

Service
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Service Manual



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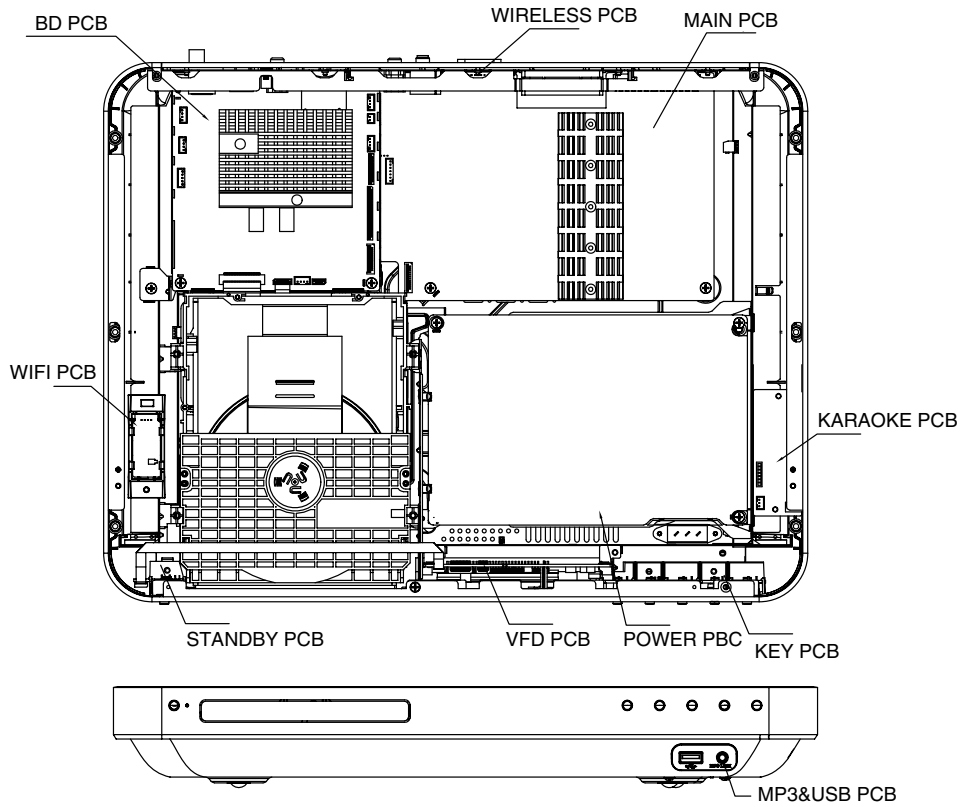
GB 3139 785 35651

Version 1.1



PHILIPS

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions	HTS8562	HTS8562
	/12	/98
Features		
Output Power - 1000W	X	X
Voltage (220~240V)	X	X
Ipod Dock	X	X
Wireless ready	X	X

SERVICE SCENARIO MATRIX:

Type/Versions	HTS8562	HTS8562
	/12	/98
Board in used		
MAIN+VFD+USB&MP3+KARA+WILE+KEY+STBY Board	C	C
Power Board	C	C
BD Board	Bd	Bd

*Bd= Board Level Replacement

*C = Component Level Repair

SPECIFICATIONS

Media formats

- AVCHD, BD, BD-R/ BD-RE, BD-Video, DVD-Video, DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL, CD-R/CD-RW, Audio CD, Video CD/SVCD, Picture files, MP3 media, WMA media, DivX PlusHD media, USB storage device

File formats

- Audio: .aac, .mka, .mp3, .wma, .wav, .mp4, .m4a
- Video:
 - .avi, .divx, .mp4, .mkv, .asf, .wmv, .mpg, .mpeg,
 - .rmvb, .rm (Available only in Asia Pacific and China)
- Picture: .jpg, .jpeg, .gif, .png

Audio formats

Your home theater supports the following audio files.

Extension	Container	Audio codec	Bit rate
.mp3	MP3	MP3	32kbps ~ 320kbps
.wma	ASF	WMA	64kbps ~ 160kbps
.aac	AAC	AAC, HE-AAC	192kbps
.wav	WAV	PCM	1.4Mbps
.m4a	MKV	AAC	192kbps
.mka	MKA	PCM	27.648 Mbps
.mka	MKA	AC-3	640kbps
.mka	MKA	DTS core	1.54Mbps
.mka	MKA	MPEG	912kbps
.mka	MKA	MP3	32kbps ~ 320kbps
.mka	MKA	WMA	64kbps ~ 160kbps
.mka	MKA	AAC, HE-AAC	192kbps

Video formats

If you have a high definition TV, your home theater allows you to play your video files with:

- Resolution: 1920 x 1080 pixels at
- Frame rate: 6 ~ 30 frames per second. .avi files in AVI container

Audio codec	Video codec	Bit rate
PCM, Dolby, Digital,	DivX 3.11, DivX 4.x, X, DivX 5.x, DivX 6.X	10Mbps max
DTS core, MP3, WMA		
	MPEG 1, MPEG 2	20Mbps (peak 40Mbps)
	MPEG 4 ASP	10Mbps max
	H.264/AVC HP@4.1/4.0; MP@3.2/3.1/3.0	20Mbps (peak 40Mbps)
	WMV9	20Mbps

.divx files in AVI container

Audio codec	Video codec	Bit rate
PCM, Dolby, Digital, MP3, WMA	DivX 3.11, DivX 4.x, X, DivX 5.x, DivX 6.X	10Mbps max
	MPEG 1, MPEG 2	20Mbps (peak 40Mbps)
	MPEG 4 ASP	10Mbps max

.mp4 or .m4v files in MP4 container

Audio codec	Video codec	Bit rate
Dolby Digital, MPEG, MP3, AAC, HE-AAC	MPEG 1, MPEG 2 2	20Mbps (peak 40Mbps)
	MPEG 4 ASP	10Mbps max
	H.264/AVC HP @ 4.1/4.0; MP @ 3.2/3.1/3.0	20Mbps (peak 40Mbps)

.mkv files in MKV container

Audio codec	Video codec	Bit rate
PCM, Dolby Digital, DTS core, MPEG, MP3, WMA, AAC, HE-AAC	MPEG 1, MPEG 2 2	20Mbps (peak 40Mbps)
	MPEG 4 ASP	10Mbps max
	H.264/AVC HP @ 4.1/4.0; MP @ 3.2/3.1/3.0	20Mbps (peak 40Mbps)
	WMV9	20Mbps

.asf and .wmv files in ASF container

Audio codec	Video codec	Bit rate
PCM, Dolby Digital, MP3, WMA	MPEG 4 ASP	10Mbps max
	H.264/AVC HP @ 4.1/4.0; MP @ 3.2/3.1/3.0	20Mbps (peak 40Mbps)
	WMV9	20Mbps

.mpg and .mpeg files in PScontainer

Audio codec	Video codec	Bit rate
PCM, DTS core, MPEG, MP3	MPEG 1, MPEG 2	20Mbps (peak 40Mbps)
	MPEG 1, MPEG 2	20Mbps (peak 40Mbps)

.rm and .rmvb files in RM container (Available only in Asia Pacific and China)

Audio codec	Video codec	Bit rate
AAC, COOK,	RV30, RV40,	20Mbps (peak 40Mbps)

Amplifier

- Total output power:
 - Europe and Asia: 1000W RMS (30% THD)
 - Latin America: 800W (10% THD)
- Frequency response: 20 Hz-20 kHz / ± 3 dB
- Signal-to-noise ratio: > 65 dB (CCIR) / (A-weighted)
- Input sensitivity:
 - AUX1, 1000 mV
 - Music iLink: 500 mV

Video

- Signalsystem: PAL / NTSC
- HDMI output: 480i/576i, 480p/576p, 720p, 1080i, 1080p, 1080p24

Audio

- S/PDIF Digital audio input:
 - Coaxial: IEC 60958-3
 - Optical: TOSLINK
- Sampling frequency:
 - MP3: 32 kHz, 44.1 kHz, 48 kHz
 - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
 - MP3: 32 kbps - 320 kbps
 - WMA: 48 kbps - 192 kbps

Radio

- Tuning range:
 - Europe/China: FM 87.5-108 MHz (50 kHz)
 - Asia Pacific/Russia/Latin America: FM 87.5-108 MHz (50/100 kHz)
- Signal-to-noise ratio: FM 50 dB
- Frequency response: FM 180 kHz-12.5 kHz / ± 3 dB

USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class (MSC)
- File system: FAT16, FAT32, NTFS
- Maximum memory support: < 160 GB

Main unit

- Power supply:
 - Europe/China: 220-240 V~, 50 Hz
 - Latin America/Asia Pacific: 110-127 V/220-240 V~, 50-60 Hz
 - Russia/India: 220-240 V~, 50 Hz
- Power consumption: 105 W
- Standby power consumption: ≤ 0.5 W
- Dimensions (WxHxD): 435 x 63.5 x 342.5 mm
- Weight: 4.0 kg

Subwoofer

- Total output power: 230W
- Impedance: 3 ohm
- Speaker drivers: 165 mm (6.5") woofer
- Frequency response: 20 Hz-150 Hz
- Dimensions (WxHxD): 196 x 395 x 342 (mm)
- Weight: 4.9 kg
- Cable length: 3 m

