

Service  
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**Service**



# Service Manual



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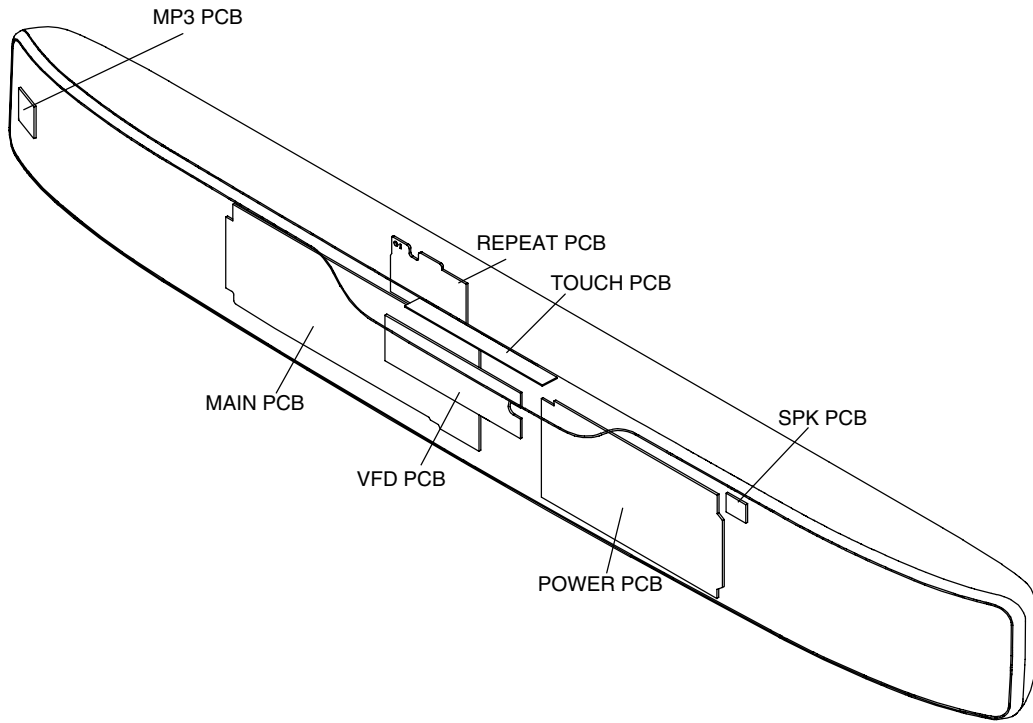
GB 3139 785 35790

Version 1.0



# PHILIPS

# LOCATION OF PCB BOARDS



## VERSION VARIATION:

Type/Versions	HTS7111
<b>Features</b>	<b>/12</b>
Output Power - 300W	X
Voltage (110-240V)	X
Music iLink	X

## REPAIR SCENARIO MATRIX:

Type/Versions	HTS7111
<b>Board in used</b>	<b>/12</b>
MAIN+HDMI+VFD+MP3+SPK Board	C
Touch Board	C
Power Board	C

\*Bd = Board Level Replacement

\*C = Component Level Repair

# SPECIFICATIONS

## ***Amplifier***

---

Total output power:  
 Europe and Asia .....300W RMS (30%THD)  
 Latin America..... 224W RMS (10% THD)  
 Frequency response..... 20 Hz-20 kHz /  $\pm 3$  dB  
 Signal-to-noise ratio..... > 65 dB (CCIR) /(A-weighted)  
 Input sensitivity:  
 AUX ..... 250 mV  
 Music iLink..... 50 mV

## ***Audio***

---

S/PDIF Digital audio input:  
 Coaxial..... IEC 60958-3  
 Optical ..... TOSLINK

## ***Main Unit***

---

Power supply ..... 110-240 V~, 50-60 Hz  
 Power consumption ..... 55 W  
 Standby power consumption .....  $\leq 1$  W  
 Center speaker:  
 Speaker impedance..... 6 ohm  
 Speaker drivers ..... 2 x 64 mm (2.5") full range  
 Frequency response: ..... 150 Hz-20 kHz  
 Front/Rear speakers:  
 Speaker impedance..... 3 ohm  
 Speaker drivers ..... 4 x 64 mm (2.5") full range  
 Frequency response..... 150 Hz-20 kHz  
 Dimensions (WxHxD): ..... 945 x 108 x 86 mm  
 Weight ..... 3.82 kg

## ***Subwoofer***

---

Output power ..... 80W RMS (30% THD)  
 Impedance..... 6 ohm  
 Speaker drivers ..... 165 mm (6.5") woofer  
 Frequency response ..... 20 Hz-150 Hz  
 Dimensions (WxHxD) ..... 192 x 447 x 253mm  
 Weight ..... 4.4 kg  
 Cable length ..... 3 m

## ***Wall Mount***

---

Dimensions (WxHxD) ..... 80 x 80 x 15mm  
 Weight ..... 0.08 kg/each

## ***Remote control batteries***

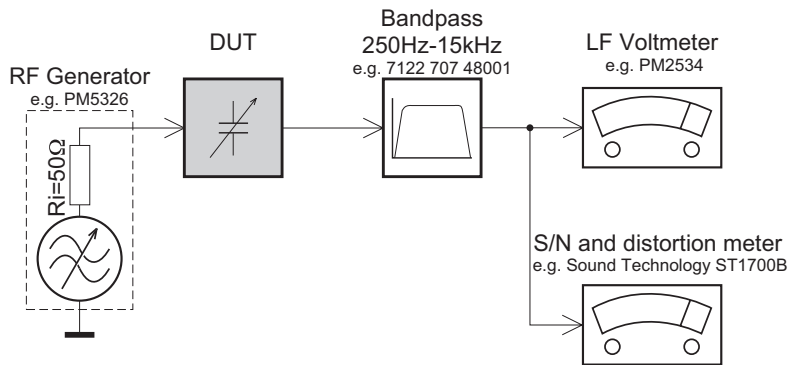
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2 x AAA-R03-1.5 V

Specifications subject to change without prior notice.

# MEASUREMENT SETUP

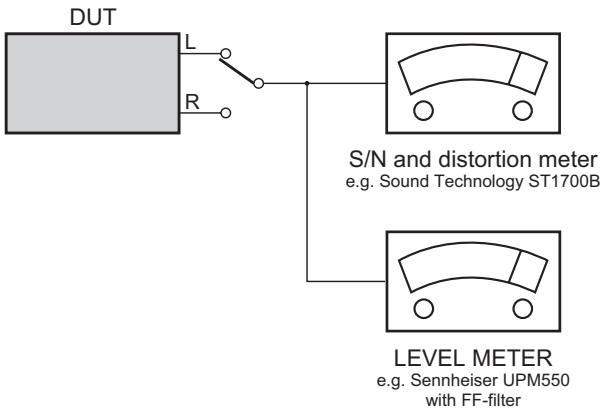
## Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilotone (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

**GENERAL**

**SERVICE PACKAGE**

**DISMOUNTING**

VACUUM PISTON  
4822 395 10082

SOLDERING IRON  
e.g. WELLER solder tip PT-H7

SOLDERING IRON  
SOLDER WICK  
4822 321 40042

e.g. A PAIR OF TWEEZERS

HEATING HEATING

SOLDERING IRON  
SOLDER WICK

CLEANING

A

B

C

**MOUNTING**

e.g. A PAIR OF TWEEZERS

SOLDERING IRON  
SOLDER  
ø0.5-0.8mm

PRESSURE

SOLDERING TIME  
< 3 sec./side

SOLDERING IRON  
SOLDER  
ø0.5-0.8mm

PRESSURE

A

B

**EXAMPLES**

CORRECT

SOLDERING IRON

NO!

**PRECAUTIONS**

SOLDERING IRON

CORRECT

COPPER TRACK

SOLDERING IRON

CHIP COMPONENT

**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.

**(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 kann 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.

**(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 hetzelfde potentiaal.

**(I) AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridotta 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  $\Delta$ .

**(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  $\Delta$ .

**(F)**

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

Less composants de sécurité sont marqués  $\Delta$ .

**(D)**

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol  $\Delta$  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.

Componenti di sicurezza sono marcati con  $\Delta$ .

**(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 spårren är urkopplad. Betrakta ej strålen.

**(SF) Varoitus !**

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alltiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

**(DK) Advarsel !**

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse 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.

### IDENTIFICATION:

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.

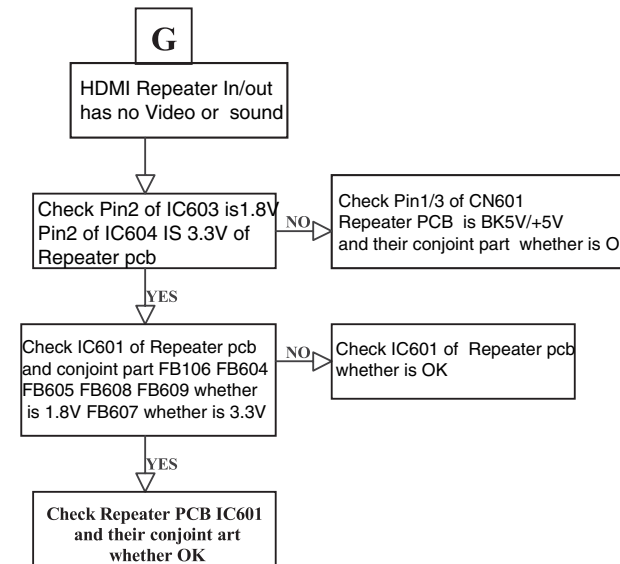
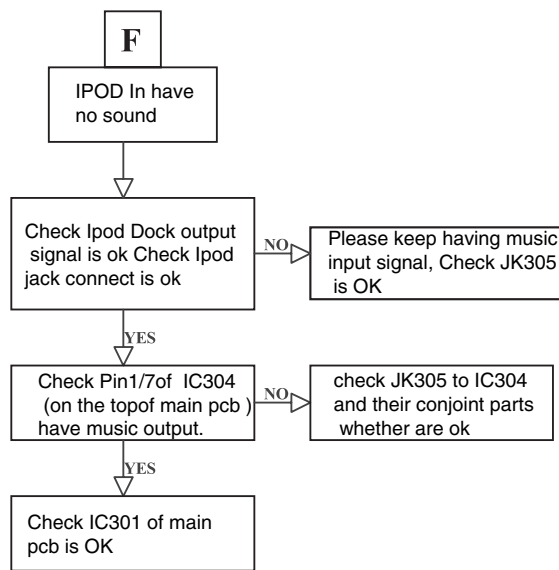
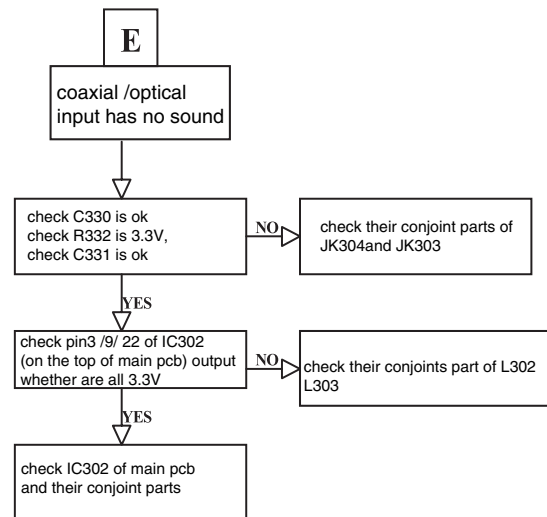
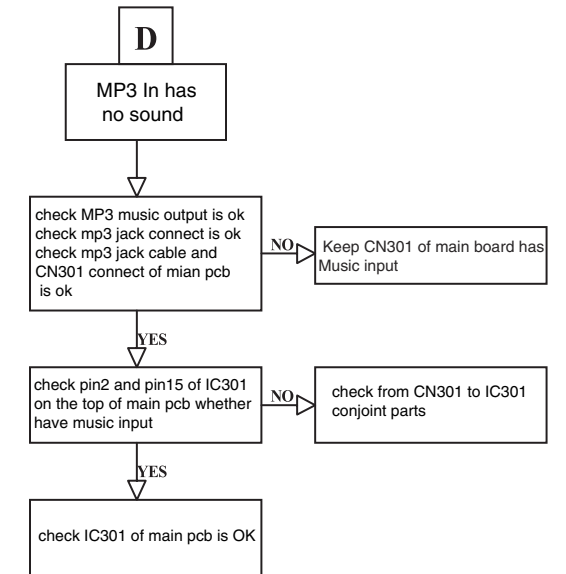
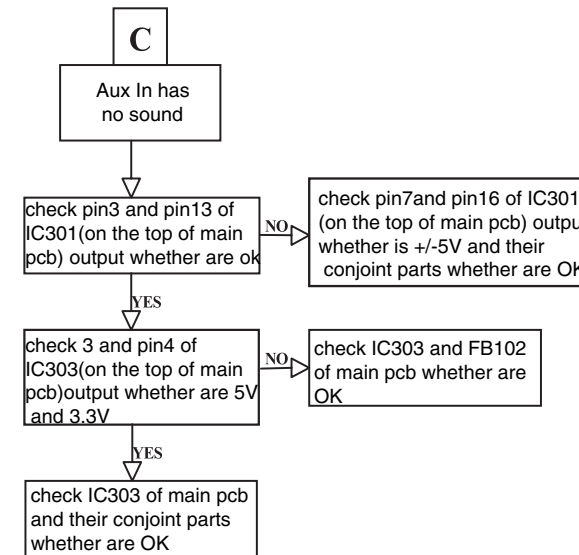
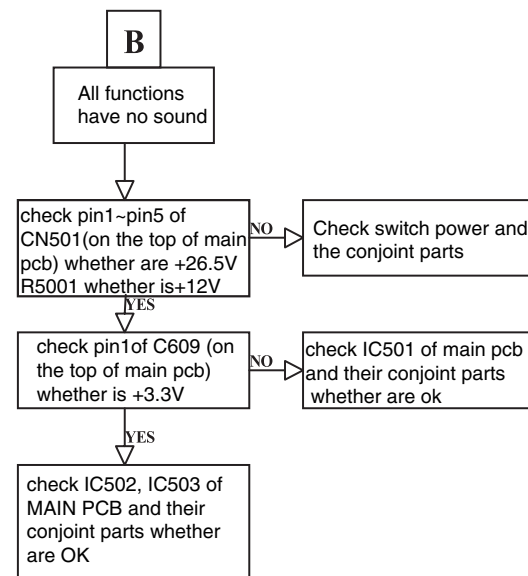
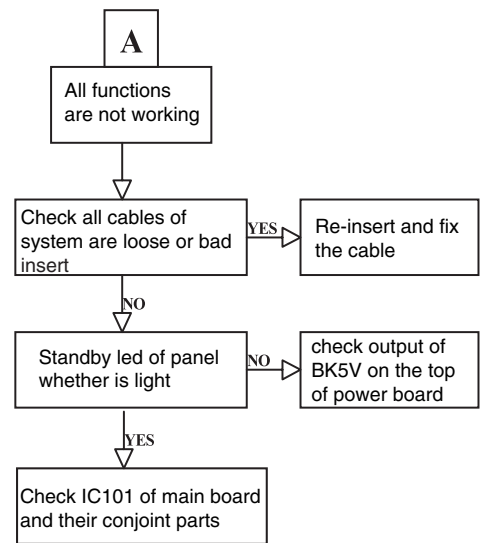
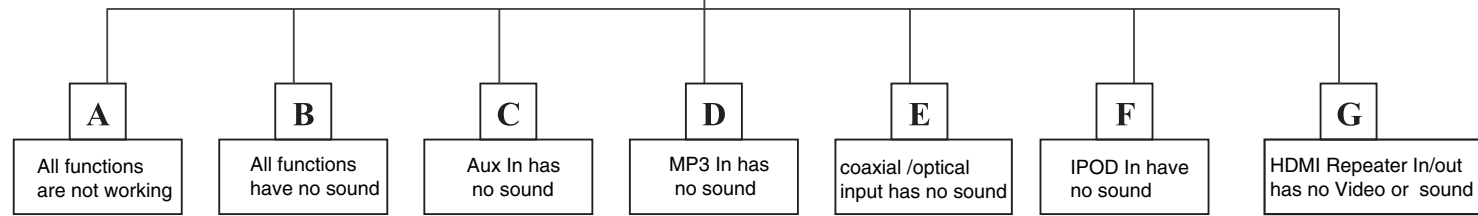
Do not re-use BGAs at all.

- 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](http://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.

# MAIN UNIT REPAIR CHART





# DISASSEMBLY INSTRUCTIONS

## Dismantling of the Rear Cover

1) Loosen 13 screws "A" to move the Rear Cover as shown in figure 1.

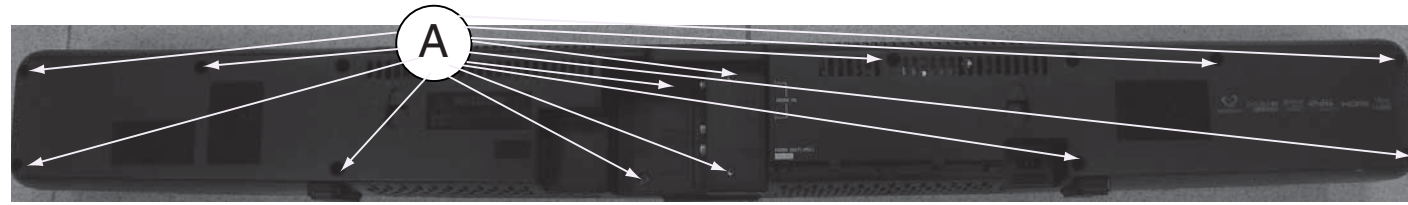


Figure 1

## Dismantling of the SPK Board

1) Loosen 2 screws "B" to remove the SPK Board as shown in figure 2.

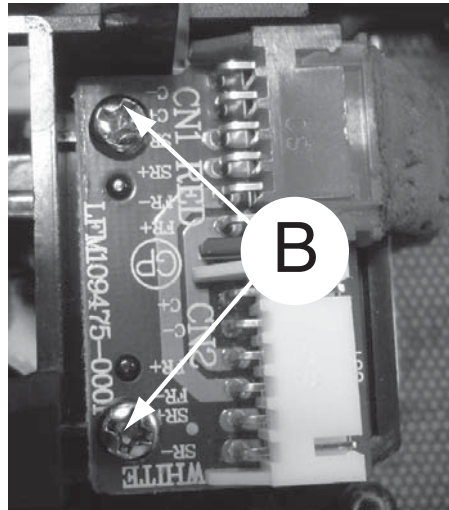


Figure 2

## Dismantling of the Power Board

1) Loosen 4 screws "C" to remove the Power Board as shown in figure 3.

