DVD Home Theatre System

HTS3156/93

Service
Service
Service

Service Manual

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CLASS 1
LASER PRODUCT

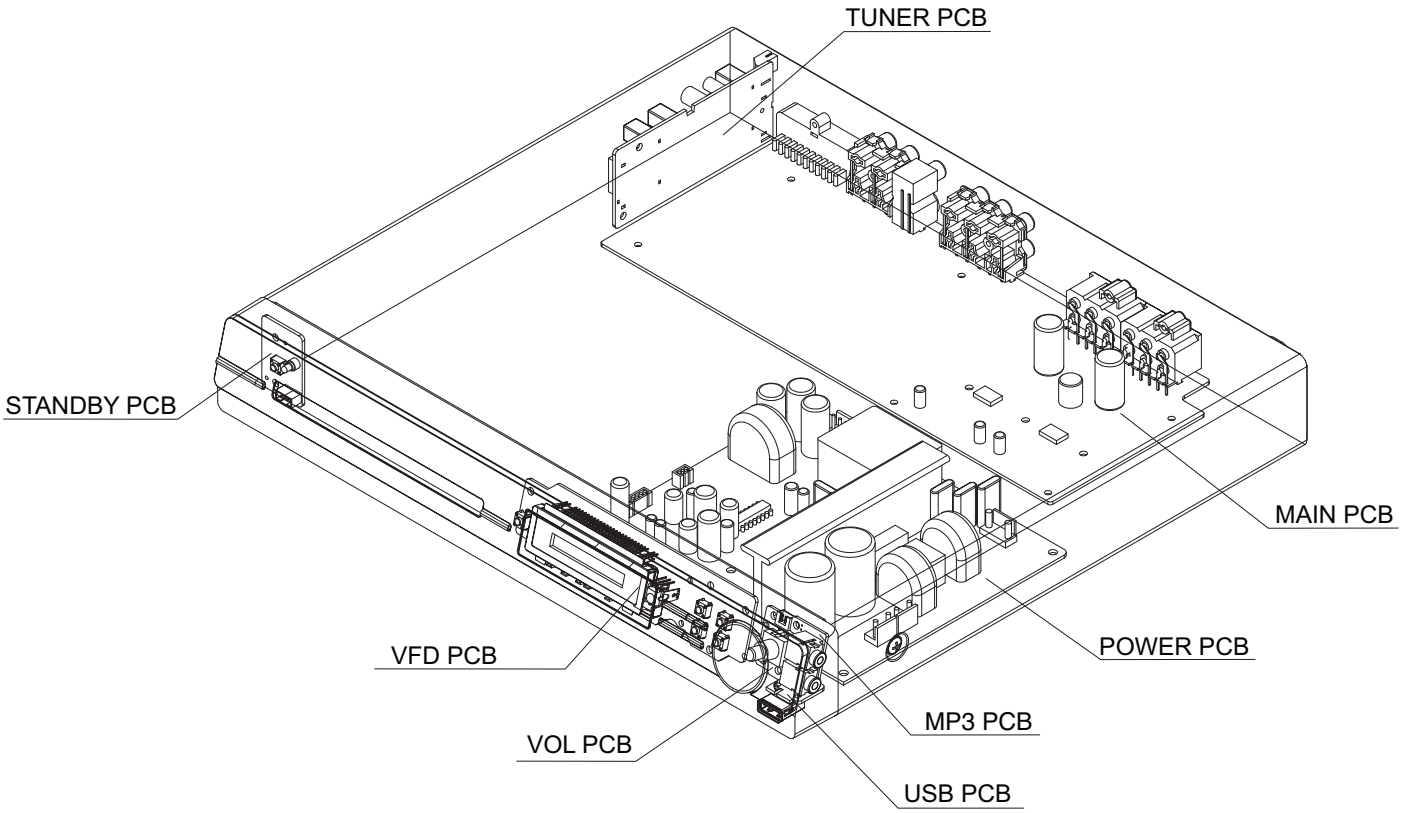
Published by LM0816 Service Audio Printed in The Netherlands Subject to modification

GB 3139 785 33990

Version 1.0

PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions / Features	HTS3156 /93
Output Power - 300W	X
Voltage (220V~240V)	X
Aux In	X

SERVICE SCNARIO MATRIX:

Type/Versions / Board in used	HTS3156 /93
Main Board	C
Power Board	C
VFD+STANDBY+USB+VOL+MIC/MP3+BRACKET Board	C

*C = Component Level Repair

SPECIFICATIONS

AMPLIFIER

Total output power –
Home Theatre mode ..... 300 W
Frequency Response ..... 180 Hz – 18 kHz / ±3 dB
Signal-to-Noise Ratio ..... > 60 dB (A-weighted)
Input Sensitivity
- AUX In ..... 500 mV
- TV In ..... 250 mV
- MP3 LINE-IN ..... 500 mV

RADIO

Tuning Range ..... FM 87.5–108 MHz
..... (50/100kHz)
..... AM 531–1602 kHz (9kHz)
..... AM 530–1700 kHz (10kHz)
..... 26 dB Quieting
Sensitivity ..... FM 22 dBf, AM 5000µV/m
IF Rejection Ratio ..... FM 60 dB, AM 24 dB
Signal-to-Noise Ratio ..... FM 50 dB, AM 30 dB
AM Suppression Ratio ..... FM 30 dB
Harmonic Distortion ..... FM Mono 3%
..... FM Stereo 3%
..... AM 5%
Frequency Response ..... FM 180 Hz–9 kHz / ±6 dB
Stereo Separation ..... FM 26 dB (1 kHz)
Stereo Threshold ..... FM 23.5 dB

DISC

Laser Type ..... Semiconductor
Disc Diametre ..... 12cm / 8cm
Video Decoding ..... MPEG-1 / MPEG-2 /
..... / DivX 3/4/5/6, Ultra
Video DAC ..... 12 Bits
Signal System ..... PAL / NTSC
Video Format ..... 4:3 / 16:9
Video S/N ..... 56 dB (minimum)
Composite Video
Output ..... 1.0 Vp-p, 75Ω
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

MAIN UNIT

Power Supply Rating ..... 220-240 V ~ 50Hz
Power Consumption ..... 60 W
Dimensions ..... 360 x 55 x 332 (mm)
..... (w x h x d)
Weight ..... 2.82 kg

FRONT SPEAKERS

System ..... Full range satellite
Impedance ..... 4 Ω
Speaker drivers ..... 3” full range speaker
Frequency response ..... 150 Hz – 20 kHz
Dimensions ..... 95 x 1184 x 73.7 (mm)
..... (w x h x d)
Weight ..... 5.99 kg/each

REAR SPEAKERS

System ..... Full range satellite
Impedance 4Ω
Speaker drivers ..... 3” full range speaker
Frequency response ..... 150 Hz – 20 kHz
Dimensions ..... 95.5 x 198 x 75 (mm)
..... (w x h x d)
Weight ..... 0.53 kg/each

CENTRE SPEAKER

System ..... Full range satellite
Impedance ..... 8 Ω
Speaker drivers ..... 3” full range speaker
Frequency response ..... 150 Hz – 20 kHz
Dimensions ..... 240 x 99.5 x 64 (mm)
..... (w x h x d)
Weight ..... 0.53 kg

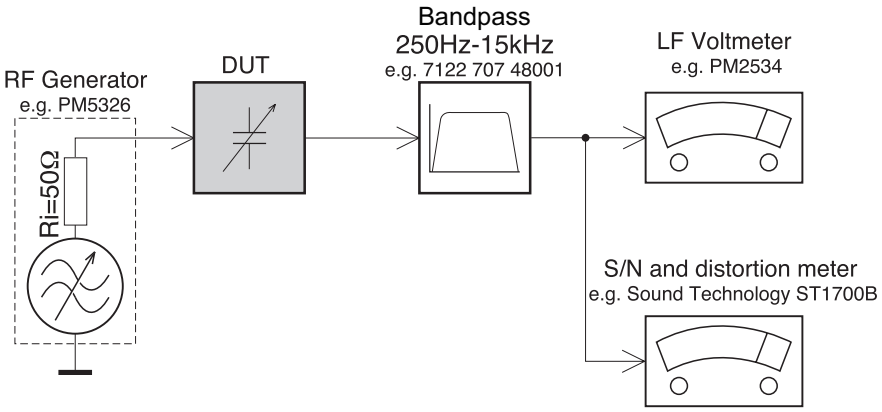
SUBWOOFER

Impedance ..... 8 Ω
Speaker drivers ..... 165 mm (6.5”) woofer
Frequency response ..... 40 Hz – 150 Hz
Dimensions ..... 163 x 363 x 369 (mm)
..... (w x h x d)
Weight ..... 5.08 kg

Specifications subject to change without prior notice.

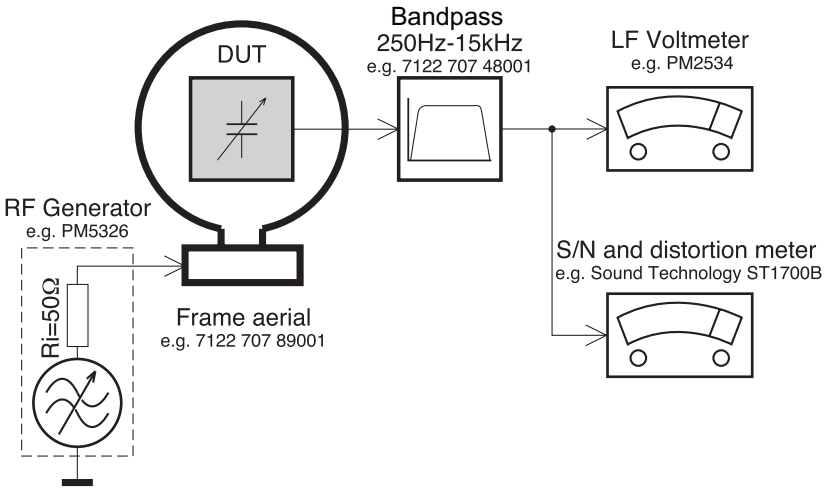
MEASUREMENT SETUUP

Tuner FM



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

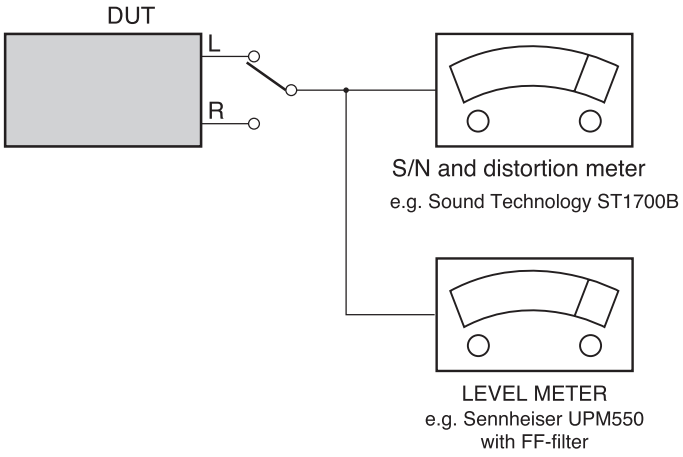
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

CD

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



SERVICE AIDS

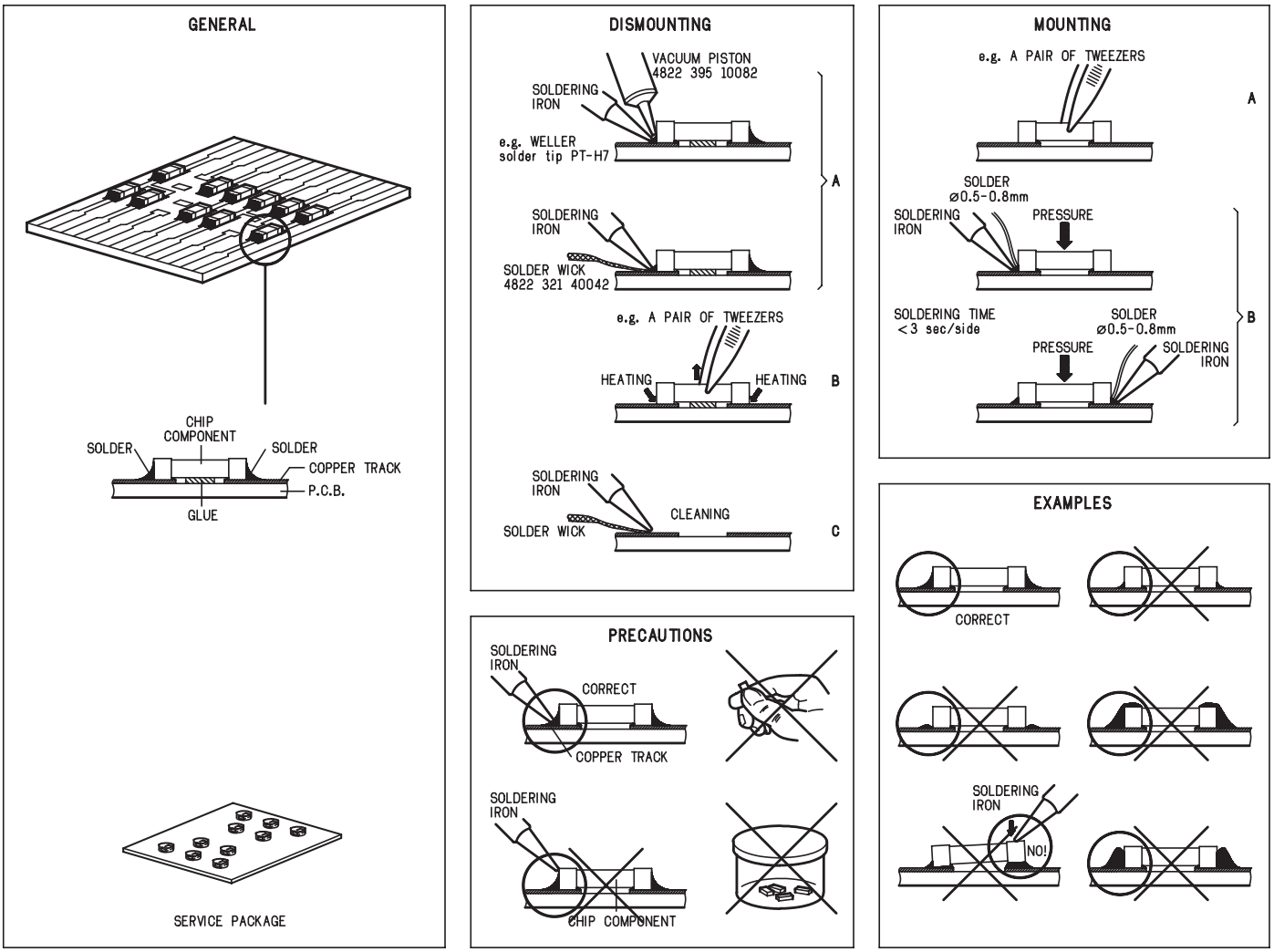
Service Tools:

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.

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System , Region Code , etc. Setting Produre

1)System Reset

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

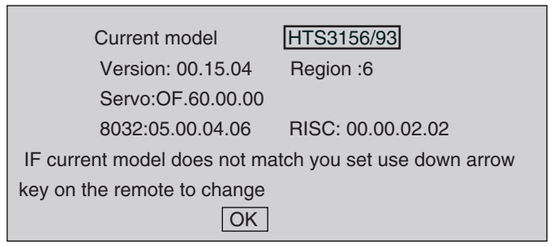
2)Region Code Change

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

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

3)Version Control Change

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



4)Password Change

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

5)Check on the Sofeware Version

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

6)Trade model

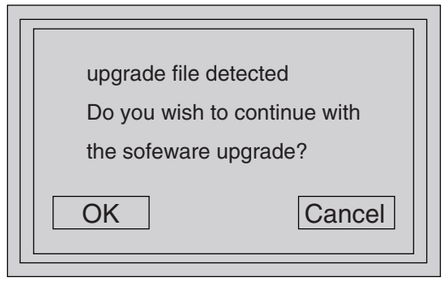
a) Press “Open/Close “ button on R/C
b) Press “2” “5” “9” on R/C,VFD will display “TRA ON “ or “TRA OFF“

6)Produce to Change Tuner Grid

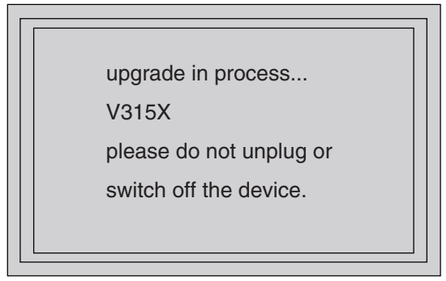
(only applicable for certain regions)
In some countries ,the frequency step between adjacent channels in the (AM/MW)/FM band is 9kHz/50kHz (10kHz/100kHz in some areas).
a) Press “source” to select “FM” or “AM”
b) In “FM” or “AM” playback mode, press & hold “play/pause” button until “Grid 9” or “Grid10” appears
note :repeating the same action will toggle back to it previous tuning grid setting.
* “grid 10” is default for /55/98/94 version, “grid 9” is default for /51 version and it doesn’s to change Tuner grid.