Speakers

Center speaker:

- Total output power: 230W
- System: full range satellite
- Speaker impedance: 3ohm

- Speaker drivers: 1 x 25.4 mm (1") tweeter
2 x 76.2 mm (3") woofer
- Dimensions (WxHxD): 280 x 95 x 92mm
- Weight: 1.40kg
- Cable length: 2m
- Front / rear speakers:
 - Total output power: 4 x 135W
 - Speaker impedance: 5 ohm
 - Speaker drivers: 1 x 25.4 mm (1") tweeter+
2 x 76.2 mm (3") woofer
- Dimensions (WxHxD):
 - small speakers: 97 x 301 x 120mm
- Weight: 1.5kg
- Cable length (front speakers): 4m
- Cable length (rear speakers): 10m

Remote control batteries

- 2 x AAA-R03-1.5V

Dock for iPod/iPhone

Dimensions (HxD): 34.5 x 104 mm
Weight: 135 g

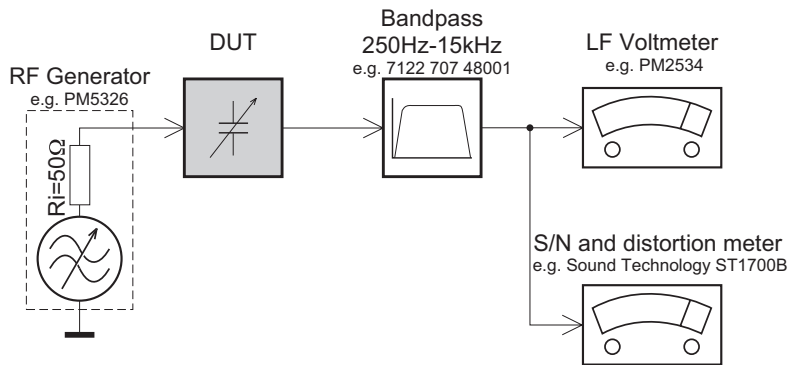
Laser

- Laser Type (Diode): InGaN/AlGaIn (BD), AlGaInP (DVD/CD)
- Wave length: 405 +7nm/-7nm (BD), 655 +10nm/-10nm (DVD), 790 +10nm/-20nm (CD)
- Output power (Max. ratings): 20mW (BD), 6mW (DVD), 7mW (CD)

Specifications subject to change without prior notice.

MEASUREMENT SETUP

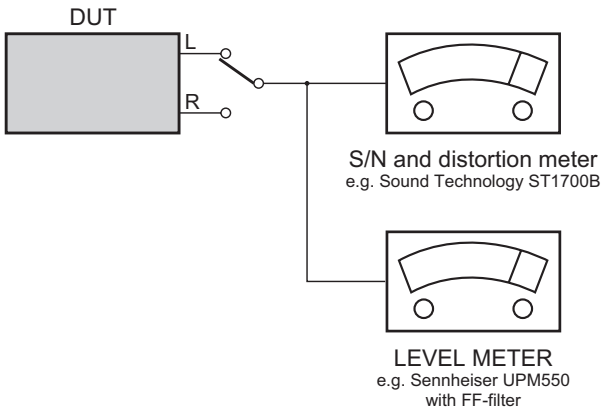
Tuner FM



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

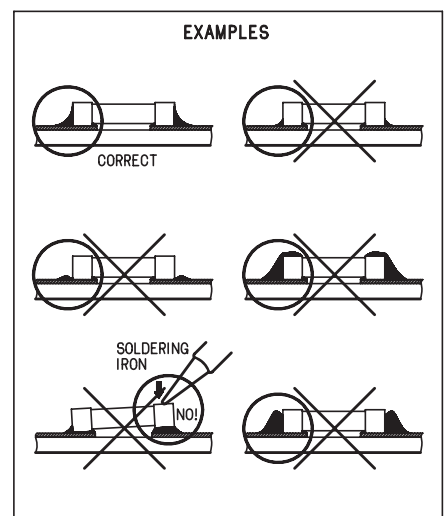
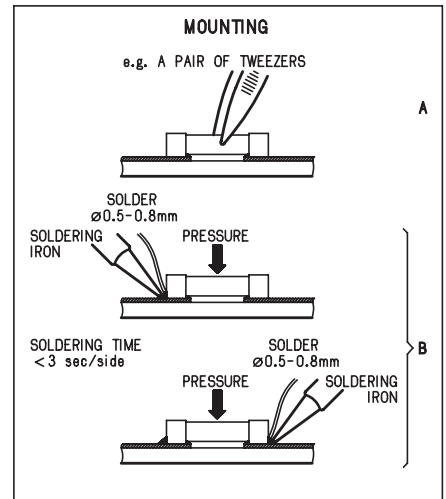
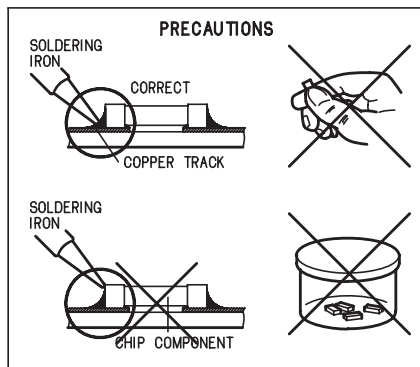
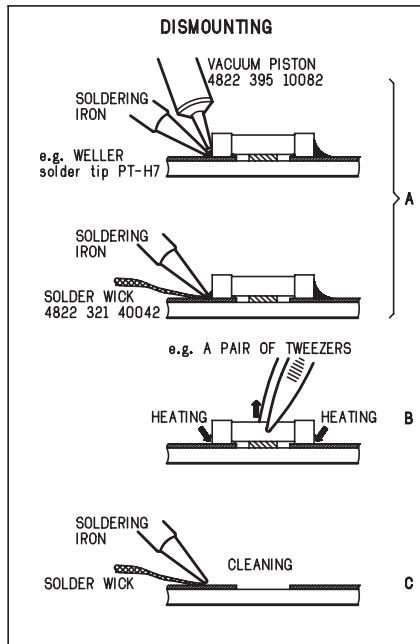
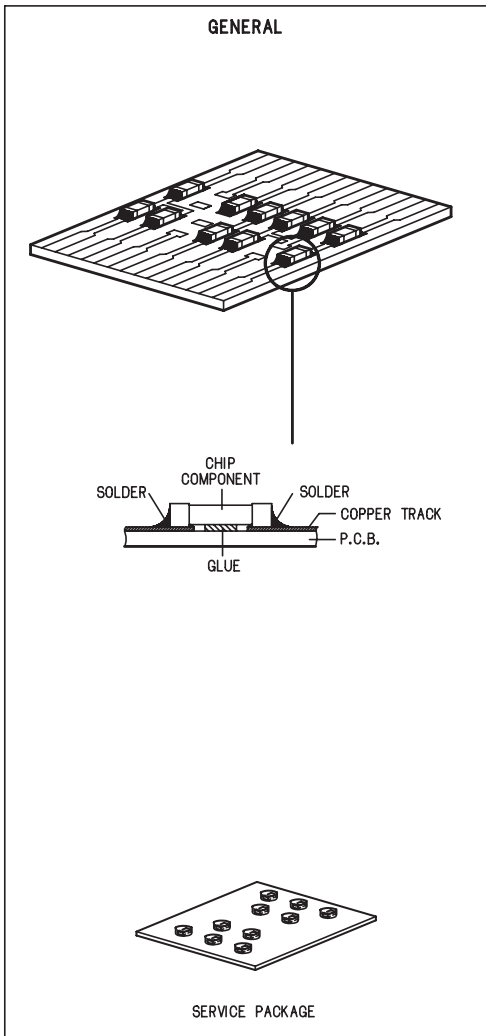
Service Tools:

- Universal Torx driver holder4822 395 91019
- Torx bit T10 150mm4822 395 50456
- Torx driver set T6-T204822 395 50145
- Torx driver T10 extended4822 395 50423

Compact Disc:

- SBC426/426A Test disc 5 + 5A4822 397 30096
- SBC442 Audio Burn-in test disc 1kHz4822 397 30155
- SBC429 Audio Signals disc4822 397 30184
- Dolby Pro-logic Test Disc4822 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.

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 ditzelfde potentiaal.

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 Δ .

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 Δ .

F

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

Less composants de sécurité sont marqués Δ .

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 Δ 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 Δ .

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 suojaelukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarse !

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

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 desoldering 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.

Software upgrade & Procedure to restore product setting

1) Restore factory setting

- Press “” <Home> button on R/C.
- Select <SETUP>, then press “OK” button on R/C.
- Select <Advanced setup>, then press < OK > button on R/C.
- Select <Restore default settings>, then press <OK> to confirm.

2) Password change

- Press “” <Home> button on R/C.
 - Select <SETUP>, then press “OK” button on R/C.
 - Select <preference setup>, then press <OK> button on R/C.
 - Select <Change Password> <Confirm>, then press <OK> button on R/C.
- “0000” is default password supplied.

