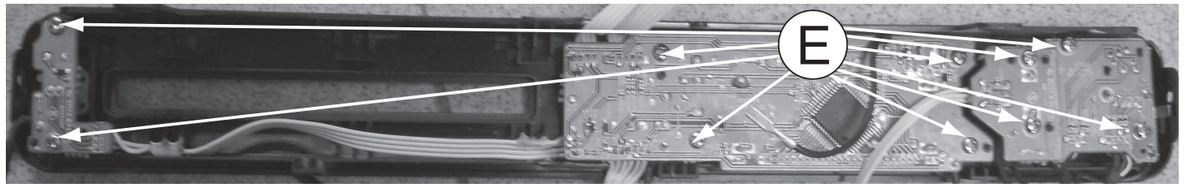


Figure 8

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.

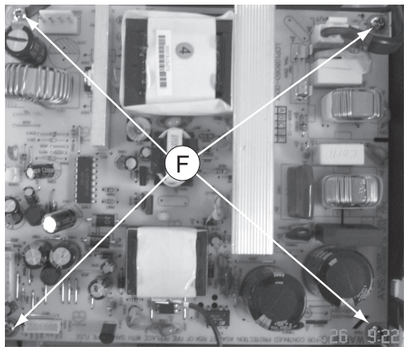


Figure 9

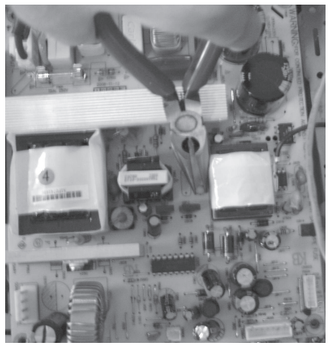


Figure 10

Dismantling of the MAIN+SCART Board

1) Loosen 4 screws “G” on the top of Main Board as shown in figure 11.
2) Loosen 11 screws at the back panel as shown in figure 12.

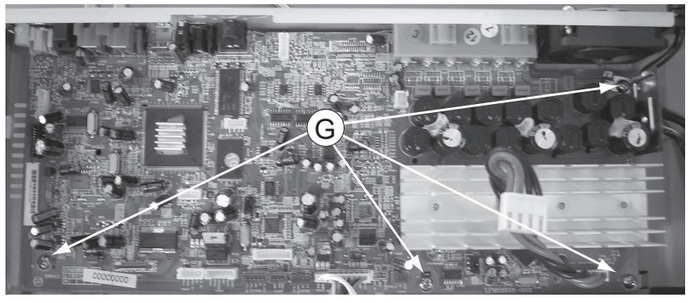


Figure 11

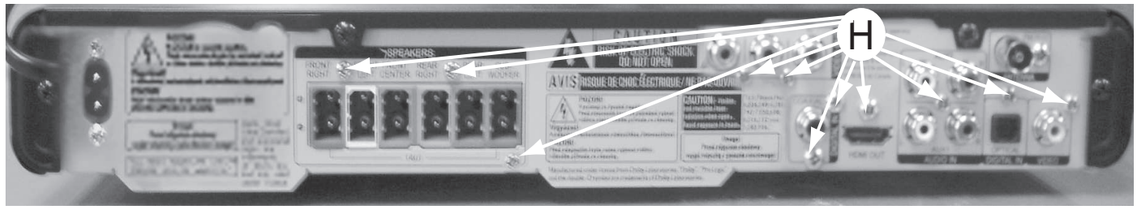
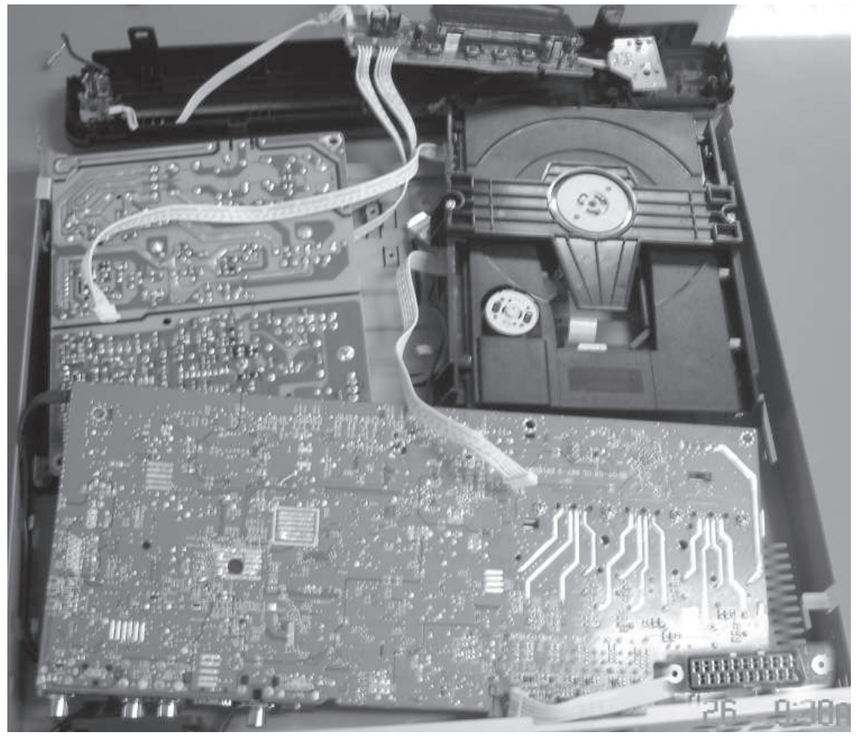


Figure 12

SERVICE POSITIONS

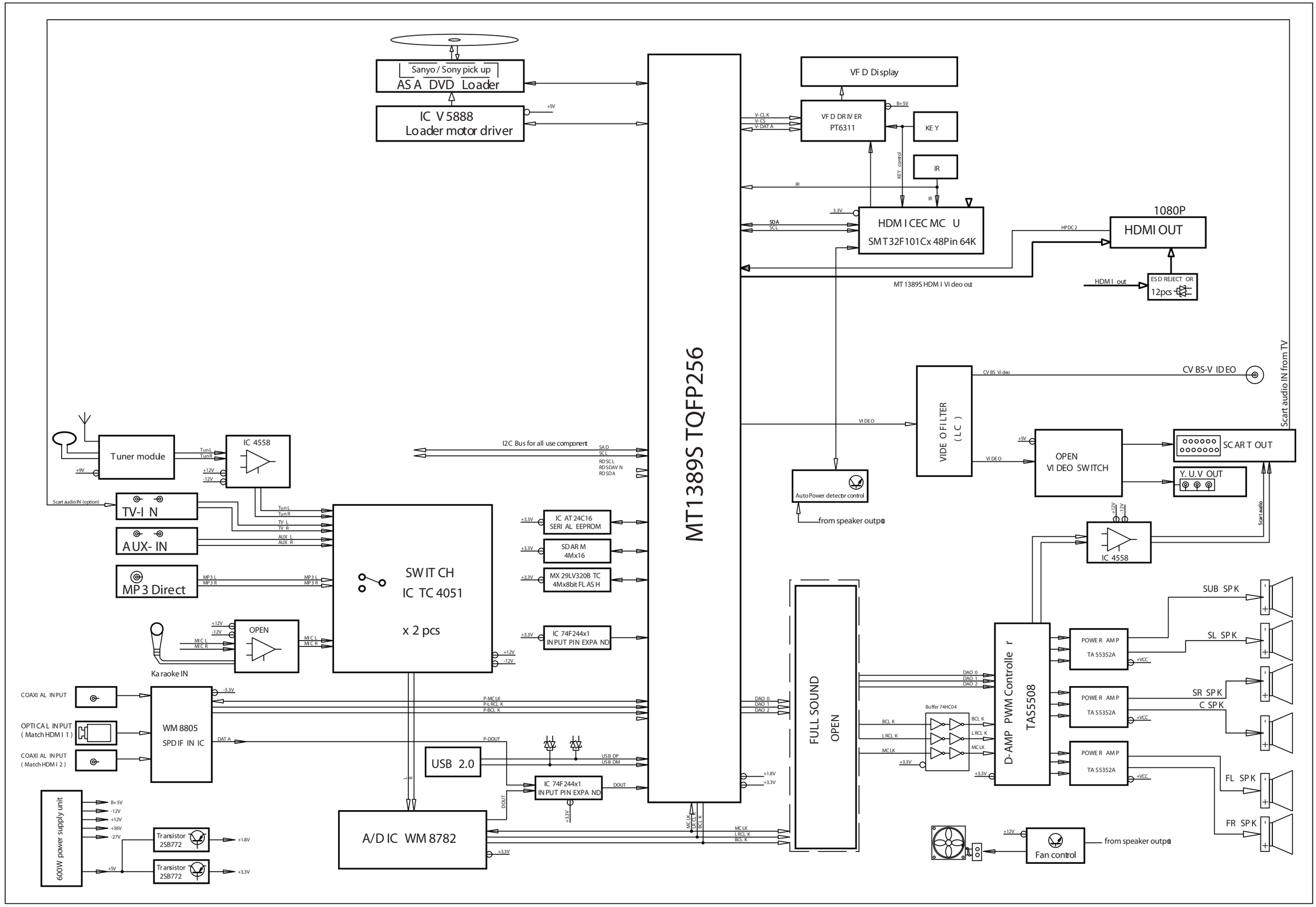
Service position A



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.

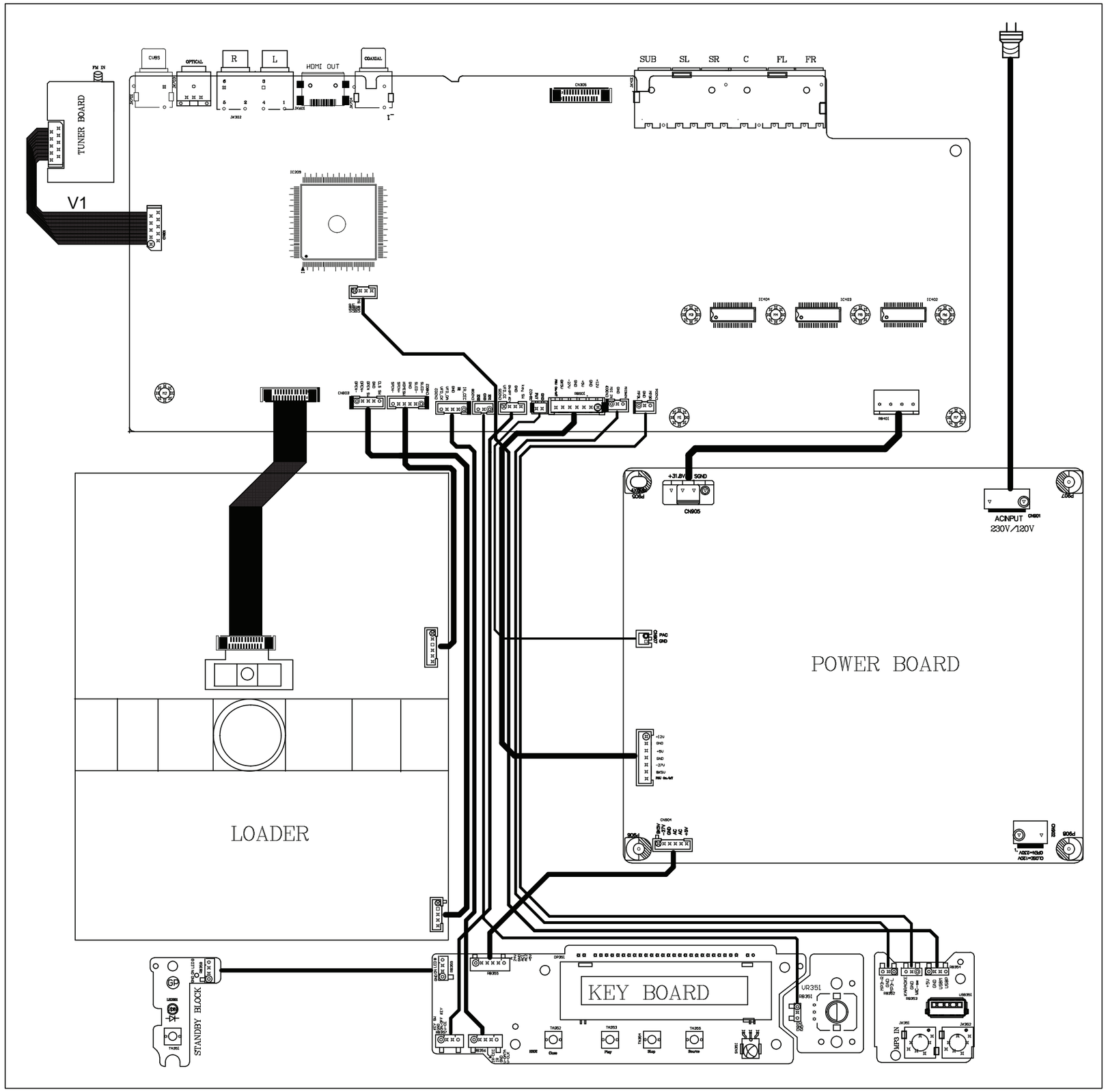
4 - 1

BLOCK DIAGRAM



4 - 2

WIRING DIAGRAM



DISP+LED+VOL BOARD

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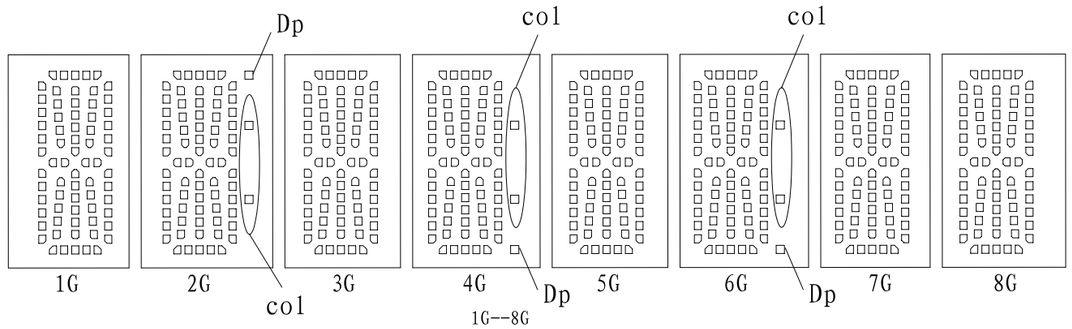
5 - 1

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

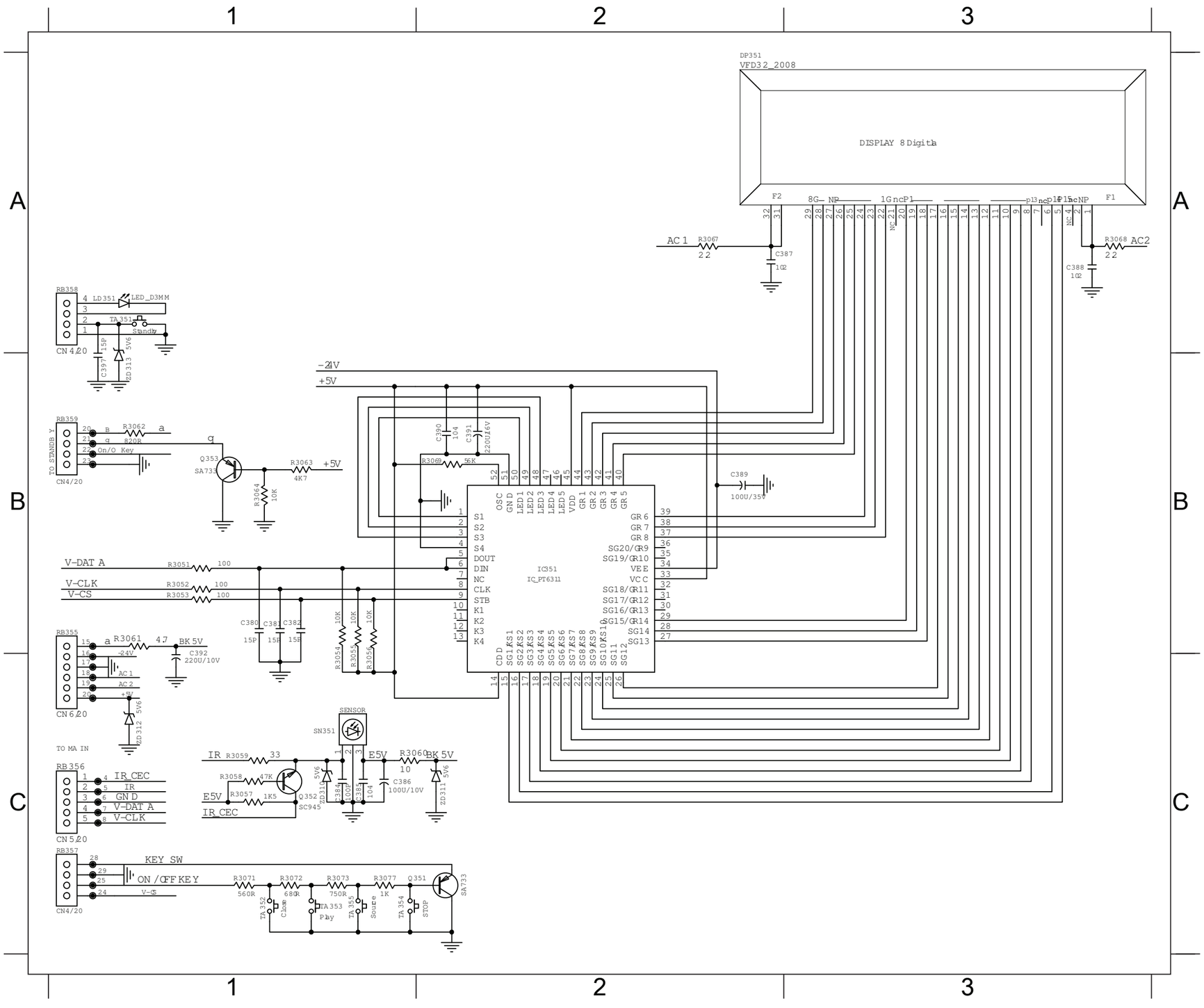
管脚序号(Pin NO.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
连接(Connection)	F1	F1	NP	NC	P15	P14	NC	P13	P12	P11	P10	P9	P8	P7	P6	P5
管脚序号(Pin NO.)	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
连接(Connection)	P4	P3	P2	P1	NC	1G	2G	3G	4G	5G	6G	7G	8G	NP	F2	F2