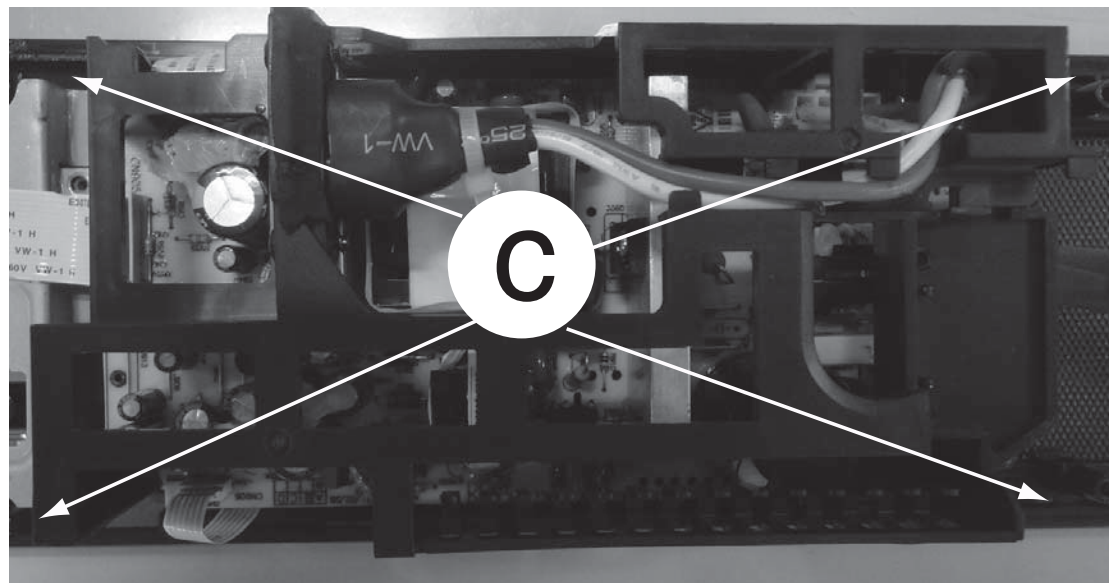


Figure 3

## Dismantling of the HDMI Repeat Board

1) Loosen 4 screws "D" to remove the HDMI Repeat Board as shown in figure 4.

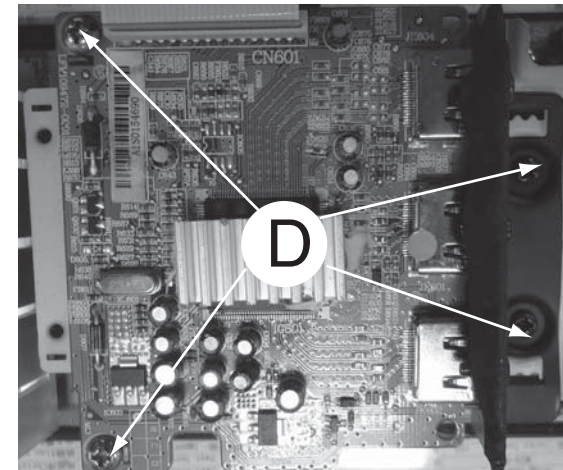


Figure 4

## Dismantling of the Main Board

1) Loosen 3 screws "E" at the bracket as shown in figure 5.  
2) Loosen 7 screws "F" on the top of Main Board as shown in figure 6.

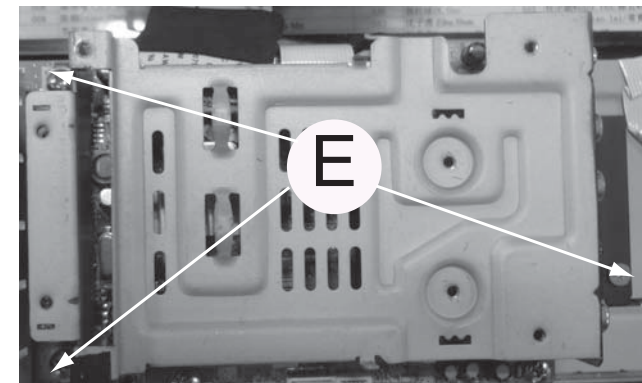


Figure 5

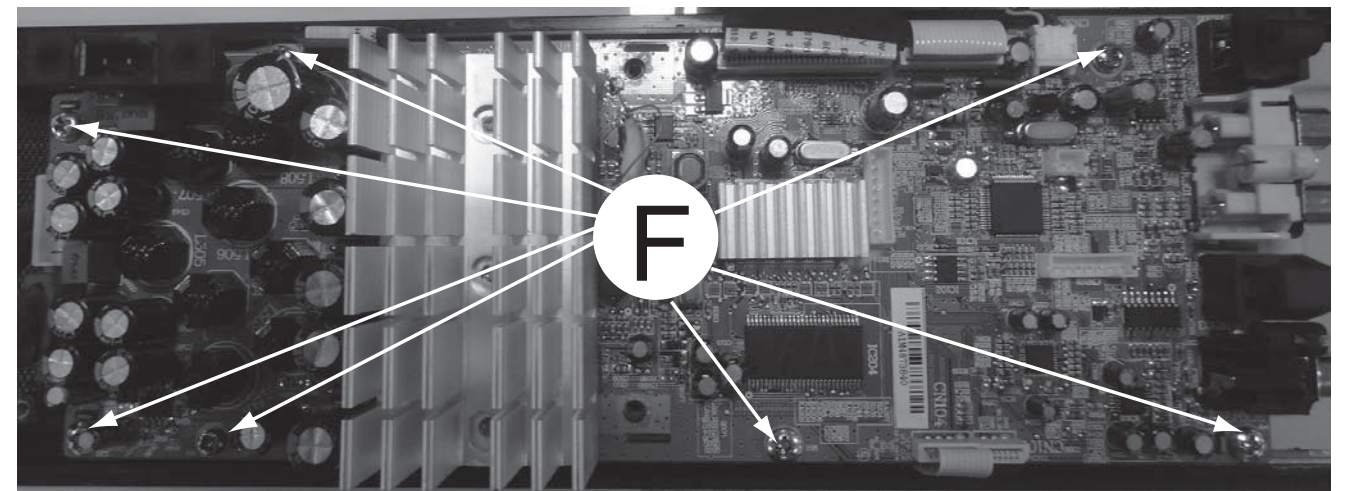


Figure 6



**Dismantling of the VFD Board**

- 1) Loosen 2 screws "G" at the bracket as shown in figure 7.
- 2) Loosen 4 screws "H" to remove the VFD as shown in figure 8.

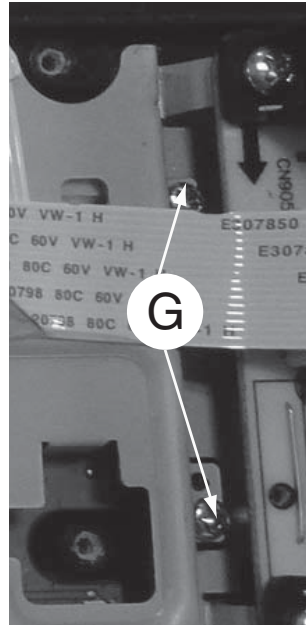


Figure 7

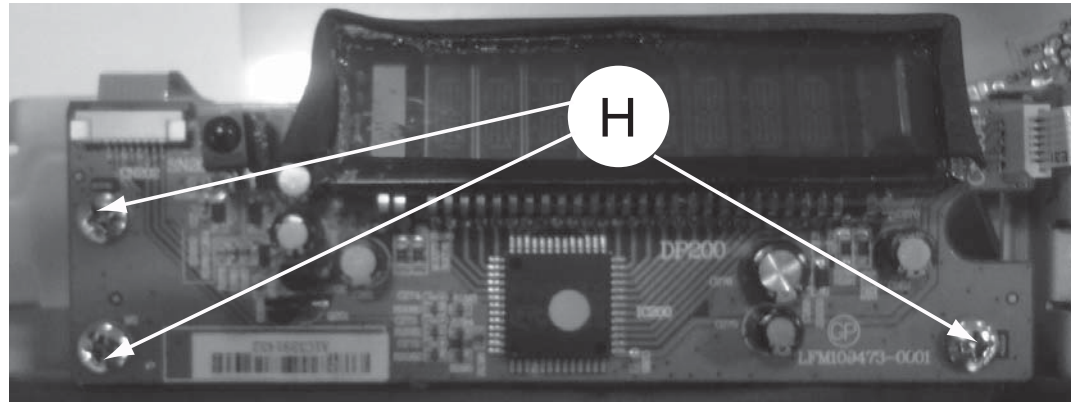


Figure 8

**Dismantling of the MP3 Board**

- 1) Loosen 2 screws "I" on the top of MP3 Board as shown in figure 9.

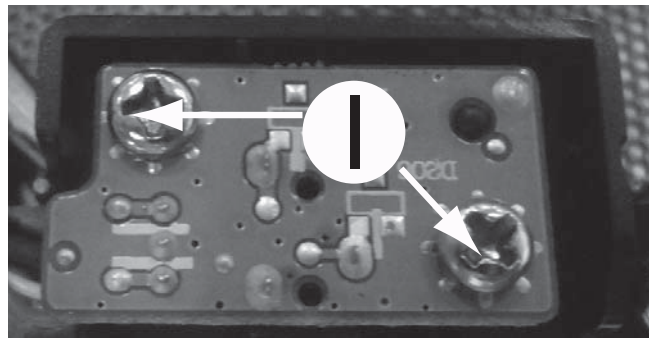


Figure 9

**Dismantling of the TOUCH Board**

- 1) Loosen 2 screws "J" at the bracket as shown in figure 10.
- 2) Loosen 2 screws "K" at the bracket as shown in figure 11.

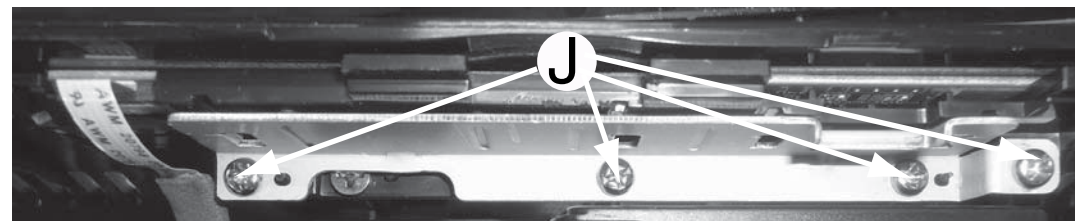


Figure 10

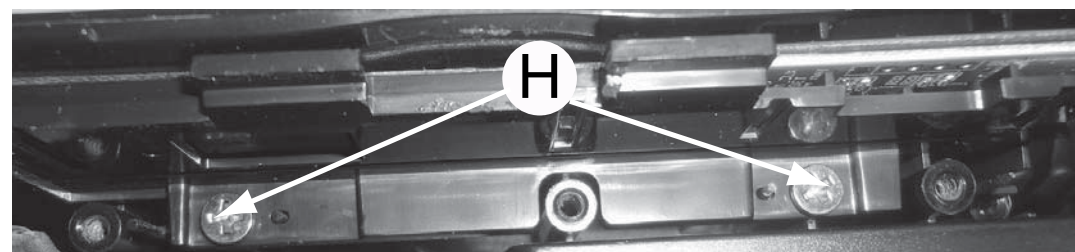
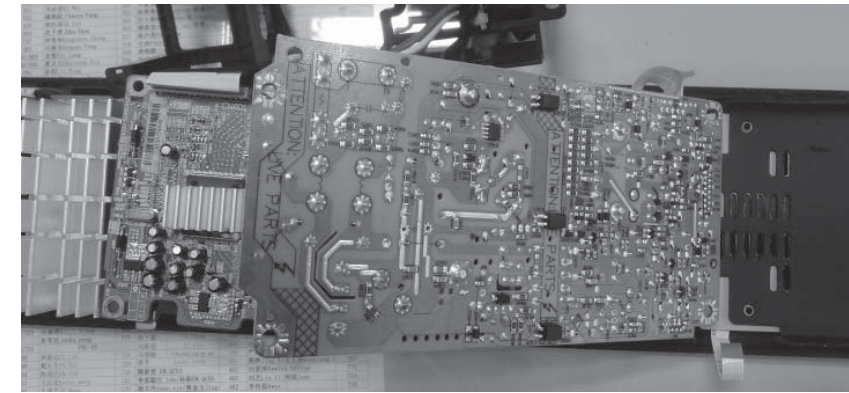