3) Trade mode

- In open model, press “” <Home> button on R/C.
- Press “2” “5” “9” on R/C, VFD will display “TRA ON” or “TRA OFF”.

4) Check software version

- Press “” <Home> button on R/C
- Select <Setup>, then press <OK> button on R/C.
- Select <Advanced Setup> <Version Info.>, then press <OK> button on R/C.
- TV will show message as follow:

Model: HTS8562/12/98
 Version:
 System SW: 1.19.00
 Subsystem SW: 03-00-54-05
 Ethernet MAC: 00:25:D1:07:9E:BA
 Wireless MAC: 5C:33:8E:6D:F3:65
 EUI64: 0025d1ffe079eba
 For more information, frequently asked questions and software updates, please visit philips.com/support

Close

- Select <Close> on the version display screen and press <OK> button to exit .

5) Upgrading new software

- Method 1: Update software from a USB storage device
- Create a folder named “UPG_ALL” in your USB storage device, and Copy the latest upgrading software into the folder.
 - Connect the USB storage device to the home theater.
 - Press “” <Home> button on R/C, and select <Setup>.
 - Select <Advance Setup> <Software Update> <USB>.
 - TV will show message as follow:

Now searching for upgrade software!
Please wait...!

Software updates for this player have been found. Do you want to upgrade?

Cancel

Start

- Select <Start>, press <OK> button on R/C.

Software upgrade will take 5 minutes

Do not switch off!

Package version: 000025.0

Software BE	80%
Software FE	Completed
Software MCU1:	
Software Dock:	
Software MCU3:	

Software upgrade will take 5 minutes

Do not switch off!

Package version: 000025.0

Software BE	Completed
Software FE	Completed
Software MCU1:	Not started
Software Dock:	2%
Software MCU3:	Not started

Software upgrade will take 5 minutes

Do not switch off!

Package version: 000025.0

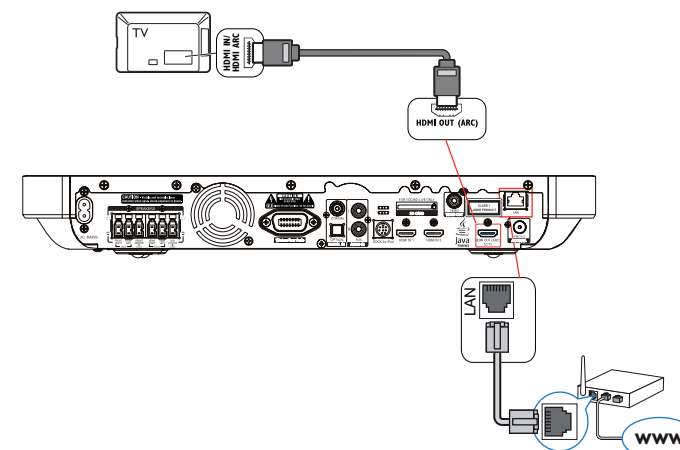
Software BE	Completed
Software FE	Completed
Software MCU1:	1%
Software Dock:	Failed
Software MCU3:	

- The set will shut down automatically when the software upgrade is completed.

Method 2: Update software from the internet

Note: To check for new updates, compare the current software version of your home theater with the latest software version (if available) on the Philips web site, and for BD-Live application and software update, make sure that the network router has access to the Internet and the firewall is disabled.

- The “LAN” jack at the back panel of the set must be connect to the network router via network cable and the set connect to TV, Prepare the connection as shown follow:



- Press “” <Home> button on R/C, and select <Setup>.
- Select <Advance Setup> <Software Update> <Network>.
- TV will show message as follow:

Now searching for upgrade software!
Please wait...!

Software updates for this player have been found. Do you want to upgrade?

Cancel

Start

- Select <Start>, press <OK> button on R/C.

Software upgrade will take 5 minutes

Do not switch off!

Package version: 000025.0

Software BE	80%
Software FE	Completed
Software MCU1:	
Software Dock:	
Software MCU3:	

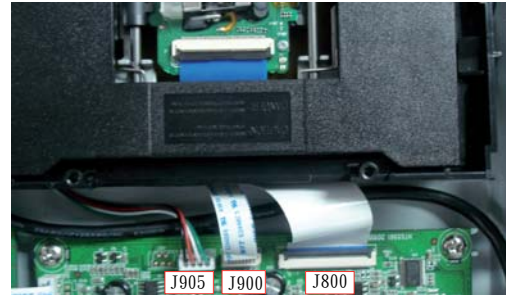
Software upgrade will take 5 minutes

Do not switch off!

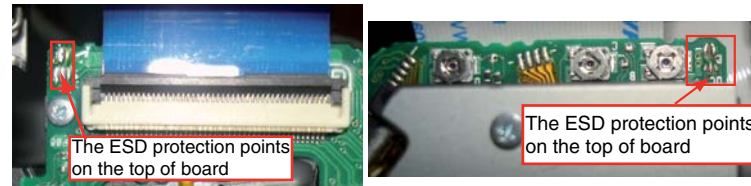
Package version: 000025.0

Software BE	Completed
Software FE	Completed
Software MCU1:	Not started
Software Dock:	2%
Software MCU3:	Not started

c) Assembly Blu-ray Loader to "J800", "J900", "J905" on the top of BD Board as shown below.



d) Remove soldered joint on the ESD protection points.



Top side view of OPU

Bottom side view of OPU

Note: The 2 ESD protection points on any one side must be soldered if

- o the Blu-ray Loader is OK and needs to be disconnected from connector J800, J900 and J905 of the BD Board.
- o the defective Blu-ray Loader is needed to be send back to supplier for failure analysis and to support backcharging evidence.

CAUTION!

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

Software upgrade will take 5 minutes

Do not switch off!

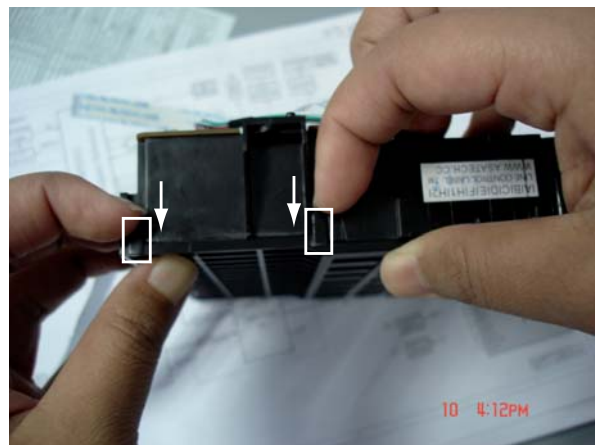
Package version: 000025.0

Software BE	Completed
Software FE	Completed
Software MCU1:	1%
Software Dock:	Failed
Software MCU3:	

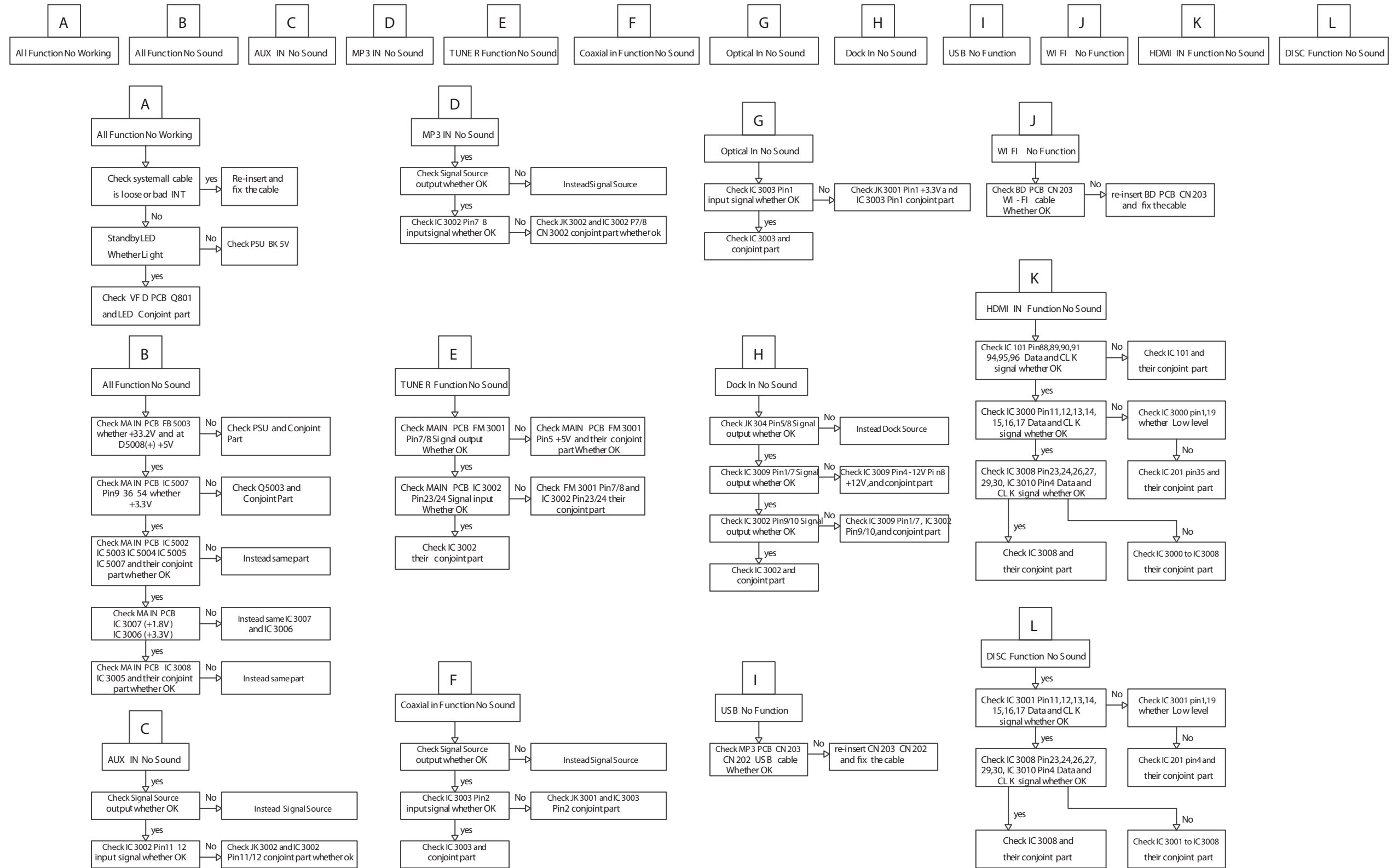
f) The set will shut down automatically when the software upgrade is completed.