7) Upgrading new sofeware

a) Copy “sofeware 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.

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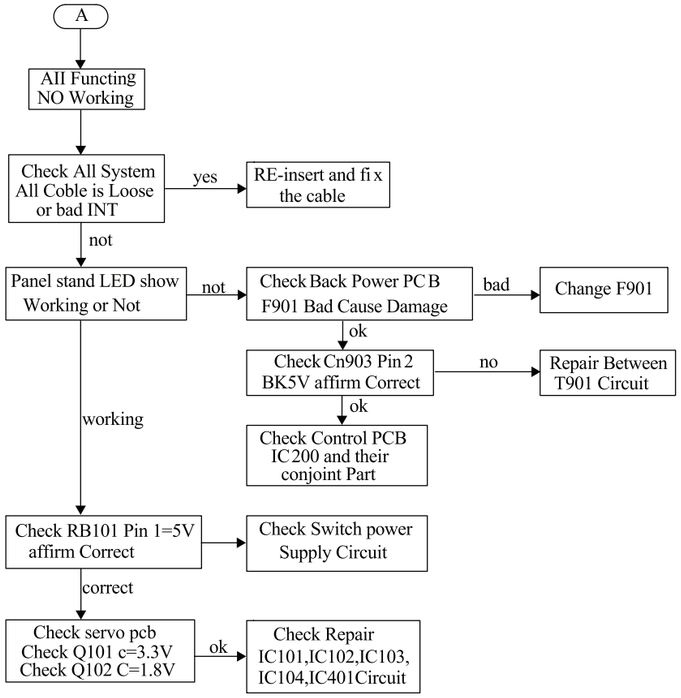
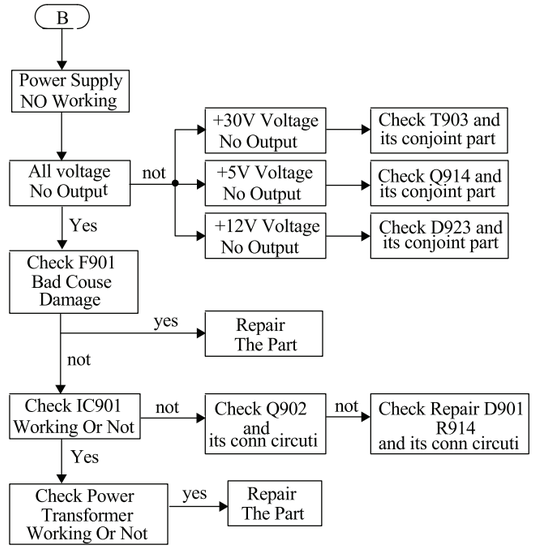
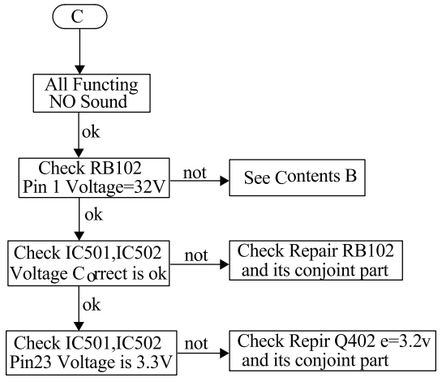
REPAIR INSTRUSTRATOR

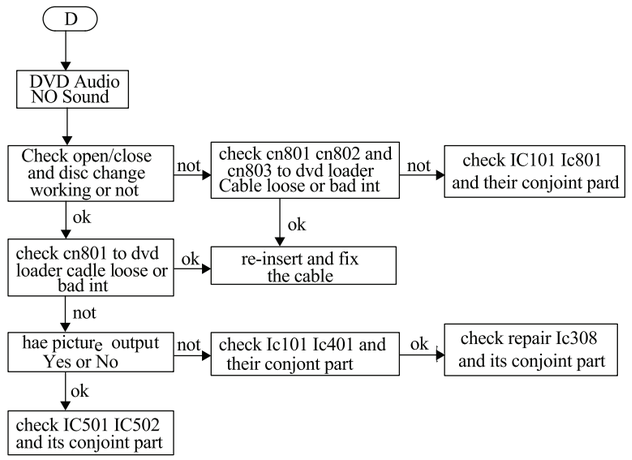
MAIN UNIT REPAIR CHART

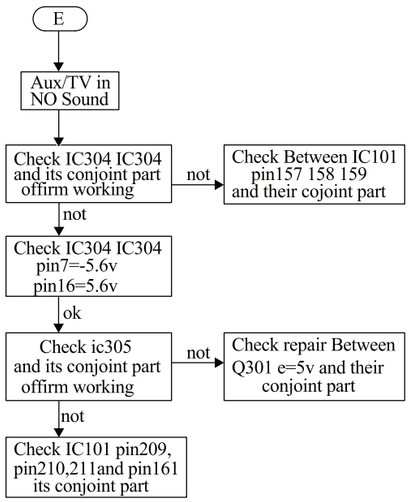
- A — AII Functing NO Working
- B — Power Supply NO Working
- C — All Functing NO Sound
- D — DVD Audio NO Sound
- E — Aux/TV in NO Sound
- F — Tuner NO Sound

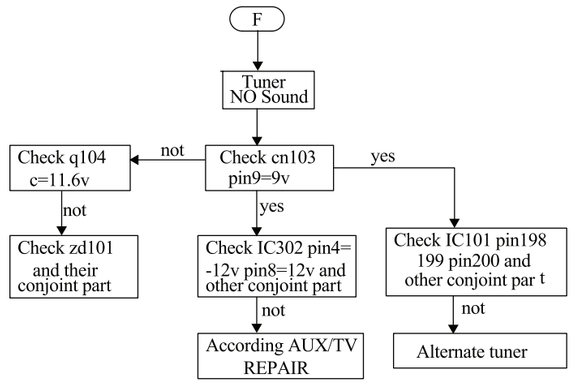












DISASSEMBLY INSTRUCTIONS

Dismantling of the Front Panel Assembly

1) Open the DVD Tray by using the Open/Close Button while the Set is ON and disconnect the mains supply after removing the Tray Cover.

   Note: If this is not possible, the DVD Tray has to be open manually.

   Take a mini screw driver about 2mm diameter and make a marking 24mm from the tip as shown in figure 2 . Place the set on its side, insert the mini screw driver till the marking and slide it towards the right as shown in figure 1 until the Tray moves out of the Front Panel.

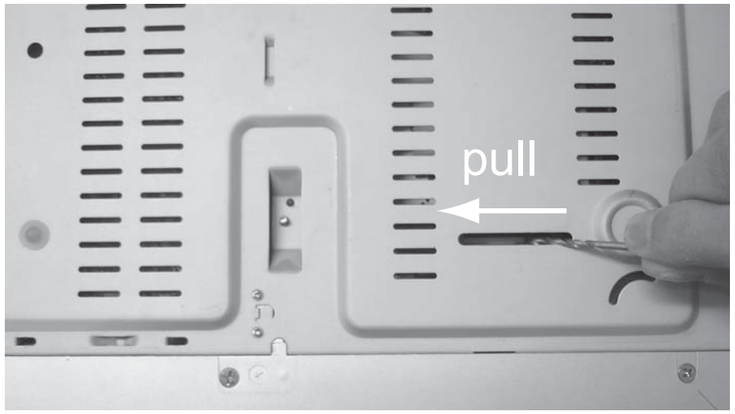


Figure 1

Figure 2

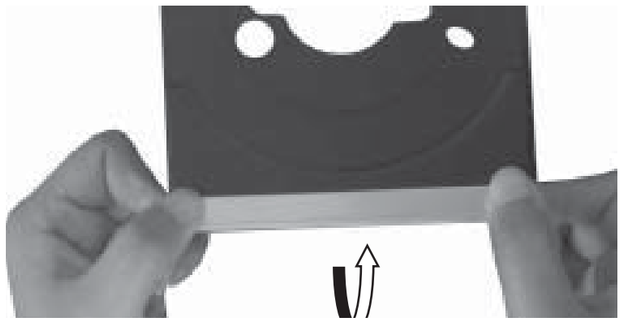


Figure 3

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.

3) Loosen 5 screws and remove the Top Cover by lifting the rear portion upwards before sliding it out towards the rear.
   - 3 screws on the back
   - 1 screws each on the left & right side

4) Loosen 6 screws & lift up the top edge of Front Panel assembly to free some catches before sliding it out towards the front.
   - 3 screws on the bottom
   - 1 screw on the inside
   - 1 screw each on the left & right side

Dismantling of the Main PCB

1) Loosen 4 screw " A " on the top of main board as shown in figure 4.
2) Loosen 4 screw "B" at the back panel as shown in figure 5.

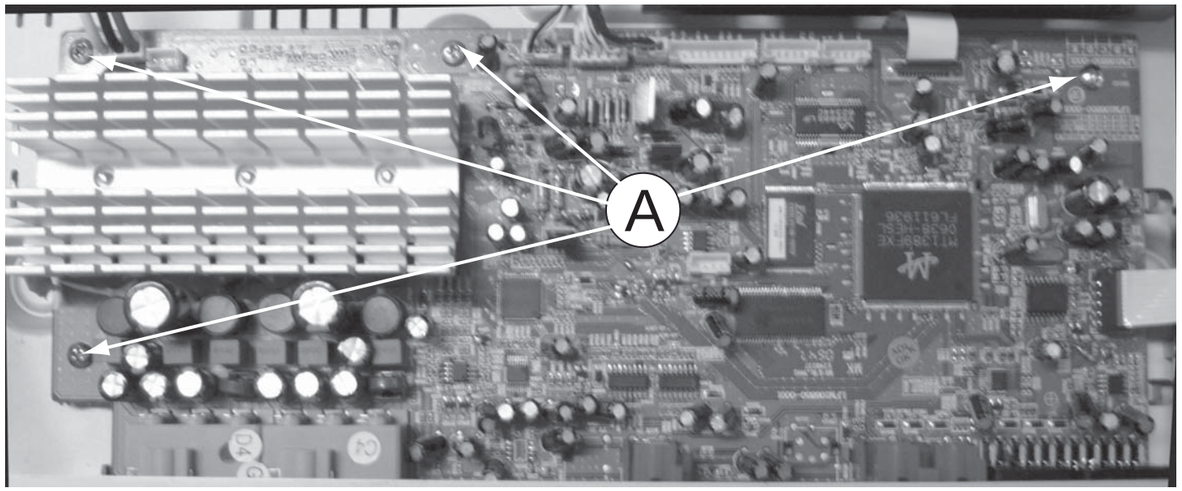


Figure 4

Figure 5

Dismantling of the Control Board

1) Loosen 12 screws " C" on the control board as shown in figure 6

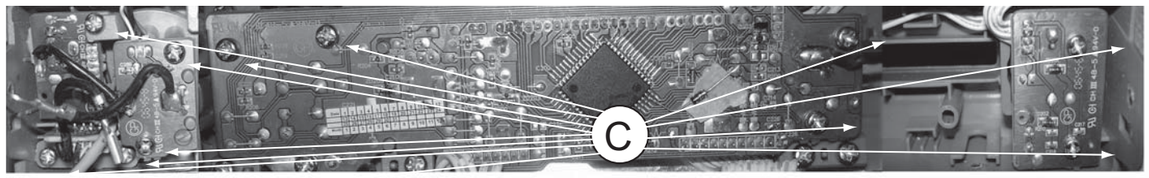


Figure 6

Dismantling of the Power Board

1) Loosen 4 screws "D" at the top of the Power Board as shown in figure 7
2) Using a noise plier to press the rubber space tightly,then,you can take the power board out from the main unit as shown in figure 8

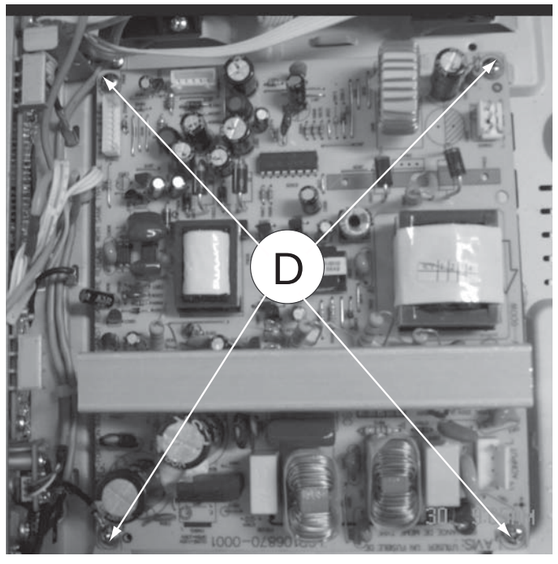


Figure 7

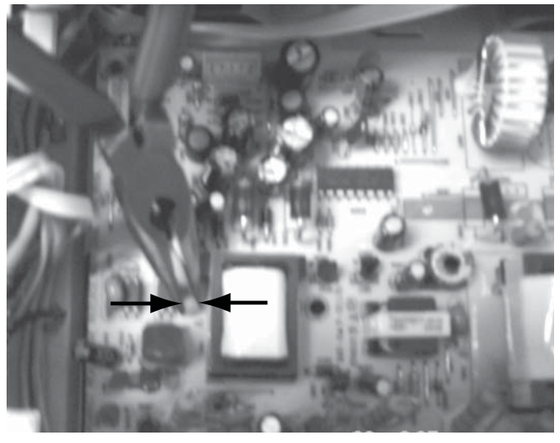


Figure 8

Dismantling of the DVD Module

1) Loosen 4 screws "E" to remove the DVD Module as shown in figure 9

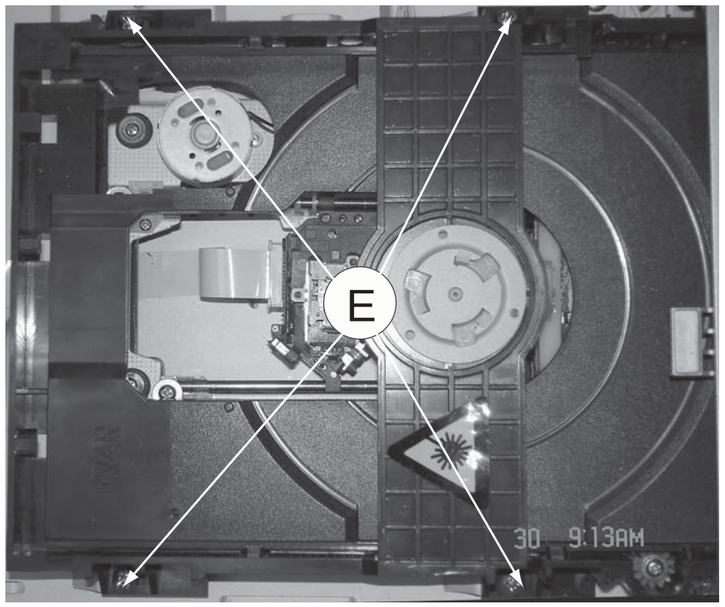
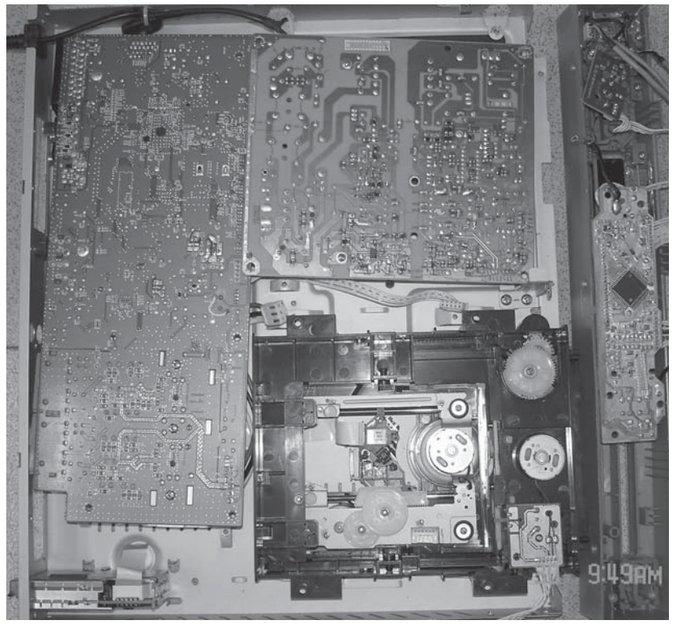