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

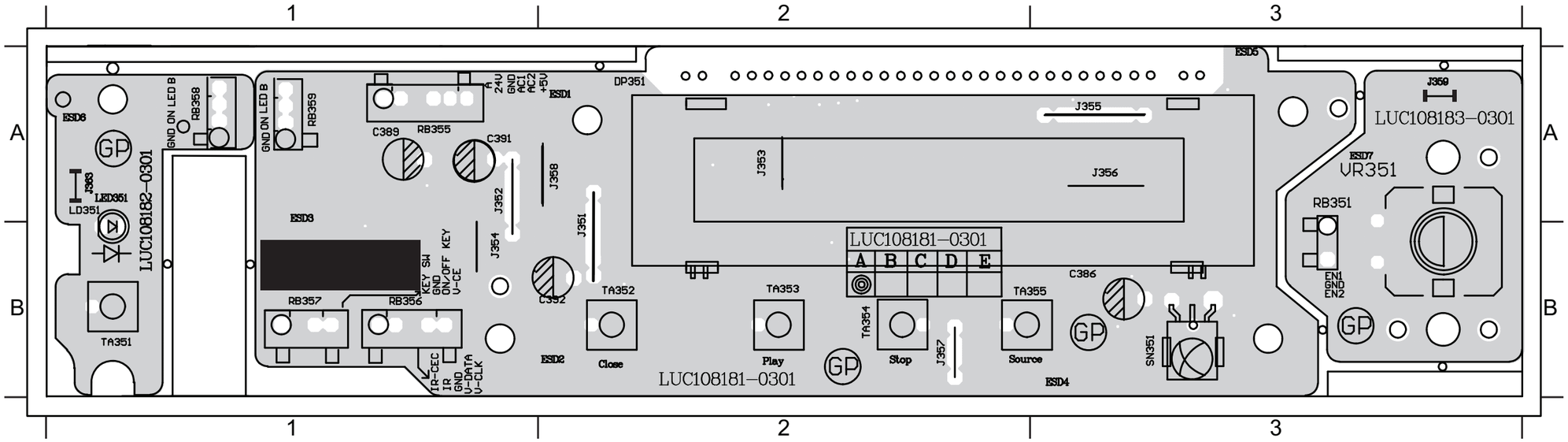
C380 B1 C384 C1 C387 A2 C390 B2 C395 C4 DP351 A2 Q351 C1 R3051 B1 R3054 B1 R3057 C1 R3060 C1 R3063 B1 R3068 A3 R3072 C1 RB351 C4 RB357 C1 TA351 A1 TA354 C1 ZD310 C1 ZD313 B1
C381 B1 C385 C1 C388 A3 C391 B2 C396 C4 IC351 B2 Q352 C1 R3052 B1 R3055 B1 R3058 C1 R3061 B1 R3064 B1 R3069 B2 R3073 C1 RB355 B1 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

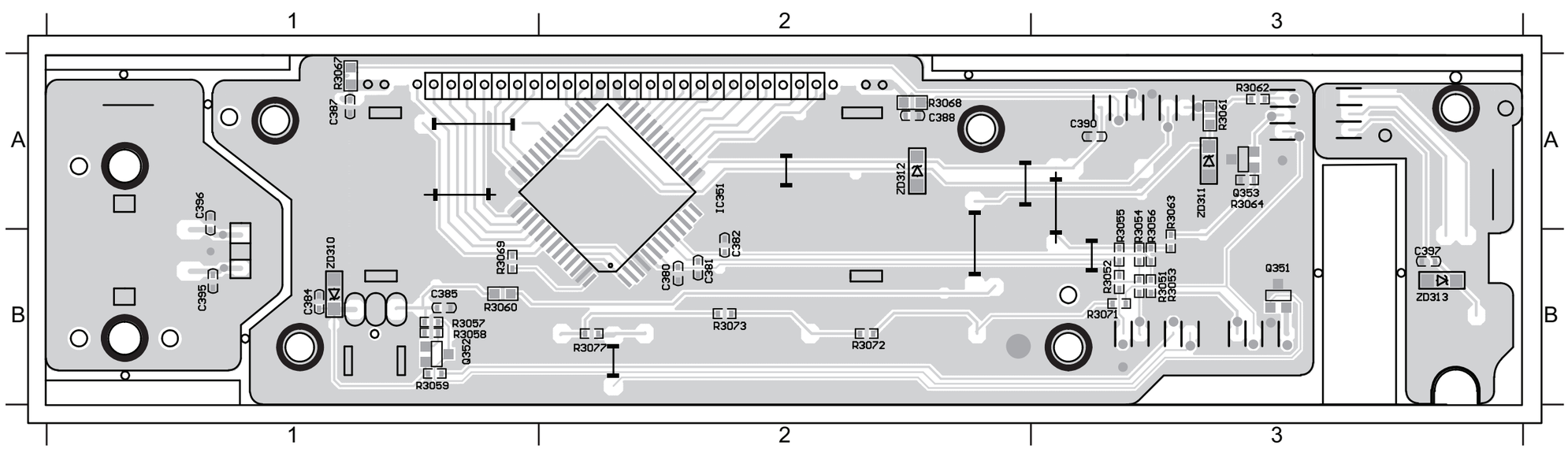
PCB LAYOUT - TOP VIEW

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

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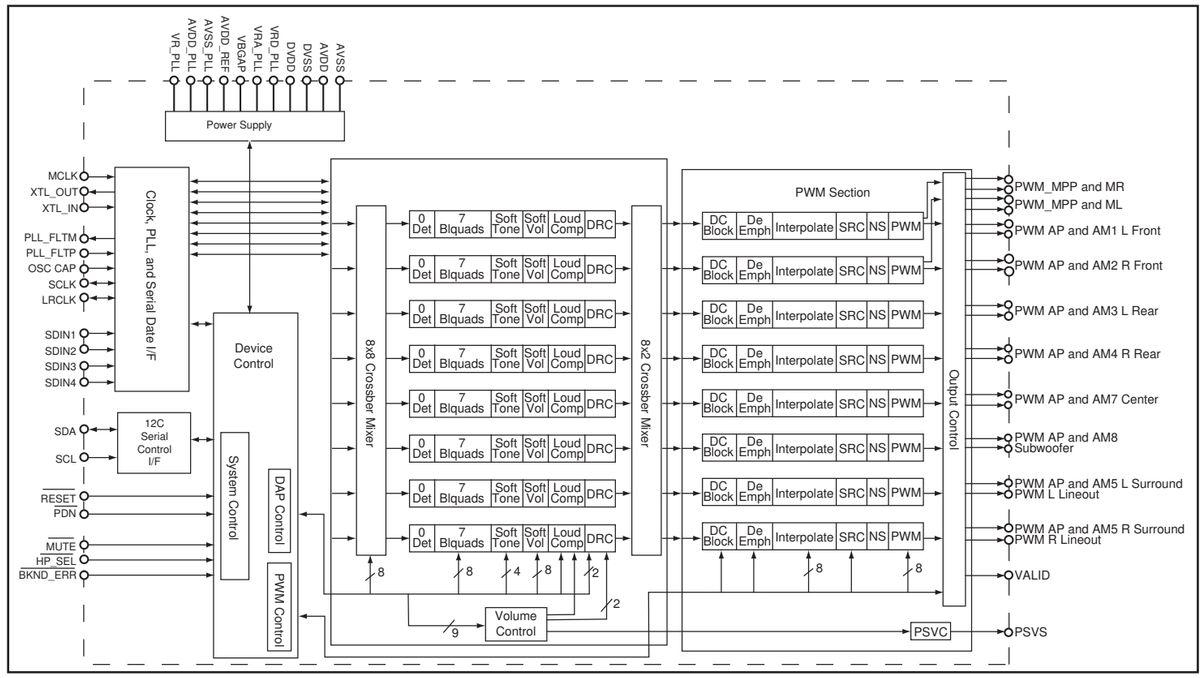
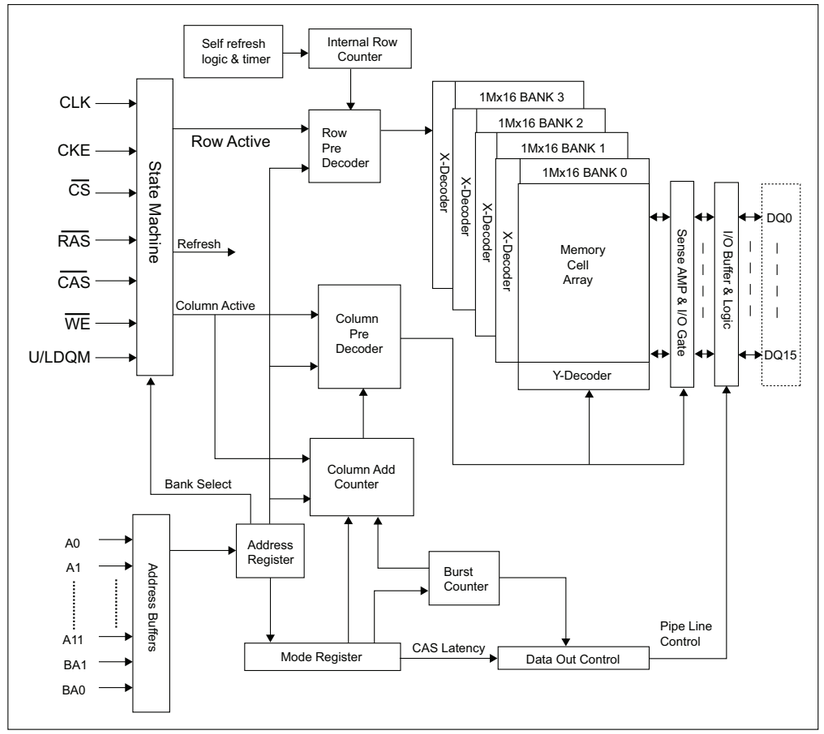
INTERNAL IC DIAGRAM - TAS5508B



INTERNAL IC DIAGRAM - HY57V641620F



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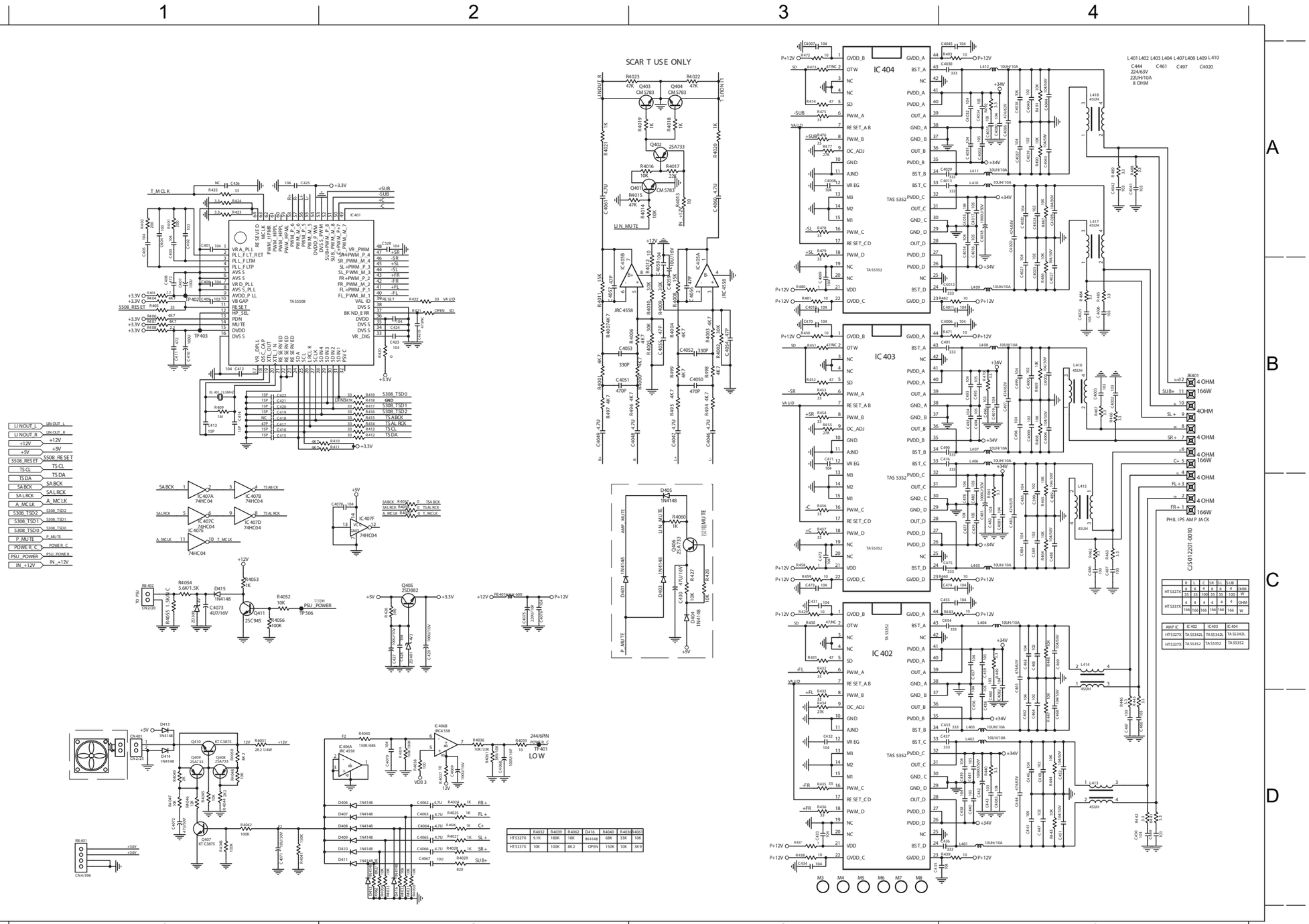
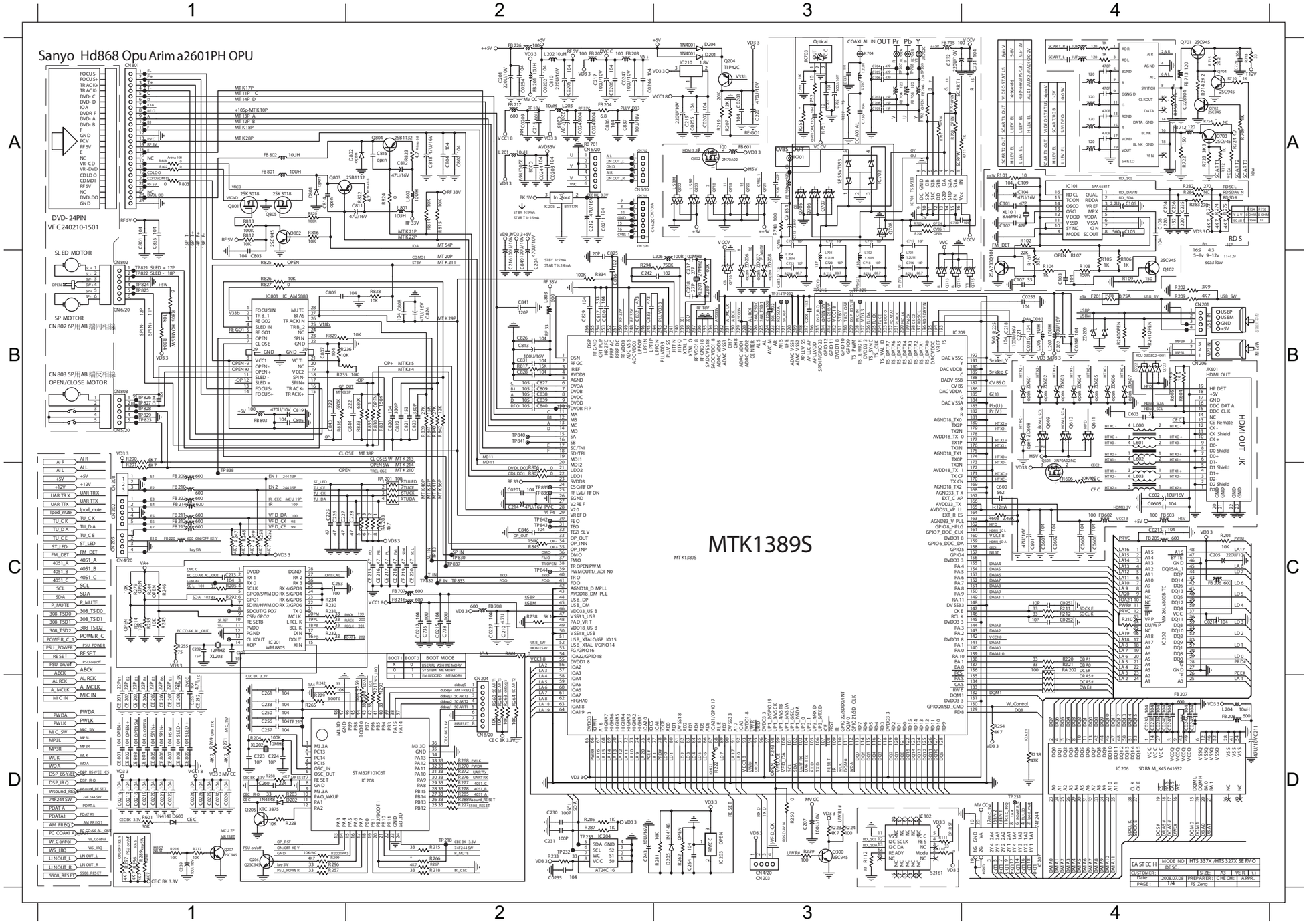
CIRCUIT DIAGRAM - part one