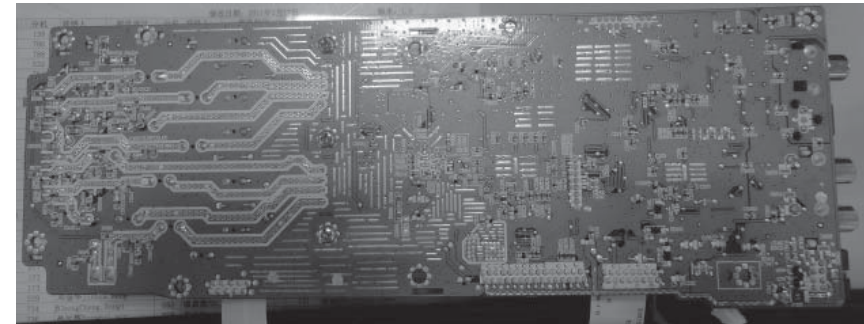
Figure 11

**SERVICE POSITIONS**

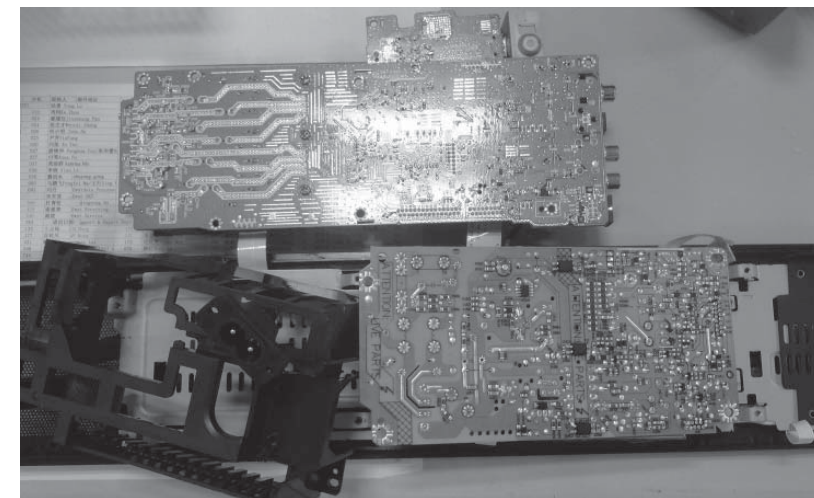
Service Position A - Power Board

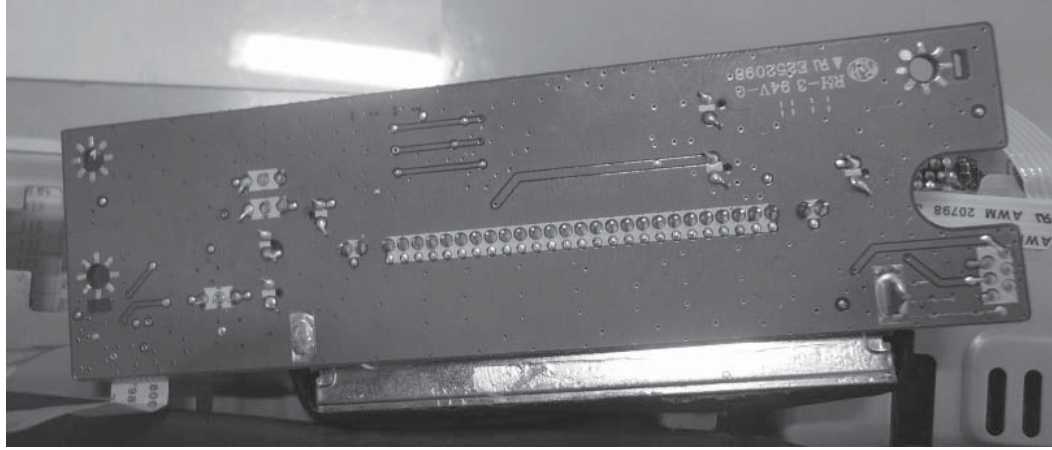


Service Position B - Mian Board

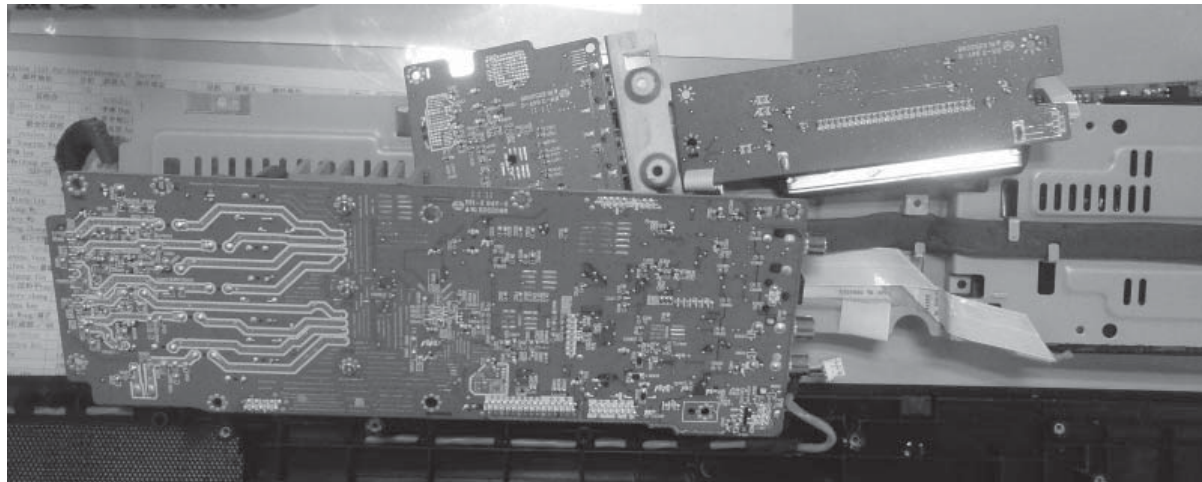


Service Position C- Mian & Power & HDMI Repeat Boards





Service Position E- Mian & VFD & HDMI Repeat Boards

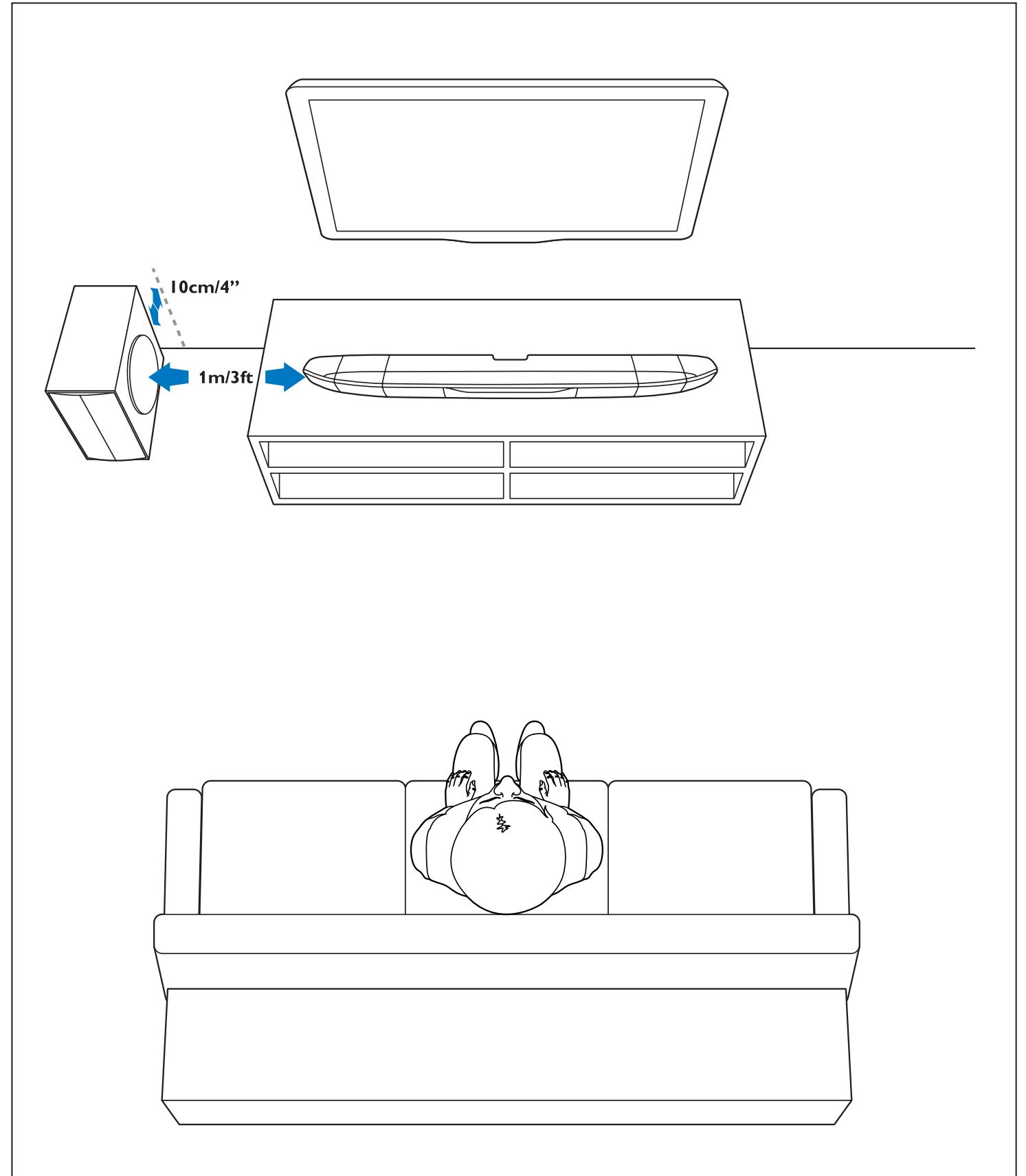
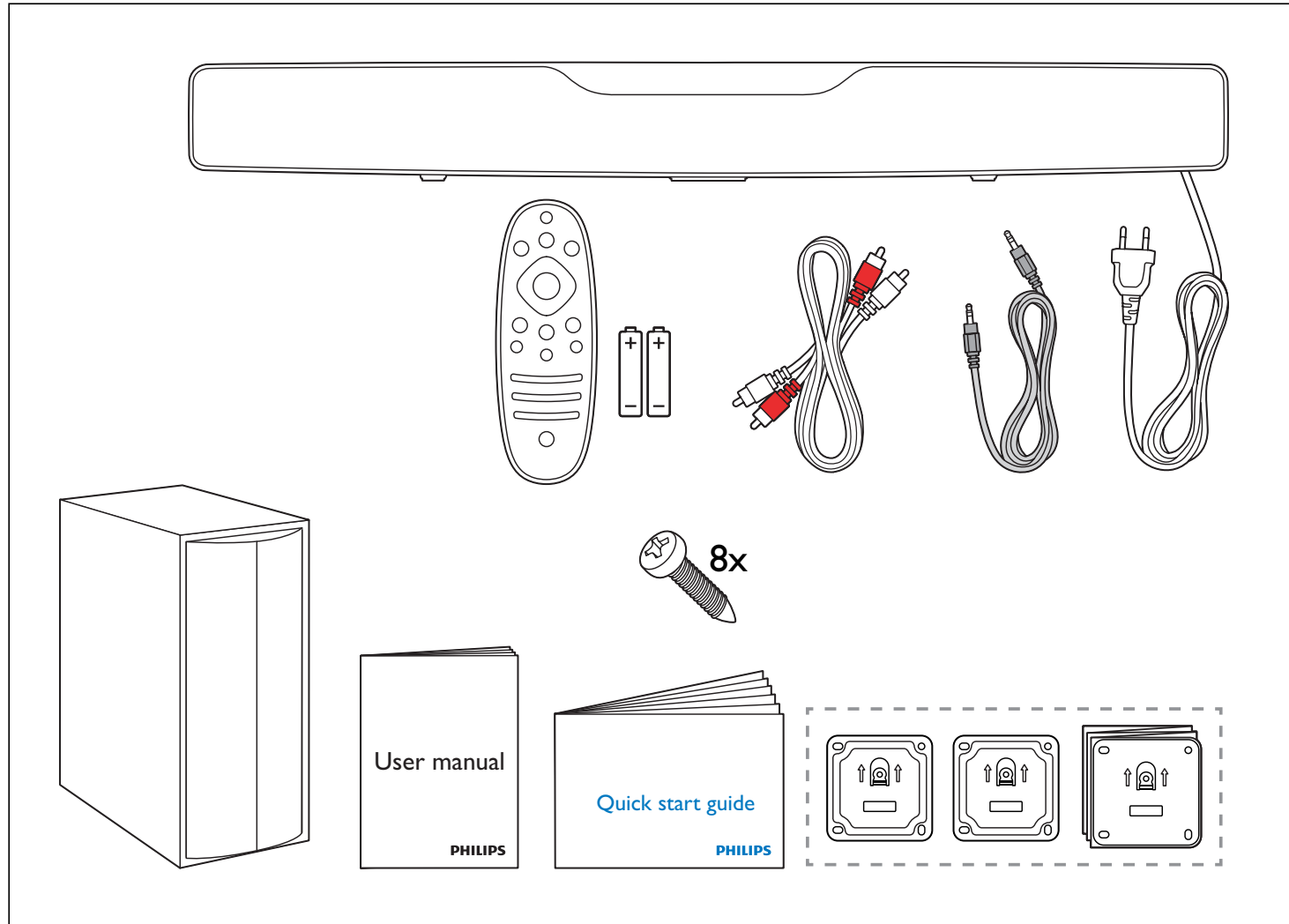


Note: In some service positions the components or copper patterns of one board may risk touching its neighbouring pc boards or metallic parts. To prevent such short-circuit use a piece of hard paper or other insulating material between them.

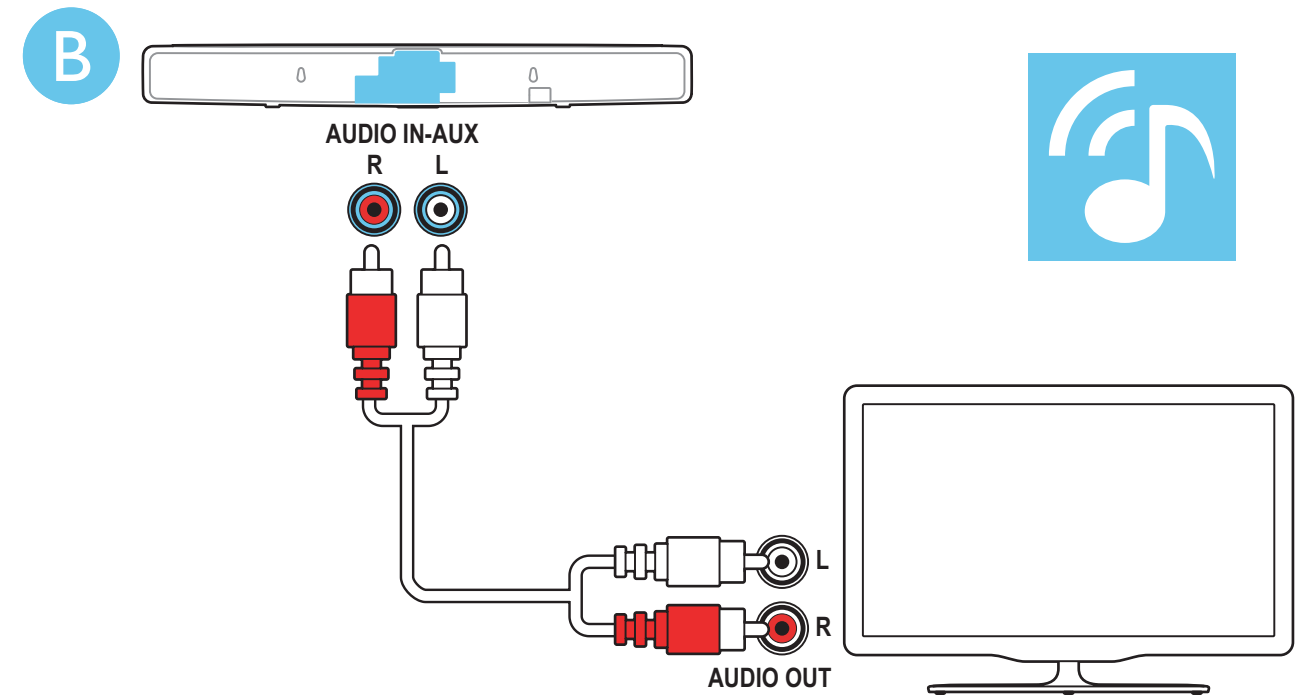
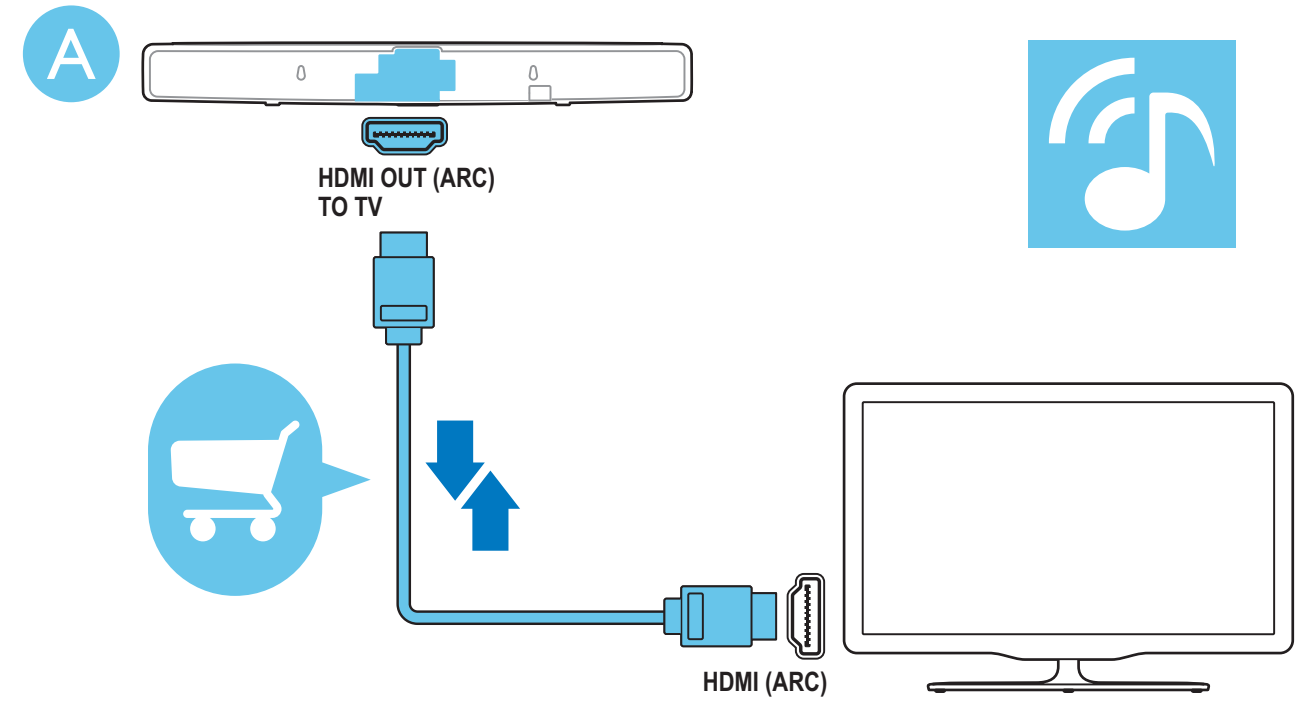
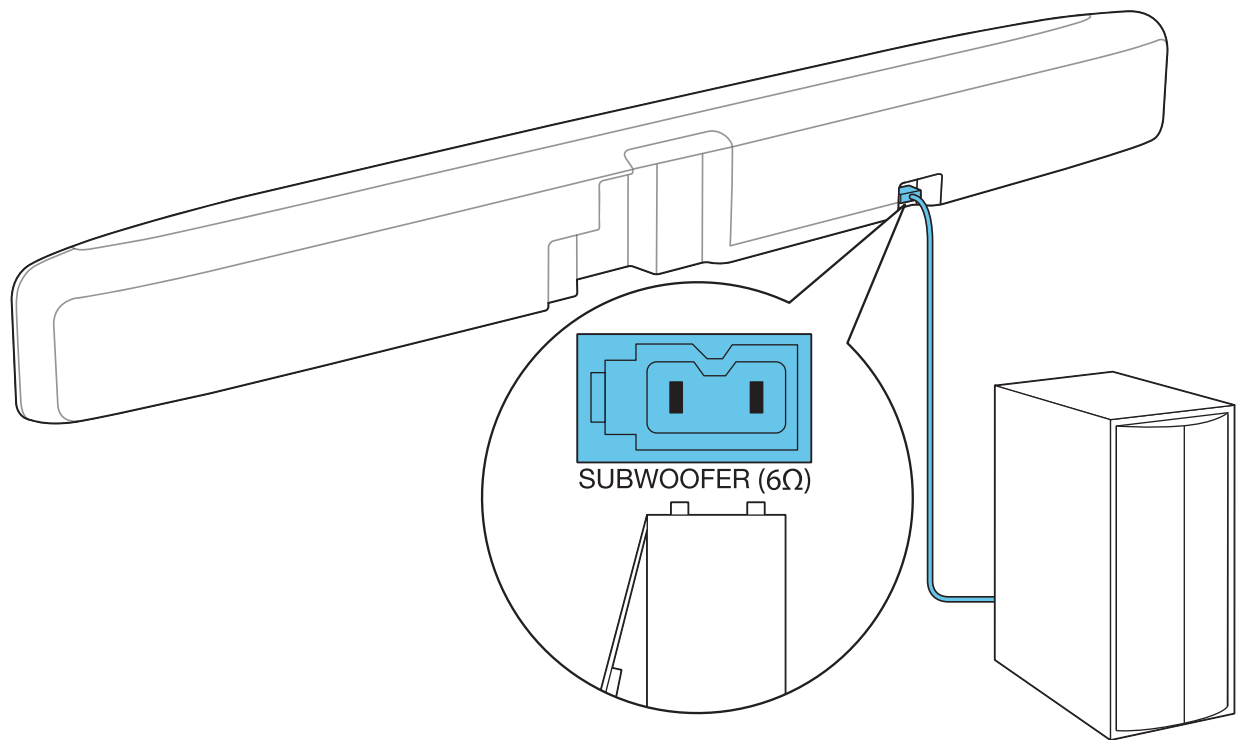
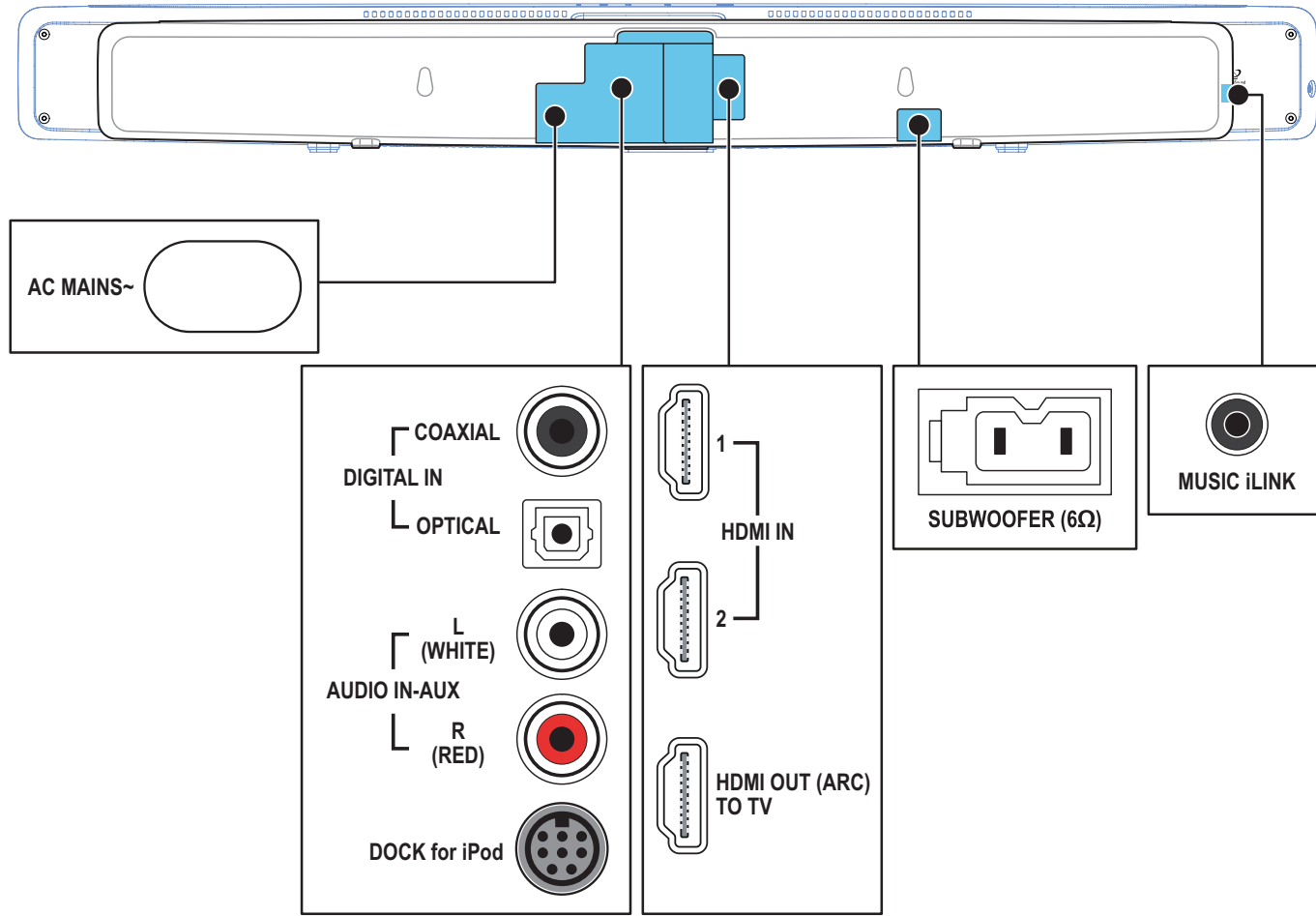