Figure 9

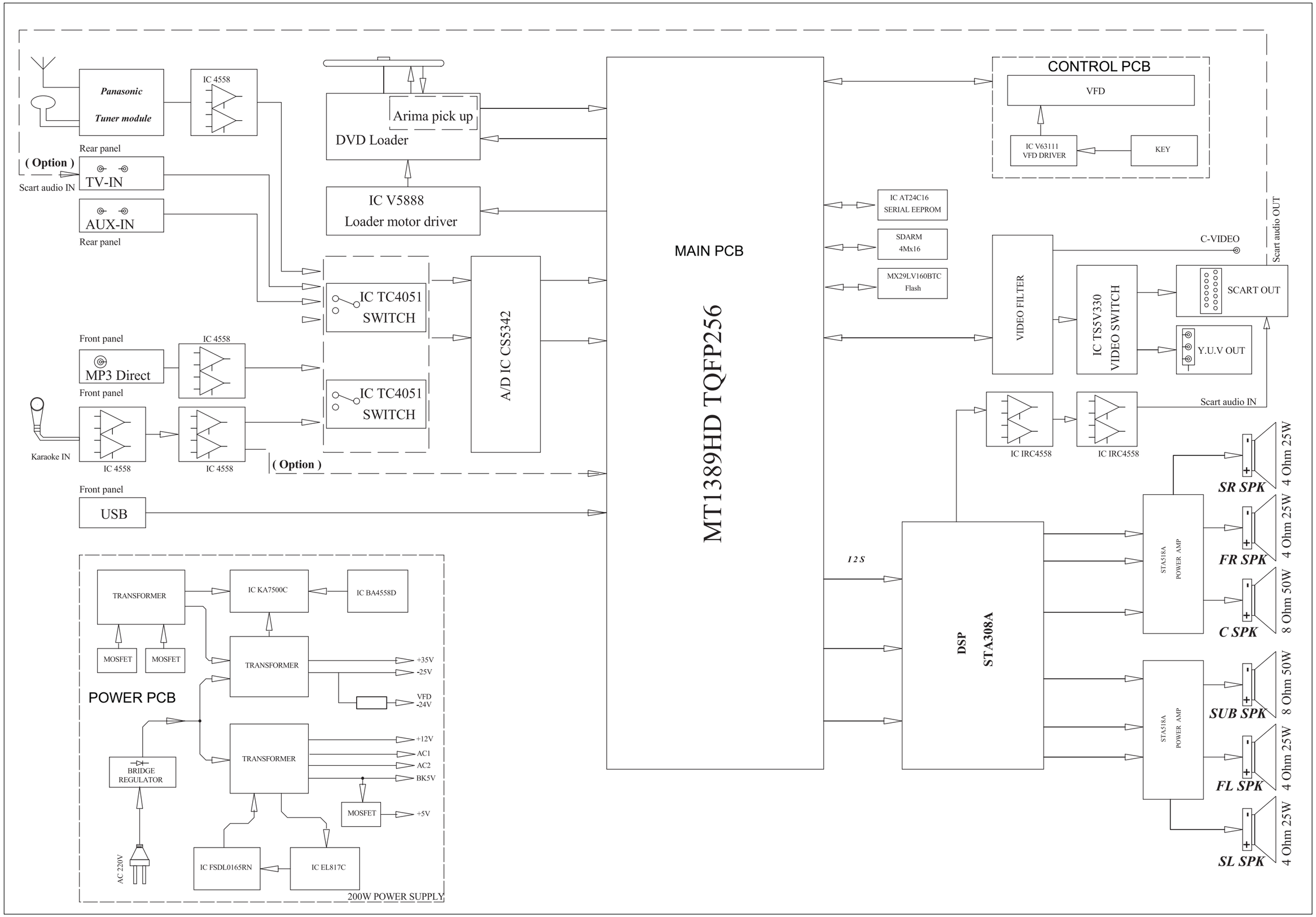
Service Position



Note:In some service positions the components or copper patterns of one board may risk touching its neighbouring pc boards or metallic parts. To prevent such short-circuit use a piece of hard paper or other insulating material between them.

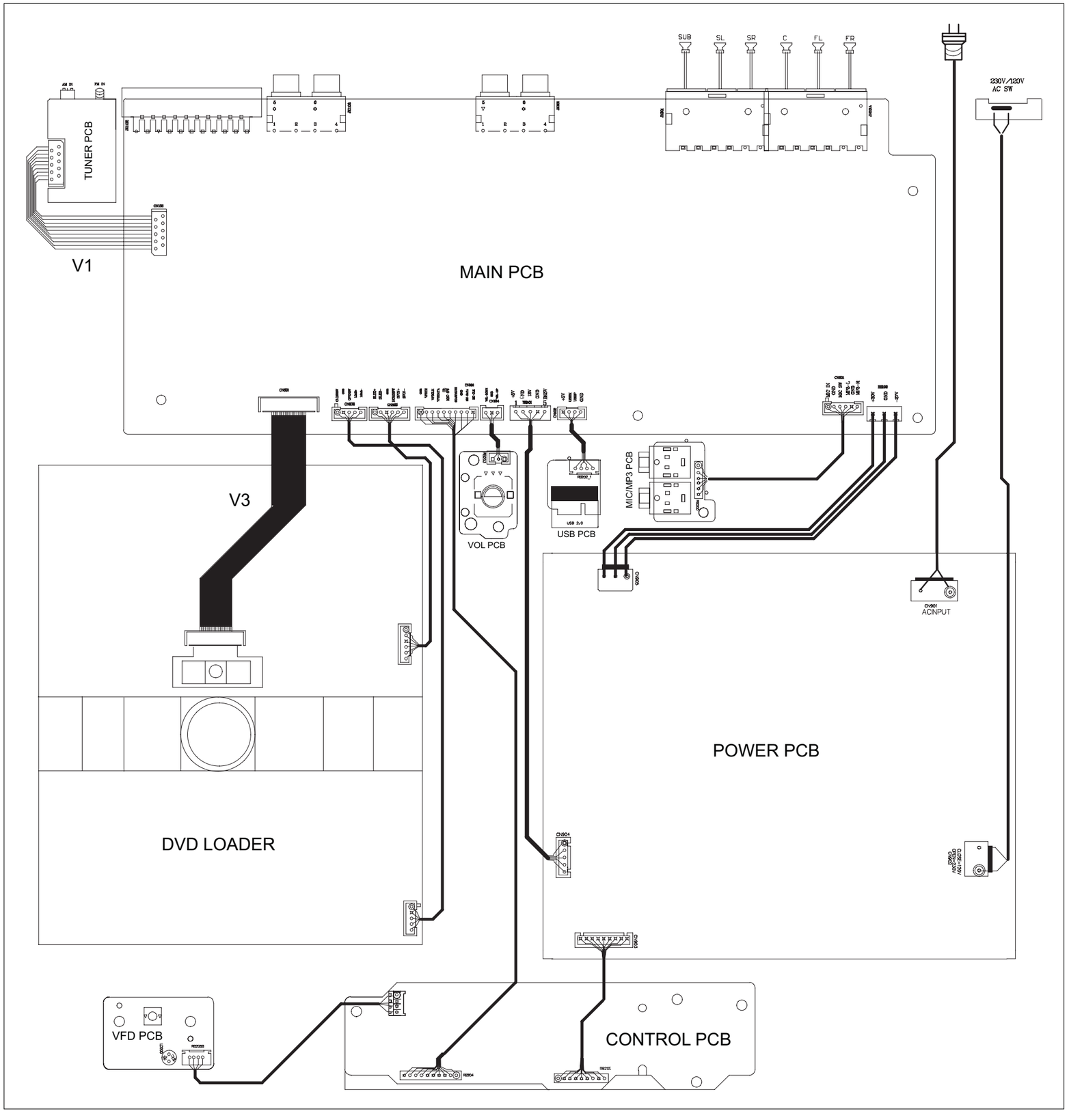
4 - 1

BLOCK DIAGRAM



4 - 2

WIRING DIAGRAM



CONTROL BOARD

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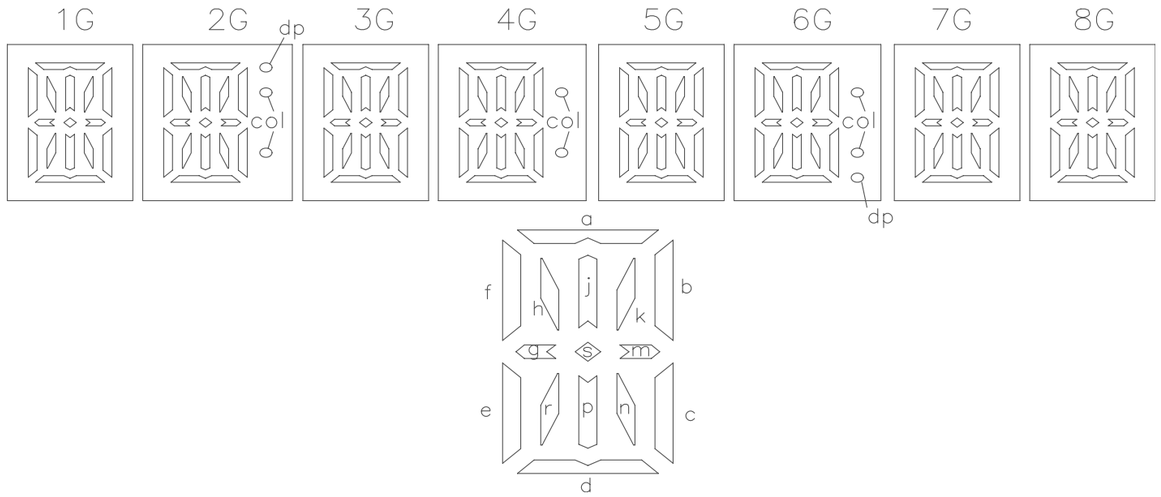
FTD DISPLAY PIN ASSIGNMENT



	1G	2G	3G	4G	5G	6G	7G	8G
P1	a	a	a	a	a	a	a	a
P2	j , p	j , p	j , p	j , p	j , p	j , p	j , p	j , p
P3	h	h	h	h	h	h	h	h
P4	k	k	k	k	k	k	k	k
P5	b	b	b	b	b	b	b	b
P6	f	f	f	f	f	f	f	f
P7	m	m	m	m	m	m	m	m
P8	g	g	g	g	g	g	g	g
P9	c	c	c	c	c	c	c	c
P10	e	e	e	e	e	e	e	e
P11	r	r	r	r	r	r	r	r
P12	n	n	n	n	n	n	n	n
P13	d	d	d	d	d	d	d	d
P14	—	dp	—	col	—	col	—	—
P15	s	s	s	s	s	s	s	s
P16	—	col	—	—	—	dp	—	—

PIN CONNECTION

端子序号 (PIN NO.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
连接 (CONNECTION)	F	F	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
端子序号 (PIN NO.)	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
连接 (CONNECTION)	P13	P14	P15	P16	1G	2G	3G	4G	5G	6G	7G	8G	NP	F	F

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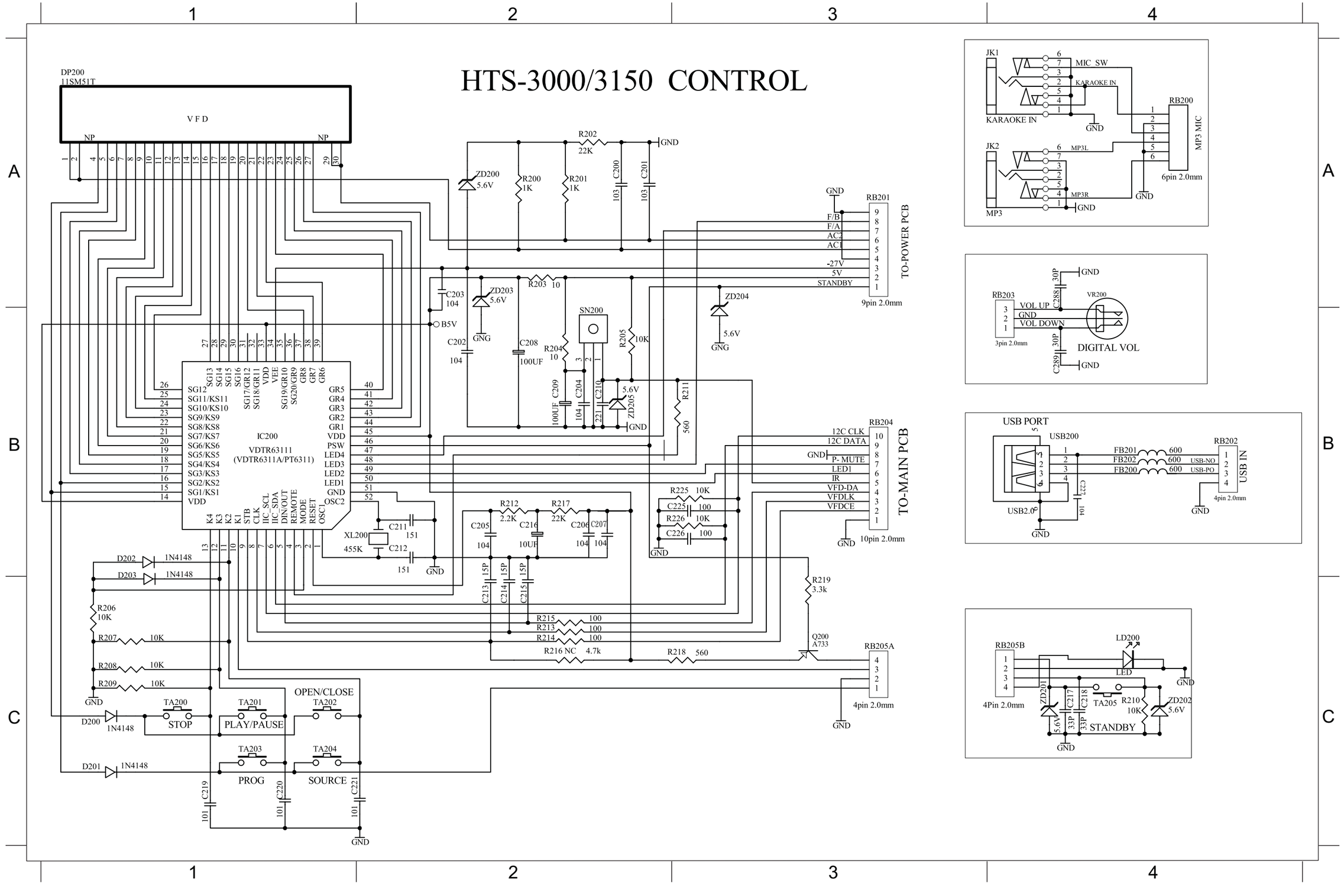
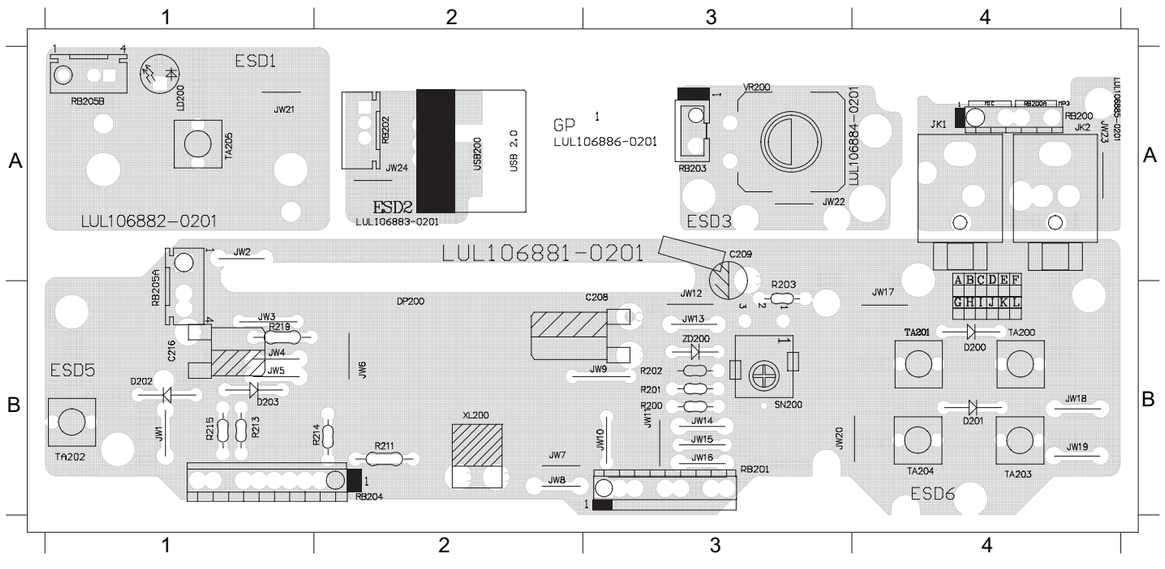
CIRCUIT DIAGRAM