6) How to replace the defective Blu-ray Loader

- a) Remove the defective Blu-ray Loader.
- b) Remove the shield cover at the top of Blu-ray Loader as shown below.



MAIN UNIT REPAIR CHART



DISASSEMBLY INSTRUCTIONS

Dismantling of the Top panel

- 1) Loosen 11 screws to remove the Top Cover .
 - 5 screws "A" at the back panel as shown in figure 1.
 - 6 screws "B" at the bottom panel as shown in figure 2.

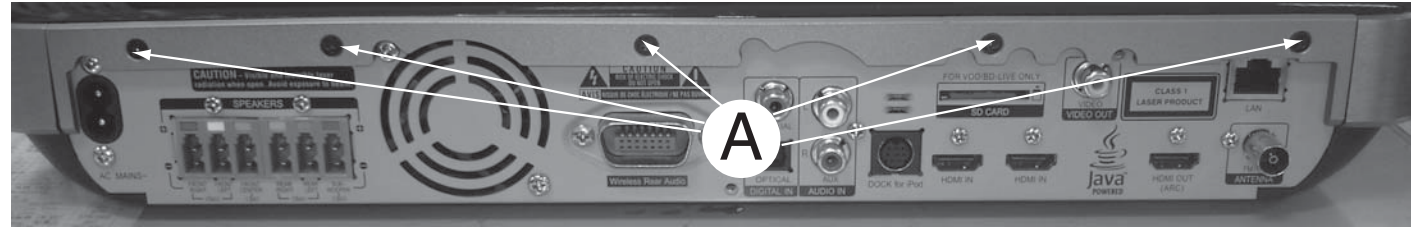
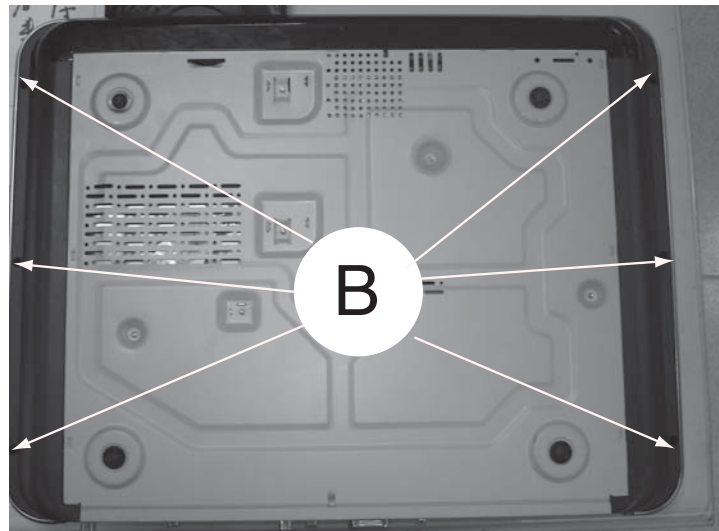


Figure 1



Dismantling of the BD Door

- 1) Open the BD 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 BD 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 4 . Place the set on its side, insert the mini screw driver till the marking and slide it towards the right as shown in figure 3 until the Tray moves out of the Front Panel.
- 2) Return the set to its upright position and remove the Tray Cover as shown in Figure 5 and close the tray manually by pushing it back in.

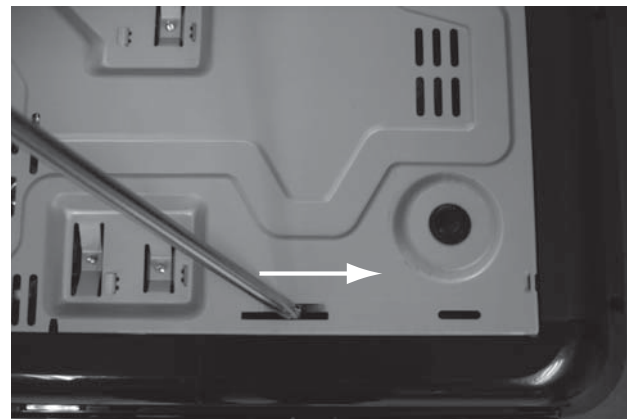


Figure 3



Figure 4

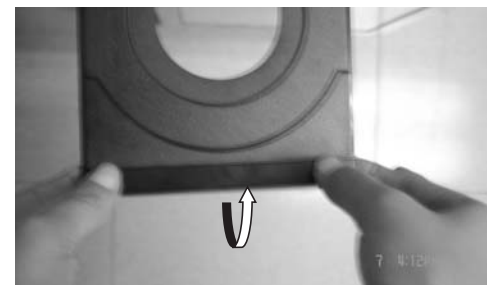


Figure 5

Dismantling of Blu-ray Loader

- 1) Loosen 4 screws "C" at the Blu-ray Loader as shown in figure 6.

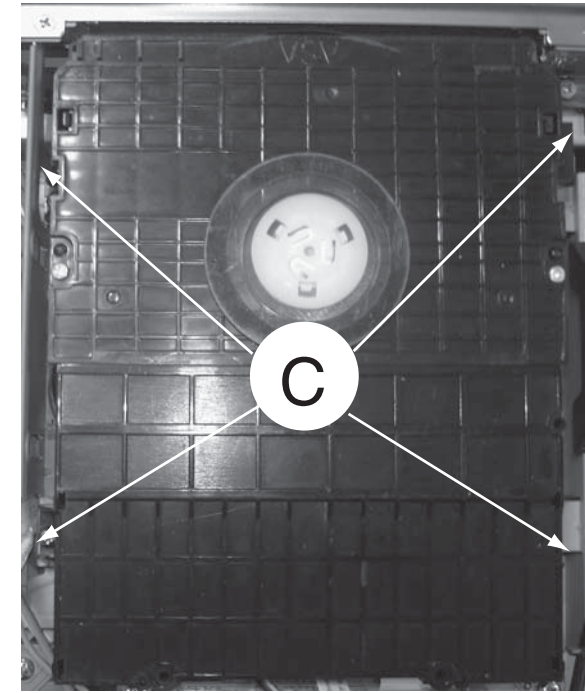


Figure 6

Dismantling of BD Board

- 1) Loosen 4 screws "D" on the top of BD Board as shown in figure 7.

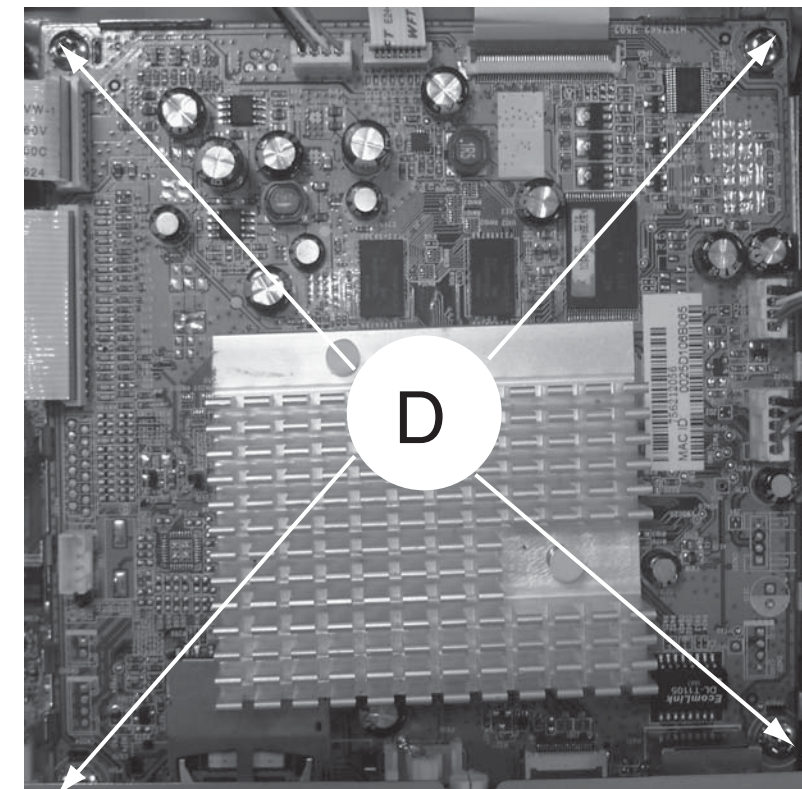


Figure 7

Dismantling of the Main Board

- 1) Loosen 3 screws "E" on the top of Main Board as shown in figure 8.
- 2) Loosen 8 screws "F" at the back panel as shown in figure 9.
- 3) VFC120330-060R replace with VFC120230-250R as shown in figure 10 & 11.