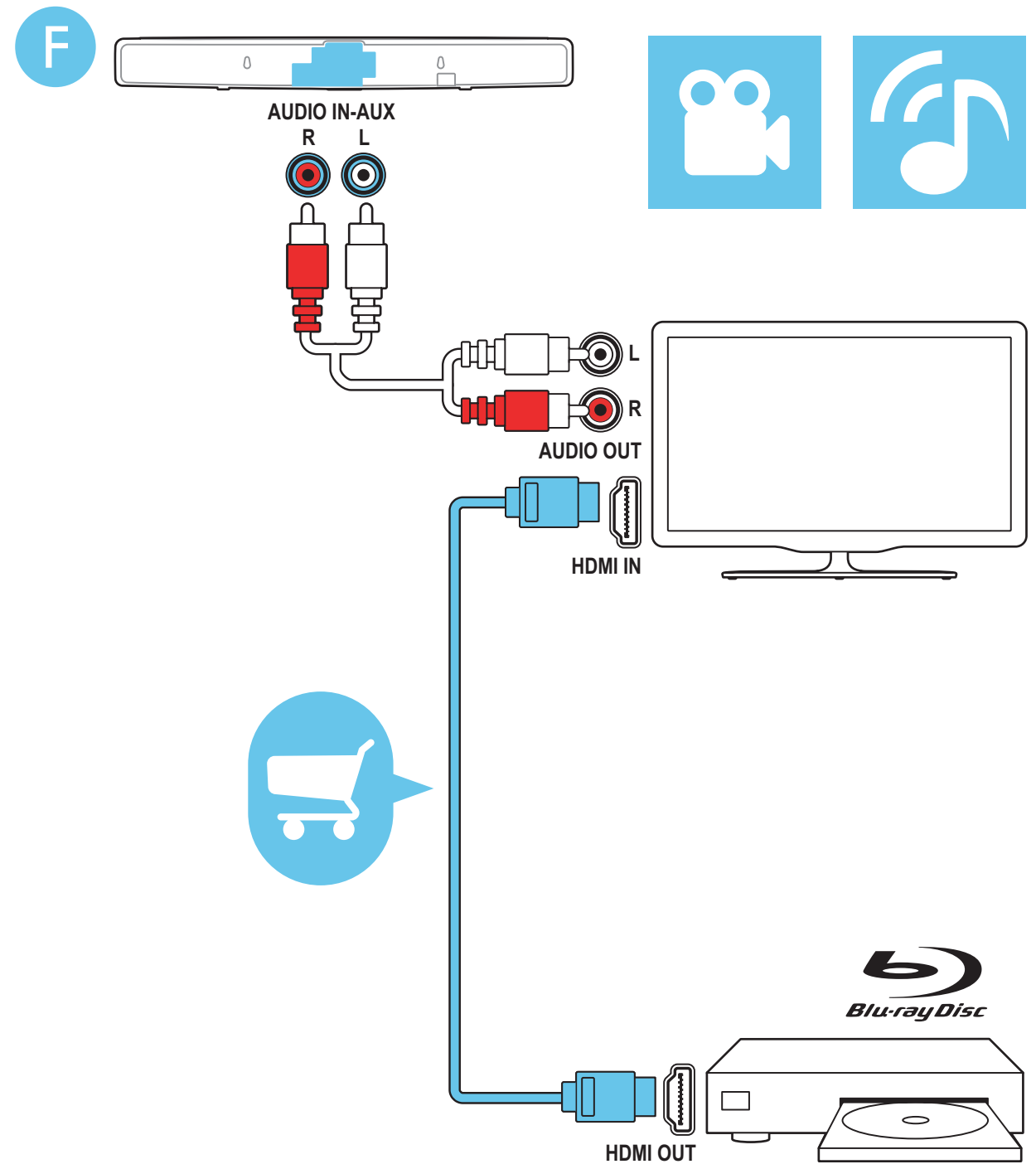
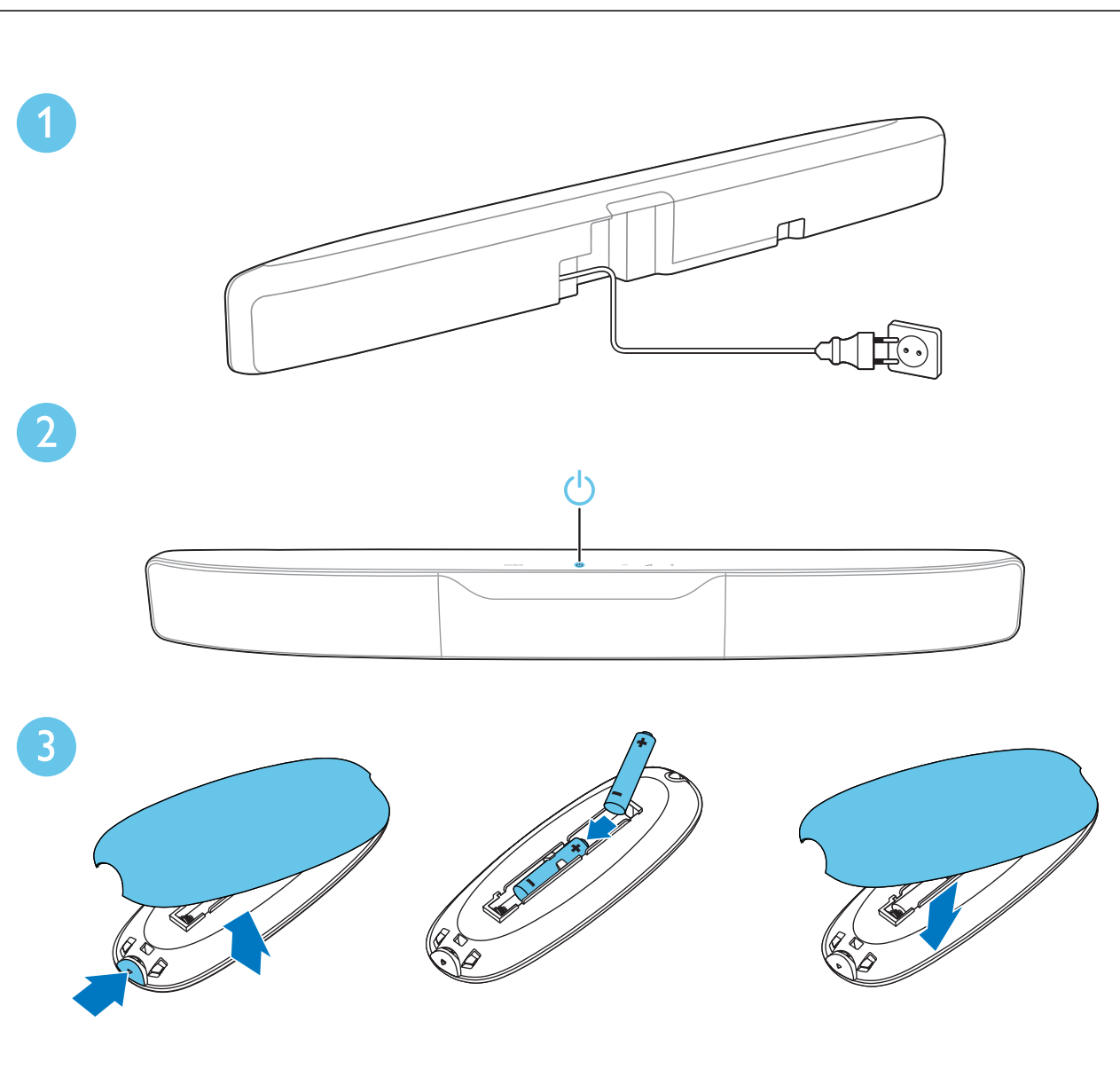
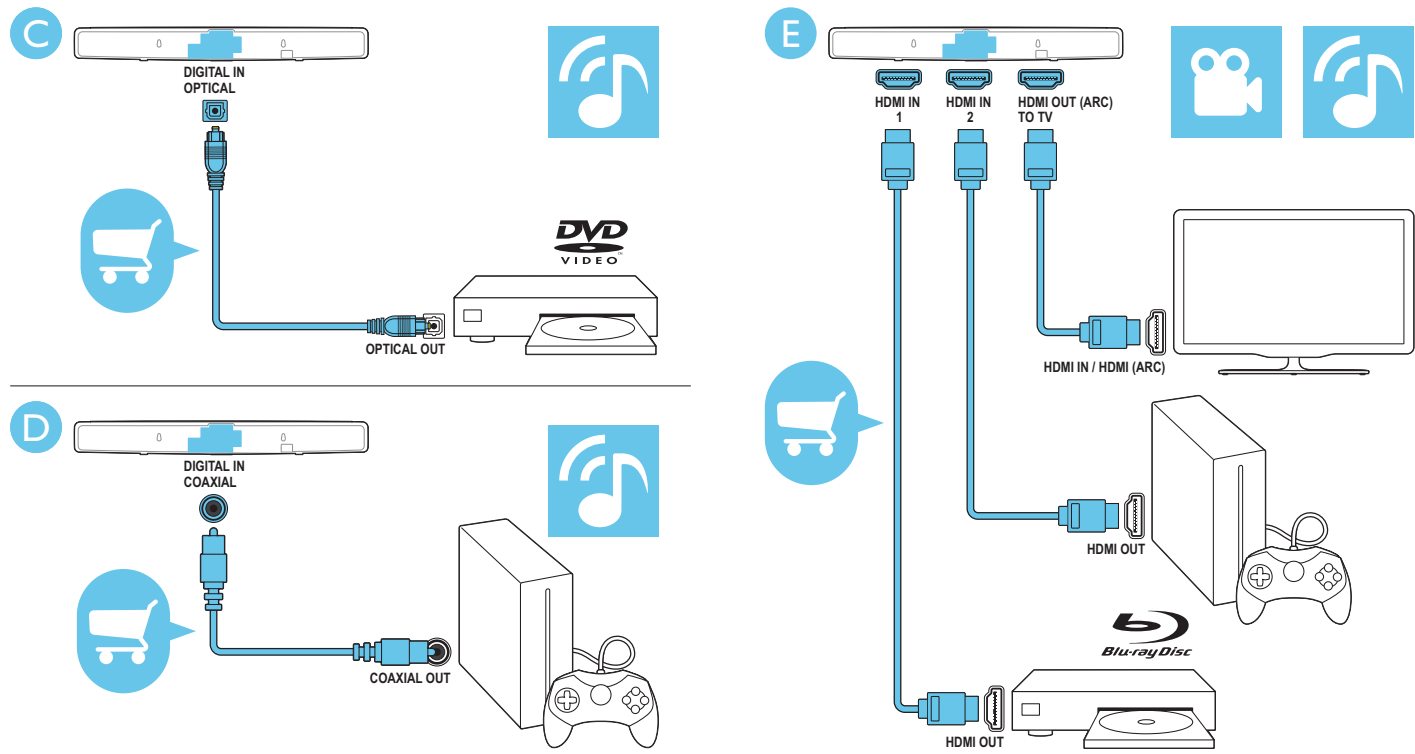
# QUICK START GUIDE

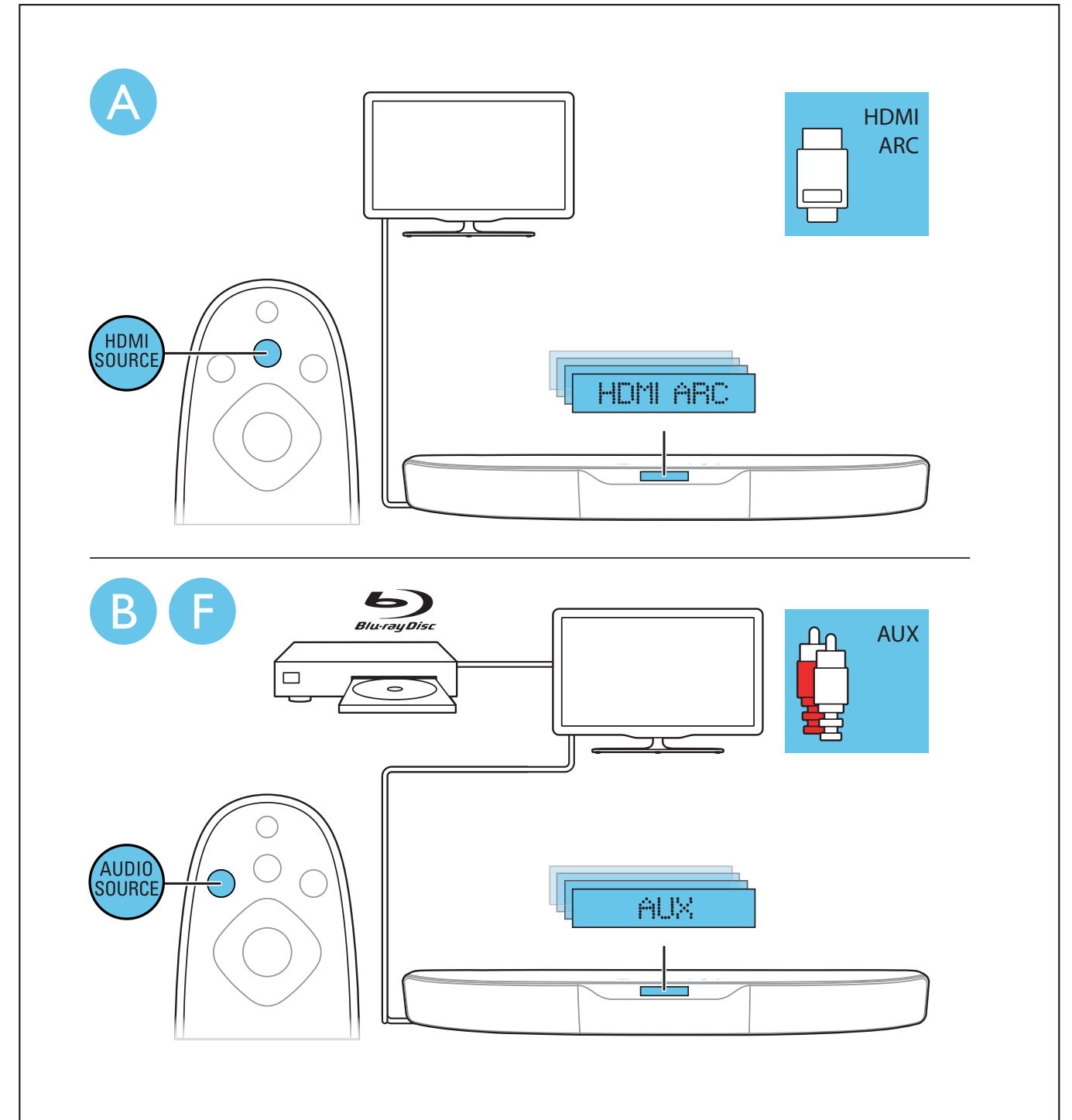
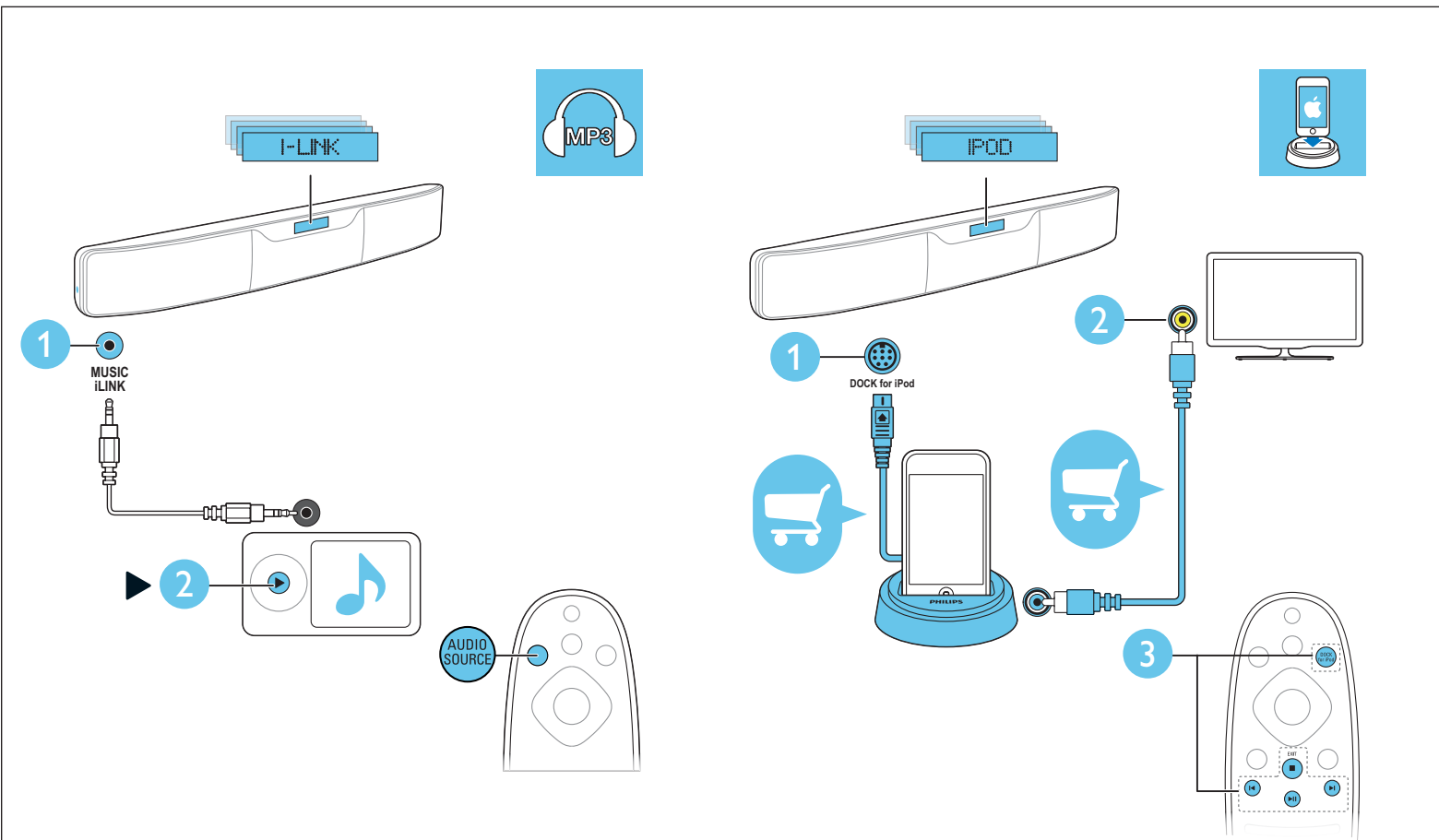
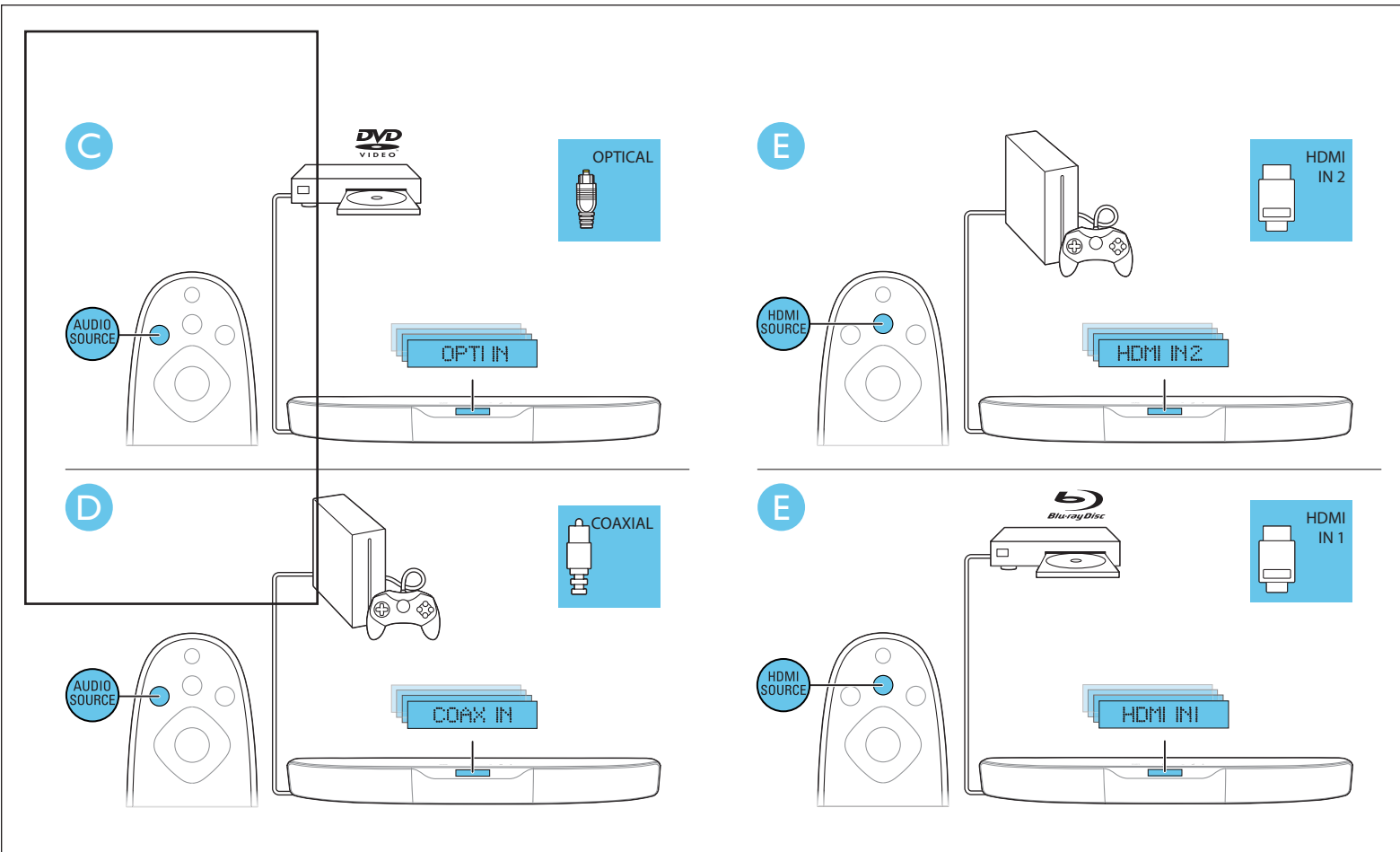
The following excerpt of the QSG/DFU serves as an introduction to the set.  
The complete Direction for Use can be download in the different languages from the internet site of Philips Consumer care Center: [www.support.philips.com](http://www.support.philips.com)