6 - 3

CIRCUIT DIAGRAM - part two

C0201 C2 C0215 C2 C0237 D4 C0252 C4 C204 B2 C219 A3 C237 B3 C601 C4 C713 A3 C736 A3 C812 A2 C828 B2 C843 B1 CE217 C2 CN202 C1 D205 D3 FB212 C1 FB706 A3 IC206 D4 L204 D4 Q206 D1 Q805 A1 R216 D1 R231 C1 R252 C1 R270 D2 R289 D1 R606 C4 R752 A3 R816 A1 R838 B2
C0202 A2 C0216 D1 C0238 D4 C0253 B4 C205 C4 C220 A3 C238 B3 C602 C4 C716 B3 C737 A3 C813 B2 C829 B2 C844 B2 CE218 C2 CN203 D3 D600 D1 FB213 C1 FB707 C2 IC207 D4 L205 B4 Q207 D1 R201 C4 R217 D1 R232 C1 R253 C1 R271 D1 R290 B1 R702 A3 R754 A4 R817 B2 R839 B2
C0203 A2 C0217 D1 C0239 D4 C0601 C4 C206 B3 C221 B4 C239 D1 C603 B4 C717 A3 C738 C2 C816 B2 C830 B2 C846 C2 CE219 C2 CN204 D2 F201 B4 FB214 C1 FB708 C2 IC208 D2 L206 B3 Q300 D3 R202 B4 R218 D2 R233 D2 R254 D4 R272 D2 R291 C1 R704 A3 R801 C2 R820 A1 R840 B2
C0204 D1 C0218 D1 C0240 D4 C0602 C4 C207 D3 C223 D1 C242 B2 C701 A3 C718 B3 C801 A1 C817 B2 C831 B2 C849 B2 CE220 C2 CN205 C1 FB201 A2 FB216 C2 FB712 A4 IC209 B3 L207 B4 Q601 B4 R203 D1 R219 A3 R234 C1 R256 D1 R274 A4 R292 C1 R705 A3 R802 A1 R822 A2 R841 B2
C0205 A2 C0219 D1 C0241 D4 C0603 C4 C208 A2 C224 D1 C243 D2 C702 A3 C719 A3 C802 A2 C818 A2 C832 B2 CE201 D1 CE801 D1 CN206 B4 FB202 A2 FB217 A2 FB715 A3 IC210 A3 L701 B3 Q602 A3 R204 D1 R220 C4 R235 B1 R257 D1 R276 D2 R293 D2 R724 A4 R803 A1 R823 A2 R842 B2
C0206 A2 C0220 D1 C0242 D4 C0604 C4 C209 B3 C225 C1 C250 D1 C703 A3 C720 B3 C803 B1 C819 B1 C833 B2 CE202 D1 CE802 D1 CN208 C1 FB203 A2 FB220 C1 FB801 A1 IC801 B1 L702 B3 Q611 B4 R205 C1 R221 C4 R236 B1 R258 D1 R277 D2 R294 B2 R731 B3 R804 B1 R824 A2 R845 C2
C0207 A3 C0221 D1 C0243 D4 C0606 C4 C210 C2 C226 C1 C253 C1 C704 A3 C721 A3 C804 A2 C820 B2 C834 B1 CE203 D1 CE803 D1 CN701A A3 FB204 A2 FB222 C1 FB802 A1 JK601 B4 L703 B3 Q705 A3 R207 A3 R222 D3 R238 D4 R259 D2 R278 D2 R296 D1 R732 B3 R805 B1 R826 B1 RA201 C2
C0208 A3 C0222 D1 C0244 A2 C101 A4 C211 D4 C227 C1 C254 D3 C705 A3 C722 A3 C805 B1 C821 B2 C835 A1 CE204 D1 CE804 D1 CN801 A1 FB205 C4 FB226 A2 FB803 B1 JK701 A3 L704 B3 Q706 A3 R208 D2 R223 D3 R239 D3 R260 D2 R279 C1 R297 D1 R733 B3 R806 C2 R827 B1 RA202 C4
C0209 A2 C0226 D1 C0245 A2 C102 A4 C213 C1 C228 C2 C255 D1 C706 A3 C723 B3 C806 B1 C822 B2 C836 A2 CE205 D1 CE805 D1 CN802 B1 FB206 C4 FB601 A3 GT01 D3 JK702 A3 L707 A3 Q707 A3 R209 B4 R224 D3 R242 D1 R261 D2 R280 B3 R298 D1 R734 B3 R807 C2 R829 B1 RA203 C2
C0210 B4 C0227 C2 C0246 A2 C105 A4 C214 C2 C229 C1 C256 D1 C707 A3 C728 A4 C807 B1 C823 B2 C837 A2 CE206 D1 CE806 D1 CN803 B1 FB207 D4 FB602 C4 IC201 D3 JK703 A3 L801 A2 Q708 A3 R210 C4 R225 B4 R245 C1 R263 D2 R281 D3 R299 D1 R737 A3 R808 A1 R831 B2 RB701 A2
C0211 A2 C0228 D1 C0247 A2 C109 A4 C215 A2 C230 D2 C257 D1 C708 A3 C730 A3 C808 B2 C824 B2 C838 B2 CE207 D1 CE807 D1 CO254 A2 FB208 D4 FB603 C4 IC202 C4 JK704 A3 L802 A2 Q801 A1 R211 C4 R227 D2 R248 C1 R264 D2 R285 D2 R601 D1 R738 C2 R812 A1 R833 B2 XL201 B3
C0212 C2 C0229 D1 C0248 B4 C201 A2 C216 B2 C231 D2 C260 D1 C709 A3 C731 A4 C809 B2 C825 A2 C839 B2 CE212 D1 CE808 D1 D201 A3 FB209 C1 FB703 A3 IC203 D3 L201 A2 L803 B2 Q802 A1 R212 C4 R228 D1 R249 C1 R267 D2 R286 D2 R603 C4 R748 A3 R813 A1 R834 B2 XL202 D1
C0213 C4 C0230 D1 C0249 A2 C202 B4 C217 A2 C232 C1 C261 D1 C710 A3 C732 A3 C810 A2 C826 B2 C840 B2 CE215 C2 CE809 D1 D202 D1 FB210 C1 FB704 A3 IC204 D2 L202 A2 Q204 A3 Q803 A1 R213 D2 R229 D1 R250 D3 R268 D2 R287 D2 R604 B4 R750 A4 R814 A2 R835 B2 XL203 C1
C0214 C4 C0235 D2 C0251 C4 C203 A2 C218 B4 C233 D1 C600 C4 C711 A3 C735 C2 C811 A2 C827 B2 C841 B2 CE216 C2 CN201 B4 D204 A3 FB211 C1 FB705 A3 IC205 A2 L203 A2 Q205 D1 Q804 A2 R215 D2 R230 C1 R251 C1 R269 D1 R288 D2 R605 B4 R751 A3 R815 A2 R836 B1 ZD209 B4



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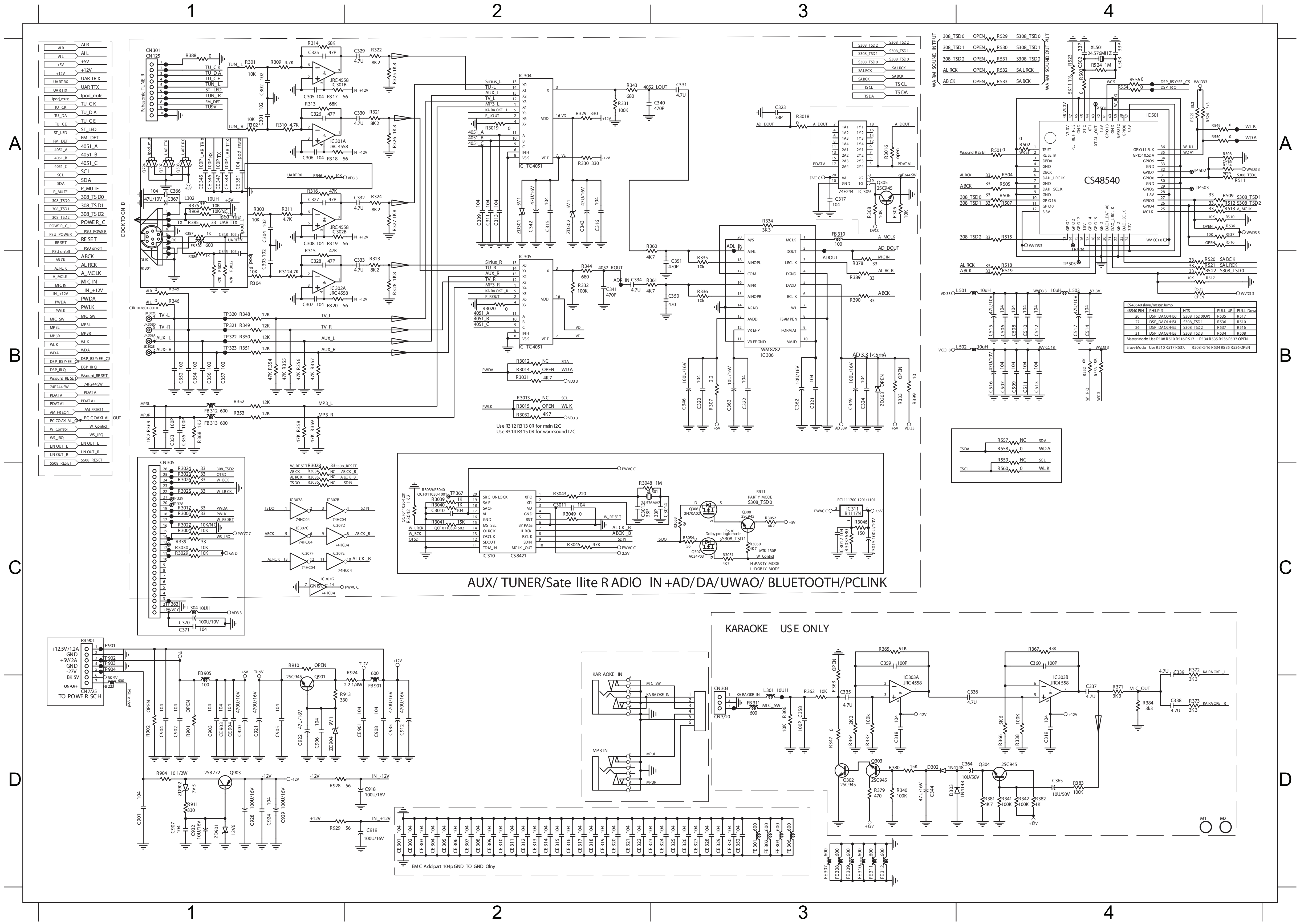
CIRCUIT DIAGRAM - part three

C301 A1	C319 D4	C331 A3	C343 A2	C356 B1	C503 A4	C918 D2	CE301 D2	CE311 D2	CE321 D2	CE346 A1	D303 D4	FE306 D3	IC305 B2	Q903 D1	R309 A1	R325 A2	R338 D4	R351 B1	R361 B3	R379 D3	R503 A4	R560 C4	ZD901 D1
C305 A1	C320 B3	C334 B2	C344 D3	C357 B1	C901 D1	C919 D2	CE302 D2	CE312 D2	CE322 D2	CE347 A1	FB223 D1	FE307 D3	IC306 B3	R301 A1	R310 A1	R326 A2	R340 D3	R352 B1	R362 B3	R380 D3	R529 A4	R904 D1	ZD902 D1
C306 A1	C321 B3	C335 D3	C346 B3	C358 D3	C902 D1	C920 D1	CE303 D2	CE313 D2	CE323 D2	CE351 A1	FB310 A3	FE308 D3	IC309 A3	R3018 A3	R311 A1	R329 A2	R341 D4	R353 B1	R364 D3	R381 D4	R530 A4	R911 D1	ZD904 D1
C309 A2	C322 B3	C336 D4	C349 B3	C359 C3	C903 D1	C921 D1	CE304 D2	CE314 D2	CE324 D3	CE352 D3	FB311 D3	FE309 D3	JK302 B1	R3019 A2	R312 B1	R330 A2	R342 D4	R354 B1	R365 C3	R382 D4	R531 A4	R913 D1	
C311 A2	C323 A3	C337 D4	C350 B3	C360 C4	C904 D1	C922 D1	CE305 D2	CE315 D2	CE325 D3	CE901 D2	FB312 B1	FE310 D3	L301 D3	R302 A1	R313 A1	R331 A3	R343 A2	R355 B1	R366 D4	R383 D4	R532 A4	R924 C2	
C313 A2	C324 B3	C338 D4	C351 B3	C362 B3	C905 D1	C924 D1	CE306 D2	CE316 D2	CE326 D3	CE903 D1	FB313 B1	FE311 D3	Q302 D3	R3020 B2	R314 A1	R332 B2	R344 B2	R356 B1	R367 C4	R384 D4	R533 A4	R928 D1	
C315 A2	C325 A1	C339 D4	C352 B1	C363 B3	C906 D1	C928 D1	CE307 D2	CE317 D2	CE327 D3	CE904 D1	FB901 D1	FE312 D3	Q303 D3	R305 A3	R317 A1	R334 A3	R347 D3	R357 B1	R371 D4	R388 A1	R546 A1	R929 D1	
C316 A2	C326 A1	C340 A3	C353 B1	C364 D4	C907 D1	C929 D1	CE308 D2	CE318 D2	CE328 D3	CN301 A1	FB905 C1	IC301 A1	Q304 D4	R306 D3	R318 A1	R335 B3	R348 B1	R358 B1	R372 C4	R389 B3	R552 B4	RB901 C1	
C317 A3	C329 A2	C341 B2	C354 B1	C365 D4	C908 D2	C932 D1	CE309 D2	CE319 D2	CE329 D3	CN303 D3	FE301 D3	IC303 C3	Q305 A3	R307 B3	R321 A2	R336 B3	R349 B1	R359 B1	R373 D4	R390 B3	R553 B4	ZD301 A2	
C318 D3	C330 A2	C342 A2	C355 B1	C502 A4	C912 D2	C935 D2	CE310 D2	CE320 D2	CE330 D3	D302 D3	FE302 D3	IC304 A2	Q901 D1	R308 A3	R322 A2	R337 D3	R350 B1	R360 A2	R378 B3	R399 B3	R558 B4	ZD302 A2	