C200	A2	C204	B2	C208	B2	C212	B2	C216	B2	C220	C1	C227	B4	D201	C1	FB200	B4	JK1	A4	R200	A2	R204	B2	R208	C1	R212	B2	R217	B2	R226	C3	RB203	B4	TA201	C1	TA205	C4	ZD200	A2	ZD204	A3
C201	A2	C205	B2	C209	B2	C213	C2	C217	C4	C221	C2	C288	A4	D202	B1	FB201	B4	JK2	A4	R201	A2	R205	B2	R209	C1	R213	C2	R218	C3	RB200	A4	RB204	B3	TA202	C1	USB200	B4	ZD201	C4	ZD205	B2
C202	B2	C206	B2	C210	B2	C214	C2	C218	C4	C225	B3	C289	B4	D203	C1	FB202	B4	LD200	C4	R202	A2	R206	C1	R210	C4	R214	C2	R219	C3	RB201	A3	SN200	B2	TA203	C1	VR200	A4	ZD202	C4		
C203	A2	C207	B2	C211	B2	C215	C2	C219	C1	C226	B3	D200	C1	DP200	A1	IC200	B1	Q200	C3	R203	A2	R207	C1	R211	B3	R215	C2	R225	C3	RB202	B4	TA200	C1	TA204	C1	XL200	B2	ZD203	A2		



PCB LAYOUT - TOP VIEW

C208	B3	D203	B2	JW11	B3	JW17	B4	JW22	A3	JW6	B2	R201	B3	R215	B1	RB204	B1	TA204	B4
C209	A3	DP200	B2	JW12	B3	JW18	B4	JW23	A4	JW7	B2	R202	B3	R219	B1	SN200	B3	TA205	A1
C216	B1	JK1	A4	JW13	B3	JW19	B4	JW24	A2	JW8	B2	R203	B3	RB200	A4	TA200	B4	USB200	A2
D200	B4	JK2	A4	JW14	B3	JW2	A1	JW3	B1	JW9	B3	R211	B2	RB201	B3	TA201	B4	VR200	A3
D201	B4	JW1	B1	JW15	B3	JW20	B4	JW4	B1	LD200	A1	R213	B1	RB202	A2	TA202	B1	XL200	B2
D202	B1	JW10	B3	JW16	B3	JW21	A1	JW5	B1	R200	B3	R214	B2	RB203	A3	TA203	B4	ZD200	B3



PCB LAYOUT - BOTTOM VIEW

C200	B2	C205	B3	C212	B3	C218	A4	C226	B4	FB201	A3	R205	B2	R210	A4	R226	B4	ZD205	B2
C201	B2	C206	B2	C213	B4	C219	B1	C227	A3	FB202	A3	R206	B4	R212	B3	ZD201	A4		
C202	B2	C207	B3	C214	B4	C220	B1	C288	A2	IC200	B3	R207	B1	R217	B4	ZD202	A4		
C203	B3	C210	B2	C215	B3	C221	B1	C289	A2	Q200	B4	R208	B1	R218	B4	ZD203	B2		
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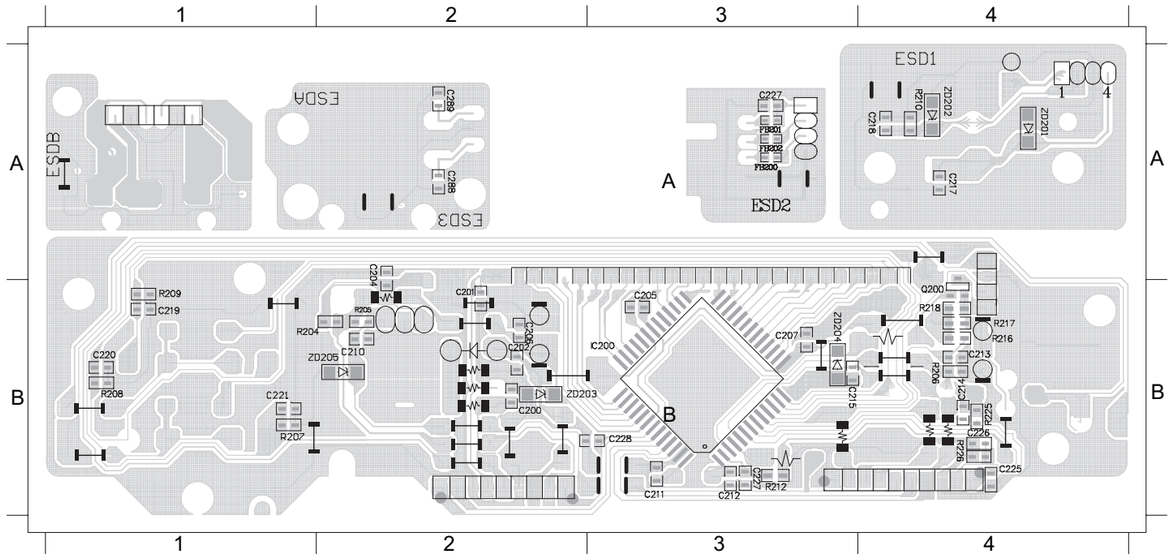

MAIN BOARD

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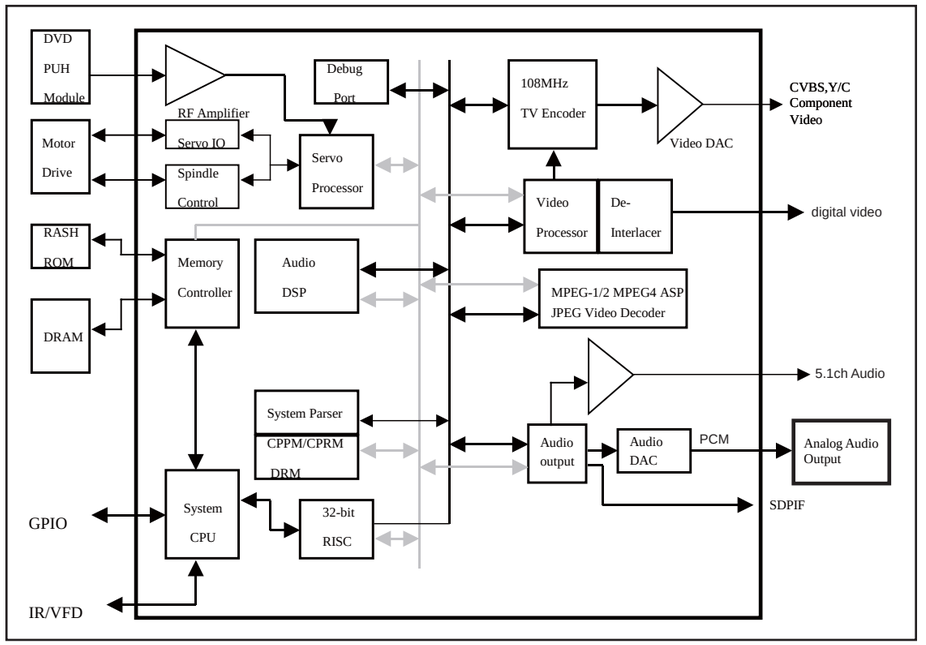
INTERNAL IC DIAGRAM - MT1389



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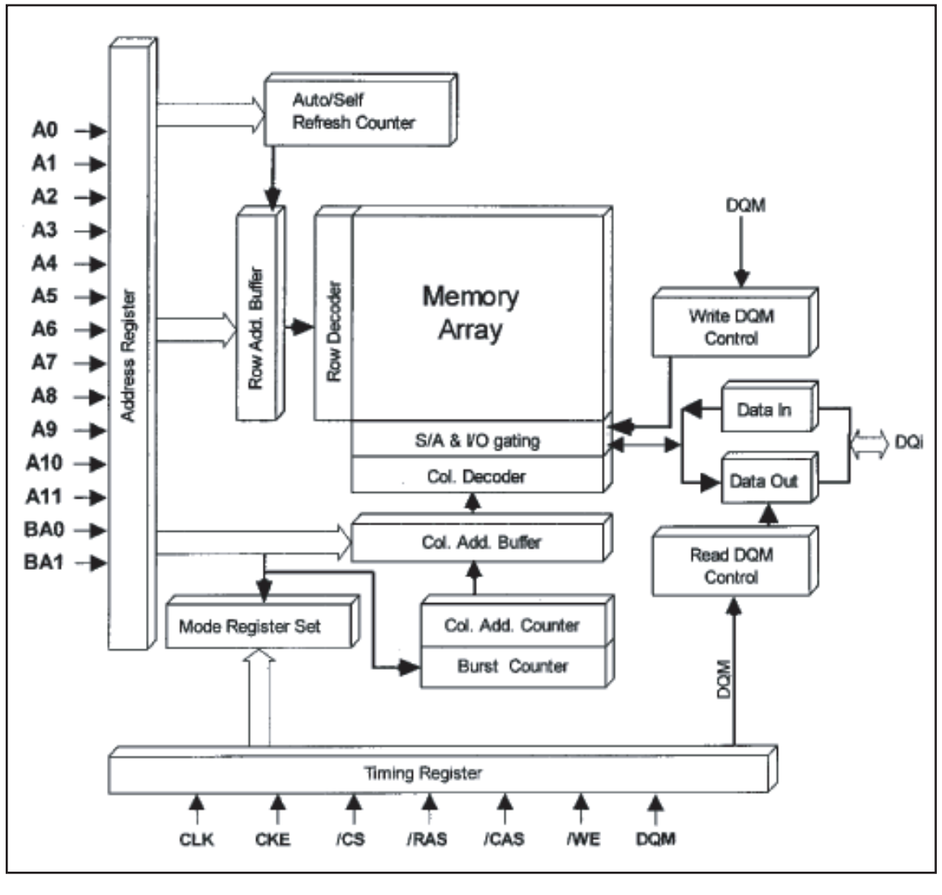
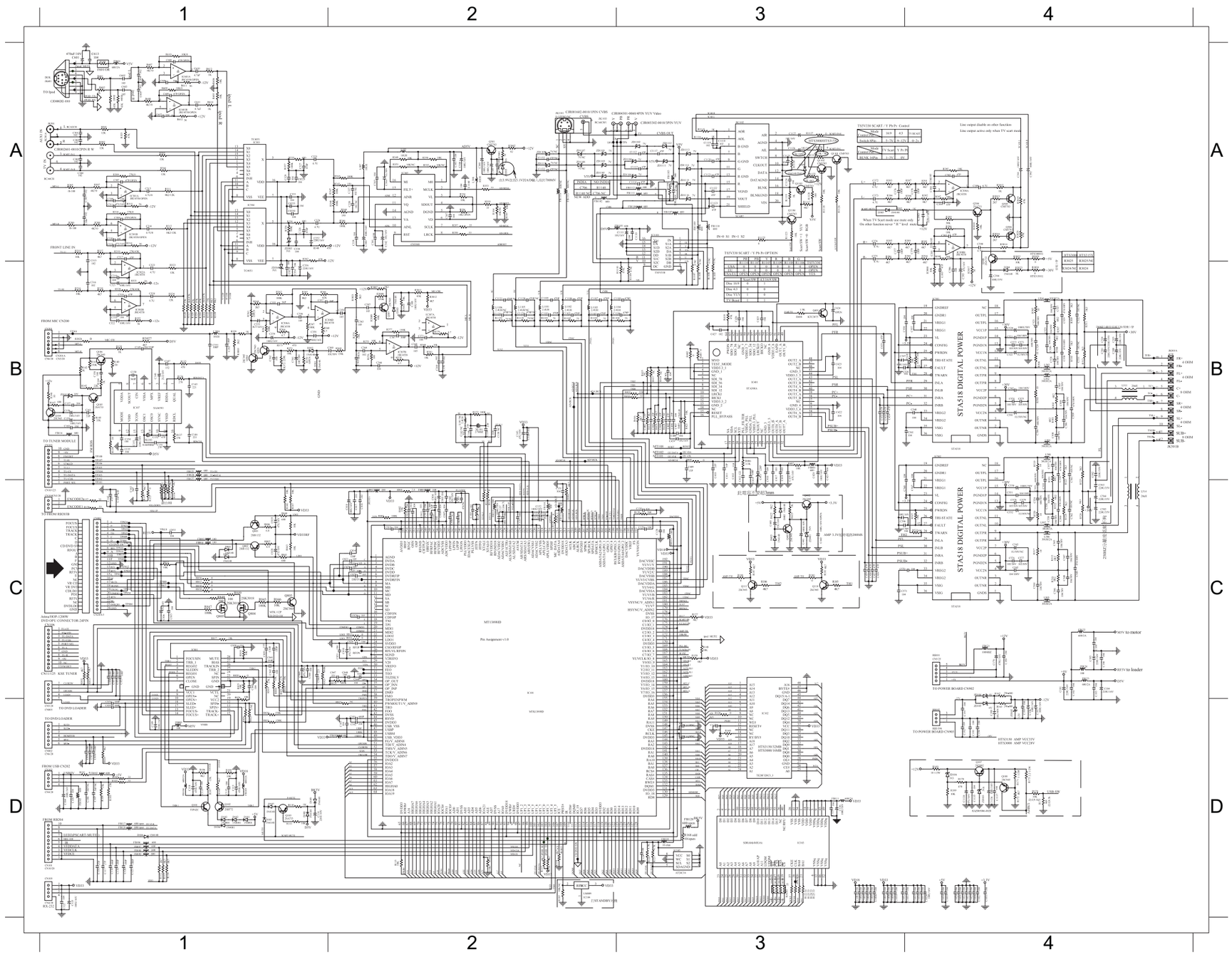