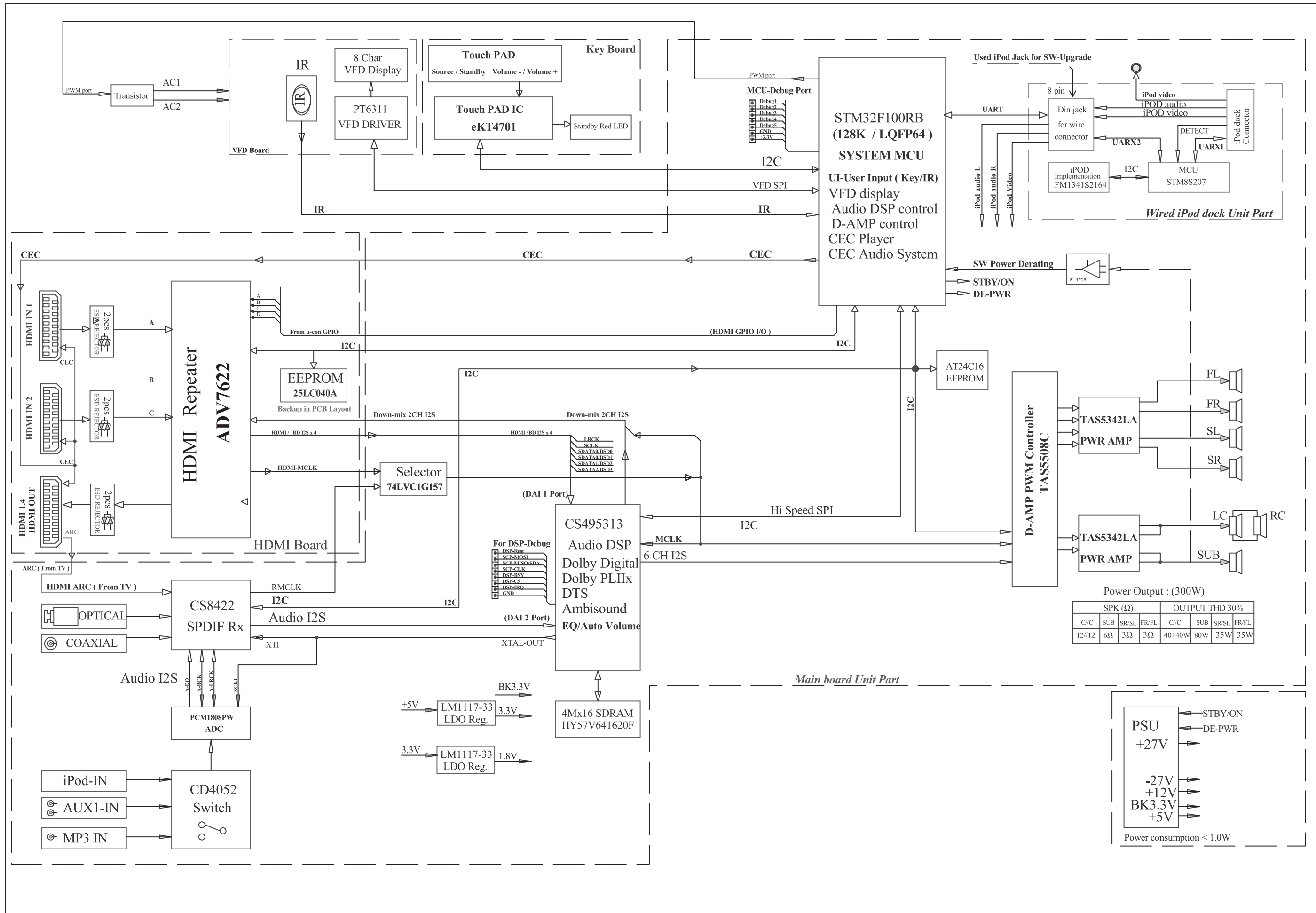


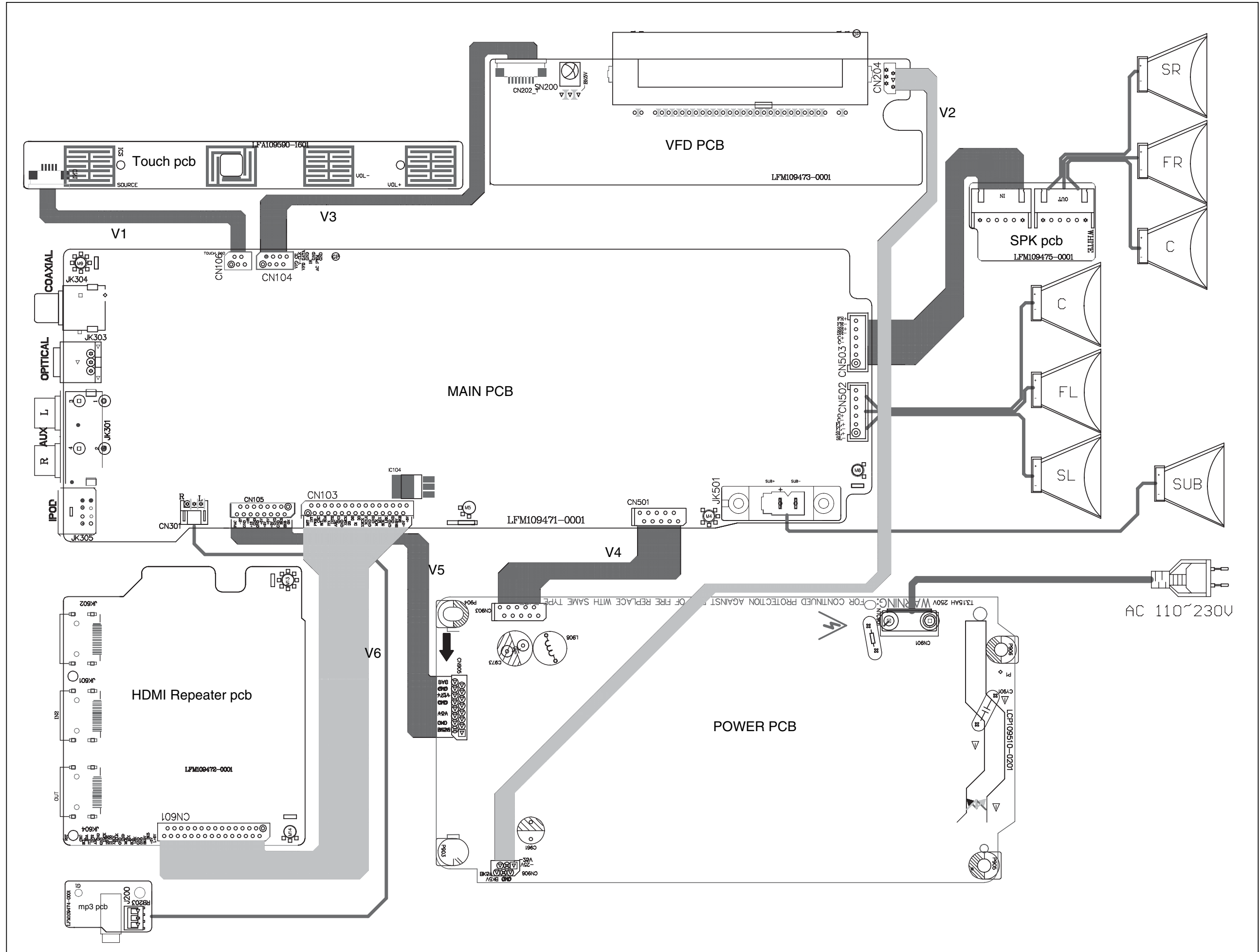










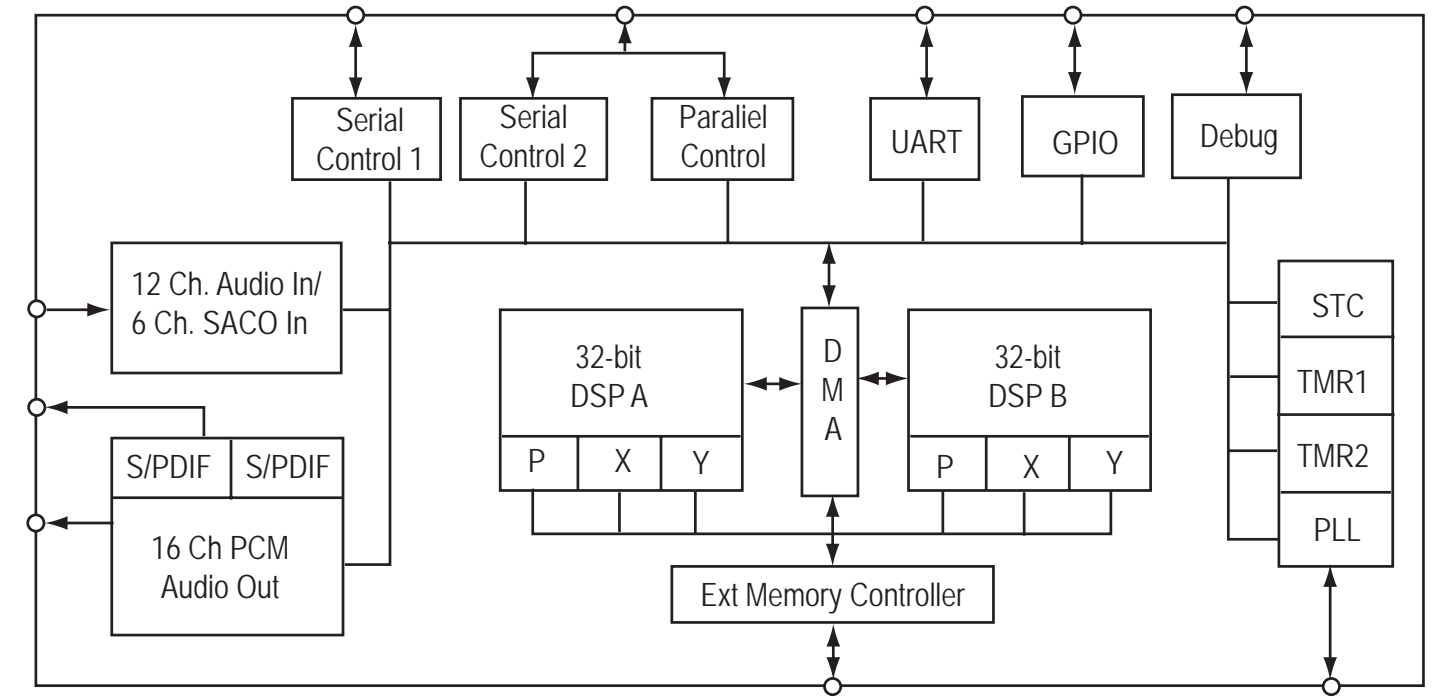


# MAIN+HDMI+VFD+MP3+SPK BOARD

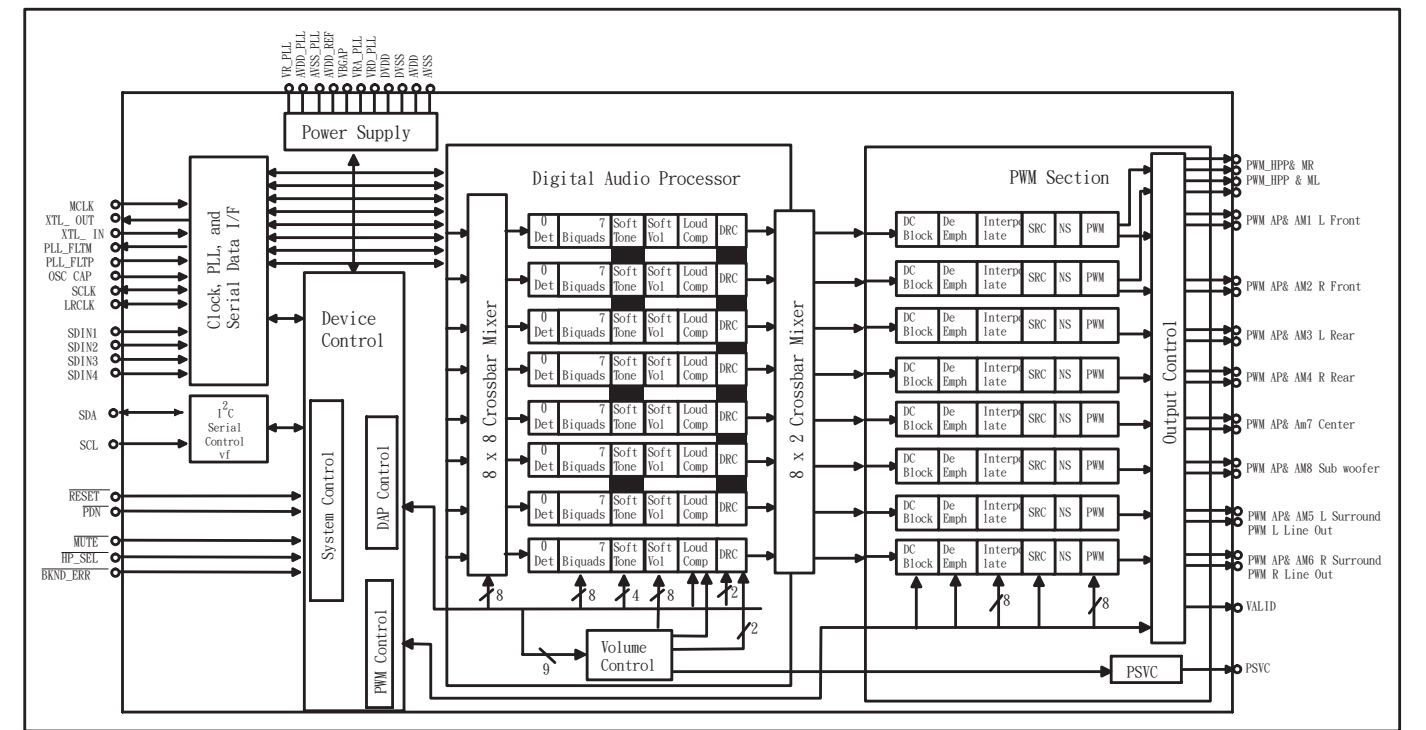
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 Circuit Diagram ..... 6-2  
 PCB Layout Top View ..... 6-3  
 PCB Layout Bottom View ..... 6-4