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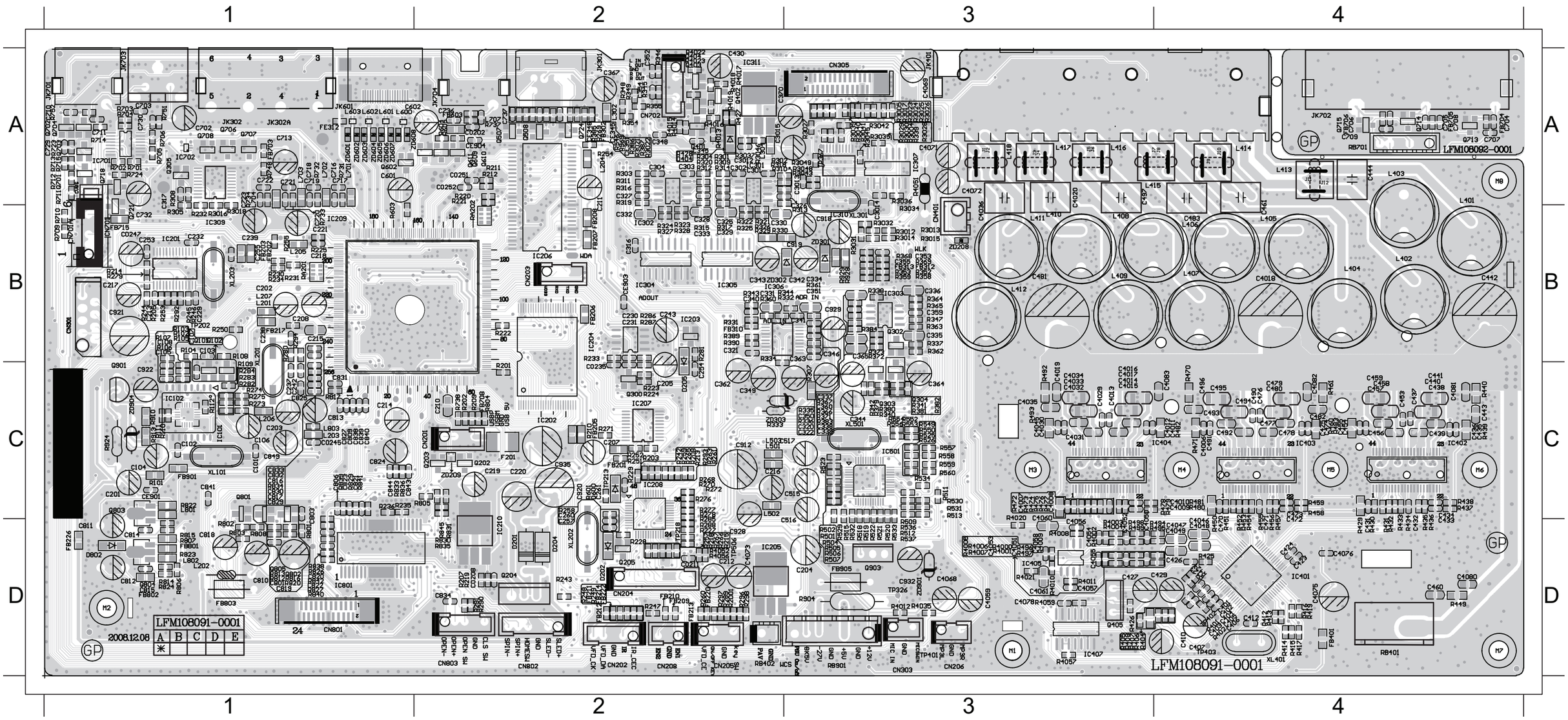
PCB LAYOUT - TOP VIEW

C0202 A2 C216 C2 C317 A1 C351 B3 C4015 B4 C4081 C4 C457 C4 C702 A1 C801 D1 C833 C1 CN201 C2 FB206 B2 FB715 B1 IC309 B1 JK702 A4 L701 A1 Q802 D1 R223 C2 R258 C2 R290 D2 R322 B2 R355 A2 R4035 D3 R435 C4 R476 C3 R605 A2 R813 D1 R904 D3
C0208 D2 C217 B1 C320 C3 C352 A2 C4018 B4 C410 D4 C460 D4 C703 A1 C803 C1 C834 D2 CN202 D2 FB207 B2 FB801 D1 IC401 D4 JK703 A4 L702 A1 Q803 C1 R224 C2 R259 C2 R291 D2 R325 B2 R358 B3 R404 D3 R436 C4 R477 C3 R702 A1 R814 D1 R913 C1
C0211 D2 C218 B1 C321 B2 C353 B3 C402 D4 C412 D4 C461 A3 C704 A4 C806 C1 C838 C1 CN203 B2 FB208 B2 FB802 D1 IC402 C4 JK704 A2 L703 A1 Q804 D1 R225 B1 R260 D2 R292 B1 R326 B2 R359 B3 R405 D3 R437 C4 R478 C4 R704 A1 R815 D1 R924 C1
C0235 C2 C219 C2 C322 C3 C354 A2 C4020 A3 C423 D4 C470 C4 C705 A4 C809 C1 C839 C1 CN204 D2 FB209 D2 FB803 D1 IC403 C4 L201 B1 L704 A1 Q805 D1 R227 D2 R261 C2 R293 C2 R329 B2 R360 B2 R4051 A3 R438 C4 R479 C4 R705 A1 R816 D1 R928 B3
C0245 C1 C220 C2 C325 B2 C355 B3 C4029 C3 C424 D4 C471 C4 C706 A4 C810 D1 C840 C1 CN205 D2 FB210 D2 FB901 C1 IC404 C3 L202 D1 L707 A2 Q901 C1 R228 D2 R263 C2 R294 B1 R330 B2 R361 B3 R406 D3 R439 C4 R480 C4 R724 A1 R817 C1 R929 B3
C0247 B1 C221 B1 C326 A2 C358 B3 C403 D4 C427 D3 C472 C4 C707 A4 C811 D1 C841 C1 CN206 D3 FB211 D2 FB905 D3 IC407 D3 L203 C1 L801 C1 Q903 D3 R229 C2 R267 D2 R296 D2 R331 B2 R362 B3 R407 D3 R440 C4 R481 C4 R731 A1 R820 D1 RA201 B1
C0251 A2 C229 B1 C329 B2 C359 B3 C4030 C3 C429 D3 C473 C4 C708 A4 C812 D1 C843 C1 CN208 D2 FB212 D2 FE312 A1 IC801 D1 L204 A2 L802 D1 R201 C2 R230 B2 R268 C3 R297 D2 R332 B3 R364 B3 R408 D3 R449 D4 R482 C4 R732 A1 R822 C1 RA202 A2
C0252 A2 C230 B2 C330 B2 C360 C3 C4031 C3 C431 C4 C474 C4 C709 A4 C813 C1 C844 C1 CN301 B1 FB213 D2 GT01 B1 J1 A3 L205 B1 L803 C1 R202 C2 R231 B1 R269 A2 R298 D2 R334 B2 R365 B3 R412 D4 R450 C4 R483 C4 R733 B1 R823 D1 RB401 D4
C101 C1 C231 B2 C331 B2 C362 C2 C4032 C3 C432 C4 C475 C4 C710 A1 C816 C1 C849 C1 CN303 D3 FB214 D2 IC201 B1 J10 A4 L206 C1 Q204 D2 R203 C2 R232 B1 R270 C2 R301 A2 R335 C3 R366 C3 R413 D4 R452 C4 R492 C3 R734 A1 R824 D1 RB701 A4
C102 C1 C232 B1 C334 B3 C363 B3 C4035 C3 C433 D4 C476 C4 C711 A1 C817 C1 C912 C2 CN701A B1 FB217 B1 IC202 C2 J11 A4 L207 B1 Q205 D2 R205 B1 R233 B2 R271 C2 R3018 B1 R336 C3 R367 C3 R414 D4 R453 C4 R493 C3 R737 A2 R826 D1 RB901 D3
C105 B1 C237 C1 C335 B3 C364 C3 C4036 A3 C434 C4 C477 C4 C713 A1 C818 D1 C918 B3 CN801 D1 FB220 D2 IC203 B2 J12 A4 L301 A2 Q300 C2 R207 D2 R234 B2 R272 C2 R302 A2 R337 B3 R371 C3 R415 D4 R454 C4 R529 D3 R738 C2 R827 D1 XL201 B1
C201 C1 C238 B1 C336 B3 C365 B3 C404 D4 C435 C4 C478 C4 C716 A1 C819 D1 C919 B3 CN802 D2 FB222 D2 IC204 B2 J2 A3 L401 A4 Q302 B3 R208 C2 R235 C1 R274 C1 R305 B1 R338 B3 R372 B3 R416 D4 R455 C4 R530 C3 R748 A1 R829 C1 XL202 D2
C202 B1 C239 B1 C337 C3 C370 A3 C4045 C3 C436 C4 C481 B3 C717 A1 C820 D1 C920 C2 CN803 D2 FB226 D1 IC205 D2 J3 A3 L402 B4 Q303 C3 R209 C2 R236 C1 R276 C2 R307 C3 R340 C3 R373 B3 R417 D4 R456 C4 R531 C3 R751 A1 R831 D2 XL203 B1
C203 C1 C242 C1 C338 C3 C4006 C4 C405 D4 C437 C4 C482 C4 C718 A1 C821 C1 C921 B1 D201 D2 FB310 B2 IC206 B2 J4 A3 L403 A4 Q304 C3 R210 C2 R242 C2 R277 C2 R308 A1 R341 C3 R379 C3 R419 D4 R457 C4 R532 D3 R752 A1 R833 C1 XL401 D4
C204 D3 C243 B2 C339 C3 C4007 C3 C406 D4 C438 C4 C483 B4 C719 A1 C822 D1 C922 C1 D202 D2 FB312 B3 IC207 C2 J5 A3 L404 B4 Q305 A1 R211 A2 R245 B1 R278 C2 R309 A2 R342 C3 R380 C3 R423 D4 R458 C4 R533 D3 R801 D1 R834 C1 ZD209 C2
C205 C2 C253 B1 C340 B2 C4008 C3 C4068 D3 C439 C4 C490 C4 C720 B1 C823 C1 C928 D2 D204 D2 FB313 B3 IC208 C2 J6 A3 L405 B4 Q405 D3 R212 A2 R248 D2 R279 B1 R310 A2 R343 B2 R381 C3 R424 D4 R459 C4 R546 A2 R802 D1 R835 D2 ZD301 B3
C207 C2 C254 C2 C341 B3 C4009 C4 C4069 A3 C442 B4 C491 C4 C721 A1 C824 C1 C929 B3 D205 C2 FB401 D4 IC209 B1 J7 A4 L406 B4 Q602 A1 R213 C2 R249 D2 R280 B1 R311 A2 R344 B3 R382 C3 R425 D4 R460 C4 R552 C3 R803 D1 R836 C1 ZD302 B2
C208 B1 C255 B1 C342 B3 C401 D4 C407 D4 C443 C4 C492 C4 C722 A1 C825 C1 C932 D3 D600 C2 FB603 A2 IC210 D2 J8 A4 L407 B4 Q611 A2 R215 D2 R250 B1 R281 B2 R312 A2 R347 B3 R383 C3 R426 D4 R461 C4 R553 C3 R804 C2 R838 D1 ZD901 D3
C210 C2 C257 D2 C343 B2 C4010 C4 C4072 A3 C444 A4 C493 C4 C723 A1 C827 C1 C935 C2 F201 C2 FB703 A1 IC301 A2 J9 A4 L408 B3 Q705 A4 R218 D2 R251 C2 R285 D2 R313 B3 R348 A2 R384 B3 R429 C4 R470 C4 R558 C3 R805 C2 R839 C1 ZD904 C1
C211 A2 C260 C2 C344 C3 C4011 C4 C4075 D4 C453 C4 C496 C4 C730 A1 C829 C1 CE351 A2 FB201 C2 FB704 A4 IC303 B3 JK302 A1 L409 B3 Q706 A1 R219 D2 R252 C2 R286 B2 R314 A2 R349 A2 R389 B2 R431 C4 R471 C4 R560 C3 R806 D1 R840 D1
C213 B1 C261 C2 C346 B3 C4012 C4 C4076 D4 C454 C4 C497 A3 C732 B1 C830 C1 CE901 C1 FB202 B1 FB705 A4 IC304 B2 JK401 A3 L410 B3 Q707 A1 R220 A2 R253 B1 R287 B2 R317 B2 R352 B3 R390 B2 R432 C4 R472 C3 R601 C2 R807 D1 R841 C1
C214 C1 C301 A2 C349 C2 C4013 C3 C4078 D3 C455 C4 C601 A1 C736 A2 C831 C1 CE903 B2 FB203 B1 FB706 A4 IC305 B2 JK601 A1 L411 B3 Q708 A1 R221 A2 R254 A2 R288 D2 R318 A2 R353 B3 R401 D4 R433 C4 R474 C3 R603 A1 R808 D1 R842 D1
C215 B1 C316 B2 C350 C3 C4014 B4 C4080 D4 C456 C4 C602 A1 C737 A2 C832 C1 CE904 A2 FB205 C2 FB708 C2 IC306 B2 JK701 A1 L412 B3 Q801 C1 R222 B2 R257 D2 R289 D2 R321 B2 R354 A2 R402 D4 R434 C4 R475 C3 R604 A2 R812 D1 R845 D2