Circuit Diagram



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C1002	D3	C179	C4	C405	B3	C578	C4	FB105	D1	R102	D1	R307	A1	R506	B4
C1003	D3	C180	C4	C406	B3	C579	C4	FB106	D1	R103	D1	R308	A1	R507	B4
C1004	D3	C181	C4	C407	B3	C580	B4	FB107	D1	R104	D1	R309	A1	R508	B4
C1005	D3	C182	C4	C408	B3	C581	B4	FB108	D1	R105	D1	R310	A1	R509	B4
C1006	D3	C183	C4	C409	B3	C582	B4	FB109	D1	R106	D1	R311	A1	R510	B4
C1007	D3	C184	C4	C410	B3	C583	C4	FB110	D3	R107	D1	R312	A1	R511	B4
C1008	D3	C185	C4	C411	B3	C802	C2	FB1101	A2	R108	D1	R313	A1	R512	B4
C1009	D3	C186	C4	C412	B3	C803	C2	FB1102	A2	R109	D1	R314	A1	R514	B4
C101	D2	C188	C4	C413	B3	C804	C2	FB1103	A3	R110	D1	R315	A1	R515	C4
C1010	D3	C189	C1	C414	B3	C805	C2	FB111	D3	R1101	B2	R316	B1	R516	C4
C1011	D4	C190	C4	C415	B3	C806	C2	FB1111	A3	R1102	B2	R317	A1	R517	C4
C1012	D4	C191	C4	C416	B3	C807	C2	FB1112	A3	R1103	B2	R318	B1	R519	B4
C1013	D4	C193	C4	C417	B3	C808	C2	FB112	C3	R1104	B2	R319	A1	R520	C4
C1015	D4	C194	C4	C418	B3	C809	C2	FB113	C2	R1105	B2	R320	B1	R521	B4
C1016	D4	C195	C4	C419	B3	C810	C2	FB114	C2	R1107	B2	R321	B1	R522	C4
C1017	D4	C196	C4	C420	B3	C811	C2	FB115	C2	R111	D1	R322	B1	R523	B4
C1018	D4	C197	C4	C421	B3	C812	C2	FB116	B1	R1110	B2	R323	B1	R524	C4
C1019	D4	C301	A1	C422	B3	C813	C2	FB121	C4	R112	D1	R324	B1	R525	B4
C102	D2	C302	A1	C423	B3	C814	C2	FB122	C4	R113	D1	R325	A1	R526	C4
C1020	D4	C303	A1	C425	B3	C815	C2	FB123	C4	R114	D1	R326	B1	R527	C4
C1021	D4	C304	A1	C426	B3	C816	C2	FB124	C4	R1140	A3	R327	B1	R532	B4
C1022	D4	C305	A1	C427	B3	C817	C2	FB125	B1	R115	D2	R328	B1	R533	C4
C1023	D4	C306	A1	C431	B3	C818	C2	FB126	B1	R117	D2	R329	B1	R801	C2
C1024	D4	C309	A1	C432	B3	C819	C1	FB127	B1	R118	D2	R330	B1	R802	C2
C1025	D4	C310	A1	C433	B3	C820	C1	FB401	B3	R119	D2	R331	B1	R803	C2
C1026	D4	C311	A1	C434	B3	C823	C2	FB801	C2	R120	D3	R332	B1	R806	C1
C1027	D4	C312	A1	C435	C3	C824	C2	FB802	C2	R121	D3	R333	B1	R807	C1
C103	D2	C313	A1	C436	C3	C825	C2	FB803	C1	R122	D3	R334	B1	R808	C2
C104	D1	C314	A1	C437	C3	C826	C2	FB804	C1	R123	D3	R335	A1	R812	C2
C105	D1	C315	A1	C438	C3	C827	C2	FB805	D1	R124	D3	R336	A1	R815	C2
C110	D1	C316	B1	C439	B3	C828	C2	IC101	C2	R125	D3	R337	A1	R816	C2
C1101	B2	C317	A1	C440	C3	C829	C2	IC102	D3	R126	D3	R338	A1	R817	C1
C1102	B2	C318	B1	C441	C3	C830	C2	IC103	D3	R127	C3	R340	A1	R818	C1
C1103	B2	C319	B1	C502	B4	C831	C2	IC104	D2	R128	C3	R342	A1	R819	C1
C1104	B2	C320	B1	C504	B4	C833	C1	IC105	D3	R129	C2	R343	A2	R820	C1
C1105	B2	C321	B1	C505	B4	C834	C2	IC302	B1	R130	C2	R344	A2	R821	C1
C1106	B2	C322	B1	C506	B4	C835	C1	IC303	A1	R131	C2	R345	A2	R822	C1
C1107	B2	C323	B1	C507	B4	C836	C1	IC304	A1	R133	B2	R346	A2	R823	C1
C1108	B2	C324	B1	C508	B4	C838	C1	IC305	A2	R134	C2	R347	A2	R824	C2
C111	D1	C325	A1	C509	B4	C839	C1	IC306	B1	R146	B1	R348	A2	R825	C1
C1110	A3	C326	A1	C520	B4	C840	C1	IC307	B2	R147	B1	R349	A2	R826	C1
C1111	A3	C327	A1	C521	B4	C841	C1	IC401	B3	R151	C1	R350	A2	R828	D1
C1112	A3	C328	A1	C523	B4	C842	C1	IC501	B4	R152	C1	R353	A2	R830	D1
C1113	A3	C329	A1	C524	B4	C843	C1	IC502	B4	R153	C1	R354	A2	R831	D1
C1114	A3	C330	A1	C525	B4	C844	C1	IC801	C1	R155	C1	R355	A2	R832	C1
C1117	A3	C332	A1	C526	B4	C845	C1	JK1103	A2	R156	C1	R357	A2	R833	C1
C112	D1	C334	B1	C527	B4	C846	C1	JK301	A1	R157	C1	R358	A2	R834	D1
C113	D1	C335	A1	C528	B4	C847	C2	JK501	B4	R158	C1	R359	B1	R836	C1
C1134	D4	C336	B1	C529	B4	C848	C2	JK501	AB4	R159	C3	R360	B1	R837	C1
C1135	D4	C339	A2	C530	B4	C849	C2	L1101	B2	R160	D3	R362	B1	R838	C1
C1136	D4	C340	A2	C533	B4	C850	C1	L1102	B2	R162	C4	R363	B1	R839	C1
C1137	D4	C341	A2	C534	B4	C851	C1	L1103	B2	R163	D4	R364	B1	R840	C1
C114	D1	C342	A2	C537	B4	C852	C1	L1104	B2	R165	A2	R365	B1	R841	C1
C116	D1	C343	A2	C538	B4	C853	C1	L3001	B1	R166	C1	R366	B1	R842	C1
C117	D1	C344	A2	C539	B4	C854	D1	L302	A2	R167	C1	R367	B1	R843	C1
C118	D1	C345	A2	C540	B4	C855	D1	L307	A2	R169	D4	R368	B1	R844	C1
C119	D1	C346	A2	C541	B4	C856	D1	L308	A2	R170	D4	R369	B2	R845	C1
C120	D1	C347	A2	C542	C4	C857	D1	L501	B4	R171	D4	R371	B1	R846	C1
C121	D1	C348	A2	C544	C4	C858	D1	L502	B4	R172	D4	R372	B1	R847	C1
C122	D1	C349	A2	C545	C4	CN101	D1	L503	B4	R173	D4	R373	B1	R848	C1
C123	D1	C350	A2	C546	C4	CN102	D1	L504	B4	R174	D4	R374	B2	R849	C1
C124	D3	C351	B1	C547	C4	CN103	B1	L505	C4	R175	D4	R375	B2	RA101	D3
C125	D3	C352	B1	C548	C4	CN104	C1	L506	C4	R180	C3	R376	B2	RB101	C4
C126	D3	C353	B1	C549	C4	CN301	B1	L507	C4	R181	C3	R377	B2	RB102	D4
C127	D3	C354	B1	C550	C4	CN801	C1	L508	B4	R182	D2	R378	B2	XL101	B2
C128	C3	C355	B1	C551	C4	CN802	D1	L511	B4	R186	C3	R379	B2	ZD101	B1
C129	C3	C356	B1	C553	C4	CN803	D1	L514	C4	R187	C3	R380	B2	ZD102	D4
C130	C3	C357	B1	C554	C4	D101	D1	Q101	D1	R188	C3	R381	B2	ZD103	D4
C131	C2	C358	B1	C555	C4	D102	D1	Q102	D1	R189	D4	R401	B3	ZD104	C4
C132	C2	C359	B2	C556	C4	D103	D1	Q103	D1	R3001	A2	R402	B3	ZD105	D4
C133	C2	C360	B2	C557	B4	D104	D1	Q104	B1	R3002	A2	R403	B3	ZD106	D4
C134	C2	C361	B1	C558	C4	D105	D1	Q107	D4	R3003	B1	R404	B3	ZD1101	A2
C135	C2	C362	B1	C559	B4	D106	D1	Q108	D4	R3007	B2	R405	B3	ZD1102	A3
C136	C2	C363	B2	C560	C4	D107	D1	Q110	C3	R3008	B2	R406	B3	ZD1103	A2
C137	C2	C364	B2	C563	C4	D108	D1	Q111	C3	R3009	B2	R407	B3	ZD1104	A3
C139	B2	C366	B2	C564	C4	D109	D1	Q301	A2	R301	A1	R408	B3	ZD1105	A2
C140	B2	C367	B2	C567	C4	D301	B1	Q302	B1	R3010	B2	R410	B3	ZD1106	A3
C142	B2	C368	B2	C568	C4	D302	B1	Q303	B1	R3011	B2	R416	B3	ZD1111	A3
C143	B2	C369	B2	C569	C4	D303	B2	Q307	B2	R3012	B2	R418	B3	ZD1112	A3
C144	C2	C370	B2	C570	C4	D401	B3	Q401	B3	R302	A1	R419	B3	ZD303	A1
C157	B1	C371	B2	C571	C4	D402	C3	Q402	C3	R3021	B2	R421	B3	ZD304	B1
C158	B1	C387	B2	C572	B4	D403	C3	Q403	C3	R3026	B1	R422	C3	ZD305	A2
C159	B1	C388	B2	C573	B4	D801	C1	Q801	C1	R3027	B1	R423	C3	ZD401	C3
C160	B1	C401	B3	C574	B4	D802	C1	Q802	C1	R303	A1	R501	B4		
C162	C1	C402	B3	C575	B4	FB101	C2	Q803	C1	R304	A1	R502	B4		
C165	C1	C403	B3	C576	C4	FB103	D1	Q804	C1	R305	A1	R503	B4		

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PCB Layout Top View

C1020 C4 C144 B1 C317 A1 C352 C4 C414 B3 C538 C4 C580 A4 C827 C1 CN802 C2 FB105 B2 FB124 C1 IC306 C4 L502 B4 Q303 C4 R1105 A1 R153 B1 R187 B2 R312 A3 R335 A2 R359 C4 R380 B2 R514 C4 R821 C1 R849 C1
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C1024 B2 C159 B1 C321 A1 C354 C3 C419 B3 C540 C4 C582 A4 C830 C1 D101 C3 FB107 C2 FB126 A1 IC401 B3 L504 B4 Q401 B3 R111 B2 R156 A1 R3001 A3 R314 A3 R337 A2 R362 C4 R401 B3 R519 B4 R825 C2 RB101 C2
C104 C3 C165 C2 C322 A1 C355 C4 C420 B3 C541 C4 C583 A3 C833 C1 D102 C2 FB108 C2 FB127 A1 IC501 B4 L505 B3 Q402 C3 R1110 A1 R157 C2 R3002 A3 R315 A1 R338 B2 R363 C4 R402 B3 R520 B4 R826 C2 RB102 C4
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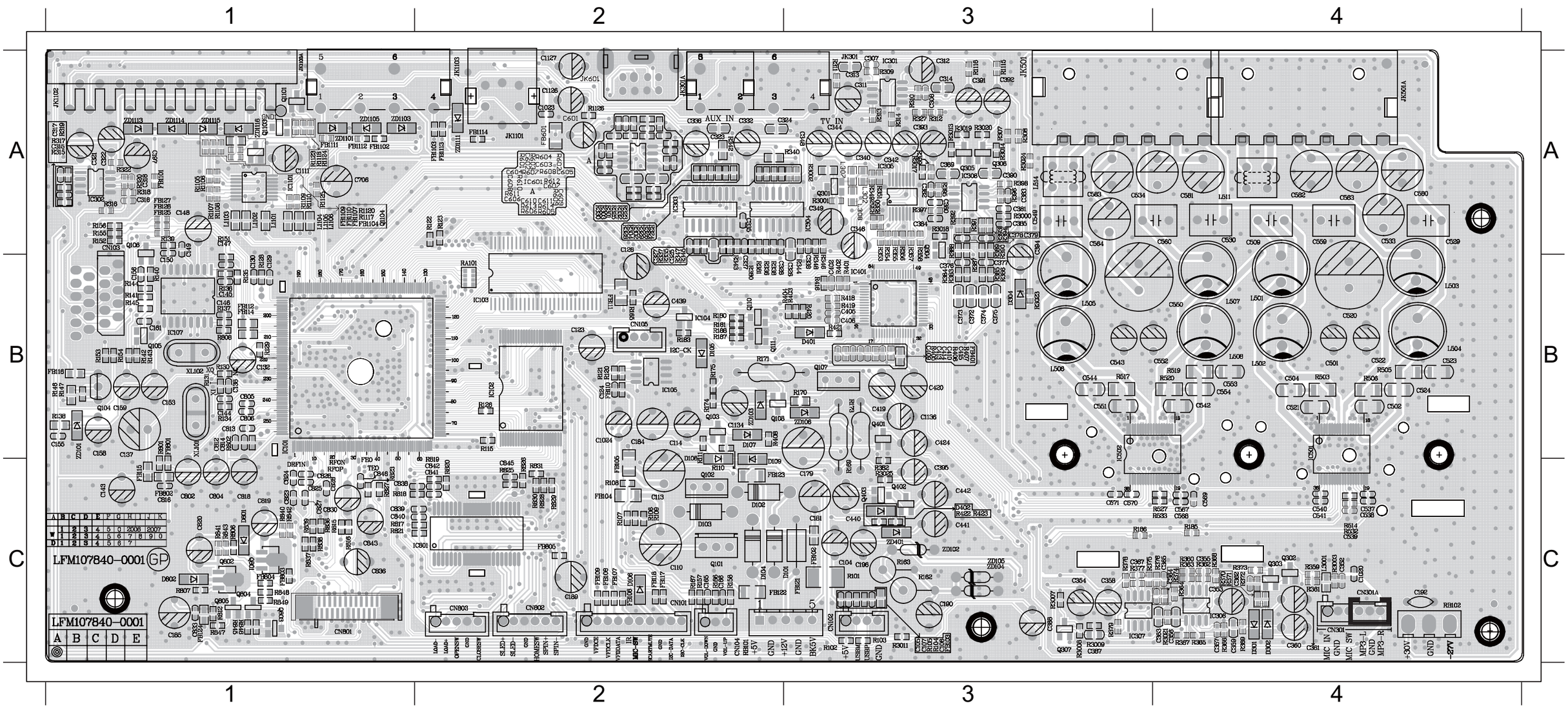
C110 C2 C179 C3 C324 A2 C357 C4 C440 C3 C544 B3 C804 C1 C838 C1 D104 C2 FB110 B2 FB801 B1 IC801 C2 L507 B4 Q801 C1 R120 B2 R162 C3 R3007 C3 R317 A1 R342 A2 R365 C4 R404 B3 R532 C4 R830 C2 ZD101 B1
C1111 A1 C181 C3 C325 A2 C358 C3 C441 C3 C549 A3 C805 B1 C839 C1 D105 C2 FB1101 A1 FB802 C1 JK1103 A1 L508 B4 Q802 C1 R121 B2 R163 C3 R3008 C3 R318 A1 R343 B2 R366 C4 R405 B3 R533 C4 R831 C2 ZD102 C3
C113 C2 C184 B2 C326 B3 C359 C4 C502 B4 C550 B4 C806 B1 C840 C1 D106 C2 FB1102 A1 FB803 C1 JK301 A3 L511 A4 Q803 C1 R122 A2 R165 B2 R3009 C3 R319 A1 R344 B3 R367 C4 R406 B3 R801 B1 R836 C1 ZD103 B2
C1134 B2 C185 C1 C327 A3 C360 C4 C504 B4 C551 B3 C812 B1 C841 C2 D107 B2 FB1103 A2 FB804 C1 JK501 A3 L514 A3 Q804 C1 R123 A2 R166 C2 R301 A2 R320 A1 R345 A2 R368 C4 R407 B3 R802 B1 R837 C1 ZD104 C3
C1136 B3 C189 C2 C328 B2 C361 C4 C509 A4 C554 B4 C813 B1 C842 C2 D108 B2 FB111 B2 FB805 C2 JK501AA4 Q101 C2 Q805 C1 R126 B2 R167 C2 R3011 C3 R322 A1 R346 B3 R369 C4 R408 B2 R806 C1 R838 C1 ZD105 C3
C114 B2 C190 C3 C332 A2 C362 C4 C520 B4 C559 A4 C814 B1 C843 C1 D109 B2 FB1111 A1 IC101 B1 L1101 A1 Q102 C2 R102 C3 R128 B1 R169 C3 R302 A2 R323 A2 R347 A2 R371 C4 R416 B3 R807 C1 R839 C1 ZD106 B3
C123 B2 C196 C3 C335 A2 C363 C4 C521 B4 C560 A4 C816 C1 C845 C2 D301 C4 FB1112 A1 IC102 B2 L1102 A1 Q103 C2 R103 C3 R129 B1 R170 B3 R3021 C4 R324 A2 R348 B3 R372 C4 R418 B3 R808 B1 R840 C1 ZD1101 A1
C124 B2 C197 A1 C336 A2 C364 C4 C523 B4 C563 A4 C818 C1 C846 C1 D302 C4 FB112 B1 IC103 B2 L1103 A1 Q104 B1 R104 C3 R130 B1 R171 B2 R303 A2 R325 A2 R349 A3 R373 C4 R419 B3 R812 C1 R841 C1 ZD1103 A1
C126 A2 C311 A3 C340 A3 C367 C3 C524 B4 C564 A3 C819 C1 CN101 C2 D401 B3 FB114 B1 IC104 B2 L1104 A1 Q107 B3 R105 C3 R131 B1 R173 B3 R304 A2 R326 A2 R350 A3 R374 C4 R421 B3 R815 C1 R842 C1 ZD1105 A1
C129 B1 C312 A3 C342 A3 C387 C3 C529 A4 C567 C4 C820 C1 CN102 C3 D402 C3 FB115 C1 IC105 B2 L3001 C4 Q108 B2 R106 C2 R134 B1 R174 B2 R307 A3 R327 A3 R353 A3 R375 C3 R422 C3 R816 C1 R843 C1 ZD1111 A2
C130 B1 C313 A3 C344 A3 C388 C3 C530 A4 C568 C4 C823 C1 CN103 A1 D801 C1 FB116 B1 IC302 A1 L302 A3 Q110 B2 R107 C2 R146 B1 R175 B2 R308 A3 R328 A2 R354 A3 R376 C4 R423 C3 R817 C1 R845 C1 ZD401 C3
C132 B1 C314 A3 C346 A3 C409 B3 C533 A4 C569 C4 C824 C1 CN104 A2 D802 C1 FB121 B3 IC303 A2 L307 A3 Q111 B2 R108 C2 R147 B1 R180 B2 R309 A3 R329 A2 R355 A3 R377 C3 R503 B4 R818 C1 R846 C1
C137 B1 C315 A1 C348 A3 C410 B3 C534 A3 C570 C3 C825 C1 CN301 C4 FB103 C3 FB122 C2 IC304 A3 L308 A3 Q301 A3 R109 C2 R151 A1 R181 B2 R310 A3 R330 A2 R357 A3 R378 C3 R505 B4 R819 B2 R847 C1
C143 C1 C316 A1 C349 A3 C413 B3 C537 C4 C571 C3 C826 C1 CN801 C1 FB104 C2 FB123 C2 IC305 A3 L501 B4 Q302 C4 R110 C2 R152 A1 R186 C3 R311 A3 R332 A2 R358 A3 R379 C3 R506 B4 R820 C2 R848 C1