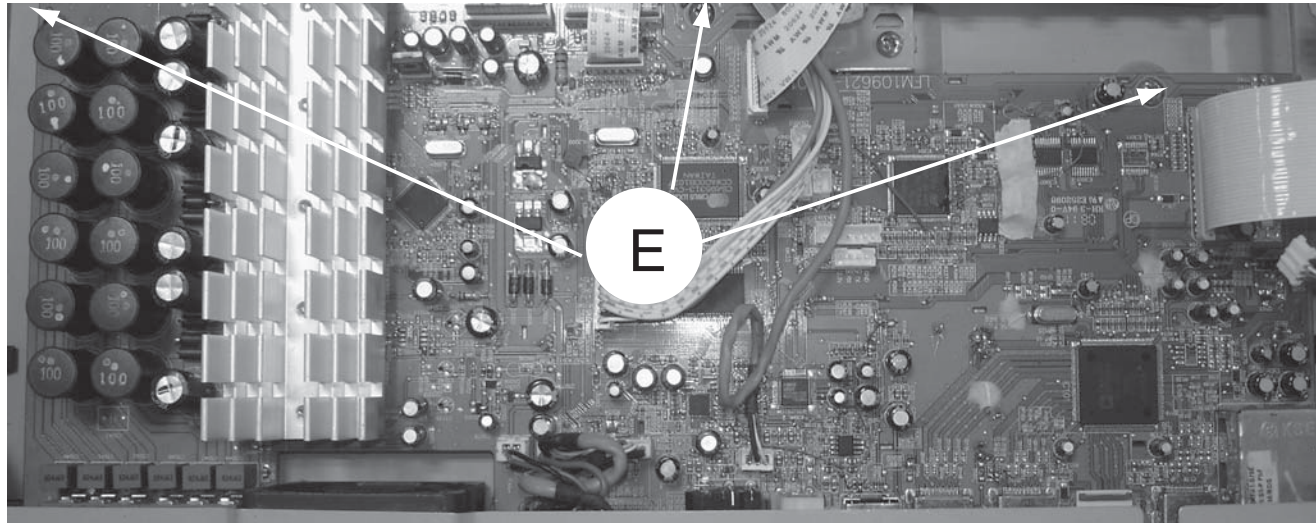


Figure 8

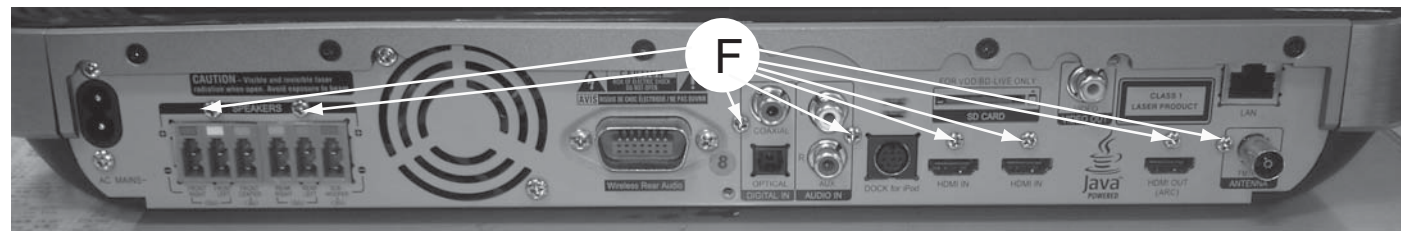


Figure 9

Note: When you repair Main Board, this VFC cable must be replaced by below VFC cable as shown in figure 11

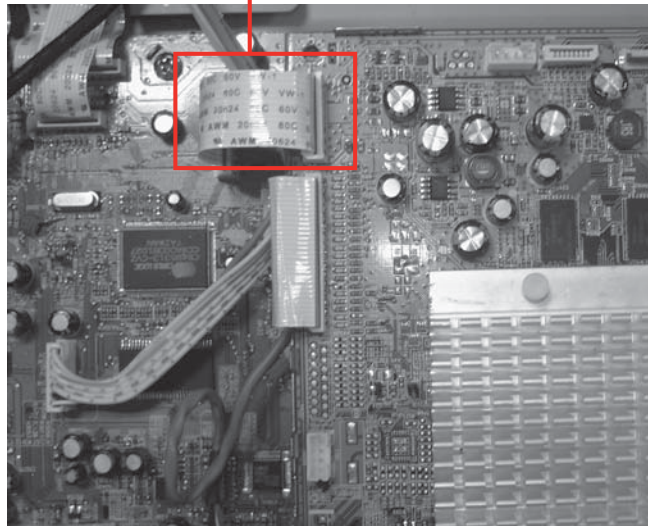


Figure 10



Figure 11

WARNING: This cable is to be use for servicing only. Not to be use in the set asssembly after service as it may cause safety issue. To be remove and replace with original cable after servicing.

Dismantling of the Power Board

- 1) Loosen 5 screws "G" on the top of Power Board as shown in figure 12.

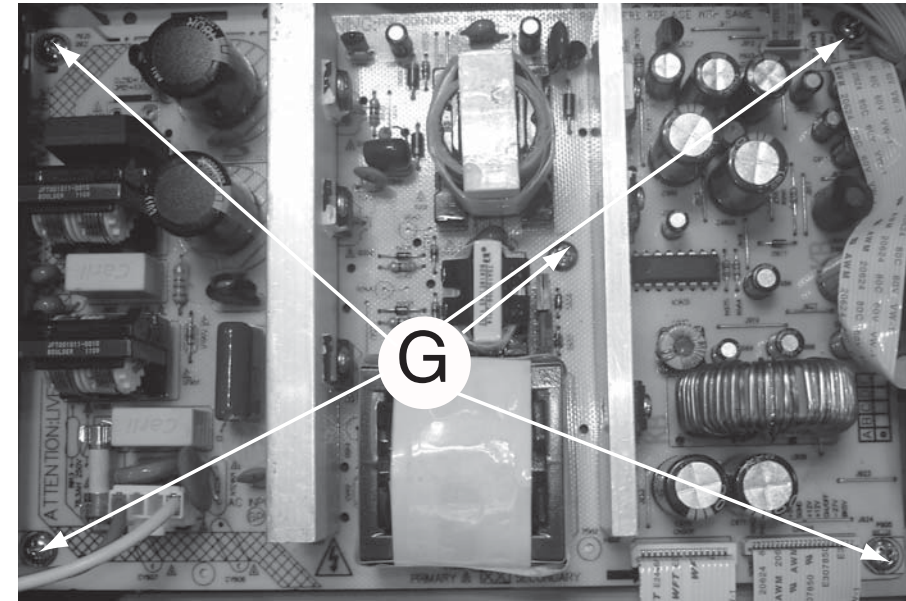


Figure 12

Dismantling of the VFD Board

- 1) Loosen 2 screws "H" at the bracket as shown in figure 13.



Figure 13

Dismantling of the KEY Board

- 1) Loosen 2 screws "J" at the bracket as shown in figure 14.

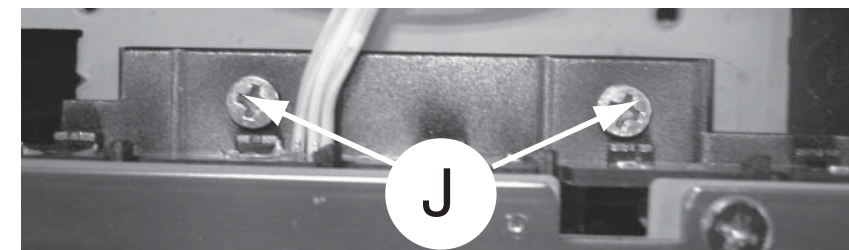


Figure 14

Dismantling of the MP3+USB Board

- 1) Remove the Display Lens as shown in figure 16.
- 2) Loosen 2 screws "K" on the top of MP3&USB board as shown in figure 17.