6 - 1  
**INTERNAL IC DIAGRAM - CS495313-CVZ LQFP**



**INTERNAL IC DIAGRAM - TAS5508CPAG TQFP TI**





# CIRCUIT DIAGRAM (part one)

C100	C2	C123	C1	C223	D2	C271	A1	C324	B2	C359	B1	C502	D2	C522	D2	C558	C3	C593	D3	C626	C4	C692	D4	FB301	C1	IC303	B2	Q101	C2	R113	C2	R146	C2	R205	D1	R263	D1	R312	B1	R349	B1	R513	D2	R554	D2	R591	B2	R626	B4	R685	D3
C1002	B3	C124	B3	C224	D2	C272	A1	C325	C1	C360	B1	C5020	B3	C523	D2	C560	C3	C594	D2	C627	C4	C693	C4	FB302	C1	IC304	B1	Q102	C1	R114	C2	R147	C2	R206	D1	R264	D1	R313	B1	R350	B1	R514	D2	R555	D2	R592	B2	R627	B4	R687	B4
C1003	B3	C125	C1	C226	C1	C273	A1	C326	C1	C361	B1	C5027	C2	C524	D2	C561	C3	C595	D3	C628	C4	C694	C1	FB305	B1	IC501	D2	Q103	B2	R115	B2	R148	C2	R207	C1	R265	D1	R314	B1	R351	B1	R515	D2	R556	C3	R593	C2	R628	B4	R688	B4
C1004	B3	C126	C1	C227	C1	C274	A1	C328	B1	C362	B1	C5028	C2	C525	D2	C562	C3	C596	D3	C629	C4	C695	C1	FB501	C3	IC502	C2	Q103	B2	R116	C2	R149	C2	R2076	A1	R266	D1	R315	B1	R352	B1	R516	D2	R557	D2	R594	C2	R629	B4	R689	B4
C1005	B3	C127	C1	C228	C1	C275	A1	C329	B1	C363	B1	C5029	C2	C526	D2	C563	C3	C597	D3	C630	C4	C696	C1	FB502	C3	IC503	D2	Q104	B2	R117	C2	R150	C2	R2077	A1	R267	D1	R317	B1	R353	B1	R517	D2	R558	D2	R595	C2	R630	B4	R690	B4
C1007	B3	C128	B2	C229	C1	C276	A1	C330	C1	C364	B1	C503	D2	C527	D2	C564	C3	C598	D3	C631	C4	C697	C1	FB503	C3	IC504	B2	Q105	B2	R118	C2	R151	C2	R2078	A1	R272	D2	R318	B1	R354	B1	R519	C3	R559	D2	R596	C2	R631	B4	R692	B4
C1008	B3	C129	B2	C230	C1	C278	B1	C331	C1	C365	B1	C5031	B2	C528	D2	C565	C3	C599	D3	C632	C4	C698	C1	FB504	D3	IC601	B4	Q200	A1	R119	C2	R152	C2	R2079	A1	R280	D1	R320	B2	R355	B1	R520	D2	R560	D2	R597	B2	R632	B4	R693	B4
C1009	B3	C130	B2	C231	C1	C279	B1	C332	C1	C366	B1	C5032	B2	C529	D2	C566	C3	C600	B4	C633	C4	C699	C1	FB505	D3	IC603	C4	Q201	A1	R120	C2	R153	C2	R2080	A1	R285	D1	R321	B1	R356	B1	R521	D2	R561	D2	R598	B2	R633	C4	R694	D4
C101	C2	C131	B2	C232	C1	C280	B1	C334	C1	C367	B1	C5034	B2	C530	D2	C567	C2	C601	D4	C634	C4	C700	D1	FB601	D4	IC604	C4	Q201	A1	R121	C2	R154	C2	R2081	A1	R286	A1	R322	C1	R357	B1	R522	D2	R562	D2	R599	B2	R634	C4	RA201	D1
C1010	B3	C132	B2	C233	C1	C281	B1	C335	C1	C368	B1	C5035	B2	C531	C2	C568	C3	C602	D4	C635	C4	C701	D1	FB602	D4	J200	B1	Q202	A1	R122	C2	R155	B2	R2082	A1	R287	A1	R323	B1	R358	B1	R523	D2	R563	D3	R600	D4	R635	C4	RA203	D1
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C1012	B3	C201	D1	C235	C1	C302	B1	C337	C1	C500	D2	C5039	C3	C533	C2	C570	C3	C604	D4	C637	B4	C703	D1	FB604	D4	JK303	C1	Q302	B1	R124	C2	R157	C2	R219	D1	R289	A1	R325	C1	R5001	B2	R525	D2	R565	D3	R602	D3	R637	D4	RA205	D1
C102	C2	C202	D1	C236	C1	C303	B1	C338	C1	C5000	D2	C504	D2	C534	D2	C572	C3	C605	D4	C638	B4	C704	D1	FB605	C4	JK304	C1	Q500	D2	R125	C2	R158	C2	R227	D1	R290	A1	R326	C1	R5002	D2	R526	D2	R566	C3	R603	D3	R638	D4	RA206	D1
C103	C2	C203	D1	C237	C1	C304	B1	C339	C1	C5001	C3	C5040	C3	C535	C2	C573	C3	C606	D4	C639	B4	C705	D1	FB607	C4	JK305	B1	Q501	D2	R126	C2	R159	C1	R228	D1	R291	A1	R327	C1	R5003	C2	R527	D2	R567	D3	R604	D3	R639	B4	RA207	D1
C104	C2	C204	D1	C238	C1	C305	B1	C340	C1	C5002	C3	C5041	C3	C536	C2	C574	C2	C607	D4	C641	B4	C706	D1	FB608	C4	JK501	D3	Q502	C2	R127	C2	R160	C1	R229	D1	R292	A1	R328	C1	R5004	C2	R528	D2	R568	C3	R605	C3	R640	B4	RA208	D1
C105	C2	C205	D1	C239	C1	C306	B1	C341	C1	C5003	C3	C5042	D3	C537	D3	C575	D2	C608	D4	C642	B4	C707	D1	FB609	C4	JK601	D3	Q503	B2	R128	C2	R161	C1	R233	D1	R293	A1	R329	C1	R5005	C2	R529	C2	R569	C3	R606	C3	R642	D3	RB203	B1
C106	C2	C206	D1	C240	D1	C307	B1	C342	C1	C5004	C3	C505	D2	C538	D3	C576	D2	C609	D4	C643	B4	C708	D1	FB610	C4	JK602	C3	Q601	B4	R129	C2	R162	C1	R234	D1	R294	A1	R330	C1	R5006	C2	R531	C2	R570	C3	R607	C3	R643	D3	SN200	A1
C107	C2	C207	D1	C241	D1	C308	B1	C343	B1	C5005	C3	C506	D2	C539	D3	C577	D2	C610	D4	C666	D4	D105	C1	FB611	C4	JK604	D4	Q602	B4	R130	C2	R163	B2	R235	D1	R295	A1	R332	C1	R5007	C2	R532	C2	R571	C3	R608	C3	R644	D3	XL101	C2
C108	C2	C208	D1	C242	D1	C309	B1	C344	B1	C5006	C3	C507	D2	C541	D3	C578	D2	C611	D4	C667	C4	D500	D2	FB612	D4	L101	B2	Q603	D3	R131	C2	R164	B2	R236	C1	R296	A1	R333	C1	R5008	C2	R533	C2	R572	C3	R609	D4	R645	C3	XL201	D1
C109	C2	C209	D1	C243	D1	C310	B1	C345	B1	C5007	C3	C508	D2	C542	D3	C579	D2	C612	D4	C668	C4	D501	B3	FB714	B1	L102	B3	Q604	C3	R132	C2	R165	B2	R237	C1	R297	B1	R334	C1	R5009	C2	R534	C2	R573	C3	R610	D4	R662	D4	XL501	D2
C110	C2	C210	D1	C244	D1	C311	B1	C346	B1	C5008	D2	C509	D2	C543	C3	C580	D2	C613	D4	C669	C4	D502	B3	IC101	C2	L201	D1	R100	C2	R133	C2	R166	B2	R241	D1	R298	A1	R335	B1	R501	D2	R535	C2	R574	C3	R611	C3	R663	D4	XL601	B4
C111	C2	C211	D1	C245	D1	C312	B1	C347	B1	C5009	C3	C510	D2	C544	C3	C581	D3	C614	D4	C670	C4	D606	D4	IC102	C2	L301	C1	R101	C2	R134	C2	R167	B2	R242	D1	R299	B1	R336	B1	R5010	C2	R536	C2	R575	C3	R612	C3	R664	D4	ZD101	B2
C112	B2	C212	D1	C260	A1	C313	B1	C348	B1	C501	D2	C511	D2	C546	C3	C582	D3	C615	D4	C671	C4	D607	C4	IC103	B3	L302	C1	R102	C2	R135	C2	R169	C3	R243	D1	R301	B1	R337	B1	R502	D2	R537	C2	R576	C3	R613	B4	R665	D4	ZD102	B2
C113	B2	C213	D1	C261	A1	C314	B1	C349	B1	C5010	C3	C512	D2	C547	C3	C583	D3	C616	D4	C672	C4	DP200	A1	IC104	B2	L303	B1	R103	C2	R136	C2	R170	B3	R244	D1	R302	B1	R338	B1	R503	D2	R538	C2	R577	C3	R614	B4	R666	D4	ZD200	A1
C114	B2	C214	D1	C262	A1	C315	B1	C350	B1	C5011	C3	C513	D2	C548	C2	C584	D3	C617	D4	C673	C4	F301	B1	IC105	C1	L306	C1	R104	C2	R137	C2	R171	B3	R245	D1	R303	B1	R339	B1	R504	D2	R539	D2	R580	C3	R615	B4	R670	C4	ZD200	A1
C115	B2	C215	C1	C263	A1	C316	B1	C351	B1	C5012	C3	C514	D2	C549	D3	C585	D3	C618	D4	C674	C4	FB102	B2	IC200	A1	L501	C3	R105	C2	R138	C2	R172	B3	R246	D1	R304	B1	R340	B1	R505	D2	R540	D2	R581	C3	R616	B4	R671	C4	ZD201	A1
C116	C1	C216	D2	C264	A1	C317	B1	C352	B1	C5013	C3	C515	D2	C550	D3	C586	D2	C619	D4	C685	C4	FB103	C1	IC200	A1	L502	C3	R106	C2	R139	C2	R173	B3	R247	D1	R305	B1	R341	B1	R506	D2	R541	D3	R582	C3	R617	B4	R672	C4	ZD201	A1
C117	B3	C217	D2	C265	A1	C318	B1	C353	B1	C5014	C3	C516	D2	C551	D3	C587	D3	C620	D4	C686	C4	FB104	C1	IC201	D2	L503	C3	R107	C2	R140	C2	R174	B3	R248	D1	R306	B1	R342	B1	R507	D2	R544	D3	R583	B3	R618	B4	R673	C4	ZD202	A1
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C119	B3	C219	D2	C267	A1	C320	B2	C355	B1	C5016	C3	C518	D2	C554	D3	C589	D3	C622	C4	C688	C4	FB200	B1	IC204	C1	L505	D3	R109	C1	R142	C2	R201	D1	R259	D1	R308	B1	R345	B1	R509	D2	R548	C3	R585	B3	R621	D3	R676	D4	ZD301	B1
C120	C1	C220	D2	C268	A1	C321	B2	C356	B1	C5017	B3	C519	D2	C555	C2	C590	D3	C623	C4	C689	D4	FB201	C1	IC301	B1	L506	D3	R110	C2	R143	C2	R202	D1	R260	C1	R309	B1	R346	B1	R510	D2	R549	C3	R588	B2	R622	D3	R677	D3	ZD502	B2
C121	C1	C221	D2	C269	A1	C322	B2	C357	B1	C5018	B3	C520	D2	C556	C3	C591	D3	C624	C4	C690	D4	FB202	C1	IC301	B1	L507	D3	R111	C2	R144	C2	R203	D1	R261	D1	R310	B1	R347	B1	R511	D2	R551	D2	R589	B2	R624	D3	R678	C3		
C122	C1	C222	D2	C270	A2	C323	B2	C358	B1	C5019	B3	C521	D2	C557	C3	C592	D3	C625	C4	C691	D4	FB203	B1	IC302	C1	L508	D3	R112	C2	R145	C2	R204	D1	R262	C1	R311	B1</														



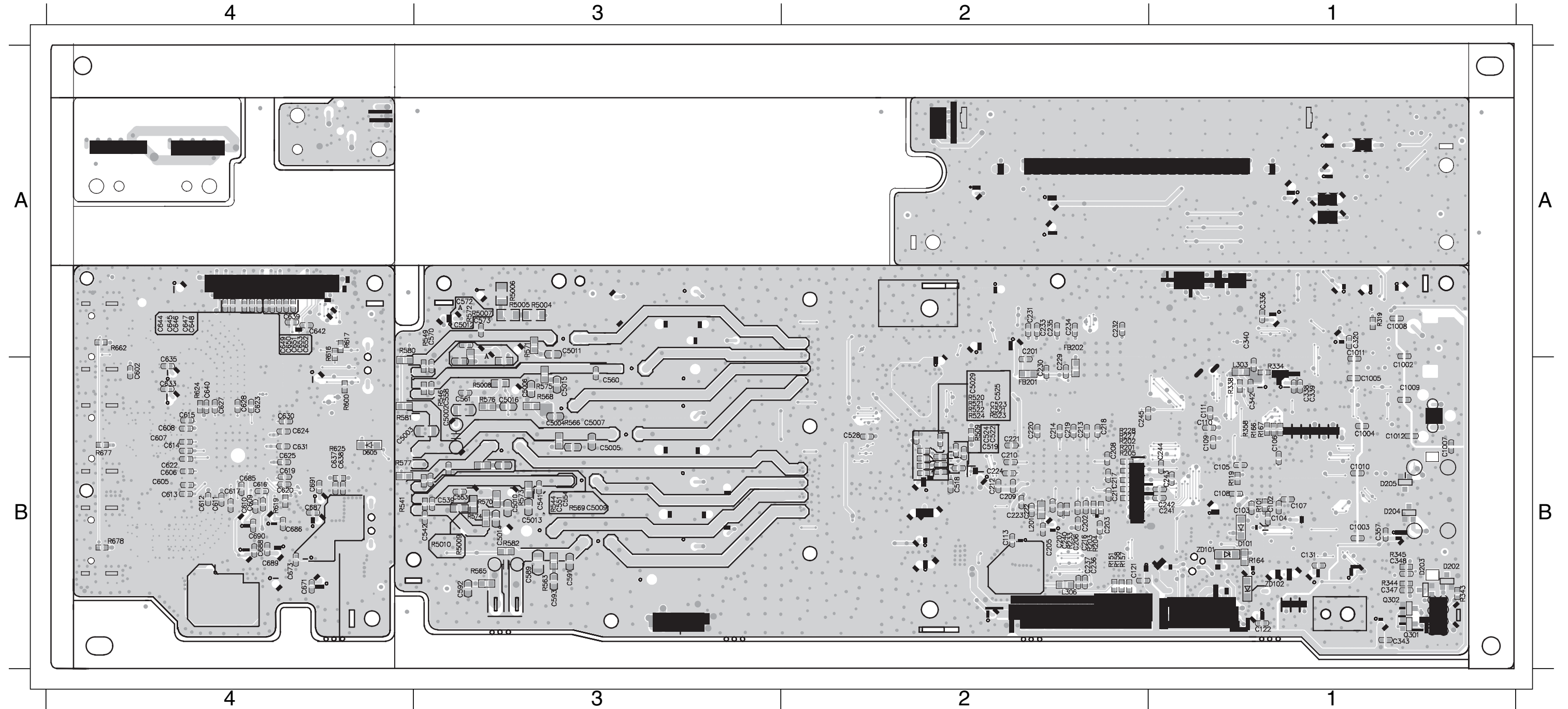


# PCB LAYOUT - BOTTOM VIEW

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C1002 B1	C105 B1	C203 B2	C218 B2	C234 A2	C339 B1	C5009 B3	C522 B2	C558 B3	C608 B4	C623 B4	C671 B4	L306 B2	R203 B2	R5008 B3	R565 B3	R581 B4
C1003 B1	C106 B1	C205 B2	C219 B2	C235 A2	C340 A1	C5010 B3	C523 B2	C560 B3	C609 B4	C624 B4	C673 B4	Q301 B1	R204 B2	R5009 B3	R566 B3	R582 B3
C1004 B1	C107 B1	C206 B2	C220 B2	C236 B2	C342 B1	C5011 A3	C524 B2	C561 B3	C610 B4	C625 B4	C685 B4	Q302 B1	R205 B2	R5010 B3	R568 B3	R600 B4
C1005 B1	C108 B1	C207 B2	C221 B2	C237 B2	C343 B1	C5012 A3	C525 B2	C570 A3	C611 B4	C627 B4	C686 B4	R101 B1	R227 B2	R520 B2	R569 B3	R616 A4
C1007 B1	C109 B1	C208 B2	C222 B2	C240 B2	C347 B1	C5013 B3	C526 B2	C572 A3	C612 B4	C628 B4	C687 B4	R119 B1	R228 B2	R521 B2	R570 B3	R617 A4
C1008 A1	C110 B1	C209 B2	C223 B2	C241 B1	C348 B1	C5014 B3	C528 B2	C573 A3	C613 B4	C630 B4	C688 B4	R151 B2	R233 B2	R522 B2	R571 A2	R619 B4
C1009 B1	C111 B1	C210 B2	C224 B2	C242 B1	C357 B1	C5015 B3	C530 B2	C589 B3	C614 B4	C631 B4	C689 B4	R157 B2	R334 B1	R523 B2	R572 A3	R624 B4
C1010 B1	C113 B2	C211 B2	C228 B2	C243 B1	C5002 B3	C5016 B3	C539 B3	C591 B3	C615 B4	C633 B4	C690 B4	R158 B2	R344 B1	R524 B2	R573 B3	R625 B4
C1011 A1	C121 B2	C212 B2	C229 B2	C244 B1	C5003 B4	C5029 B2	C541 B3	C592 B3	C616 B4	C635 B4	C691 B4	R164 B1	R345 B1	R525 B2	R574 B3	R626 A4
C1012 B1	C122 B1	C213 B2	C230 B2	C245 B2	C5004 B3	C518 B2	C542 B3	C593 B3	C617 B4	C637 B4	D101 B1	R166 B1	R358 B1	R526 B2	R575 B3	R627 B4
C102 B1	C131 B1	C214 B2	C231 A2	C320 A1	C5005 B3	C519 B2	C551 B3	C602 B4	C619 B4	C638 B4	FB201 B2	R167 B1	R5004 A3	R546 B3	R576 B3	R628 B4
C103 B1	C201 A2	C216 B2	C232 A2	C336 A1	C5006 B3	C520 B2	C553 B3	C606 B4	C620 B4	C639 A4	FB202 A2	R201 B2	R5006 A3	R549 A3	R577 B4	ZD101 B1
C104 B1	C202 B2	C217 B2	C233 A2	C338 B1	C5007 B3	C521 B2	C554 B3	C607 B4	C622 B4	C642 A4	L201 B2	R202 B2	R5007 A3	R563 B3	R580 A4	ZD102 B1