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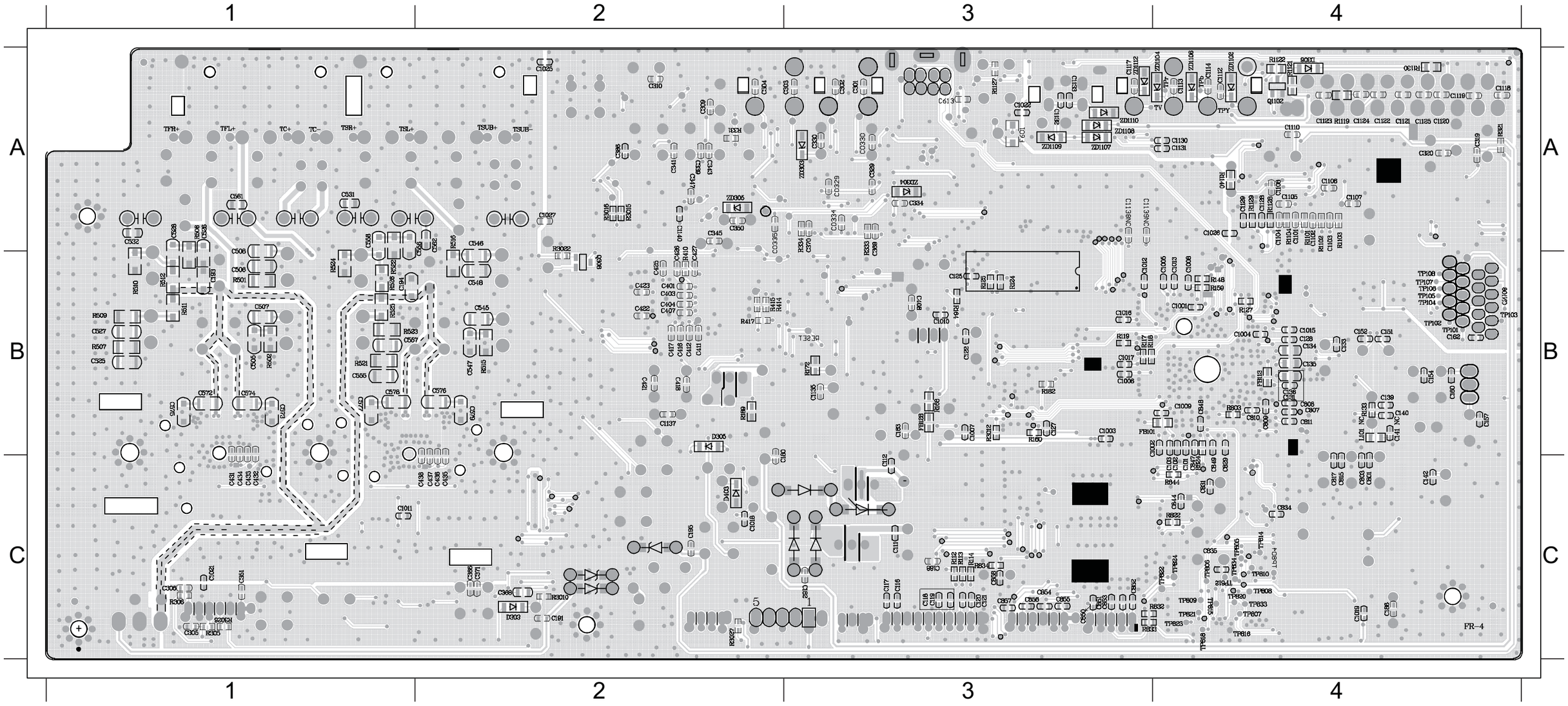
PCB Layout Bottom View

C1001	B4	C1010	B3	C1021	C1	C1105	A4	C112	C3	C125	B3	C142	C4	C193	B1	C310	A2	C347	A2	C403	B2	C418	B2	C434	C1	C526	A1	C558	A1	C807	B4	C835	C4	C855	C3	R1103	A4	R125	B3	R3026	C1	R502	B1	R522	B1	R834	C3
C1002	B3	C1011	C1	C1022	A2	C1106	A4	C1135	B2	C127	B3	C157	B4	C194	B1	C319	A4	C350	A2	C404	B2	C421	B2	C435	C2	C527	B1	C572	B1	C808	B4	C844	C4	C856	C3	R1104	A4	R127	B4	R3027	C2	R507	B1	R523	B1	R844	C4
C1003	B3	C1012	B3	C1025	A2	C1107	A4	C1137	B2	C128	B4	C160	B4	C195	C2	C320	A4	C351	C1	C405	B3	C422	B2	C436	C2	C528	A1	C573	B1	C809	B4	C847	C4	C857	C3	R112	C3	R133	B4	R305	C1	R508	A1	R524	B1	ZD1102	A4
C1004	B4	C1013	B4	C1026	A4	C1108	A4	C116	C3	C131	B4	C162	B4	C301	A3	C329	A3	C366	C2	C406	B3	C423	B2	C437	C2	C545	B2	C574	B1	C810	B4	C848	B4	C858	C3	R113	C3	R159	B4	R306	C1	R509	B1	R525	B1	ZD1104	A4
C1005	B4	C1015	B4	C1027	A2	C111	C3	C117	C3	C133	B4	C180	C3	C302	A3	C330	A3	C368	C2	C407	B2	C425	B2	C438	C2	C546	A2	C575	B1	C811	B4	C849	C4	D303	C2	R114	C3	R160	B3	R321	A4	R510	B1	R526	B1	ZD1106	A4
C1006	B3	C1016	B3	C103	C4	C1110	A4	C118	C3	C134	B4	C182	C2	C303	A3	C334	A3	C369	A3	C408	B3	C426	B2	C505	B1	C547	B2	C576	B2	C815	C4	C850	C3	D403	C2	R1140	A4	R172	B3	R331	A2	R511	B1	R803	B4	ZD1112	A3
C1007	B3	C1017	B3	C1101	A4	C1112	A4	C119	C3	C135	B4	C183	B2	C304	A2	C339	A2	C370	A3	C411	A2	C427	B2	C506	B1	C548	B2	C577	B1	C817	C4	C851	C3	FB101	B3	R117	B3	R182	B3	R333	A3	R512	B1	R822	C4	ZD303	A3
C1008	B4	C1018	C2	C1102	A4	C1113	A4	C120	C3	C136	B4	C186	C4	C305	C1	C341	A2	C371	C2	C412	A2	C431	C1	C507	B1	C555	B1	C578	B1	C829	C4	C852	C3	FB113	B4	R118	B3	R189	B2	R334	A3	R515	B2	R824	C4	ZD304	A3
C1009	B4	C1019	C4	C1103	A4	C1114	A4	C121	C3	C139	B4	C188	C3	C306	C1	C343	A2	C401	B2	C416	B2	C432	C1	C508	B1	C556	A2	C579	B2	C831	C4	C853	C3	R1101	A4	R119	B3	R3010	C2	R410	B2	R516	A2	R832	C3	ZD305	A2
C101	C4	C102	C4	C1104	A4	C1117	A3	C122	B3	C140	B4	C191	C2	C309	A2	C345	A2	C402	B3	C417	B2	C433	C1	C525	B1	C557	B1	C803	C4	C834	C4	C854	C3	R1102	A4	R124	B3	R3012	B3	R501	B1	R521	B1	R833	C3		



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POWER BOARD

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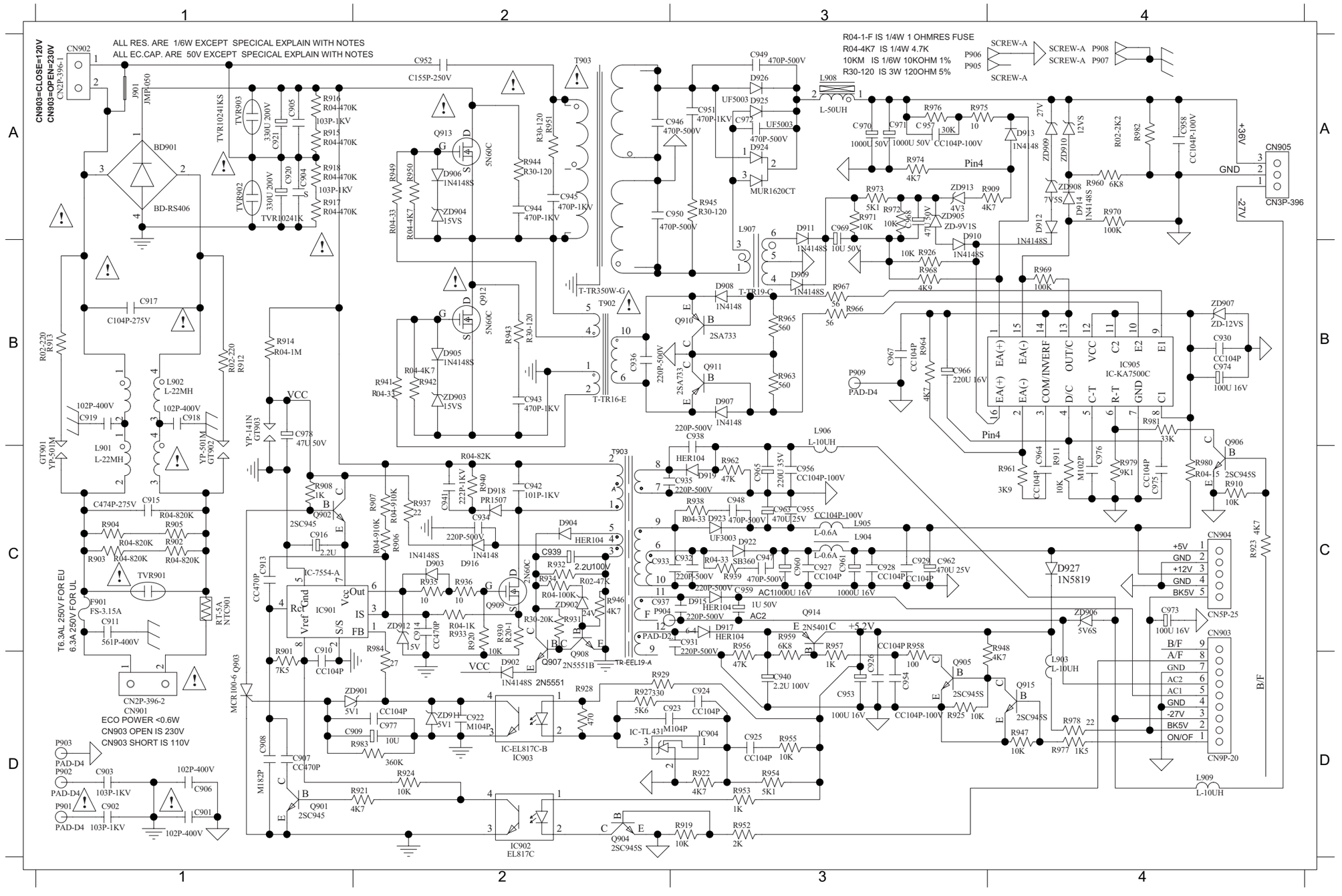
CIRCUIT DIAGRAM

BD901	A1	C913	C1	C925	D3	C937	C2	C949	A3	C962	C3	C975	C4	D906	A2	D919	C3	IC905	B4	Q902	C1	Q914	C3	R911	C4	R924	D2	R936	C2	R948	D4	R960	A4	R972	A3	R984	D2	ZD907	B4
C901	D1	C914	C2	C926	D3	C938	C3	C950	A2	C963	C3	C976	C4	D907	B3	D922	C3	L901	C1	Q903	D1	Q915	D4	R912	B1	R925	D3	R937	C2	R949	A2	R961	C4	R973	A3	R985	C3	ZD908	A4
C902	D1	C915	C1	C927	C3	C939	C2	C951	A3	C964	C4	C977	D2	D908	B3	D923	C3	L902	B1	Q904	D2	R901	D1	R914	B1	R926	B3	R938	C3	R950	A2	R962	C3	R974	A3	T901	A2	ZD909	A4
C903	D1	C916	C1	C928	C3	C940	D3	C952	A2	C965	C3	C978	B1	D909	B3	D925	A3	L903	D4	Q905	D3	R902	C1	R915	A1	R927	D2	R939	C3	R951	A2	R963	B3	R975	A3	T902	B2	ZD910	A4
C904	A1	C917	B1	C929	C3	C941	C2	C954	D3	C966	B3	CN901	D1	D910	B3	D926	A3	L904	C3	Q906	C4	R903	C1	R916	A1	R928	D2	R940	C2	R952	D3	R964	B3	R976	A3	T903	C2	ZD911	D2
C905	A1	C918	B1	C930	B4	C942	C2	C955	C3	C967	B3	CN903	D4	D911	A3	D927	C4	L905	C3	Q907	D2	R904	C1	R917	A1	R929	D2	R941	B2	R953	D3	R965	B3	R977	D4	TVR901	C1	ZD913	A3
C906	D1	C919	B1	C931	C3	C943	B2	C956	C3	C968	A3	CN904	C4	D912	A4	F901	C1	L906	B3	Q908	C2	R905	C1	R918	A1	R930	C2	R942	B2	R954	D3	R966	B3	R978	D4	ZD901	D1		
C907	D1	C920	A1	C932	C3	C944	A2	C957	A3	C969	A3	CN905	A4	D914	A4	GT902	C1	L907	B3	Q909	C2	R906	C2	R919	D3	R931	C2	R943	B2	R955	D3	R967	B3	R979	C4	ZD902	C2		
C908	D1	C921	A1	C933	C2	C945	A2	C958	A4	C971	A3	D902	D2	D915	C3	IC901	C1	L908	A3	Q910	B3	R907	C2	R920	C2	R932	C2	R944	A2	R956	D3	R968	B3	R980	C4	ZD903	B2		
C909	D1	C922	D2	C934	C2	C946	A2	C959	C3	C972	A3	D903	C2	D916	C2	IC902	D2	L909	D4	Q911	B3	R908	C1	R921	D2	R933	C2	R945	A3	R957	D3	R969	B4	R981	B4	ZD904	A2		
C910	D1	C923	D3	C935	C3	C947	C3	C960	C3	C973	C4	D904	C2	D917	C3	IC903	D2	NTC901	C1	Q912	B2	R909	A4	R922	D3	R934	C2	R946	C2	R958	D3	R970	A4	R982	A4	ZD905	A3		
C911	C1	C924	D3	C936	B2	C948	C3	C961	C3	C974	B4	D905	B2	D918	C2	IC904	D3	Q901	D1	Q913	A2	R910	C4	R923	C4	R935	C2	R947	D4	R959	D3	R971	A3	R983	D2	ZD906	C4		