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PCB LAYOUT - BOTTOM VIEW

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C0203	B4	C0219	B3	C0242	B3	C209	B4	C313	B3	C4005	B2	C4042	A2	C414	D1	C449	A1	C486	A1	C728	B4	C846	C4	CE205	D3	CE305	A4	CE319	C2	CE352	B3	D407	A1	FB602	B4	Q601	A3	R356	A4	R4032	A2	R420	D1	R465	B1	R606	B4
C0204	B4	C0220	B3	C0243	B3	C223	C3	C315	B3	C4021	B2	C4043	B2	C415	D1	C450	A1	C487	A2	C731	A4	C901	D2	CE206	D3	CE306	D3	CE320	C2	CE801	D3	D408	A2	FB707	B4	R204	C3	R357	A4	R4033	A2	R421	C1	R466	A2	R750	B4
C0205	D4	C0221	B3	C0244	B4	C224	D3	C318	B2	C4022	B2	C4044	B2	C416	D1	C451	B1	C488	B1	C735	B3	C902	D2	CE207	D3	CE307	C4	CE321	B3	CE802	D3	D409	A2	FB712	A4	R216	B4	R378	B4	R4034	A2	R422	C1	R467	A2	R754	A4
C0206	B4	C0222	B3	C0246	B4	C225	B4	C319	B2	C4023	B2	C4062	A1	C417	D1	C452	B1	C489	B1	C738	B4	C903	D2	CE212	D3	CE308	C2	CE322	B3	CE803	D3	D410	A2	FE301	B4	R217	B4	R388	B4	R4036	A1	R441	A1	R468	B1	R911	D2
C0207	C3	C0226	C3	C0248	B4	C226	B4	C323	B4	C4024	B2	C4063	A1	C419	D1	C462	B1	C498	B1	C802	D4	C904	D2	CE215	A4	CE309	D2	CE323	B3	CE804	D3	D411	A2	FE302	B4	R238	B3	R399	B3	R4037	A2	R442	A1	R469	B2	RA203	B4
C0209	B4	C0227	C3	C0249	B4	C227	B4	C324	B3	C4025	A2	C4064	A2	C420	D1	C463	B1	C499	B2	C804	C4	C905	B4	CE216	B4	CE310	A3	CE324	B3	CE805	D3	D412	A2	FE306	A3	R239	C3	R4024	A1	R4038	A1	R443	B1	R484	A2	ZD401	D1
C0210	B4	C0228	B3	C0253	B4	C228	B4	C356	A4	C4026	A2	C4065	A2	C421	D1	C464	B1	C502	C2	C805	D4	C906	C4	CE217	B4	CE311	C2	CE325	B3	CE806	D3	D413	A2	FE307	B4	R256	D3	R4025	A1	R4039	A1	R444	B1	R485	A2	ZD902	D2
C0212	C3	C0229	B3	C0601	B4	C233	D3	C357	A4	C4027	B2	C4066	A2	C422	D1	C465	B1	C503	C2	C807	D4	C907	D2	CE218	B4	CE312	C4	CE326	D2	CE807	D3	D414	A2	FE308	A4	R264	D3	R4026	A1	R4040	A1	R445	A1	R486	B2		
C0213	C3	C0230	B3	C0602	A3	C250	C3	C371	A3	C4028	B2	C4067	A2	C425	D1	C466	A1	C528	D1	C808	C4	C908	C3	CE219	B4	CE313	D2	CE327	D4	CE808	D3	D416	A1	FE309	B4	R299	D3	R4027	A2	R4061	A1	R446	A1	R487	B2		
C0214	B3	C0237	B3	C0603	A3	C256	D3	C4000	B1	C4037	B2	C4070	A1	C428	D2	C467	A1	C589	B1	C826	C4	C924	D2	CE220	B4	CE314	C3	CE328	A4	CE809	D3	FB204	B4	FE310	A4	R3019	B3	R4028	A2	R4062	A2	R447	B1	R488	A2		
C0215	C3	C0238	B3	C0604	B4	C305	A3	C4001	B2	C4038	B2	C408	D1	C445	B1	C468	B1	C590	B1	C828	C4	CE201	D3	CE301	D4	CE315	B2	CE329	B4	CO254	C4	FB216	C3	FE311	A3	R3020	B3	R4029	A2	R409	D1	R448	B1	R489	A2		
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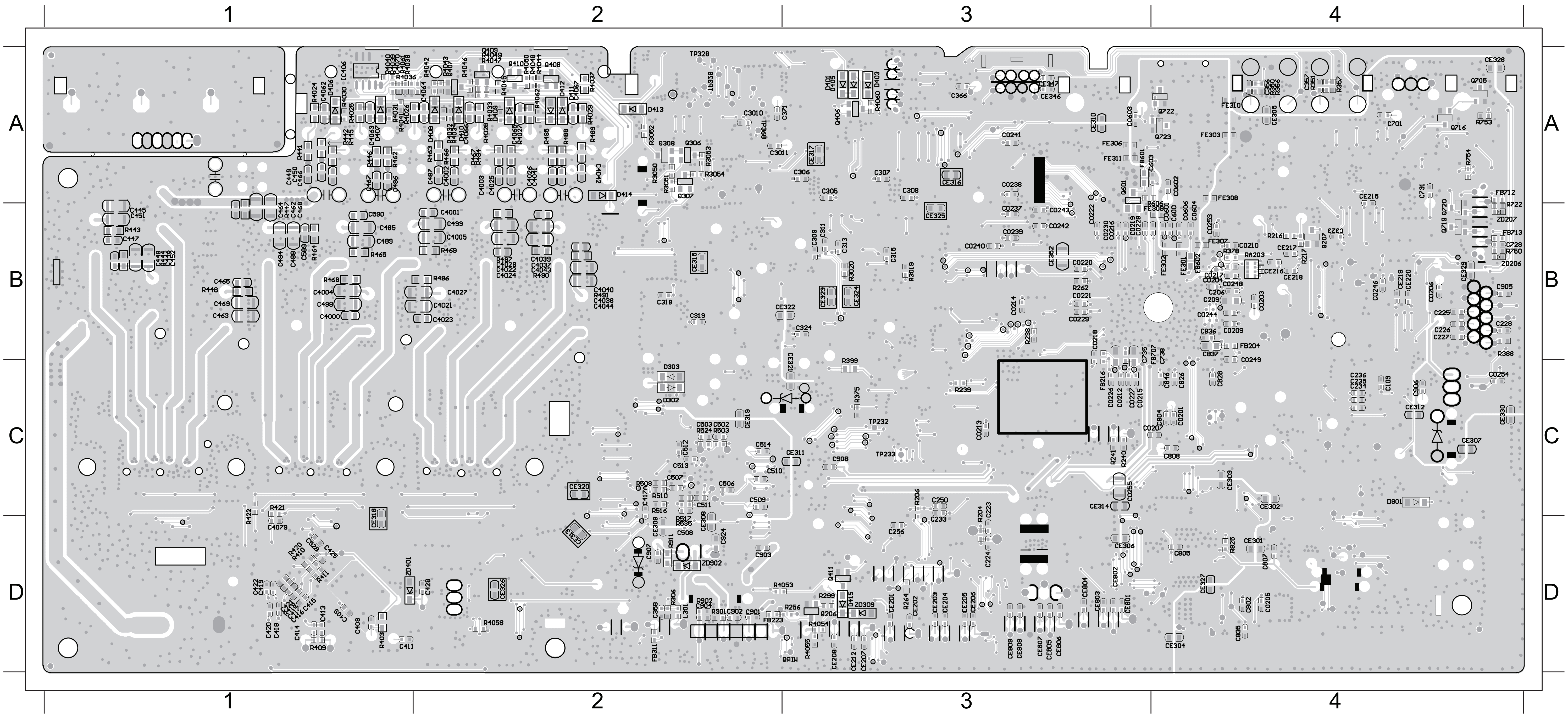
C0217	B4	C0240	B3	C109	C4	C309	B3	C4003	A2	C4040	B2	C411	D1	C447	B1	C484	B1	C603	A3	C836	B4	CE203	D3	CE303	C4	CE317	A3	CE346	A3	D303	C2	FB311	D2	Q206	D3	R350	A4	R4030	A1	R411	D1	R463	A2	R491	B2		



POWER BOARD

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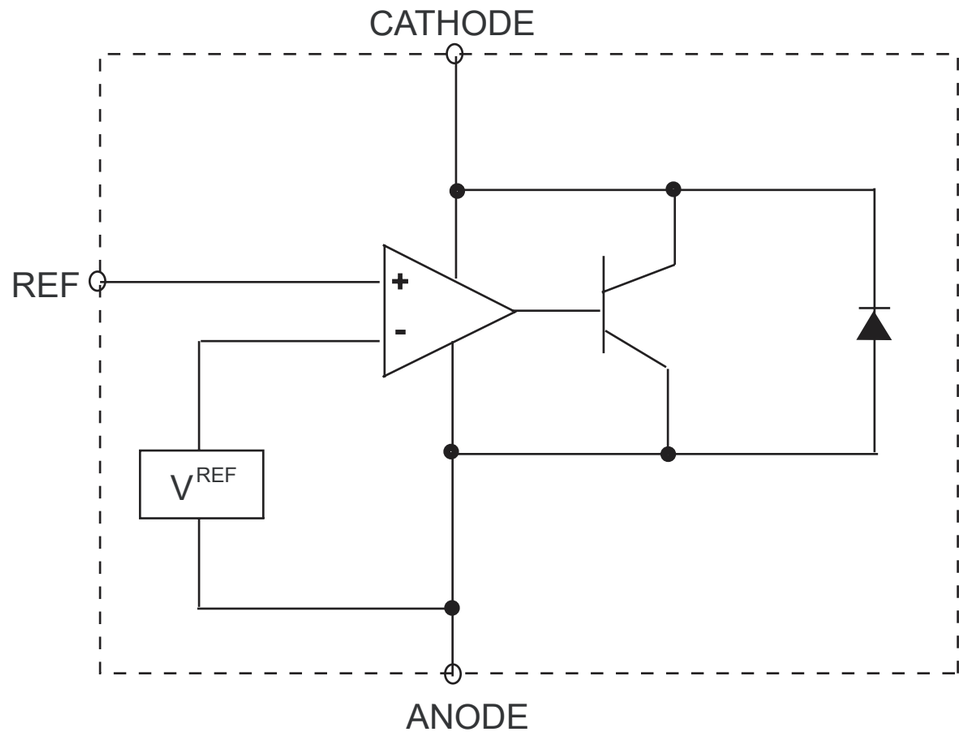
INTERNAL IC DIAGRAM - AZ431



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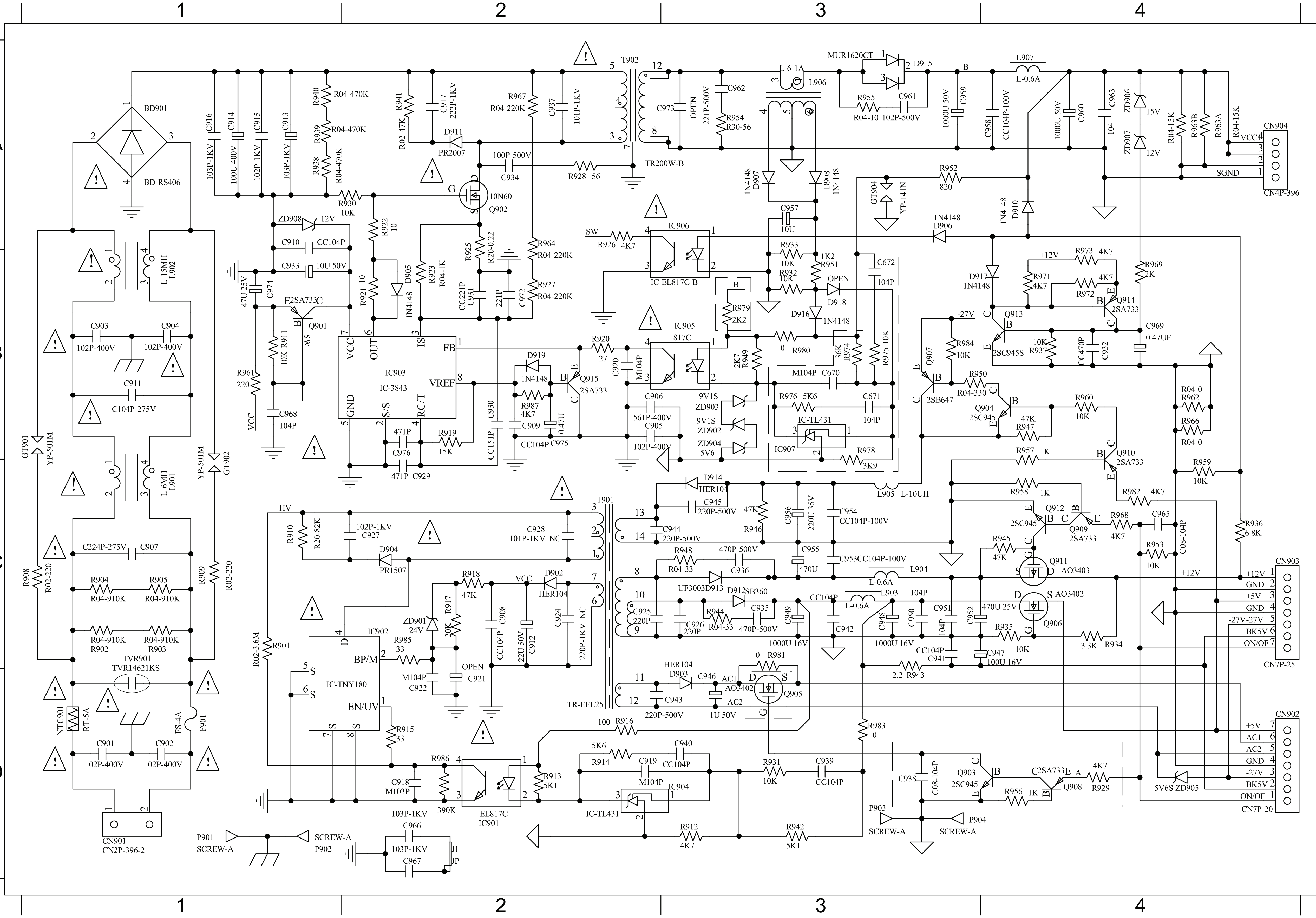
CIRCUIT DIAGRAM

BD901 A1	C910 A1	C918 D2	C930 B2	C939 C3	C949 C3	C957 A3	C967 D2	CN903 C4	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	ZD906 A4
C903 B1	C911 B1	C919 D2	C931 B2	C940 D3	C950 C3	C958 A3	C968 B1	CN904 A4	D910 A4	D919 B2	IC906 A3	NTC901 D1	Q911 C4	R904 C1	R915 D2	R923 B2	R933 A3	R941 A2	R949 B3	R958 C4	R966 B4	R981 C3	T902 A2	ZD907 A4
C904 B1	C912 C2	C920 B2	c932 B4	C941 C3	C951 C3	C959 A3	C969 B4	D902 C2	D911 A2	F901 D1	L901 C1	Q901 B1	Q912 C4	R905 C1	R916 D2	R925 A2	R934 C4	R942 D3	R950 B3	R959 B4	R967 A2	R982 C4	TVR901 C1	ZD908 A1
c905 B2	C913 A1	C921 D2	C933 B1	C942 C3	C952 C3	c960 A4	C972 B2	D903 D3	D912 C3	GT902 B1	L902 B1	Q902 A2	Q913 B4	R909 C1	R917 C2	R926 A2	R935 C4	R943 D3	R951 B3	R960 B4	R968 C4	R983 D3	ZD901 C2	
C906 B2	C914 A1	C922 D2	C934 A2	C945 C4	C953 C3	C961 A3	C974 B1	D904 C2	D913 C3	IC901 D2	L903 C3	Q904 B3	Q914 B4	R910 C1	R918 C2	R927 B2	R936 C4	R944 C3	R952 A2	R961 B1	R969 B4	R984 B3	ZD902 B3	
C907 C1	C915 A1	C927 C2	C935 C3	C946 D3	C954 C3	C962 A3	C975 B2	D905 B2	D914 C3	IC902 C2	L904 C3	Q906 C4	Q915 B2	R911 B1	R919 B2	R928 A2	R937 B4	R945 C4	R953 C4	R962 B4	R971 B4	R985 C2	ZD903 B3	
C908 C2	C916 A1	C928 C2	C936 C3	C947 C4	C955 C3	C963 D4	CN901 D1	D906 A3	D915 A3	IC903 B2	L905 C3	Q907 B3	R901 C1	R912 D3	R920 B2	R930 A1	R938 A1	R946 C3	R954 A3	R963A A4	R972 B4	R986 D2	ZD904 B3	
C909 B2	C917 A2	C929 C2	C937 A2	C948 C3	C956 C3	C965 C4	CN902 D4	D907 A3	D916 B3	IC904 D3	L906 A3	Q909 C4	R902 C1	R913 D2	R921 B2	R931 D3	R939 D2	R947 B4	R955 A3	R963B A4	R973 B4	R987 B2	ZD905 D4	



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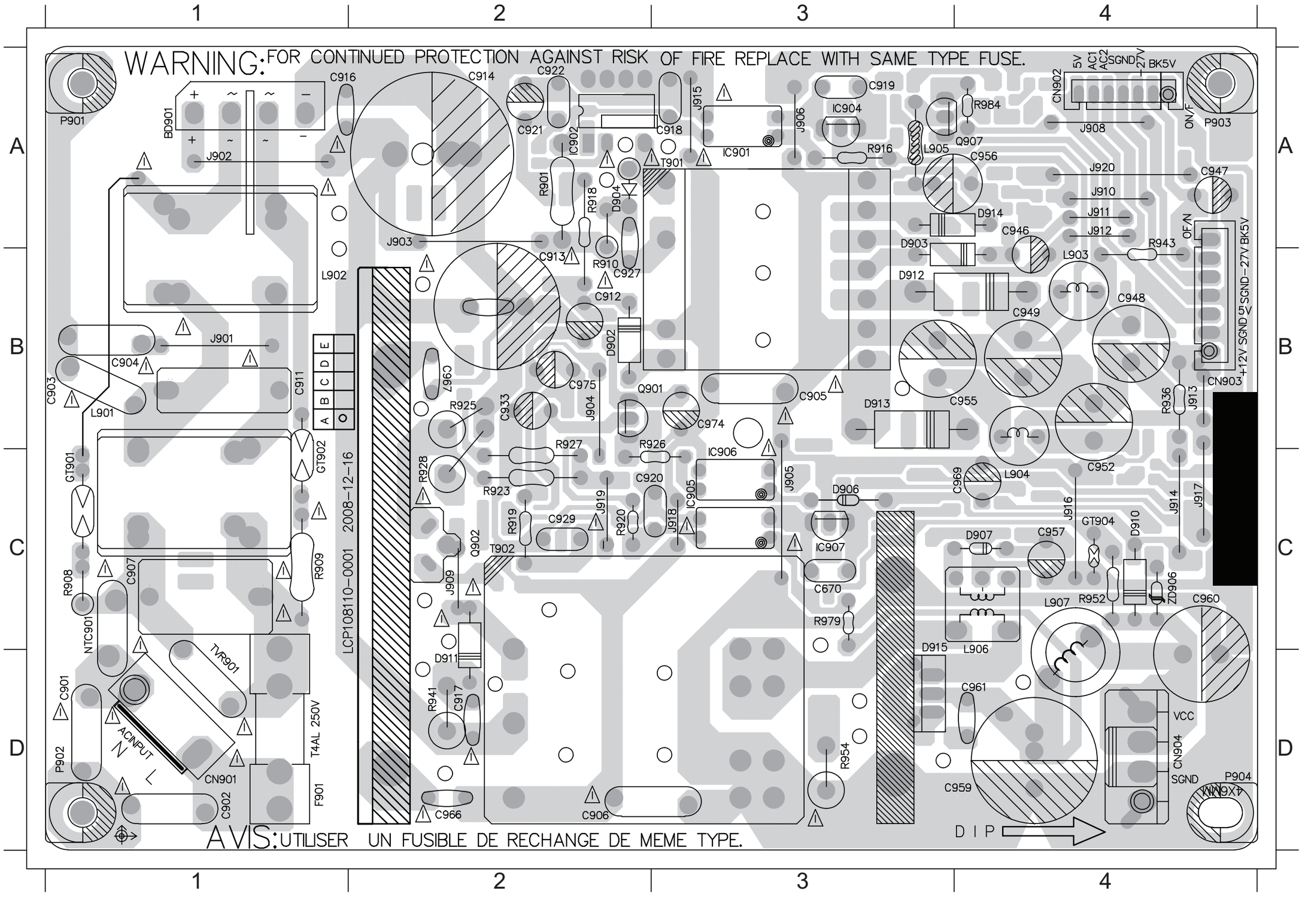
PCB LAYOUT - TOP VIEW