Figure 16

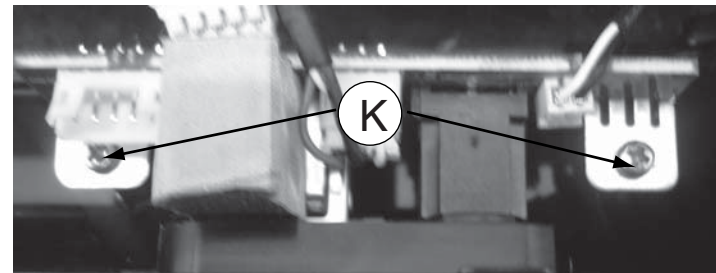


Figure 17

Dismantling of the KARAOKE Board

- 1) Loosen 2 screws "L" on the top of KARAOKE board as shown in figure 18.

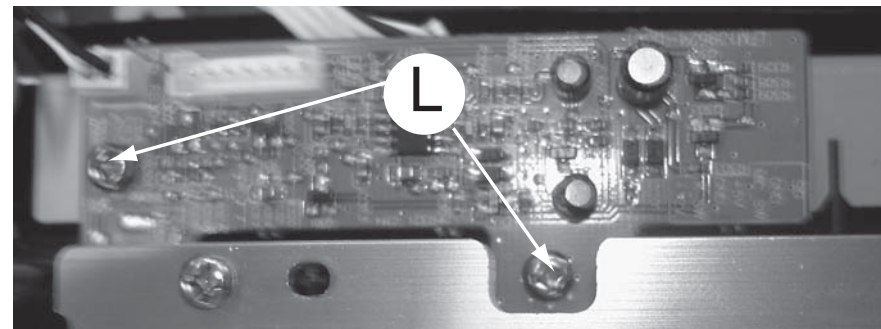


Figure 18

Dismantling of the WIRELESS Board

- 1) Loosen 2 screws "O" at the back panel as shown in figure 19.

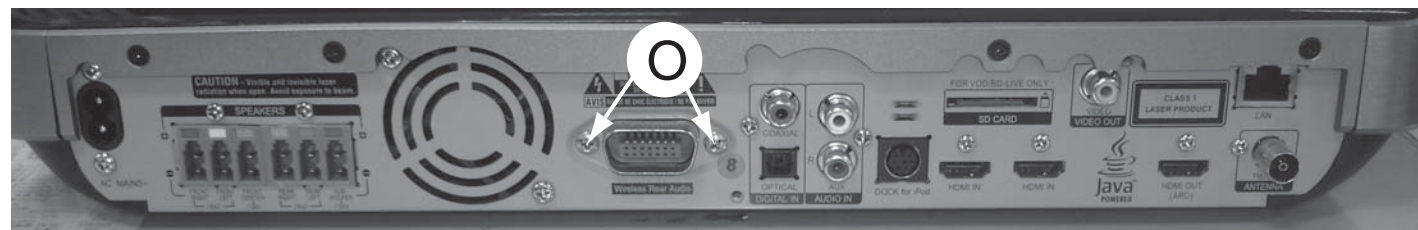
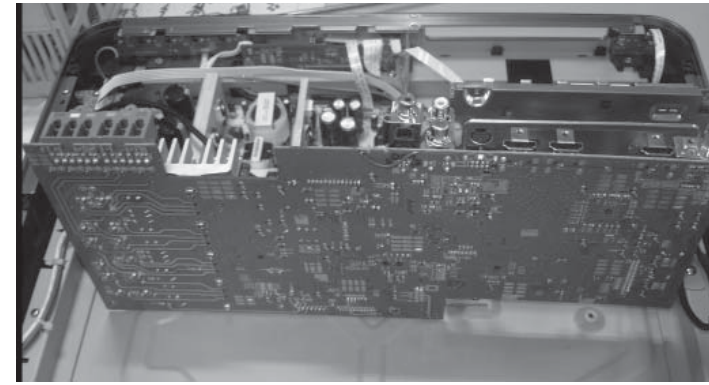