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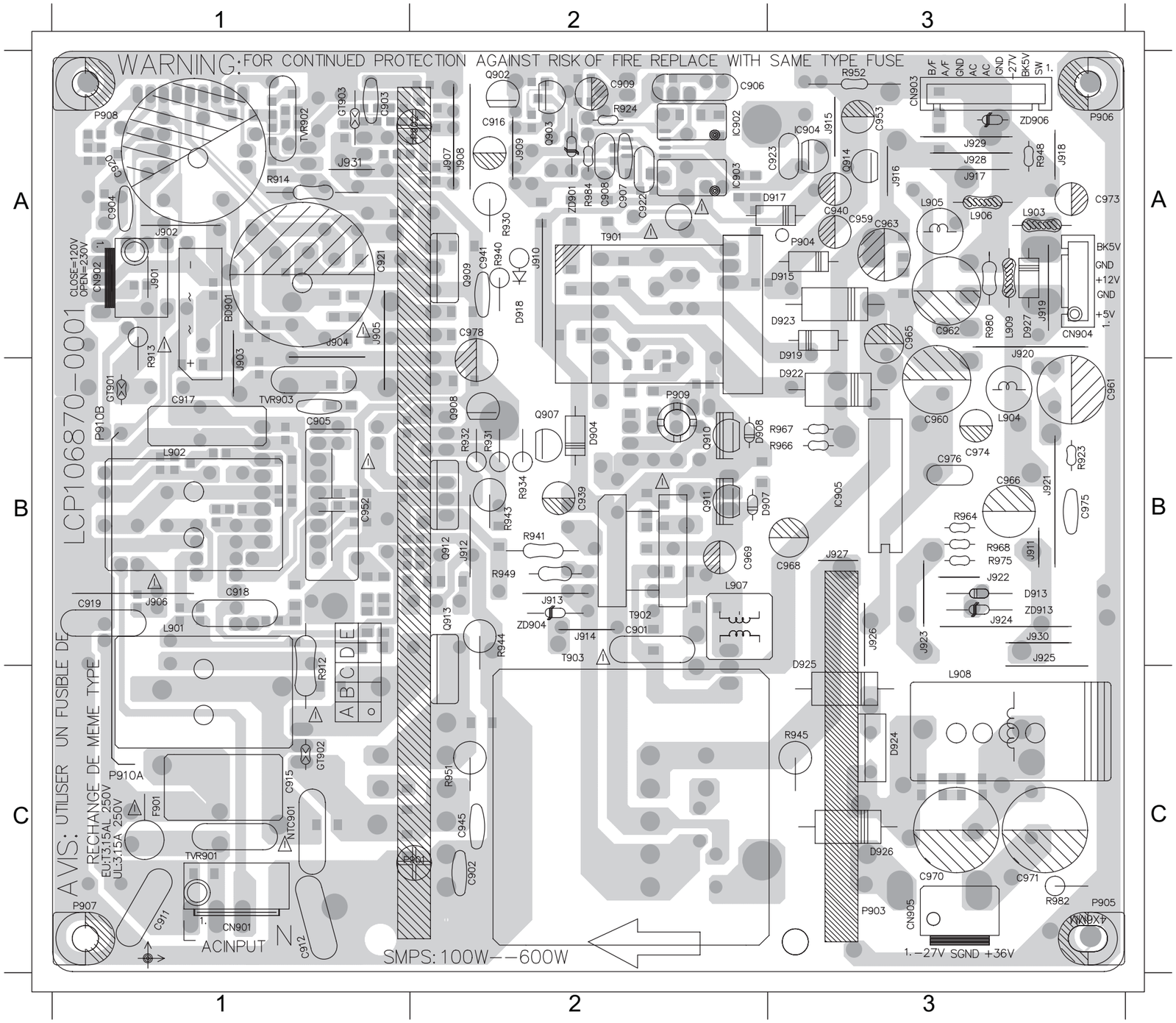
PCB LAYOUT - TOP VIEW

BD901	A1	C909	A2	C922	A2	C961	B3	C974	B3	D907	B2	D926	C3	J903	A1	J912	B2	J921	B3	J930	B3	L908	C3
C901	B2	C911	C1	C923	A3	C962	A3	C975	B3	D908	B2	D927	A3	J904	A1	J913	B2	J922	B3	J931	A1	L909	A3
C902	C2	C915	C1	C939	B2	C963	A3	C976	B3	D915	A3	F901	C1	J905	A1	J914	B2	J923	B3	L901	B1	NTC901	C1
C903	A1	C916	A2	C940	A3	C965	A3	C978	A2	D917	A3	GT902	C1	J906	B1	J915	A3	J924	B3	L902	B1	Q902	A2
C904	A1	C917	B1	C941	A2	C966	B3	CN901	C1	D918	A2	IC902	A2	J907	A2	J916	A3	J925	B3	L903	A3	Q903	A2
C905	B1	C918	B1	C945	C2	C968	B3	CN903	A3	D919	A3	IC903	A2	J908	A2	J917	A3	J926	B3	L904	B3	Q907	B2
C906	A2	C919	B1	C952	B1	C969	B2	CN904	A3	D922	B3	IC904	A3	J909	A2	J918	A3	J927	B3	L905	A3	Q908	B2
C907	A2	C920	A1	C959	A3	C971	C3	CN905	C3	D923	A3	IC905	B3	J910	A2	J919	A3	J928	A3	L906	A3	Q909	A2
C908	A2	C921	A1	C960	B3	C973	A3	D904	B2	D925	C3	J902	A1	J911	B3	J920	A3	J929	A3	L907	B2	Q910	B2

Q911	B2	R930	A2	R948	A3	R980	A3	ZD906	A3														
Q912	B2	R931	B2	R949	B2	R982	C3	ZD913	B3														
Q913	B2	R932	B2	R951	C2	R984	A2																
Q914	A3	R934	B2	R952	A3	T901	A2																
Q915	A1	R940	B2	R964	B3	T902	B2																
R912	C1	R941	B2	R966	B3	T903	C2																
R914	A1	R943	B2	R967	B3	TVR901	C1																
R923	B3	R944	B2	R968	B3	ZD901	A2																
R924	A2	R945	C2	R975	B3	ZD904	B2																



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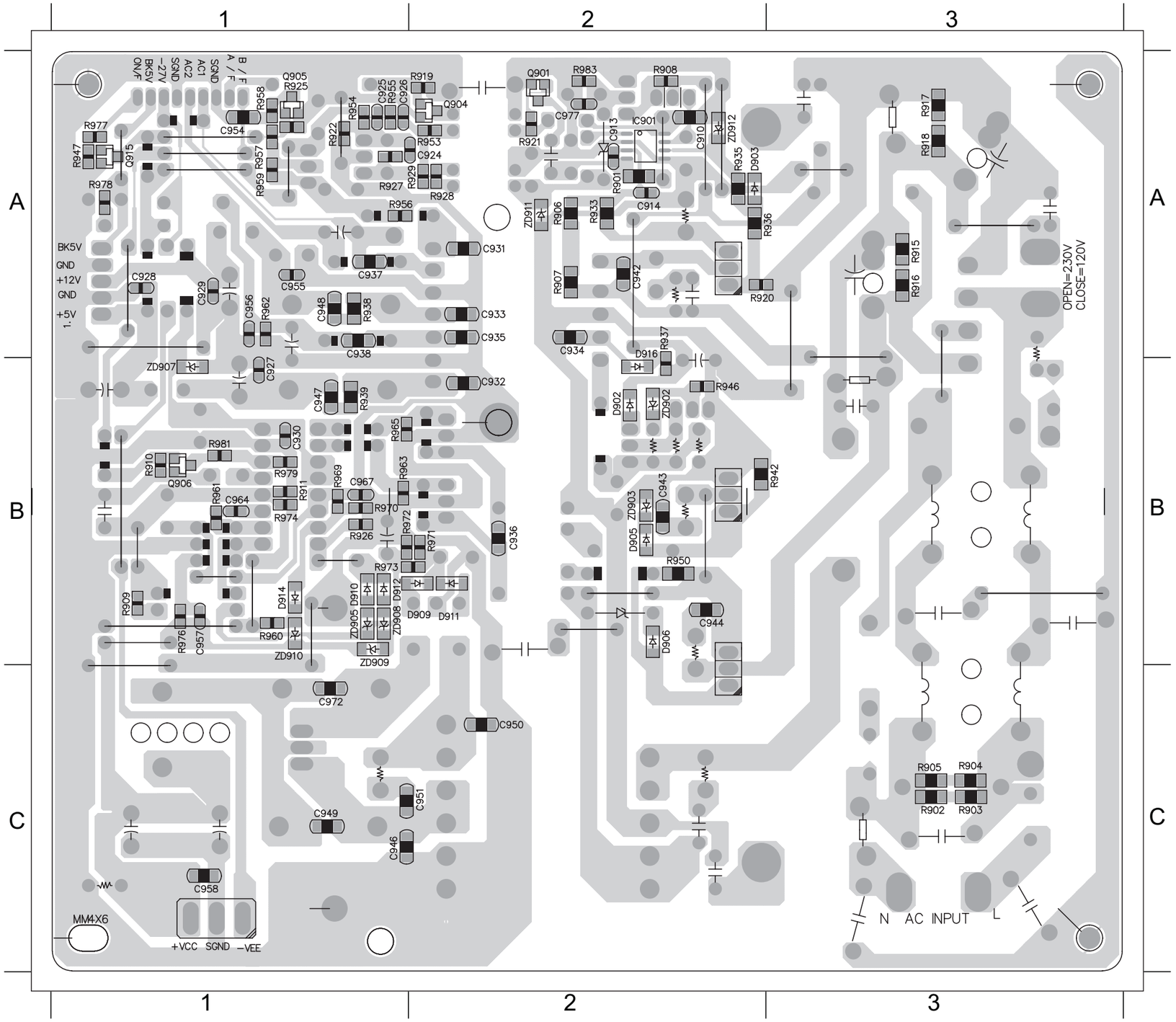
PCB LAYOUT - BOTTOM VIEW

C910	A2	C927	B1	C934	A2	C944	B2	C954	A1	C972	C1	D910	B1	Q904	A2	R905	C3	R915	A3	R922	A1	R935	A2	R947	A1	R958	A1	R969	B1	R977	A1	ZD903	B2
C913	A2	C928	A1	C935	A2	C946	C1	C955	A1	C977	A2	D911	B2	Q905	A1	R906	A2	R916	A3	R925	A1	R936	A2	R950	B2	R959	A1	R970	B1	R978	A1	ZD905	B1
C914	A2	C929	A1	C936	B2	C947	B1	C956	A1	D902	B2	D912	B1	Q906	B1	R907	A2	R917	A3	R926	B1	R937	A2	R953	A2	R960	B1	R971	B2	R979	B1	ZD907	B1
C915	A1	C930	B1	C937	A1	C948	A1	C957	B1	D903	A2	D914	B1	R901	A2	R908	A2	R918	A3	R927	A1	R938	A1	R954	A1	R961	B1	R972	B1	R981	B1	ZD908	B1
C924	A2	C931	A2	C938	A1	C949	C1	C958	C1	D905	B2	D916	A2	R902	C3	R909	B1	R919	A2	R928	A2	R939	B1	R955	A1	R962	B1	R973	B1	R983	A2	ZD909	B1
C925	A1	C932	B2	C942	A2	C950	C1	C964	B1	D906	B2	IC901	A2	R903	C3	R910	B1	R920	A2	R929	A2	R942	B2	R956	A1	R963	B1	R974	B1	R985	A1	ZD910	B1
C926	A1	C933	A2	C943	B2	C951	C1	C967	B1	D909	B2	Q901	A2	R904	C3	R911	B1	R921	A2	R933	A2	R946	B2	R957	A1	R965	B1	R976	B1	ZD902	B2	ZD911	A2



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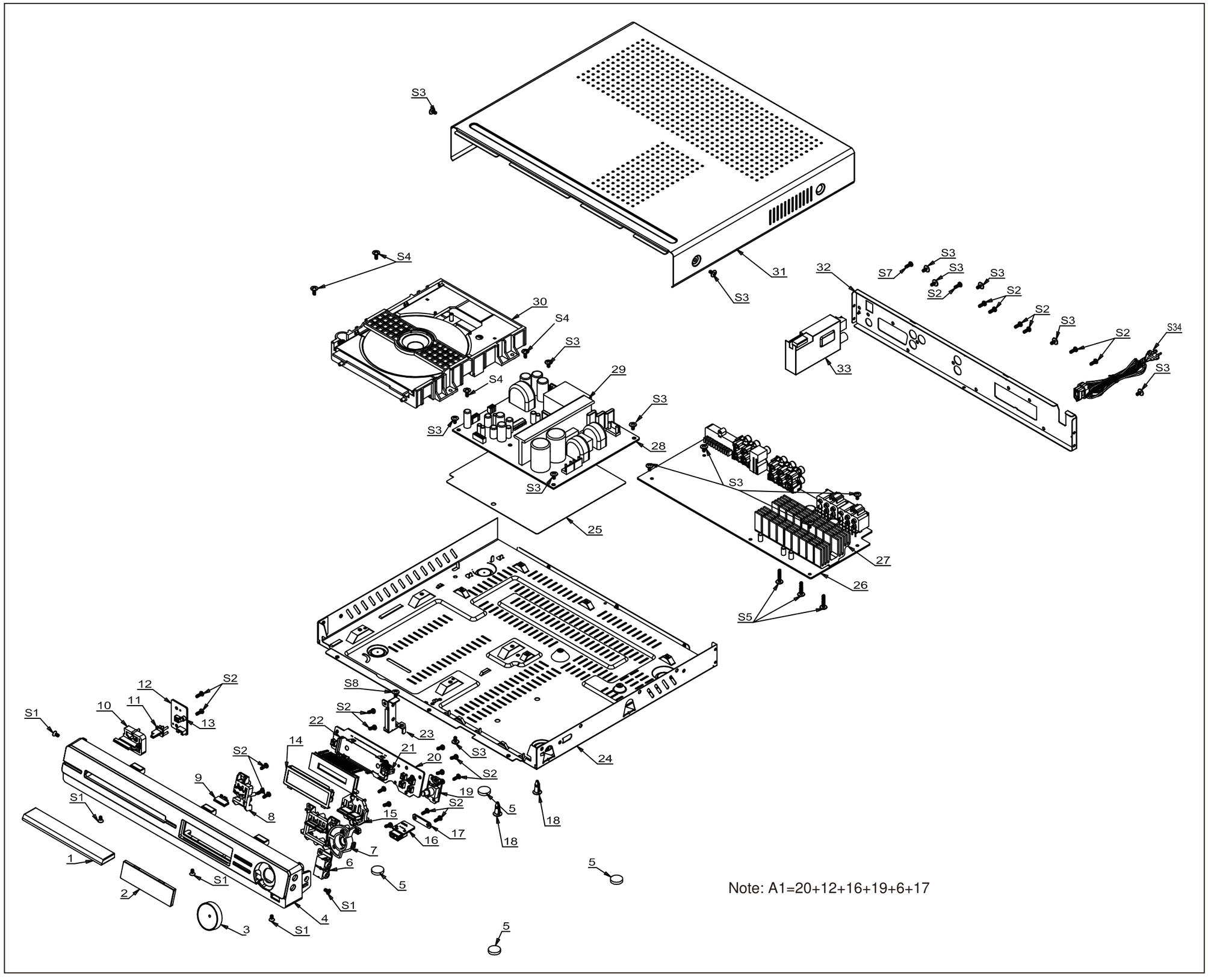
MECHANICAL EXPLODED VIEW



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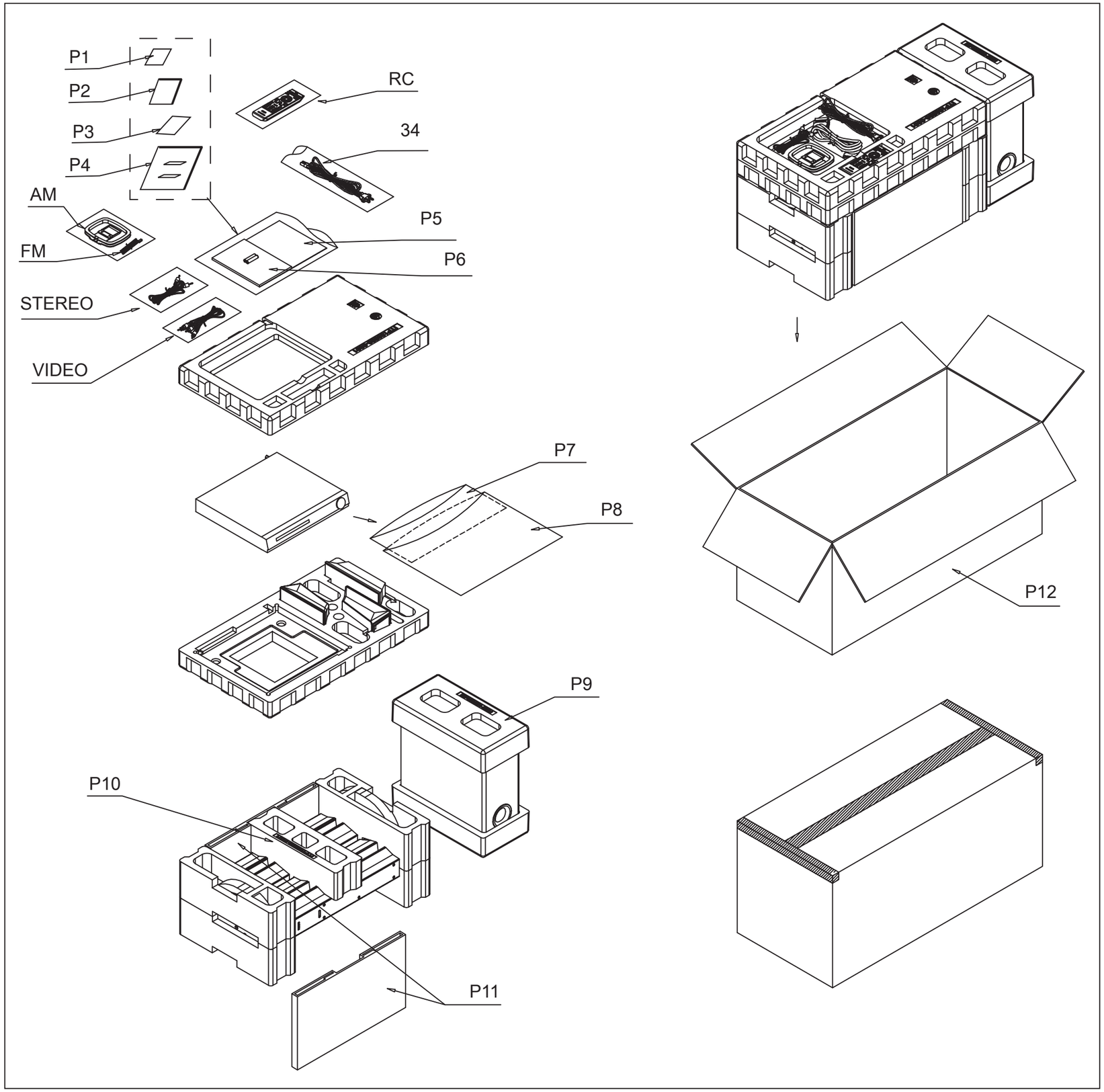
MECHANICAL PACKING VIEW