BD901	A1	C907	C1	C916	A1	C921	A2	C946	A4	C955	B4	C961	D4	CN901	D1	D903	A3	D911	D2	F901	D1	IC905	B3	J904	B2	J910	A4	J915	A3	L901	B1	L906	C4	Q907	A4	R918	A2	R926	B2	R943	A4	T902	C2
C903	B1	C911	B1	C917	D2	C922	A2	C947	A4	C956	A4	C967	B2	CN902	A4	D904	A2	D912	B4	GT902	C1	IC906	C3	J905	C3	J911	A4	J916	C4	L902	B1	L907	C4	R901	A2	R919	C2	R927	B2	R952	C4	TVR901	C1
C904	B1	C912	B2	C918	A3	C927	B2	C948	B4	C957	C4	C969	C4	CN903	B4	D906	C3	D913	B3	IC901	A3	J901	B1	J906	A3	J912	A4	J917	C4	L903	B4	NTC901	C1	R909	C1	R920	C2	R928	C2	R954	D3	ZD906	C4
c905	B4	C913	B2	C919	A3	C929	C2	C949	B4	C959	D4	C974	B3	CN904	D4	D907	C4	D914	A4	IC902	A2	J902	A1	J908	A4	J913	B4	J918	C3	L904	C4	Q901	B2	R910	B2	R923	C2	R936	B4	R984	A4		
C906	D2	C914	A2	C920	C2	C933	B2	C952	C4	c960	C4	C975	B2	D902	B2	D910	C4	D915	C3	IC904	A3	J903	A2	J909	C2	J914	C4	J919	C2	L905	A3	Q902	C2	R916	A3	R925	B2	R941	D2	T901	A3		



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PCB LAYOUT - BOTTOM VIEW

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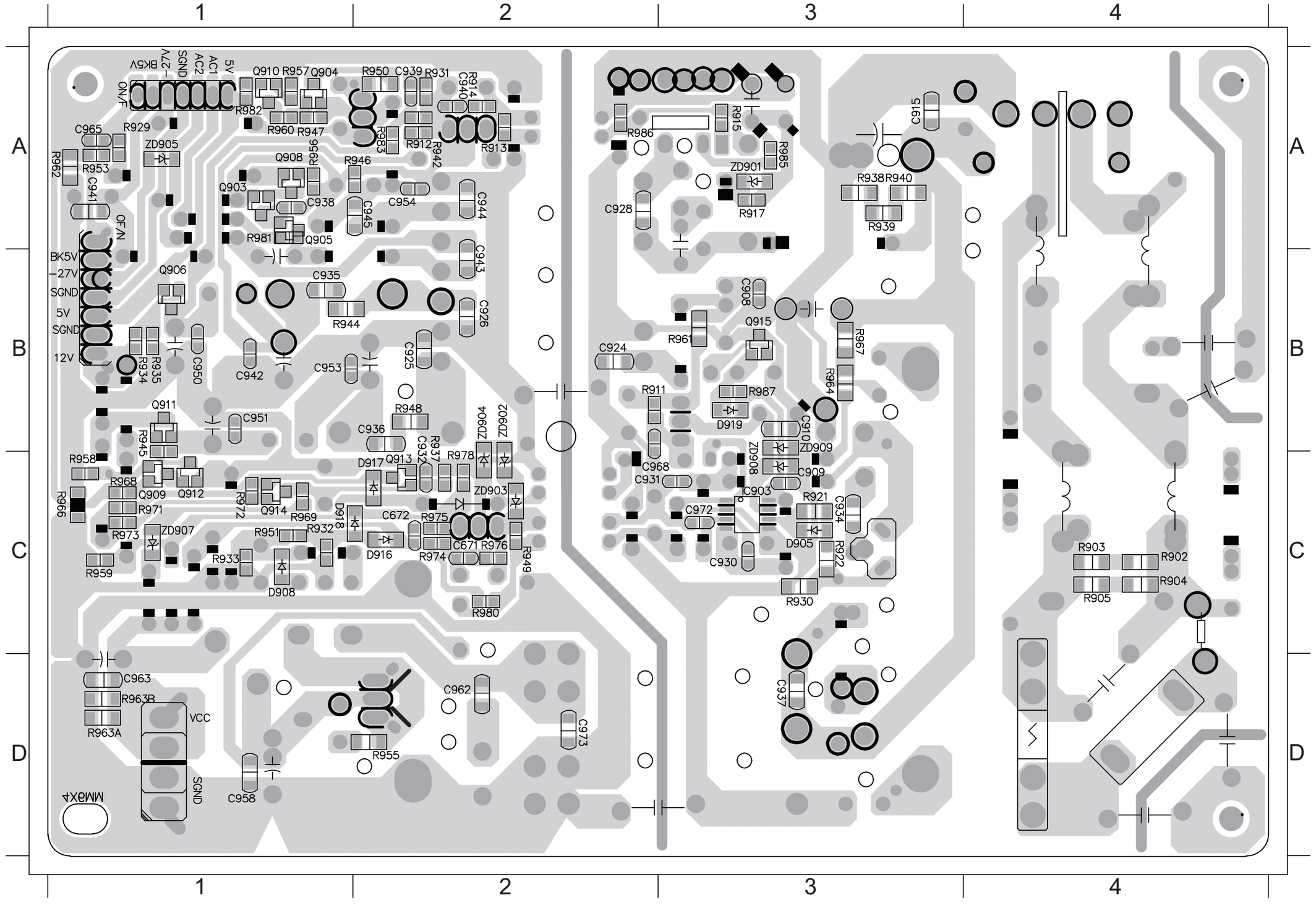
C965	A1	R957	A1	C928	A2	R913	A2	R986	A2	R940	A3	C951	B1	R945	B1	R948	B2	Q915	B3	D908	C1	R951	C1	R971	C1	D917	C2	C934	C3	R930	C3	C963	D1		
Q904	A1	R960	A1	C939	A2	R914	A2	C915	A3	R985	A3	C953	B1	c932	B2	ZD902	B2	R961	B3	Q909	C1	R958	C1	R972	C1	Q913	C2	C972	C3	R902	C4	C931	D2		
Q910	A1	R962	A1	C940	A2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



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MP3 IN+MIC BOARD

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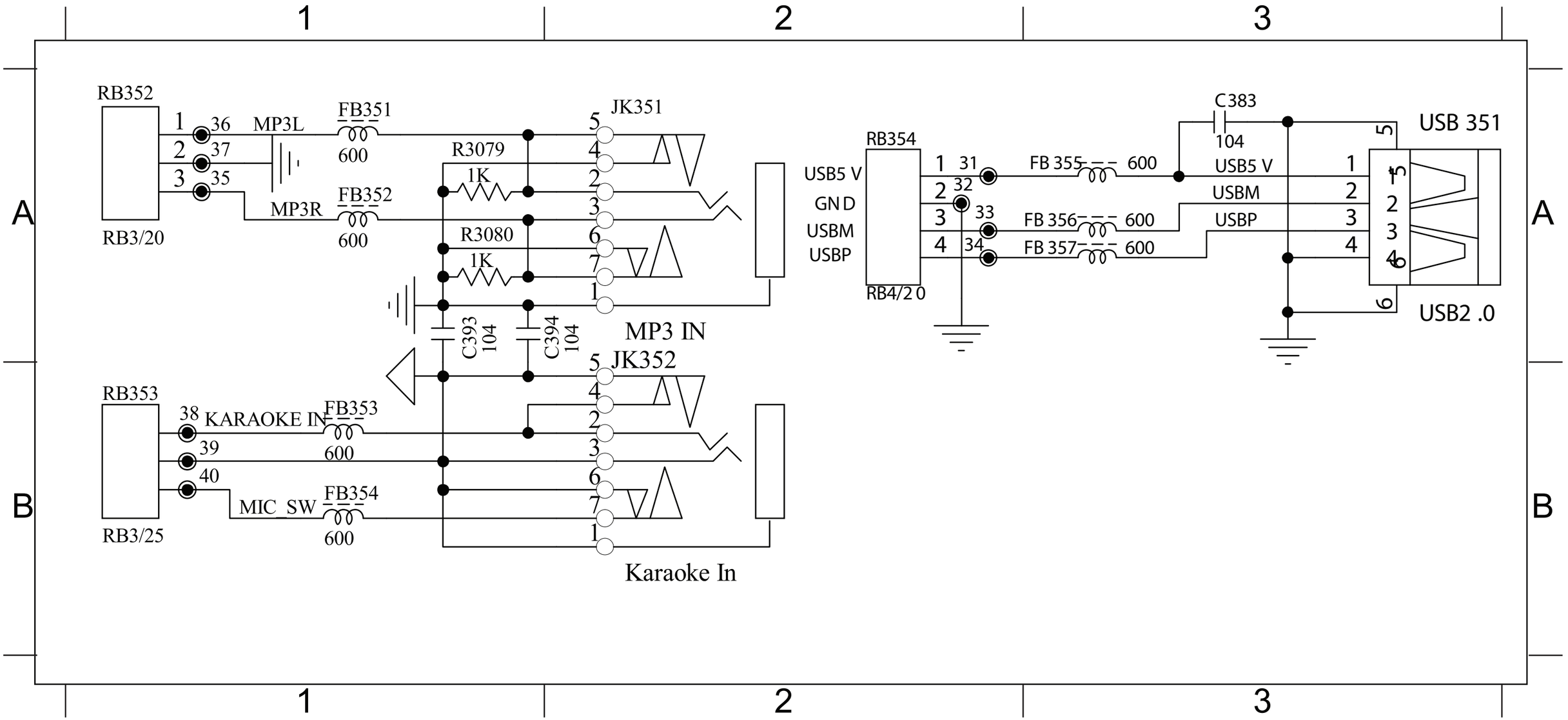
CIRCUIT DIAGRAM

J360 A2 J361 B1 JK351 B1 JK352 B2 RB352 A1 RB353 A1 RB354 A2 USB351 A2



PCB LAYOUT - TOP VIEW

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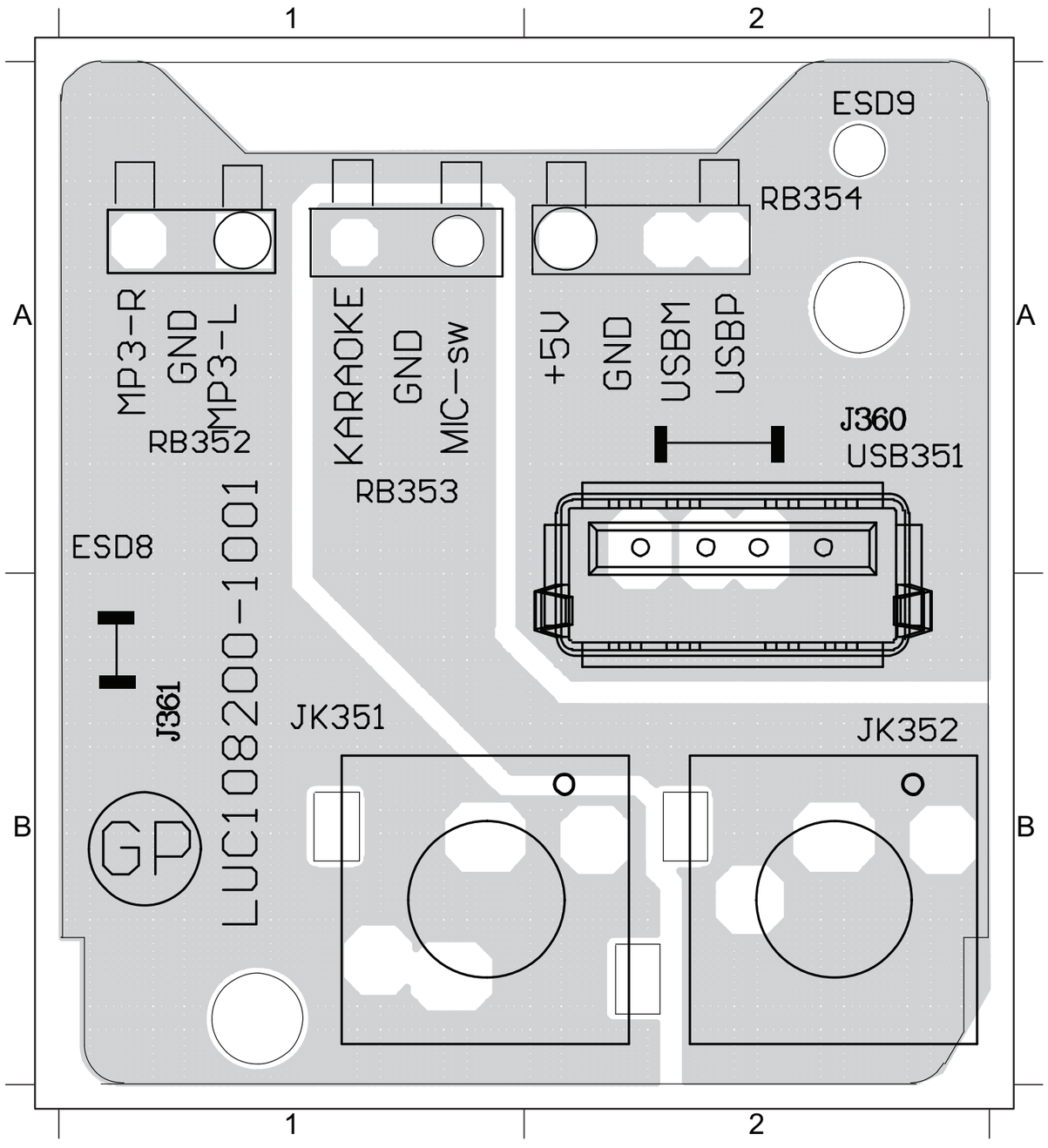

PCB LAYOUT - BOTTOM VIEW

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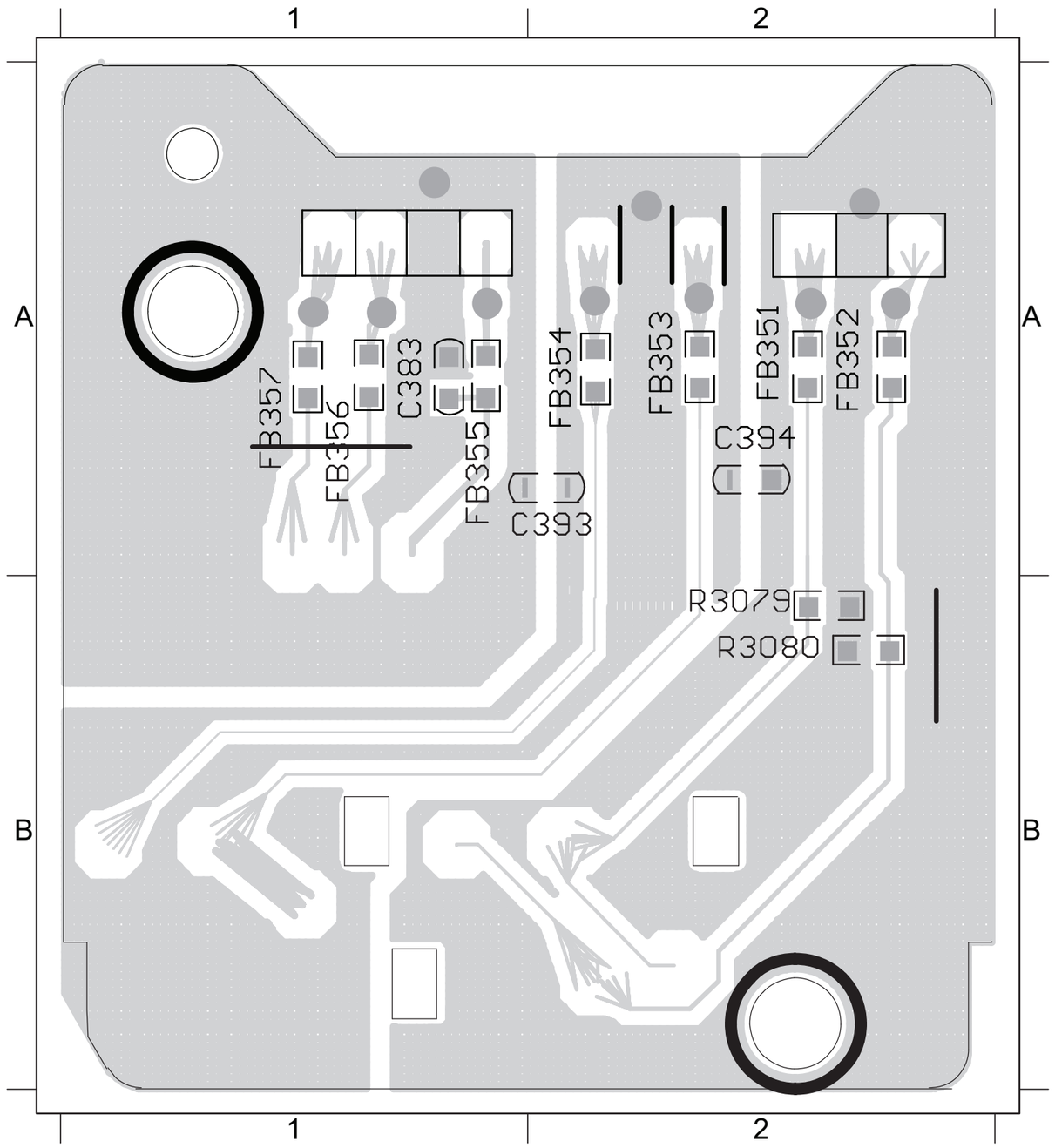