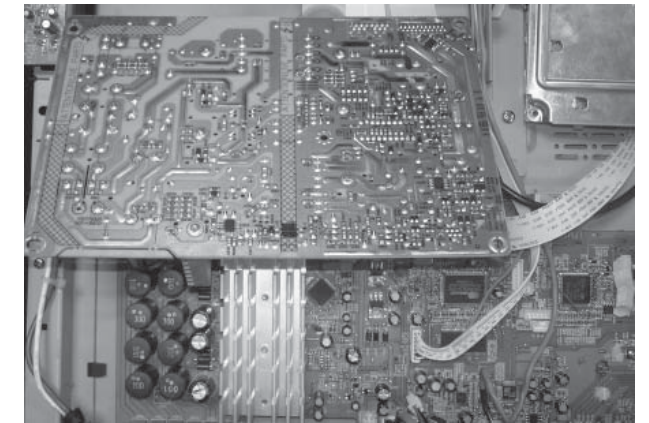
Figure 19

SERVICE POSITIONS

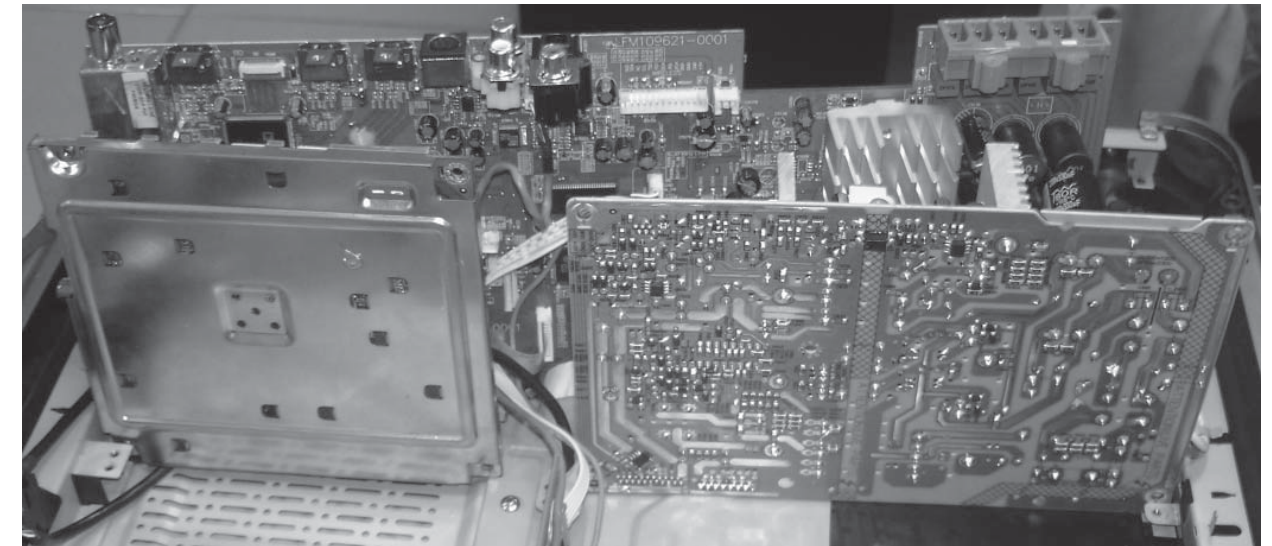
Service Position A - MAIN Board



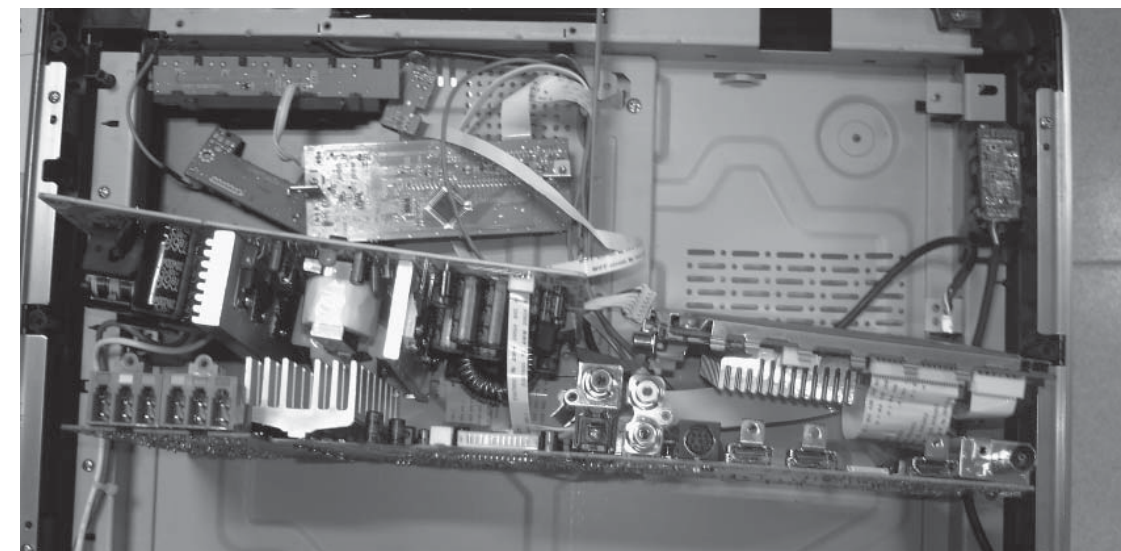
Service Position B - POWER Board



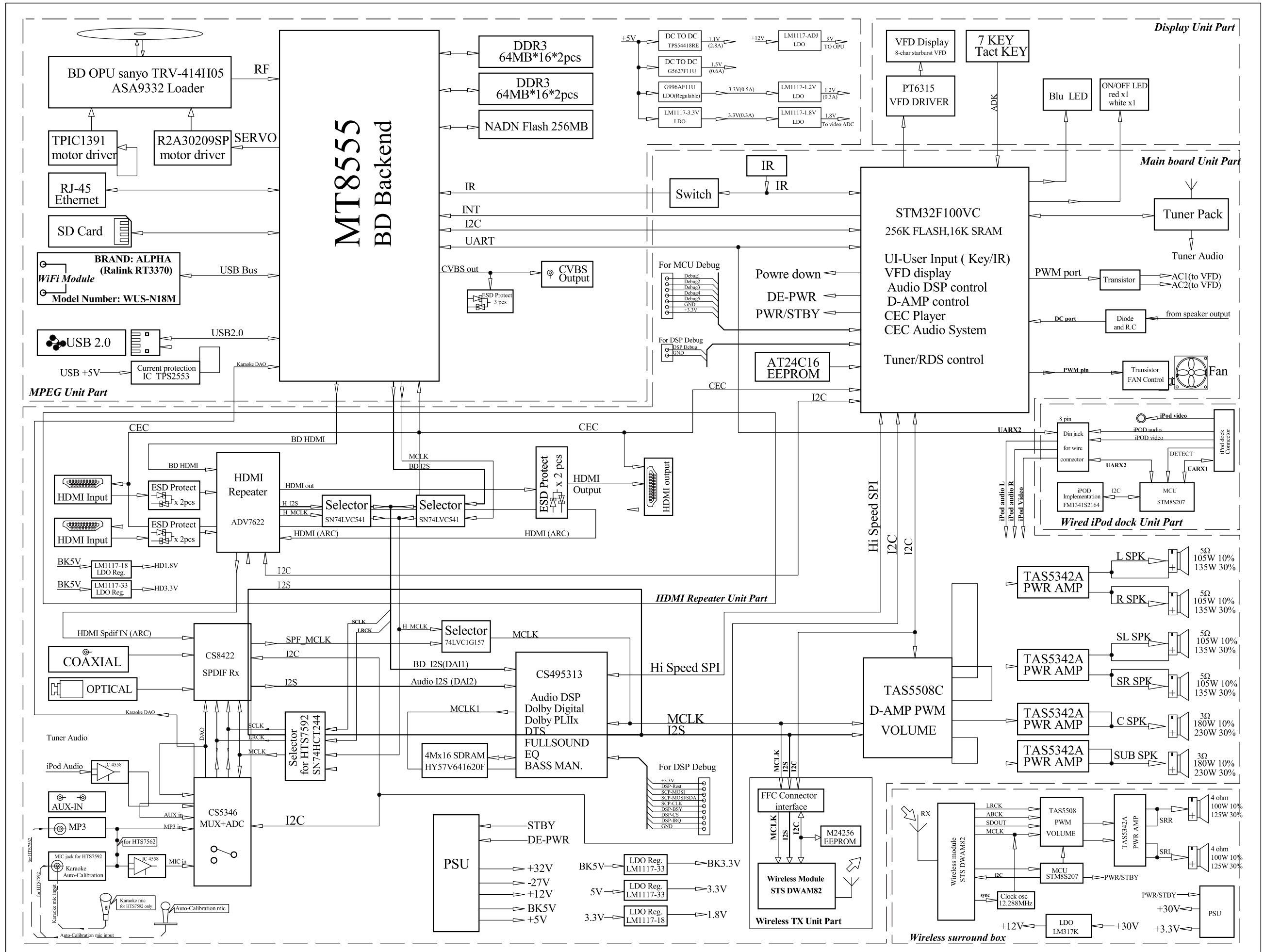
Service Position C - MAIN & POWER & BD Board

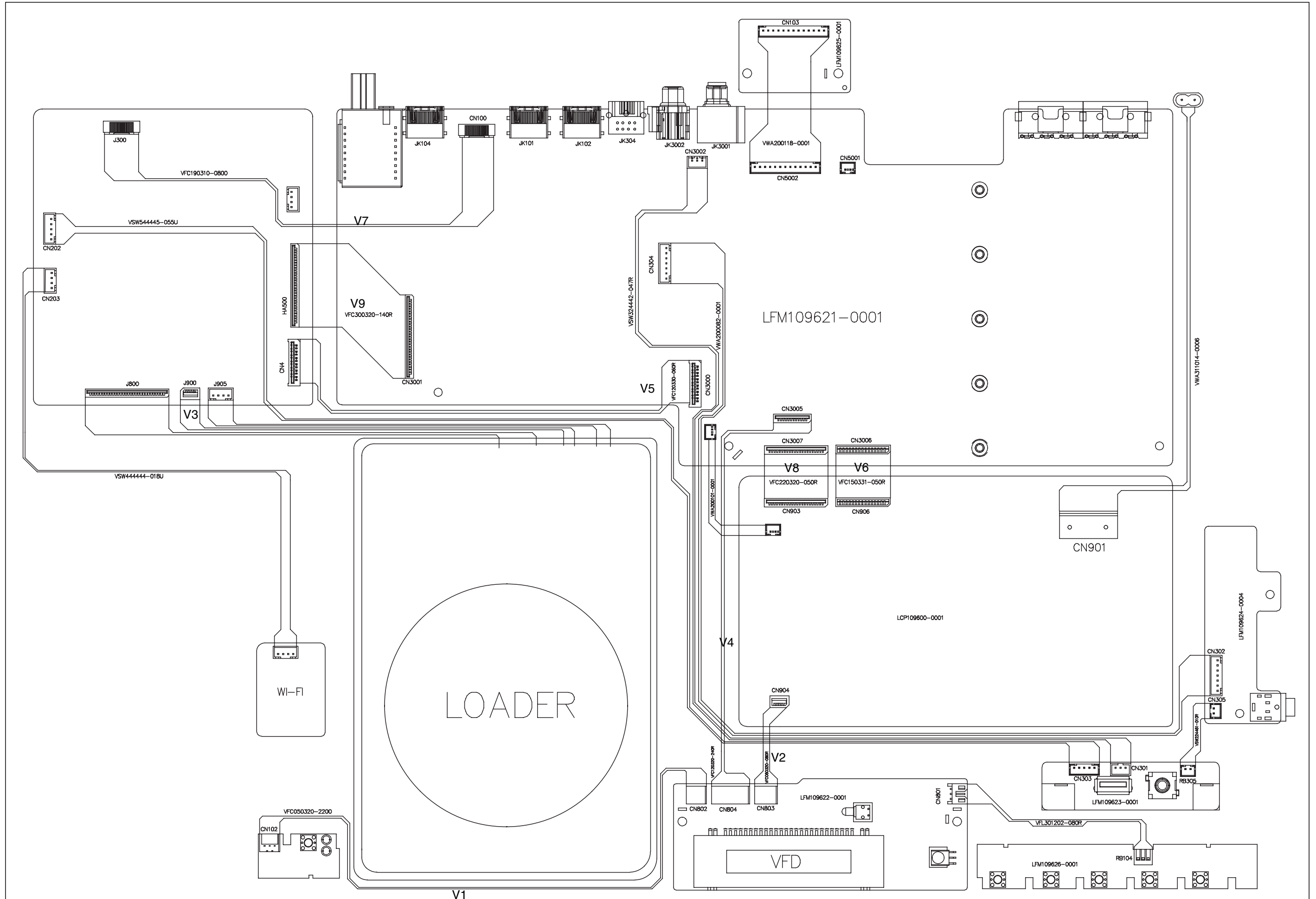


Service Position A - ALL Board



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.