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# TOUCH BOARD

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# CIRCUIT DIAGRAM

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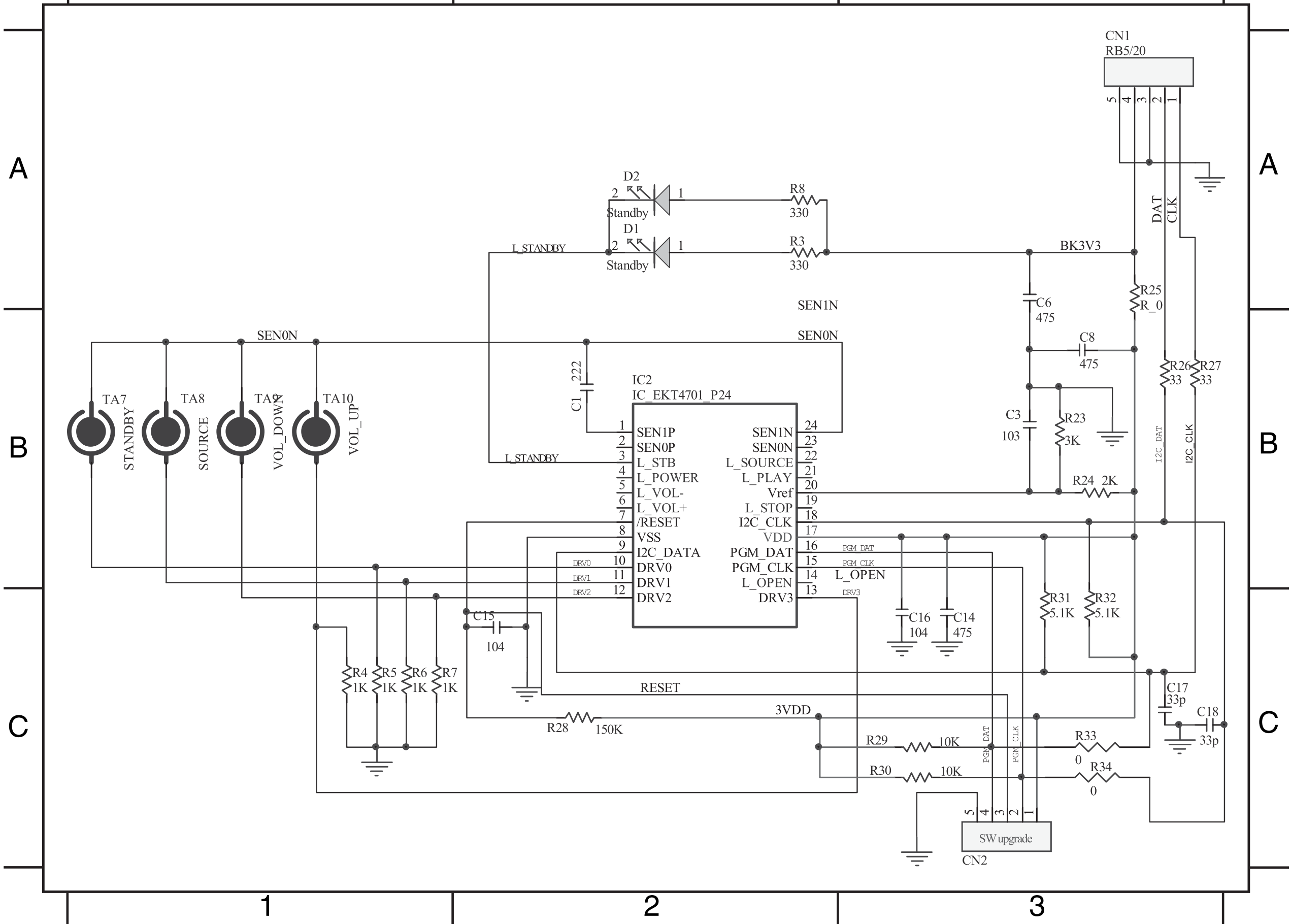
7 - 2

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C14	C3	C17	C3	C6	A3	D1	A2	R24	B3	R27	B3	R3	A2	R32	C3	R4	C1	R7	C1
C15	C2	C18	C3	C8	B3	IC2	B2	R25	A3	R28	C2	R30	C3	R33	C3	R5	C1		

1

2

3



1

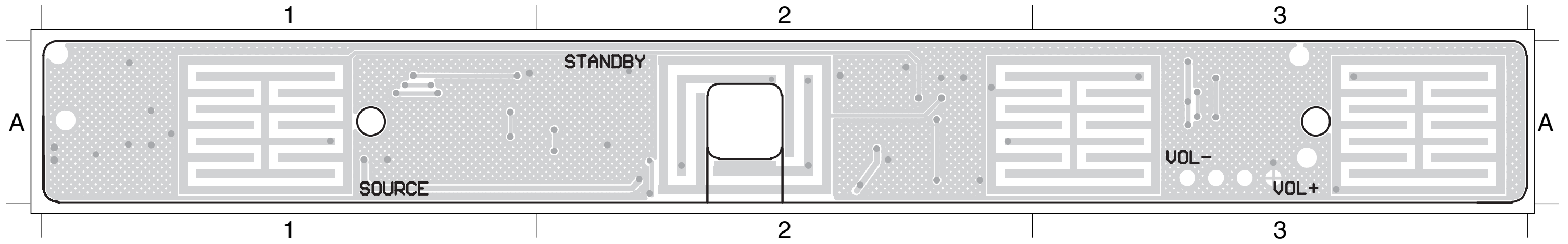
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3

# PCB LAYOUT - TOP VIEW

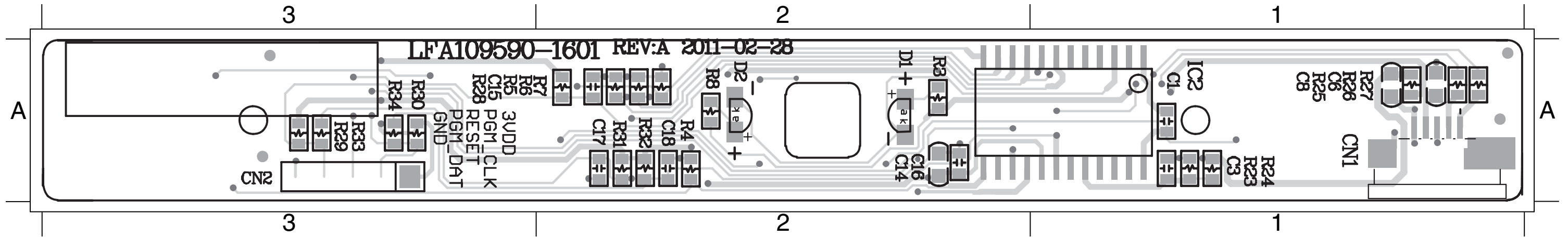
7 - 3

7 - 3



# PCB LAYOUT - BOTTOM VIEW

C1	A1	C16	A2	C3	A1	CN1	A1	R23	A1	R26	A1	R29	A3	R31	A2	R34	A3	R6	A2
C14	A2	C17	A2	C6	A1	D1	A2	R24	A1	R27	A1	R3	A2	R32	A2	R4	A2	R7	A2
C15	A2	C18	A2	C8	A1	IC2	A1	R25	A1	R28	A2	R30	A3	R33	A3	R5	A2		

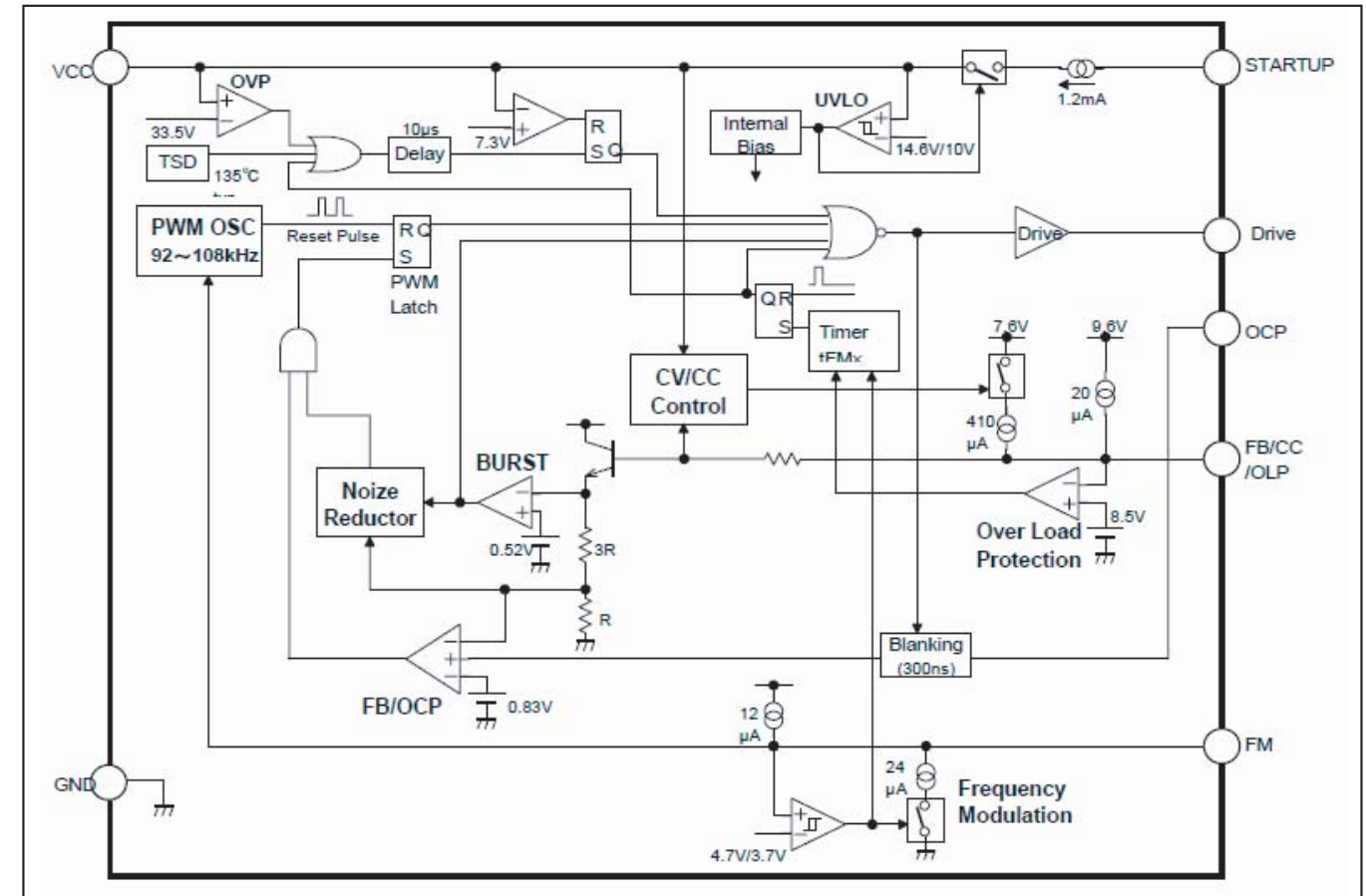


# POWER BOARD

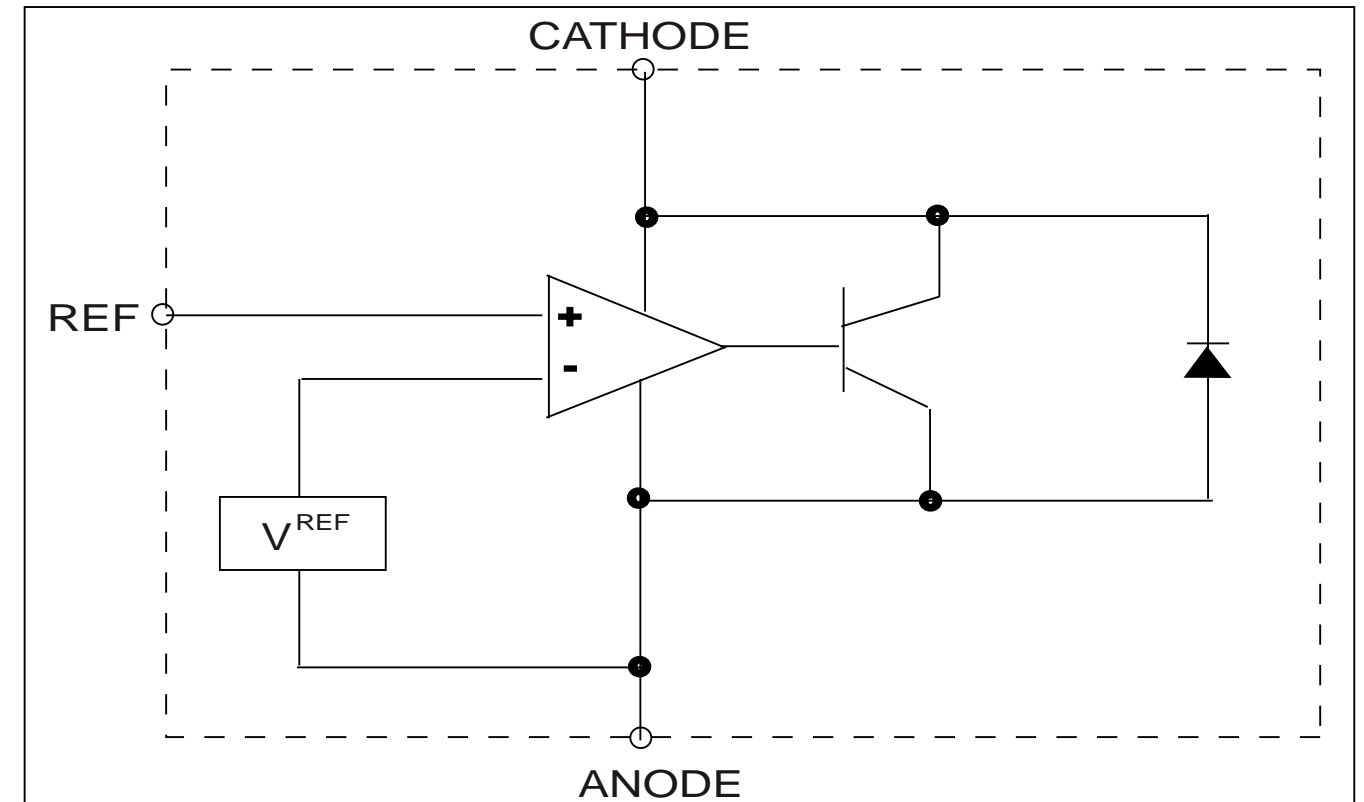
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## INTERNAL IC DIAGRAM - SSC620S