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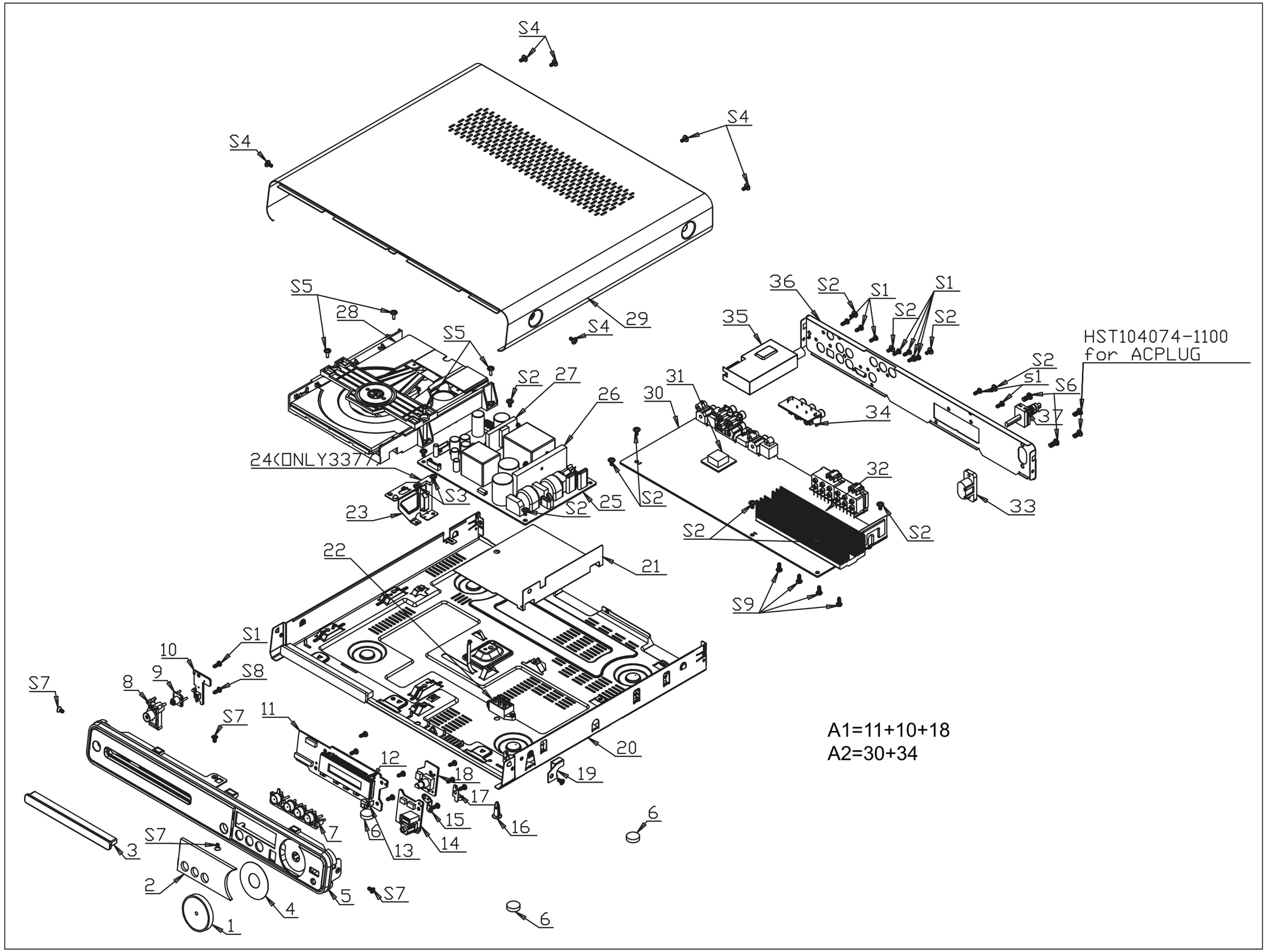
Mechanical Exploded View



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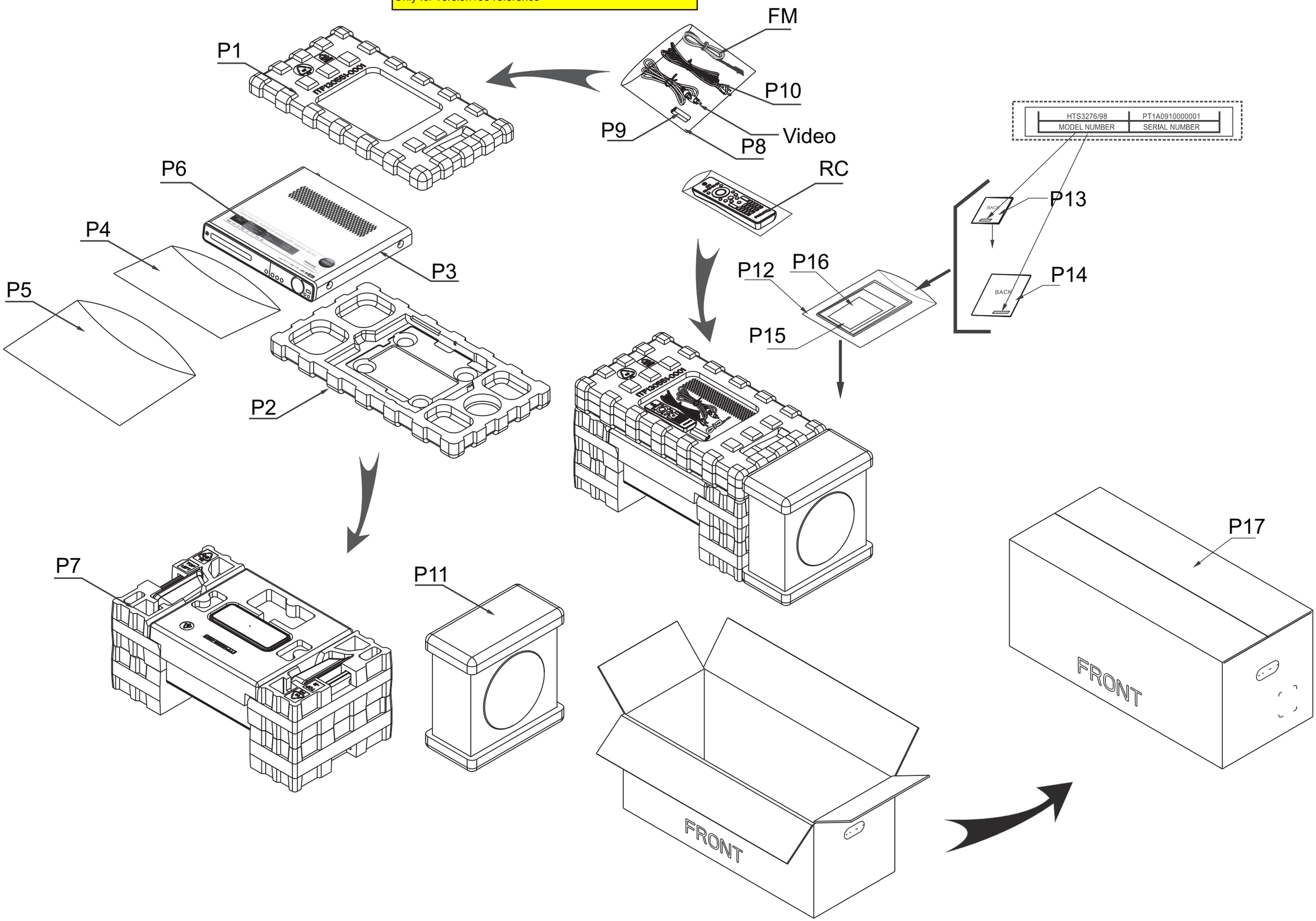
Packing Exploded View

Only for version /93 reference



PART LIST

ONLY FOR VERSION /98

Loc.	Part No.	Description
MAIN UNIT		
1	996510021087	VOLUME KNOB ABS
2	996510021093	DISPLAY LENS PMMA
3	996510021244	DVD DOOR ABS
5	996510021245	FRONT PANEL ABS
6	--	RUBBER FOOT
7	996510021068	FUNCTION KNOB ABS
8	996510021069	STANDBY KNOB ABS
9	996510021064	STANDBY LENS PMMA
14	996510021203	MP3 IN +MIC PCB ASS'Y
20	--	BTM CAB SECC T=0.6mm
25	996510021228	POWER PCB ASS'Y 420W
28	996510021059	DVD LOADER
29	--	TOP COVER SECC
35	996510017572	TUNER PACK
36	--	REAR PANEL SECC
37	996510002650	PWR CORD 2P 1500 VDE
A1	996510021089	DISP+LED+VOL PCB ASS'Y
A2	996510021202	MAIN+Y.U.V PCB ASS'Y
FM	996510008251	FM ANT
RC	996510021186	REMOTE CONTROL
SCREW	996510017273	8.5X60LX11LXM5X0.8P
V1	996510007429	FFC CABLE 10P 100mm
VIDEO	996500013058	RCA CABLE 1200mm
SPEAKER		
SPKC	996510021206	SPEAKER BOX-CENTER
SPKFL	996510021201	SPEAKER BOX-FRONT LEFT
SPKFR	996510021243	SPEAKER BOX-FRONT RIGHT
SPKRL	996510021187	SPEAKER BOX-REAR LEFT
SPKRR	996510021205	SPEAKER BOX-REAR RIGHT
SPKS	996510021204	SPEAKER BOX-SUBW
RFF	--	RUBBER FOOT-FRONT
RFR	--	RUBBER FOOT-REAR
RFC	--	RUBBER FOOT-CENTER
RFS	--	RUBBER FOOT-SUB
SCREW		
S7	--	M3xP0.5xL6mm NICKEL
S1	--	T3.0x1.06PxL8mm NICKEL
S9	--	T3.0x1.06PxL10mm NICKEL
S8	--	T3.0x1.06PxL8mm NICKEL
S3	--	M3.0x0.5PxL4mm NICKEL
S2	--	M3.0x0.5PxL6mm NICKEL
S5	--	M3.0x0.5PxL8mm NICKEL
S4	--	M3x6x0.5P
MAIN+Y.U.V PCB		
CN201	996500015859	CONNECTOR 4PIN P2.0MM
CN202	996510012494	CONNECTOR 5 PIN RED
CN203	996500015859	CONNECTOR 4PIN P2.0MM
CN204	996500017367	CONNECTOR 8P
CN205	996510012495	CONNECTOR 4P
CN206	996500015897	CONNECTOR 3 PIN RED P=2.0MM
CN208	996500015897	CONNECTOR 3 PIN RED P=2.0MM
CN301	996510012497	FPC/FFC CONN. 10P
CN303	996500015900	CONNECTOR 3 PIN P=2.0MM
CN701A	996500015901	CONNECTOR 6 PIN P=2.0MM
CN802	996500015901	CONNECTOR 6 PIN P=2.0MM
CN803	996500015895	CONNECTOR 5 PIN P=2.0MM
D201	996510010358	DIODE 1N4007
D204	996510010358	DIODE 1N4007
IC201	996510012499	IC 28P
IC202	996510021129	IC 48P KH29LV320DBTC-70G
IC203	996500041284	IC 3P STM809SWX6F 3.0V
IC204	996510004289	IC 8P TU24C16CS2 SOIC TURBO
IC205	996510021062	IC3P LD1117ADJ SOT223 3.3VST1A
IC206	996510016601	IC 54P HY57V641620F(L/S)TP-6
IC207	996510012500	IC 20 PIN SN74HC244PWR TSSOPTI
IC208	996510021132	IC 48P STM32F101C6A LQFP ST
IC209	996510021082	IC 256P MT1389FXE/SN LQFP
IC210	996500027090	IC 3 PIN AP1117E18LA 1.8V SOT2
IC301	996510020341	IC 8P D4558 SOP SILICORE
IC303	996510020341	IC 8P D4558 SOP SILICORE
IC304	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC305	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC306	996510021056	IC 20P WM8781GEDS SSOP WOLFSON
IC309	996510012500	IC 20 PIN SN74HC244PWR TSSOPTI
IC401	996510021092	IC 64P TAS5508APAG TQFP TI
IC402	996510021229	IC 44P TAS5342ADDV
IC403	996510021229	IC 44P TAS5342ADDV
IC404	996510021229	IC 44P TAS5342ADDV
IC406	996510020341	IC 8P D4558 SOP SILICORE
IC407	996500023948	IC 14PIN 74HCU04D PHILIPS TSOP
IC801	996510010380	Motor Drive IC
JK302	996510021122	JACK 4P WHT-RED/WHT-RED
JK401	996510013837	GPSPK JAC12P RD-WT-GRN-GRY-BLU
JK601	996510012507	HDMI JACK 19P PDVBT8-19 FLBS4N
JK701	996510012481	RCA JACK 1P YELLOW W/GND
JK702	996500012609	RCA JACK R/G/B
JK703	996510015645	TOSL JA PLR131/T2 RECEIVER
JK704	996500017363	RCA JACK 1P W/GND P
L301	996510016733	INDUCTOR10uH 10% Q=35 0603 SMT
L401	996510021242	INDUCTOR 22uH 20% 10A
L402	996510021242	INDUCTOR 22uH 20% 10A
L403	996510021242	INDUCTOR 22uH 20% 10A
L404	996510021242	INDUCTOR 22uH 20% 10A
L405	996510021061	INDUCTOR 10uH 20% 10A
L406	996510021061	INDUCTOR 10uH 20% 10A
L407	996510021242	INDUCTOR 22uH 20% 10A
L408	996510021242	INDUCTOR 22uH 20% 10A
L409	996510021242	INDUCTOR 22uH 20% 10A
L410	996510021242	INDUCTOR 22uH 20% 10A
L411	996510021061	INDUCTOR 10uH 20% 10A
L412	996510021061	INDUCTOR 10uH 20% 10A
Q204	996510012508	XISTR PNP TIP42C
Q205	996510000578	XISTR NPN KTC3875-Y
Q206	994000000915	XISTR NPN 2SC1623
Q207	994000000915	XISTR NPN 2SC1623
Q300	994000000915	XISTR NPN 2SC1623
Q302	994000000915	XISTR NPN 2SC1623
Q303	994000000915	XISTR NPN 2SC1623
Q304	994000000915	XISTR NPN 2SC1623
Q305	994000000915	XISTR NPN 2SC1623
Q405	996500028742	XISTR NPN 2SD882P PB<1000PPM
Q601	996510008289	FET AO3402 SOT23 30V/4A
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 ROHM HF
Q805	996510004117	FET 2SK3018 30V/0.1A SC-70
Q901	996510000615	XISTR NPN 2SC945P
Q903	996500026946	XISTR PNP 2SB772P/Q NEC PB<10
XL401	996510021233	X'TAL 13.5MHz 15ppm 20pF
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	--	KBL406-KBU-B 4A 600V
C903	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C904	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C905	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C906	994000005344	CAP.SAFETY Y1 560PF 400V 10%