MECHANICAL PART LIST

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Loc.	12NC.	Description
MAIN		
1	996510015700	DVD DOOR HIPS
2	996510001640	DISPLAY LENS
3	996510012024	VOL KNOB
4	996510015701	FRONT PANEL HIPS
5	994000005305	RUBBER FOOT D14XT3.0MM W/ADV
7	996510012026	FUN BUTTON BASE ABS
8	996510001644	EJECT BUTTON BASE
9	996510012027	EJECT BUTTON ABS
10	996510012028	STANDBY BUTTON ABS
11	996510001258	STANDY LED LENS
15	996510012029	FUNCTION BUTTON ABS
24	996510015702	BOTTOM CAB
25	996510001648	POWER PCB PC
26	996510015726	MAIN PCB ASSY
28	996510015716	POWER PCB ASSY
30	996510010819	DVD LOADER
31	996510008742	TOP COVER
32	996510015703	BACK PANEL
33	996510001690	TUNER PACK
34	996510005069	POWER CORD
A1	996510015715	VFD+STDBY+USB+VOL+MIC/MP3+BRKT
AM	996510001621	LOOP ANT
FM	996500023583	FM ANTENNA 1000MM 1007#24 TC
V1	996510001623	FFC CABLE 10P 60MM
V1	996510007337	FFC CABLE 10P 60MM
VIDEO	996500013058	RCA CABLE 2P 1.2M
DVD LOADER		
DT	996500020250	TRAVERSE MECHANISM
LB	996510012492	LOADER BASE
V3	996510007319	FFC CABLE 24P 180MM
V3	996510013767	FFC CABLE 24P
SPEAKER		
RC	996510002652	REMOTE CONTROL
RFC	996510001599	RUBBER FOOT -CENTER SPK
RFF	996510003838	RUBBER FOOT - REAR
RFFL	996510001600	RUBBER FOOT-FRONT SPK
RFFR	996510001601	RUBBER FOOT - REAR SPK
RFS	996510010854	RUBBER FOOT -SUB
SPKC	996510015709	SPEAKER BOX -CENTER
SPKFL	996510015710	SPEAKER BOX - FRONT LEFT
SPKFR	996510015711	SPEAKER BOX - FRONT RIGHT
SPKRL	996510015712	SPEAKER BOX - REAR LEFT
SPKRR	996510015713	SPEAKER BOX - REAR RIGHT
STEREO	996510001598	STEREO CABLE
SUBW	996510015714	SUBWOOFER
PACKING		
P1	996510015035	PHILIPS ELIGIBLE CARD 12NC:
P10	996510015706	SUPPORT POLYFOAM
P11	996510015705	DIVIDER
P12	996510015704	CARTON
P2	996510009720	WARRANTY CARD
P3	996510008441	WARRANTY CARD
P4	996510009491	REGISTRATION CARD
P5	996510015708	QUICK START GUIDE SIZE:A4
P6	996510015707	OWN MANUAL SIZE:A5
P7	996510009717	SOFT BAG L430xW140xT0.5mm
P8	996510009716	POLY BAG L450xW550mmxT0.038mm

MAIN PCB		
C193	996510015727	CHIP CAP 0.1uF100V 10% X7R1206
C193	996510015728	CHIP CAP 0.1uF100V 10% X7R1206
C194	996510015727	CHIP CAP 0.1uF100V 10% X7R1206
C194	996510015728	CHIP CAP 0.1uF100V 10% X7R1206
C502	996510015727	CHIP CAP 0.1uF100V 10% X7R1206
C502	996510015728	CHIP CAP 0.1uF100V 10% X7R1206
C509	996510015729	COND METAL 0.47uF 100V 5%
C509	996510015730	COND METAL 0.47uF 100V 5%
C521	996510015727	CHIP CAP 0.1uF100V 10% X7R1206
C521	996510015728	CHIP CAP 0.1uF100V 10% X7R1206
C529	996510015729	COND METAL 0.47uF 100V 5%
C529	996510015730	COND METAL 0.47uF 100V 5%
C530	996510015729	COND METAL 0.47uF 100V 5%
C530	996510015730	COND METAL 0.47uF 100V 5%
C542	996510015727	CHIP CAP 0.1uF100V 10% X7R1206
C542	996510015728	CHIP CAP 0.1uF100V 10% X7R1206
C549	996510015729	COND METAL 0.47uF 100V 5%
C549	996510015730	COND METAL 0.47uF 100V 5%
C551	996510015727	CHIP CAP 0.1uF100V 10% X7R1206
C551	996510015728	CHIP CAP 0.1uF100V 10% X7R1206
C559	996510015729	COND METAL 0.47uF 100V 5%
C559	996510015730	COND METAL 0.47uF 100V 5%
C560	996510015729	COND METAL 0.47uF 100V 5%
C560	996510015730	COND METAL 0.47uF 100V 5%
CN101	996510012539	CONNECTOR 10 PIN PITCH=2.0mm
CN102	996500015859	CONNECTOR 4PIN P2.0MM
CN103	996510012497	FPC/FFC CONN. 10P
CN104	996500015900	CONNECTOR 3 PIN P=2.0MM
CN301	996500015901	CONNECTOR 6 PIN P=2.0MM
CN802	996500015901	CONNECTOR 6 PIN P=2.0MM
CN803	996500015895	CONNECTOR 5 PIN P=2.0MM
D101	996510010358	DIODE 1N4007
D102	996510010358	DIODE 1N4007
D103	996510010358	DIODE 1N4007
D104	996510010358	DIODE 1N4007
IC101	996510010359	IC 256P MT1389FXE/HD LQFP
IC102	996510004290	IC 48P EN29LV320B-70TCP
IC102	996510004291	IC 48P KH29LV320CBTC-70G
IC103	994000005465	IC 54P EW484M1644VTA-6F
IC103	996500032752	IC 54P HY57V641620ETP-7
IC103	996510004115	IC 54P AS81F641642C-6P TSOPII
IC103	996510004635	IC 54P K4S641632K-UC60 TSOPII
IC103	996510009895	IC 54P A641604L-6T TSOP II
IC104	994000005209	IC 3P AZ809NSTR-E1 SOT23
IC104	996500015890	IC IMP809 SOT23 2.93V
IC105	996510004289	IC 8P TU24C16CS2 SOIC TURBO
IC302	996500041286	IC 8P 4558
IC303	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC304	996510012503	IC 16P CD4051BM SOIC TI ANALOG
IC305	994000005212	IC 16 PIN CS5340-CZ
IC306	996500029611	IC 8P CO4558A SO8 CERAMATE LF
IC306	996500041286	IC 8P 4558
IC307	996500029611	IC 8P CO4558A SO8 CERAMATE LF
IC307	996500041286	IC 8P 4558
IC401	996510004293	IC 64P STA308A TQFP ST
IC501	996510012541	IC 36P STA518 PSSO ST 40V 3.5A
IC502	996510012541	IC 36P STA518 PSSO ST 40V 3.5A
IC801	994000005214	IC 28P V5888S
IC801	996510010380	Motor Drive IC
JK1103	996510012542	RCA JACK4PRED-GRN/YEL-BLUW/GND
JK301	996510004283	RCA JACK 4P AUDIO
JK501	996510012529	SPKJACK 6PGY-BLU-PURPLESD-0103
JK501&501A	996510013837	GPSPK JAC12P RD-WT-GRN-GRY-BLU
JK501A	996510012528	SPKJACK6PRED-WHT-GRNSD-0103-01
L501	996500016695	30UH 15% 1KHZ 0.25V 2A
L502	996500016695	30UH 15% 1KHZ 0.25V 2A
L503	996500016695	30UH 15% 1KHZ 0.25V 2A
L504	996500016695	30UH 15% 1KHZ 0.25V 2A
L505	996500016695	30UH 15% 1KHZ 0.25V 2A
L506	996500016695	30UH 15% 1KHZ 0.25V 2A
L507	996500016695	30UH 15% 1KHZ 0.25V 2A
L508	996500016695	30UH 15% 1KHZ 0.25V 2A
L511	996500016692	20UH D0.5MM 4PIN
L514	996500016692	20UH D0.5MM 4PIN
Q101	996510012508	XISTR PNP TIP42C
Q101	996510012543	PNP TRANSISTOR TIP42CTO-220UTC
Q102	996500026946	XISTR PNP 2SB772P/Q NEC PB<10
Q103	994000000921	XISTR PNP 2SA812 HFE:200-400
Q104	996510000615	XISTR NPN 2SC945P
Q107	996500028742	XISTR NPN 2SD882P PB<1000PPM
Q108	994000000915	XISTR NPN 2SC1623
Q110	994000000915	XISTR NPN 2SC1623
Q111	996510004282	XISTR NPN SMT (2SC945)
Q301	996510000578	XISTR NPN KTC3875-Y
Q302	994000000915	XISTR NPN 2SC1623
Q303	994000000915	XISTR NPN 2SC1623
Q307	994000000915	XISTR NPN 2SC1623
Q401	996510000578	XISTR NPN KTC3875-Y
Q402	994000000915	XISTR NPN 2SC1623
Q403	994000000915	XISTR NPN 2SC1623
Q801	996500026927	XISTR PNP 2SB1132RT100 ROHM HF
Q802	996500026927	XISTR PNP 2SB1132RT100 ROHM HF
Q803	994000000915	XISTR NPN 2SC1623
Q804	996510004117	FET 2SK3018 30V/0.1A SC-70
Q805	996510004117	FET 2SK3018 30V/0.1A SC-70
R162	996510015732	RES. 680 OHM 2W 5% MO
R163	996510015732	RES. 680 OHM 2W 5% MO
XL101	994000005201	CRYST 27MHZ +/-20PPM H=3.5MM
XL101	996500017371	27.0000MHZ HC-49US +/-20PPM
ZD102	996500026940	DIODE ZENR 11.9-12.4V 0.5W
ZD104	996510012545	DIODEZENR 5.3-5.5V 0.5WHITACHI
ZD105	996510012545	DIODEZENR 5.3-5.5V 0.5WHITACHI

POWER PCB		
BD901	996500041295	BRIDGE RS406 4A 600V UL
C901	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C906	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C908	996510010365	COND MYLAR 0.0018uF 100V 5%
C911	994000005344	CAP.SAFETY Y1 560PF 400V 10%
C915	996510012548	GOND SAFETY 0.47uF 275V 10% X2
C917	994000005343	COND SAFETY 0.22UF 275V 20%
C918	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C919	996500027115	CAP.SAFTY Y1 102PF 250V 20% Y5
C920	996500041298	CAP.E 100uF 250V 105' 20%
C921	996500041298	CAP.E 100uF 250V 105' 20%
C922	996510004633	COND MYLAR 0.1 uF 100V 5%
C923	996500016360	COND MYLAR 0.22UF 100V 5%
C939	996510012511	COND ELECT 2.2 uF 100V
C940	996510012511	COND ELECT 2.2 uF 100V
C941	996510012473	COND DISC 2200 pF 1KV 10%
C945	996500020264	COND DISC 470PF 1KV 10%
C952	996500027124	COND METAL 1.5UF 250V DC /-10
C976	996500016357	COND MYLAR 0.001UF 100V 5%
CN901	996500015936	CONNECTOR 4PIN P=3.96MM
CN903	996500015922	CONNECTOR 9PIN P=2.0MM
CN904	996500015863	CONNECTOR B5B-XH-A 5 PIN
CN905	996500019399	CONNECTOR 3P CL3962WVO
CN905	996510012549	CONN 3P P=3.96mm 180' NICKEL
D904	994000000941	DIODE HER104 1A 300V 50NS
D907	996500026949	DIODE SW 1N4148 PB<1000PPM
D908	996500026949	DIODE SW 1N4148 PB<1000PPM
D915	994000000941	DIODE HER104 1A 300V 50NS
D917	994000000941	DIODE HER104 1A 300V 50NS

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D918	994000000938	DIODE PR1507 1.5A 1000V
D919	994000000941	DIODE HER104 1A 300V 50NS
D922	994000005249	DIODE SB360 3A 60V DO-201AD
D923	994000000943	DIODE UF3003 3A 200V
D925	996510015717	DIODE HER504 DO-201AD 5A300VHI
D926	996510015717	DIODE HER504 DO-201AD 5A300VHI
D927	996510004297	IN5819 1A 28V SCHOTTKY
F901	996510004105	FUSE T3.15AL 250V
IC901	996510004113	IC 8P AP3843GMTR-E1
IC902	994000000946	OPTICAL SENSOR 4P
IC903	994000000946	OPTICAL SENSOR 4P
IC904	994000000952	IC 3PIN TL431
IC904	996500029312	IC 3 PIN TL431 TO-92 CHANG JI
IC905	996510008293	IC 16P AZ7500BP-E1
L901	994000005233	COMMON COIL 22MH
L902	994000005233	COMMON COIL 22MH
L904	996500016694	6UH 13.5TS 2UEW
L905	996500016694	6UH 13.5TS 2UEW
L907	996510015718	TOROIDCOIL S1=2TSD=0.65mmx2P=3
L908	996510015719	COMMONCOIL 75UH 10% 1KHZ/0.25V
Q901	996510004282	XISTR NPN SMT (2SC945)
Q902	996510000615	XISTR NPN 2SC945P
Q903	996510012518	TRIACS 3P MCR100-6 TO-92 CJ
Q904	996510004282	XISTR NPN SMT (2SC945)
Q905	996510004282	XISTR NPN SMT (2SC945)
Q906	996510004282	XISTR NPN SMT (2SC945)
Q907	996510004298	XISTR NPN 2N5551B TO-92
Q908	996510004298	XISTR NPN 2N5551B TO-92
Q909	994000005348	MOSFET STF3NK80Z N-CH 2.5A
Q909	996510015720	MOSFET2N60L-A-TA3TTO-2202A600V
Q910	996510010367	XISTR PNP 2SA733Q,P TO-92
Q911	996510010367	XISTR PNP 2SA733Q,P TO-92
Q912	996510015721	MOSFETFQPF5N60CTO220FFAIRCHILD
Q913	996510015721	MOSFETFQPF5N60CTO220FFAIRCHILD
Q914	996510012475	XISTR PNP 2N5401B TO-92 J.
Q915	996510004282	XISTR NPN SMT (2SC945)
R930	996510012520	RES. 1 OHM 2W 5% MO
R943	996510012519	RES. 120 OHM 3W 5% MOF
R944	996510012519	RES. 120 OHM 3W 5% MOF
R945	996510012519	RES. 120 OHM 3W 5% MOF
R951	996510012519	RES. 120 OHM 3W 5% MOF
T901	996510012476	SW TRANS EEL-19 DW:KB486-8220
T901	996510012477	SW TRANS EEL-19 5+7PIN LIEDOWN
T902	996510015722	SW TRANS EE-16 DW:KB486-8217
T902	996510015723	SW TRANS EE-16 5+5PIN
T903	996510015724	SW TRANS ERL-28 DW:KB486-8219
T903	996510015725	SW TRANS ERL-28 6+6PIN
ZD901	996500026942	DIODE ZENR 5.0-5.2V 0.5W
ZD904	996500027137	DIODE ZENR 17.5-18.3V 0.5W PB<
ZD906	996510010364	DIODE ZENER 5.32-5.88V 0.5W
ZD913	996500027138	DIODE ZENR 3.8-4.0V 0.5W

VFD+STDBY+USB+VOL+MIC/MP3+BRKT

D202	996500026949	DIODE SW 1N4148 PB<1000PPM
D203	996500026949	DIODE SW 1N4148 PB<1000PPM
IC200	994000005266	IC 52P V63111 QFP
Q200	994000000921	XISTR PNP 2SA812 HFE:200-400
SN200	994000005472	IRT RECEIVER IRM-2638AF4
XL200	996510012536	RES CERAMIC 455KHZ ZTB455ET4C
ZD200	996510010364	DIODE ZENER 5.32-5.88V 0.5W
JK1	996500028774	PHONE JACK D3.5 7 PIN BLACK
JK2	996500028774	PHONE JACK D3.5 7 PIN BLACK

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REVISION LIST

Version 1.0
*Initial release