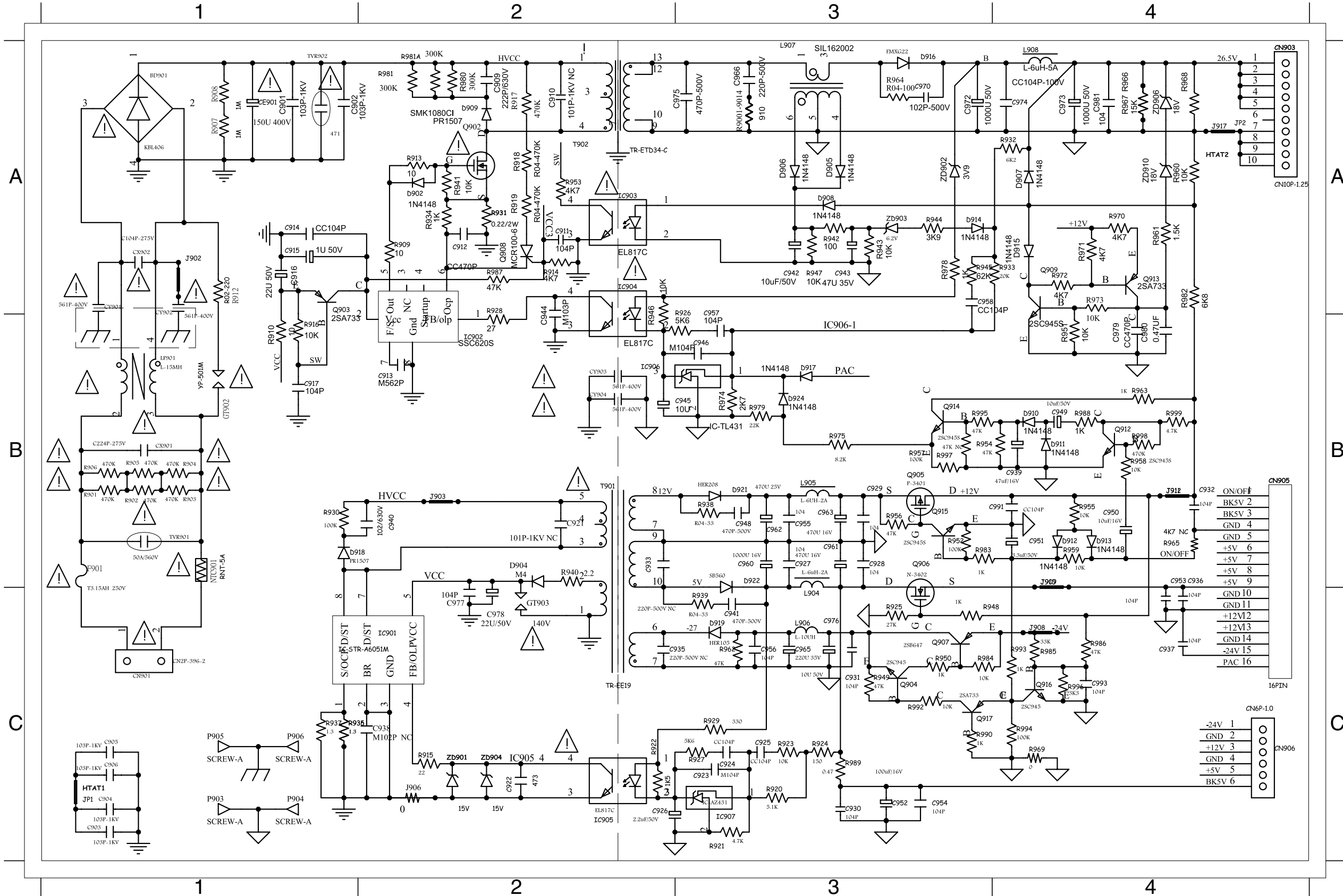


## INTERNAL IC DIAGRAM - AZ431AZ



# CIRCUIT DIAGRAM

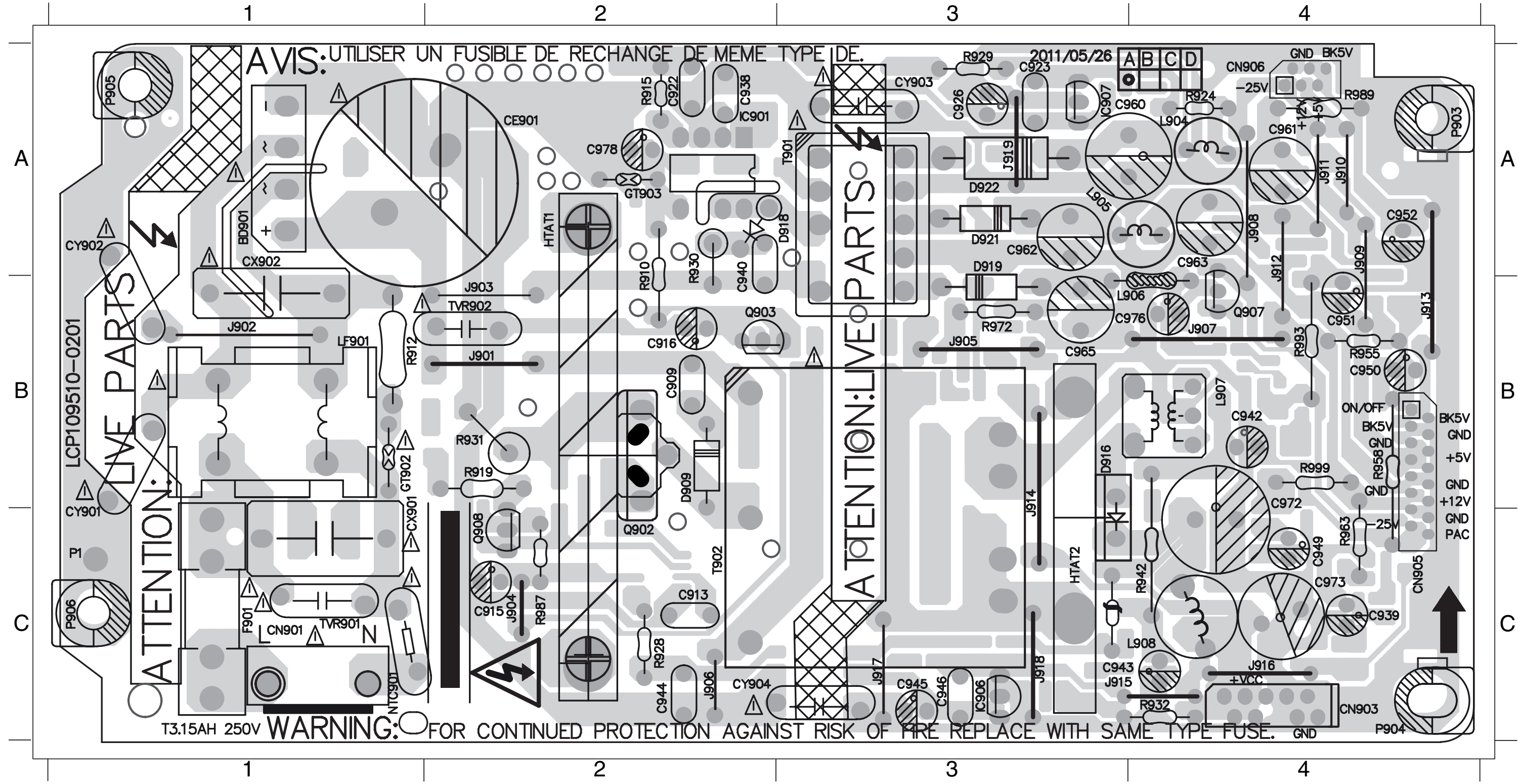
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C901 A1	C922 C2	C937 C4	C950 B4	C962 B3	C980 B4	CY902 A1	D912 B4	F901 B1	J901 B4	L907 A3	Q908 A2	R9005 A3	R903 B1	R916 B1	R928 B2	R940 B2	R952 B3	R964 A3	R979 B3	R990 C3	TVR901 B1
C902 A1	C923 C3	C938 C2	C951 B4	C963 B3	C981 A4	CY903 B2	D913 B4	GT902 B1	J902 A1	L908 A4	Q909 A4	R9006 A3	R904 B1	R917 A2	R929 C3	R941 A2	R953 A2	R966 A4	R980 A2	R992 C3	ZD901 C2
C904 C1	C924 C3	C939 B4	C952 C3	C965 C3	C991 B4	CY904 B2	D914 A3	GT903 C2	J903 B2	LF901 B1	Q912 C4	R9007 A3	R905 B1	R918 A2	R929 B1	R942 A3	R954 B3	R967 A4	R981 A2	R993 C4	ZD902 A3
C906 C1	C925 C3	C940 B2	C953 B4	C966 A3	C993 C4	D902 A2	D915 A4	IC901 C2	J906 C2	NTC901 B1	Q913 A4	R9008 A3	R906 B1	R919 A2	R931 A2	R943 A3	R955 B4	R968 A4	R981A A2	R994 C4	ZD903 A3
C909 A2	C926 C2	C941 C3	C954 C3	C970 A3	CE901 A1	D904 B2	D916 A3	IC902 B2	J908 C4	Q902 A2	Q914 B3	R9009 A3	R907 A1	R920 C3	R932 A4	R944 A3	R956 B3	R969 C4	R982 A4	R995 B3	ZD906 A4
C911 A2	C927 B3	C942 A3	C955 B3	C972 A3	CN901 C1	D905 A3	D916 A3	IC903 A2	J909 B4	Q902 A2	Q915 B3	R901 B1	R908 A1	R921 C3	R933 A4	R945 A3	R957 B3	R970 A4	R983 B3	R996 C4	ZD910 A4
C912 A2	C928 B3	C943 A3	C956 C3	C973 A4	CN903 A4	D906 A3	D917 B3	IC904 A2	J911 B4	Q903 A1	Q916 C4	R9010 A3	R909 A2	R922 C2	R934 A2	R946 B3	R958 B4	R971 A4	R984 C3	R998 B4	
C913 B2	C929 B3	C944 B2	C957 B3	C974 A4	CN905 B4	D907 A4	D918 B1	IC905 C2	J912 B4	Q904 C3	Q917 C3	R9011 A3	R910 B1	R923 C3	R935 C1	R947 A3	R959 B4	R972 A4	R985 C4	R999 B4	
C914 A1	C930 C3	C945 B3	C958 A3	C976 C3	CN906 C4	D908 A3	D919 C3	IC906 B2	J917 A4	Q905 B3	Q901 A3	R9012 A3	R912 A1	R924 C3	R936 C1	R948 C3	R960 A4	R973 A4	R986 C4	T901 B2	
C915 A1	C931 C3	C946 B3	C960 B3	C977 C2	CX901 B1	D909 A2	D921 B3	IC906 B2	L904 C3	Q905 B3	R9002 A3	R9013 A3	R913 A2	R925 C3	R937 C1	R949 C3	R961 A4	R974 B3	R987 A2	T901 B2	
C916 A1	C932 B4	C948 B3	C960 B3	C978 C2	CX902 A1	D910 B4	D922 B3	IC907 C3	L905 B3	Q906 B3	R9003 A3	R9014 A3	R914 A2	R926 B3	R938 B3	R950 C3	R962 C3	R975 B3	R988 B4	T902 A2	





PCB LAYOUT - TOP VIEW

BD901	A1	C923	A3	C943	C3	C951	B4	C963	A4	CE901	A2	CX902	A1	D916	B3	F901	C1	IC907	A3	J905	B3	J911	A4	J917	C3	L908	C4	Q907	B4	R924	A4	R942	C4	R989	A4	T902	C2
C909	B2	C926	A3	C944	C2	C952	A4	C965	B3	CN901	C1	CY901	B1	D916	B3	GT902	B1	IC907	A3	J906	C2	J912	B4	J918	C3	LF901	B1	Q908	C2	R928	C2	R955	B4	R993	B4	TVR901	C1
C913	C2	C938	A2	C945	C3	C960	A3	C972	B4	CN903	C4	CY902	A1	D918	A3	GT903	A2	J901	B2	J907	B4	J913	B4	L904	A4	NTC901	C1	R910	B2	R929	A3	R958	B4	R999	B4		
C915	C2	C939	C4	C946	C3	C960	A3	C973	C4	CN905	C4	CY903	A3	D919	A3	IC901	A2	J902	B1	J908	A4	J914	B3	L905	A3	Q902	C2	R912	B1	R930	B2	R963	C4	T901	A3		
C916	B2	C940	B2	C949	C4	C961	A4	C976	B3	CN906	A4	CY904	C2	D921	A3	IC906	C3	J903	B2	J909	A4	J915	C3	L906	B3	Q902	C2	R915	A2	R931	B2	R972	B3	T901	A3		
C922	A2	C942	B4	C950	B4	C962	A3	C978	A2	CX901	B1	D909	B2	D922	A3	IC906	C3	J904	C2	J910	A4	J916	C4	L907	B4	Q903	B2	R919	B2	R932	C4	R987	C2	T902	C2		

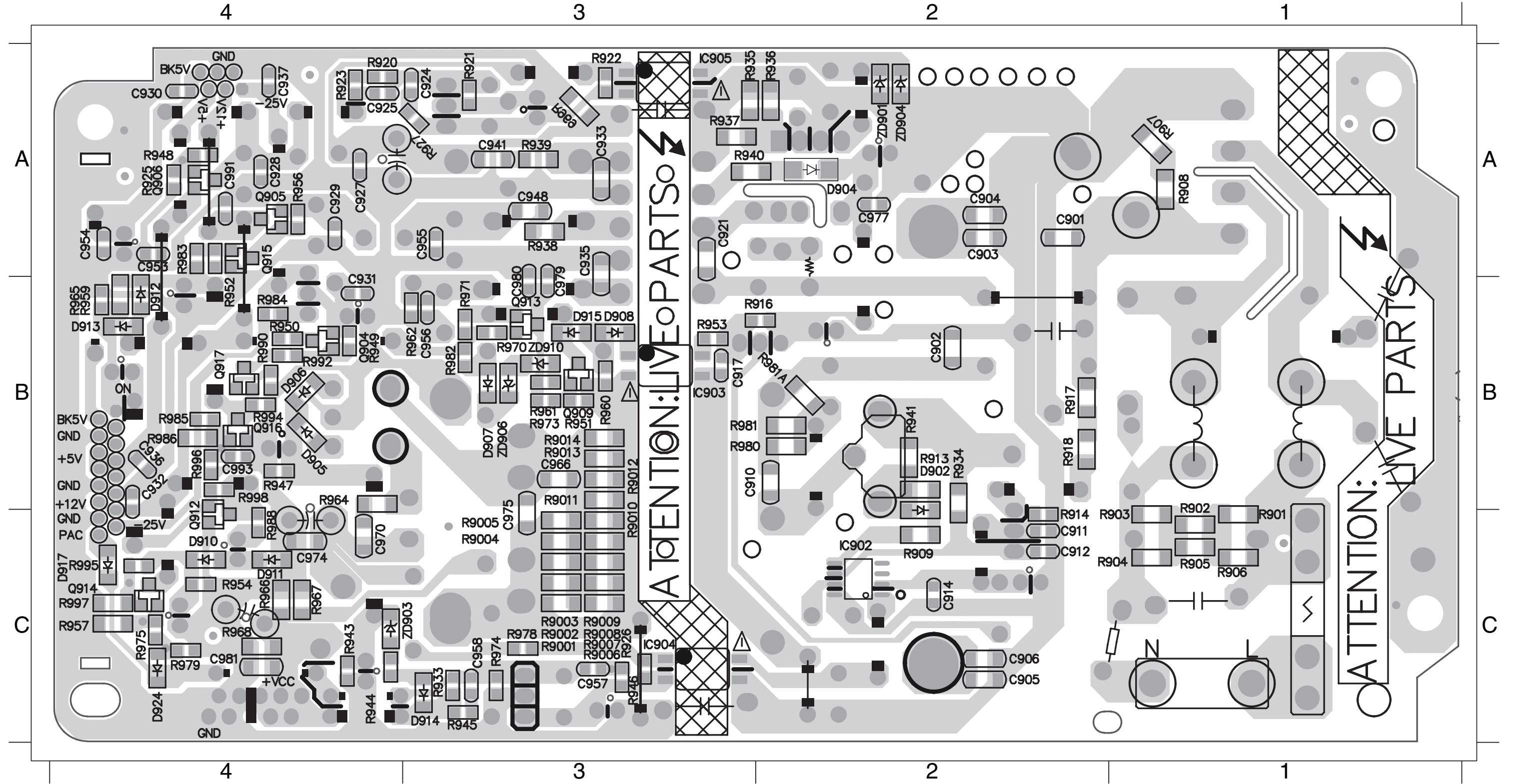


# PCB LAYOUT - BOTTOM VIEW

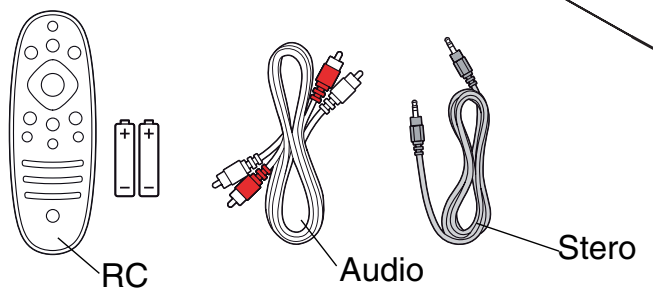
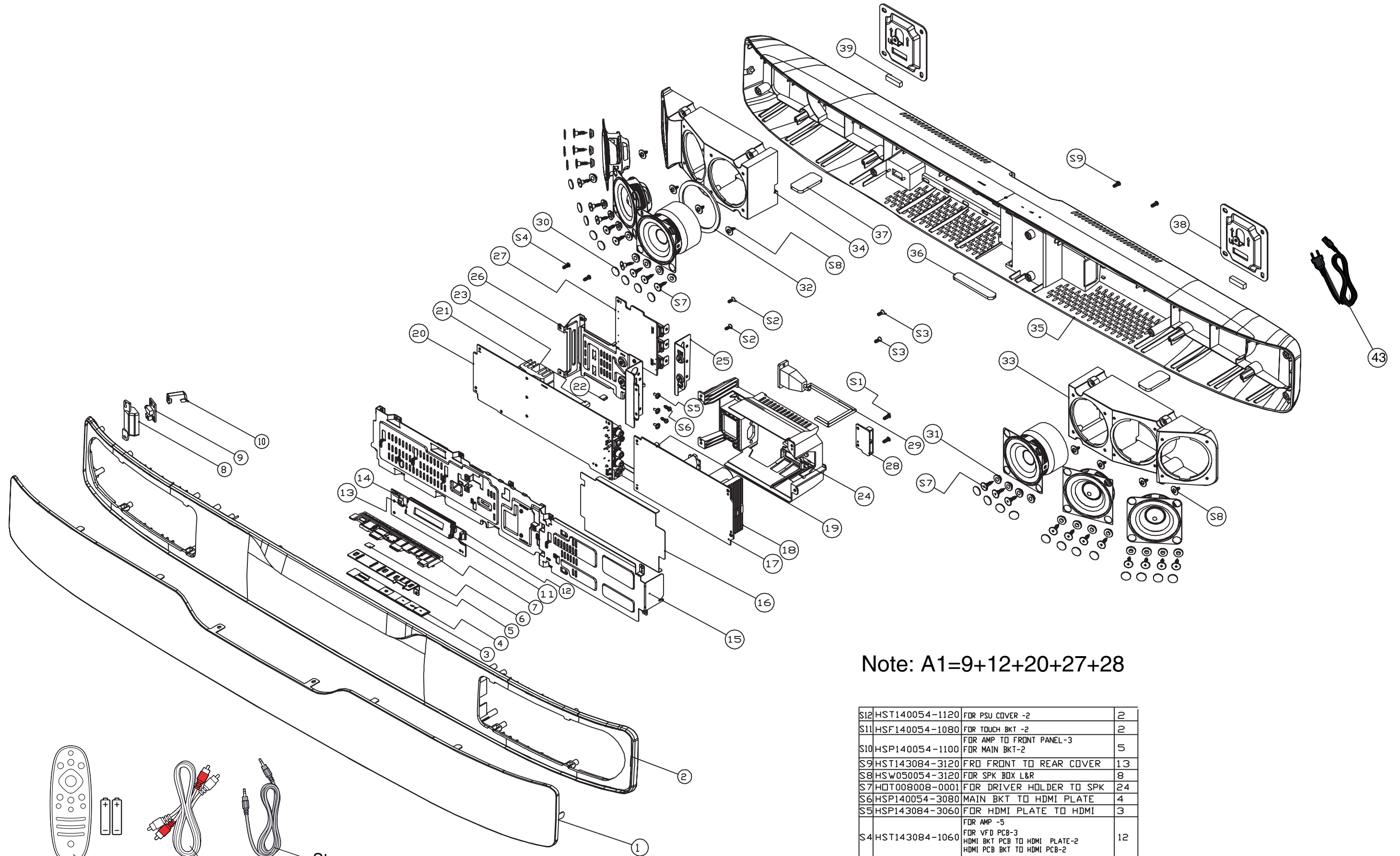
8 - 4

8 - 4

C901	A2	C925	A4	C941	A3	C970	C4	D904	A2	D914	C3	Q905	A4	Q917	B4	R9009	C3	R904	C2	R917	B2	R933	C3	R943	C4	R952	B4	R964	B4	R975	C4	R985	B4	ZD901	A2
C902	B2	C927	A4	C948	A3	C974	C4	D905	B4	D915	B3	Q905	A4	R9001	C3	R901	C1	R905	C1	R918	B2	R934	B2	R944	C4	R953	B3	R966	C4	R978	C3	R986	B4	ZD903	C3
C904	A2	C928	A4	C953	A4	C977	A2	D906	B4	D917	C4	Q906	A4	R9002	C3	R9010	C3	R906	C1	R920	A4	R935	A3	R945	C3	R954	C4	R967	C4	R979	C4	R988	C4	ZD906	B3
C906	C2	C929	A4	C954	A4	C979	B3	D907	B3	D924	C4	Q909	B3	R9003	C3	R9011	B3	R907	A1	R921	A3	R936	A2	R946	C3	R956	A4	R968	C4	R980	B3	R990	B4	ZD910	B3
C911	C2	C930	A4	C955	A3	C980	B3	D908	B3	IC902	C2	Q912	B4	R9004	C3	R9012	B3	R908	A1	R922	A3	R937	A3	R947	B4	R957	C4	R969	A3	R981	B3	R992	B4		
C912	C2	C931	B4	C956	B3	C981	C4	D910	C4	IC903	B3	Q913	B3	R9005	C3	R9013	B3	R909	C2	R923	A4	R938	A3	R948	A4	R959	B4	R970	B3	R981A	B2	R994	B4		
C914	C2	C932	B4	C957	C3	C991	A4	D911	C4	IC904	C3	Q914	C4	R9006	C3	R9014	B3	R913	B2	R925	A4	R939	A3	R949	B4	R960	B3	R971	B3	R982	B3	R995	C4		
C917	B3	C936	B4	C958	C3	C993	B4	D912	B4	IC905	A3	Q915	A4	R9007	C3	R902	C1	R914	C2	R926	C3	R940	A3	R950	B4	R961	B3	R973	B3	R983	A4	R996	B4		
C924	A3	C937	A4	C966	B3	D902	B2	D913	B4	Q904	B4	Q916	B4	R9008	C3	R903	C2	R916	B3	R927	A3	R941	B2	R951	B3	R962	B3	R974	C3	R984	B4	R998	B4		







Note: A1=9+12+20+27+28

S12	HST140054-1120	FOR PSU COVER -2	2
S11	HSF140054-1080	FOR TOUCH BKT -2	2
S10	HSP140054-1100	FOR AMP TO FRONT PANEL-3 FOR MAIN BKT-2	5
S9	HST143084-3120	FRD FRONT TO REAR COVER	13
S8	HSW050054-3120	FOR SPK BOX L&R	8
S7	HOT008008-0001	FOR DRIVER HOLDER TO SPK	24
S6	HSP140054-3080	MAIN BKT TO HDMI PLATE	4
S5	HSP143084-3060	FOR HDMI PLATE TO HDMI	3
S4	HST143084-1060	FOR AMP -5 FOR VFD PCB-3 HDMI BKT PCB TO HDMI PLATE-2 HDMI PCB BKT TO HDMI PCB-2	12
S3	HSF143084-3060	FOR MAIN BKT TO REAR COVER-2	2
S2	HSF143084-1060	FOR MAIN BKT TO JACK PLATE-1	1
S1	HSP140054-1080	FOR PSU HEATSINK-2 FOR TOUCH PCB-4 FOR MP3 COVER-2	8
NO	PART NUMBER	DESCRIPTION	Q'TY

REVISION LIST

Version 1.0

\*Initial release