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C907	994000005343	COND SAFETY 0.22UF 275V 20%
C911	994000005343	COND SAFETY 0.22UF 275V 20%
C913	996500018042	COND DISC 0.01UF 1KV 20%
C914	996510018518	COND ELECT 100uF 400V 20%
C916	996500018042	COND DISC 0.01UF 1KV 20%
C917	996510012473	COND DISC 2200 pF 1KV 10%
C927	--	COND DISC 0.001uF 1KV 20%
C961	--	COND DISC 0.001uF 1KV 20%
C967	--	COND DISC 0.01uF1KV 20%
CN901	996500015936	CONNECTOR 4PIN P=3.96MM
CN902	996500015901	CONNECTOR 6 PIN P=2.0MM
CN903	996510021055	CONNECTOR B7B-XH-A 7 PIN
CN904	996500017360	CONNECTOR 4P CL3962WVO
D902	996510012516	DIODEHER105 DO-411A400V50nSFMS
D903	996510012516	DIODEHER105 DO-411A400V50nSFMS
D904	994000001571	DIODE FR107 1A 1000V
D906	--	1N4148 0.15A 75V DO-35
D907	--	1N4148 0.15A 75V DO-35
D910	996510012516	DIODEHER105 DO-411A400V50nSFMS
D911	996510021223	DIODE PR2007 2A 1000V DO-15CTC
D912	994000005249	DIODE SB360 3A 60V DO-201AD
D913	994000000943	DIODE UF3003 3A 200V
D914	996510012516	DIODEHER105 DO-411A400V50nSFMS
D915	994000005459	DIODE STPR1020CT
F901	994000001567	FUSE 4A 250V
GT902	996510021084	SURGE PROTECTOR DSP-501N-A21F
IC901	994000000946	OPTICAL SENSOR 4P
IC902	996510021079	IC 8P(P3=N.C) TNY180PN DIP-8C
IC903	996510004113	IC 8P AP3843GMTR-E1
IC904	994000000952	IC 3PIN TL431
IC905	994000000946	OPTICAL SENSOR 4P
IC906	994000000946	OPTICAL SENSOR 4P
L901	996510021225	LINE FILTER ET-24 7mH 2VEW
L902	996510013922	LINE FILTER ET24
L903	996500016694	6UH 13.5TS 2UEW
L904	996500016694	6UH 13.5TS 2UEW
L906	996500027102	TOROID COIL S1=1TS D0.65MMX2 P
L907	996500027104	INDUCTOR 6UH /-15% D=1.0MM PB
NTC901	994000005232	THERMIST. NTC 5R 5A
Q901	996510010367	XISTR PNP 2SA733Q
Q902	996510021085	MOSFET STK1060F TO220F AUK600V
Q904	994000000915	XISTR NPN 2SC1623
Q906	996510008289	FET AO3402 SOT23 30V/4A
Q907	996510010356	XISTR PNP 2SB647 TO-92MOD
Q909	994000000921	XISTR PNP 2SA812 HFE:200-400
Q910	994000000921	XISTR PNP 2SA812 HFE:200-400
Q911	996510018395	FET AO3401 SOT23 -30V/-4.2A
Q912	994000000915	XISTR NPN 2SC1623
Q913	994000000915	XISTR NPN 2SC1623
Q914	994000000921	XISTR PNP 2SA812 HFE:200-400
Q915	994000000921	XISTR PNP 2SA812 HFE:200-400
R925	996510021241	RESISTOR 0.22R 3W 5% MO
R928	996510021232	RES. 56R 3W +/-5% MOF
R954	996510021232	RES. 56R 3W +/-5% MOF
T901	996510021236	TRASFO. EEL-25 7+7P 40W
T902	996510021238	TRASFO. ERL-35 7+7P 150W
ZD906	--	14.5-15.1V 0.5W LEAD FREE
DISP+LED+VOL PCB		
IC351	996500029614	IC 52P PT6311(PTC)
LD351	996510020167	LED 3 DIA ULTRA RED
Q351	994000000921	XISTR PNP 2SA812 SOT-23 CJ
Q352	994000000915	XISTR NPN 2SC1623
Q353	--	XISTR PNP 2SA812 SOT-23 CJ
SN351	994000005472	RECEIVER IRM-2638AF4 L21.0mm
MP3 IN+MIC PCB		
JK351	996510004129	KARAOKE JACK D3.6MM 7P
JK352	996510004129	KARAOKE JACK D3.6MM 7P
USB351	996510013742	USB JACK 4P

PART LIST

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Loc.	Part No.	Description
MAIN UNIT		
1	996510021087	VOLUME KNOB
2	996510021093	DISPLAY LENS
20	996510022387	BTM CAB
25	996510021228	POWER PCB ASSY 420W
28	996510021248	DVD LOADER
29	996510022388	TOP COVER
3	996510021244	DVD DOOR
35	996510017572	TUNERPACK KST-MT001FS0-6BKWANG
36	996510022391	REAR PANEL
37	996510005069	POWER CORD
5	996510021245	FRONT PANEL
6	996510021942	RUBBER FOOT D14xH4.2
7	996510021068	FUNCTION KNOB
8	996510021069	STANDBY KNOB
9	996510021064	STANDBY LENS
A1	996510021089	DISP+LED+VOL PCB ASSY
A2	996510021202	MAIN+Y.U.V PCB ASSY
FM	996510008251	FM ANT
HSCREW	996510017273	SCREW
RC	996510022384	REMOTE CONTROL
V1	996510007429	GP FFCCBLE 10P100mmUL20798 P=1
VIDEO	996500013058	RCA CABLE 2P 1.2M
SPEAKER		
RFC	996510001599	RUBBER FOOT -CENTER SPK
RFF	996510012224	RUBBER FOOT - REAR
RFR	996510001601	RUBBER FOOT - REAR SPK
RFS	996510010854	RUBBER FOOT -SUB
SPKC	996510021206	SPEAKER BOX-CENTER
SPKFL	996510021201	SPEAKER BOX-FRONT LEFT
SPKFR	996510021243	SPEAKER BOX-FRONT RIGHT
SPKRL	996510021187	SPEAKER BOX-REAR LEFT
SPKRR	996510021205	SPEAKER BOX-REAR RIGHT
SPKS	996510021204	SPEAKER BOX-SUBW
SCREW		
S7	--	M3xP0.5xL6mm NICKEL
S1	--	T3.0x1.06PxL8mm NICKEL
S9	--	T3.0x1.06PxL10mm NICKEL
S8	--	T3.0x1.06PxL8mm NICKEL
S3	--	M3.0x0.5PxL4mm NICKEL
S2	--	M3.0x0.5PxL6mm NICKEL
S5	--	M3.0x0.5PxL8mm NICKEL
S4	--	M3x6x0.5P
PACKING		
P12	996510019208	POLY BGA
P13	996510022381	USER MANUAL A5 Eng
P14	996510022378	QSG A4 Eng & Simp Chinese
P15	996510018482	WARRANTY CARD12NC:996510015858
P16	996510018481	WARRANTY CARD(CHINA) 12NC:4840
P17	996510022382	CARTON W960xD410xH435
P4	996510022379	SOFT BAG L430xW140xT0.5
P5	996510014552	POLY BAG
P8	996510022386	POLY BAG L260xW180xT0.025

MAIN+Y.U.V PCB

CN201	996500015859	CONNECTOR 4PIN P2.0MM
CN202	996510012494	CONNECTOR 5 PIN RED
CN203	996500015859	CONNECTOR 4PIN P2.0MM
CN204	996500017367	CONNECTOR 8P
CN205	996510012495	CONNECTOR 4P
CN206	996500015897	CONNECTOR 3 PIN RED P=2.0MM
CN208	996500015897	CONNECTOR 3 PIN RED P=2.0MM
CN301	996510012497	FPC/FFC CONN. 10P
CN303	996500015900	CONNECTOR 3 PIN P=2.0MM
CN701A	996500015901	CONNECTOR 6 PIN P=2.0MM
CN802	996500015901	CONNECTOR 6 PIN P=2.0MM
CN803	996500015895	CONNECTOR 5 PIN P=2.0MM
D201	996510010358	DIODE 1N4007
D204	996510010358	DIODE 1N4007
IC201	996510012499	IC 28P
IC202	996510021129	IC 48P KH29LV320DBTC-70G
IC203	996500041284	IC 3P STM809SWX6F 3.0V
IC204	996510004289	IC 8P TU24C16CS2 SOIC TURBO
IC205	996510021062	IC3P LD1117ADJ SOT223 3.3VST1A
IC206	996510016601	IC 54P HY57V641620F(L/S)TP-6
IC207	996510012500	IC 20 PIN SN74HC244PWR TSSOPTI
IC208	996510021132	IC 48P STM32F101C6A LQFP ST
IC209	996510021082	IC 256P MT1389FXE/SN LQFP
IC210	996500027090	IC 3 PIN AP1117E18LA 1.8V SOT2
IC301	996510020341	IC 8P D4558 SOP SILICORE
IC303	996510020341	IC 8P D4558 SOP SILICORE
IC304	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC305	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC306	996510021056	IC 20P WM8781GEDS SSOP WOLFSON
IC309	996510012500	IC 20 PIN SN74HC244PWR TSSOPTI
IC401	996510021092	IC 64P TAS5508APAG TQFP TI
IC402	996510021229	IC 44P TAS5342ADDV
IC403	996510021229	IC 44P TAS5342ADDV
IC404	996510021229	IC 44P TAS5342ADDV
IC406	996510020341	IC 8P D4558 SOP SILICORE
IC407	996500023948	IC 14PIN 74HCU04D PHILIPS TSOP
IC801	996510010380	Motor Drive IC
JK302	996510021122	JACK 4P WHT-RED/WHT-RED
JK401	996510013837	GPSPK JAC12P RD-WT-GRN-GRY-BLU
JK601	996510012507	HDMI JACK 19P PDVBT8-19 FLBS4N
JK701	996510012481	RCA JACK 1P YELLOW W/GND
JK702	996500012609	RCA JACK R/G/B
JK703	996510015645	TOSL JA PLR131/T2 RECEIVER
JK704	996500017363	RCA JACK 1P W/GND P
L301	996510016733	INDUCTOR10uH 10% Q=35 0603 SMT
L401	996510021242	INDUCTOR 22uH 20% 10A
L402	996510021242	INDUCTOR 22uH 20% 10A
L403	996510021242	INDUCTOR 22uH 20% 10A
L404	996510021242	INDUCTOR 22uH 20% 10A
L405	996510021061	INDUCTOR 10uH 20% 10A
L406	996510021061	INDUCTOR 10uH 20% 10A
L407	996510021242	INDUCTOR 22uH 20% 10A
L408	996510021242	INDUCTOR 22uH 20% 10A
L409	996510021242	INDUCTOR 22uH 20% 10A
L410	996510021242	INDUCTOR 22uH 20% 10A
L411	996510021061	INDUCTOR 10uH 20% 10A
L412	996510021061	INDUCTOR 10uH 20% 10A
Q204	996510012508	XISTR PNP TIP42C
Q205	996510000578	XISTR NPN KTC3875-Y
Q206	994000000915	XISTR NPN 2SC1623
Q207	994000000915	XISTR NPN 2SC1623
Q300	994000000915	XISTR NPN 2SC1623
Q302	994000000915	XISTR NPN 2SC1623
Q303	994000000915	XISTR NPN 2SC1623
Q304	994000000915	XISTR NPN 2SC1623
Q305	994000000915	XISTR NPN 2SC1623
Q405	996500028742	XISTR NPN 2SD882P PB<1000PPM
Q601	996510008289	FET AO3402 SOT23 30V/4A
Q602	996500041281	FET 2N7002 60V/115MA

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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 ROHM HF
Q805	996510004117	FET 2SK3018 30V/0.1A SC-70
Q901	996510000615	XISTR NPN 2SC945P
Q903	996500026946	XISTR PNP 2SB772P/Q NEC PB<10
XL401	996510021233	X'TAL 13.5MHz 15ppm 20pF
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	--	KBL406-KBU-B 4A 600V
C903	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C904	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C905	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C906	994000005344	CAP.SAFETY Y1 560PF 400V 10%
C907	994000005343	COND SAFETY 0.22UF 275V 20%
C911	994000005343	COND SAFETY 0.22UF 275V 20%
C913	996500018042	COND DISC 0.01UF 1KV 20%
C914	996510018518	COND ELECT 100uF 400V 20%
C916	996500018042	COND DISC 0.01UF 1KV 20%
C917	996510012473	COND DISC 2200 pF 1KV 10%
C918	996500032755	COND MYLAR 0.01 UF 100V 5%
C919	996510004633	COND MYLAR 0.1 uF 100V 5%
C920	996510004633	COND MYLAR 0.1 uF 100V 5%
C922	996510004633	COND MYLAR 0.1 uF 100V 5%
C929	996510010365	COND MYLAR 0.0018uF 100V 5%
CN901	996500015936	CONNECTOR 4PIN P=3.96MM
CN902	996500015901	CONNECTOR 6 PIN P=2.0MM
CN903	996510021055	CONNECTOR B7B-XH-A 7 PIN
CN904	996500017360	CONNECTOR 4P CL3962WVO
D902	996510012516	DIODEHER105 DO-411A400V50nSFMS
D903	996510012516	DIODEHER105 DO-411A400V50nSFMS
D904	994000001571	DIODE FR107 1A 1000V
D910	996510012516	DIODEHER105 DO-411A400V50nSFMS
D911	996510021223	DIODE PR2007 2A 1000V DO-15CTC
D912	994000005249	DIODE SB360 3A 60V DO-201AD
D913	994000000943	DIODE UF3003 3A 200V
D914	996510012516	DIODEHER105 DO-411A400V50nSFMS
D915	994000005459	DIODE STPR1020CT
F901	994000001567	FUSE 4A 250V
GT902	996510021084	SURGE PROTECTOR DSP-501N-A21F
IC901	994000000946	OPTICAL SENSOR 4P
IC902	996510021079	IC 8P(P3=N.C) TNY180PN DIP-8C
IC903	996510004113	IC 8P AP3843GMTR-E1
IC904	994000000952	IC 3PIN TL431
IC905	994000000946	OPTICAL SENSOR 4P
IC906	994000000946	OPTICAL SENSOR 4P
L901	996510021225	LINE FILTER ET-24 7mH 2VEW
L902	996510013922	LINE FILTER ET24
L903	996500016694	6UH 13.5TS 2UEW
L904	996500016694	6UH 13.5TS 2UEW
L906	996500027102	TOROID COIL S1=1TS D0.65MMX2 P
L907	996500027104	INDUCTOR 6UH /-15% D=1.0MM PB
NTC901	994000005232	THERMIST. NTC 5R 5A
Q901	996510010367	XISTR PNP 2SA733Q
Q902	996510021085	MOSFET STK1060F TO220F AUK600V
Q904	994000000915	XISTR NPN 2SC1623
Q906	996510008289	FET AO3402 SOT23 30V/4A
Q907	996510010356	XISTR PNP 2SB647 TO-92MOD
Q909	994000000921	XISTR PNP 2SA812 HFE:200-400
Q910	994000000921	XISTR PNP 2SA812 HFE:200-400
Q911	996510018395	FET AO3401 SOT23 -30V/-4.2A
Q912	994000000915	XISTR NPN 2SC1623
Q913	994000000915	XISTR NPN 2SC1623
Q914	994000000921	XISTR PNP 2SA812 HFE:200-400
Q915	994000000921	XISTR PNP 2SA812 HFE:200-400

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R925	996510021241	RESISTOR 0.22R 3W 5% MO
R928	996510021232	RES. 56R 3W +/-5% MOF
R954	996510021232	RES. 56R 3W +/-5% MOF
T901	996510021236	TRASFO. EEL-25 7+7P 40W
T902	996510021238	TRASFO. ERL-35 7+7P 150W
L902	996510013922	LINE FILTER ET24
L903	996500016694	6UH 13.5TS 2UEW
L904	996500016694	6UH 13.5TS 2UEW
L906	996500027102	TOROID COIL S1=1TS D0.65MMX2 P
L907	996500027104	INDUCTOR 6UH /-15% D=1.0MM PB
NTC901	994000005232	THERMIST. NTC 5R 5A
Q901	996510010367	XISTR PNP 2SA733Q
Q902	996510021085	MOSFET STK1060F TO220F AUK600V
Q904	994000000915	XISTR NPN 2SC1623
Q906	996510008289	FET AO3402 SOT23 30V/4A
Q907	996510010356	XISTR PNP 2SB647 TO-92MOD
Q909	994000000921	XISTR PNP 2SA812 HFE:200-400
Q910	994000000921	XISTR PNP 2SA812 HFE:200-400
Q911	996510018395	FET AO3401 SOT23 -30V/-4.2A
Q912	994000000915	XISTR NPN 2SC1623
Q913	994000000915	XISTR NPN 2SC1623
Q914	994000000921	XISTR PNP 2SA812 HFE:200-400
Q915	994000000921	XISTR PNP 2SA812 HFE:200-400
R925	996510021241	RESISTOR 0.22R 3W 5% MO
R928	996510021232	RES. 56R 3W +/-5% MOF
R954	996510021232	RES. 56R 3W +/-5% MOF
T901	996510021236	TRASFO. EEL-25 7+7P 40W
T902	996510021238	TRASFO. ERL-35 7+7P 150W

DISP+LED+VOL PCB

IC351	996500029614	IC 52P PT6311(PTC)
LD351	996510020167	LED 3 DIA ULTRA RED
Q351	994000000921	XISTR PNP 2SA812 SOT-23 CJ
Q352	994000000915	XISTR NPN 2SC1623
Q353	994000000921	XISTR PNP 2SA812 SOT-23 CJ
SN351	994000005472	RECEIVER IRM-2638AF4 L21.0mm

MP3 IN+MIC PCB

JK351	996510004129	KARAOKE JACK D3.6MM 7P
JK352	996510004129	KARAOKE JACK D3.6MM 7P
USB351	996510013742	USB JACK 4P

REVISION LIST

Version 1.0
*Initial release

Version 1.1
*In this version, the version /93 added, the Part List for /93 has been added.

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