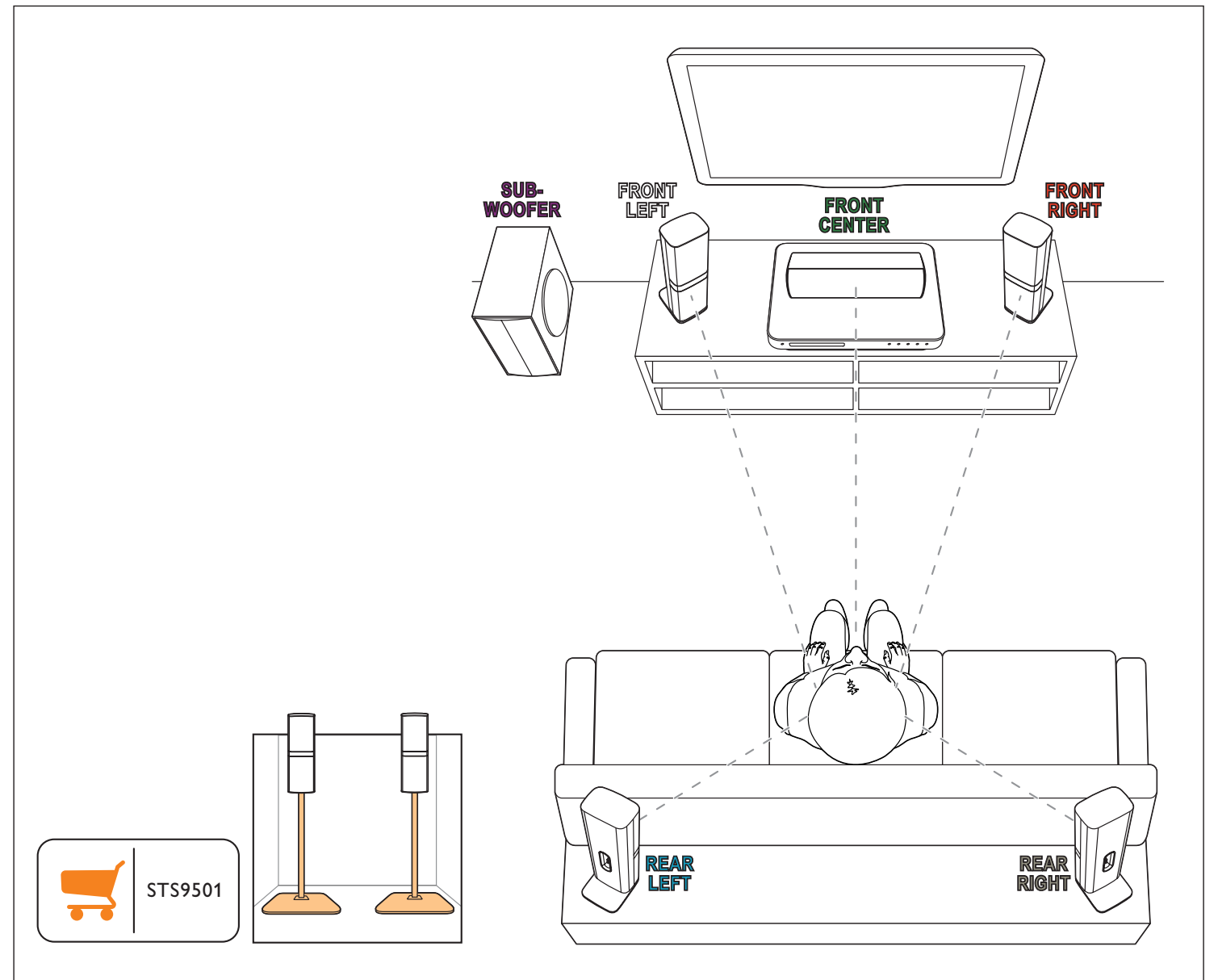
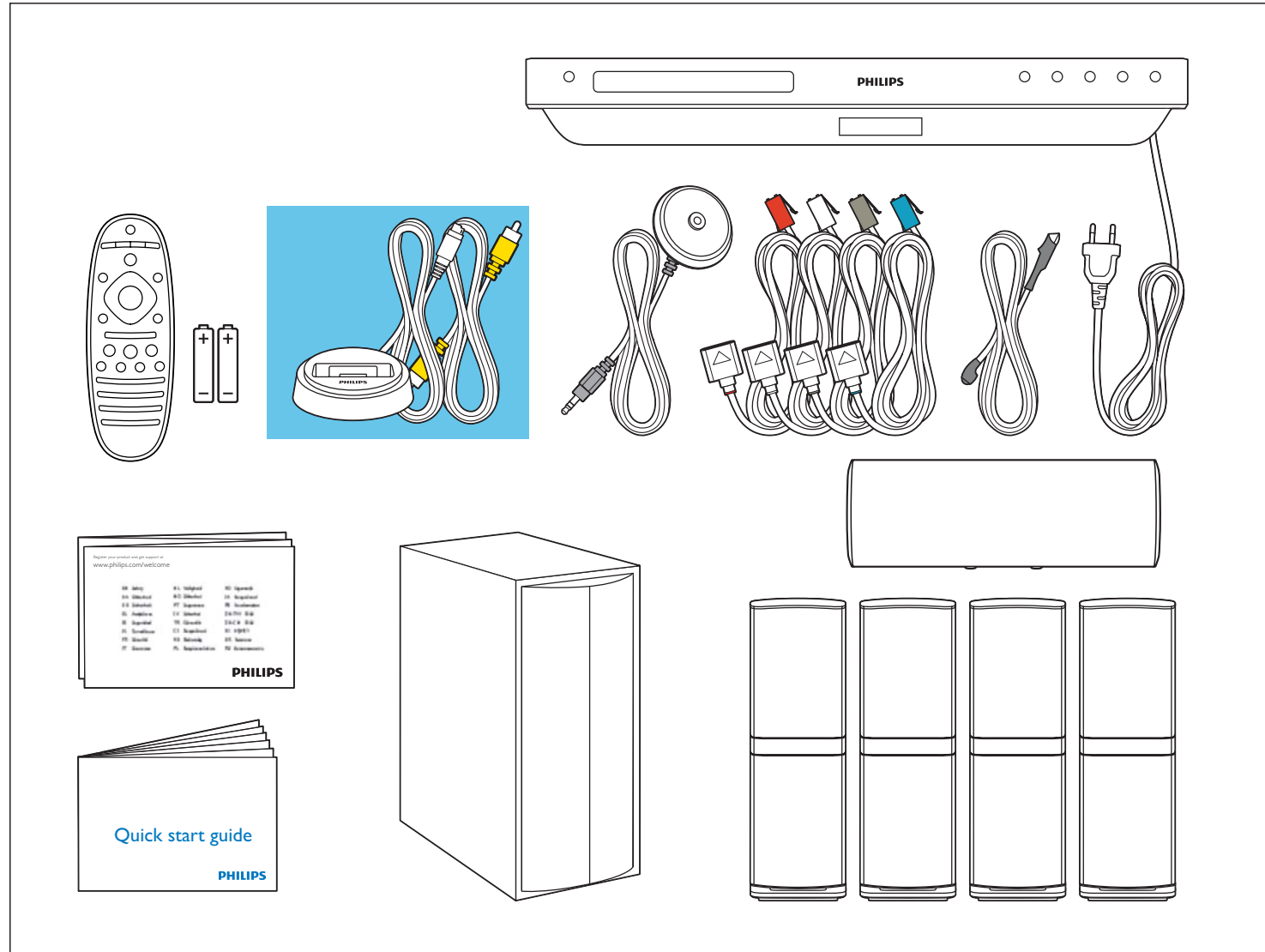


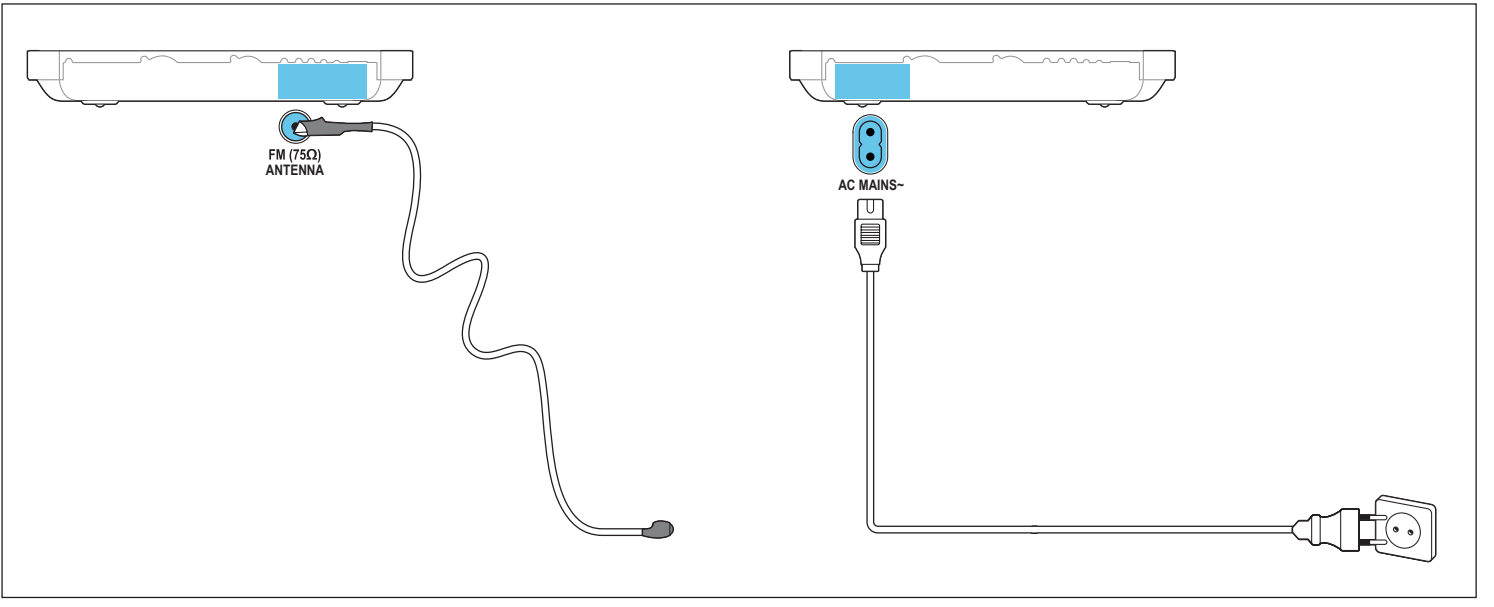
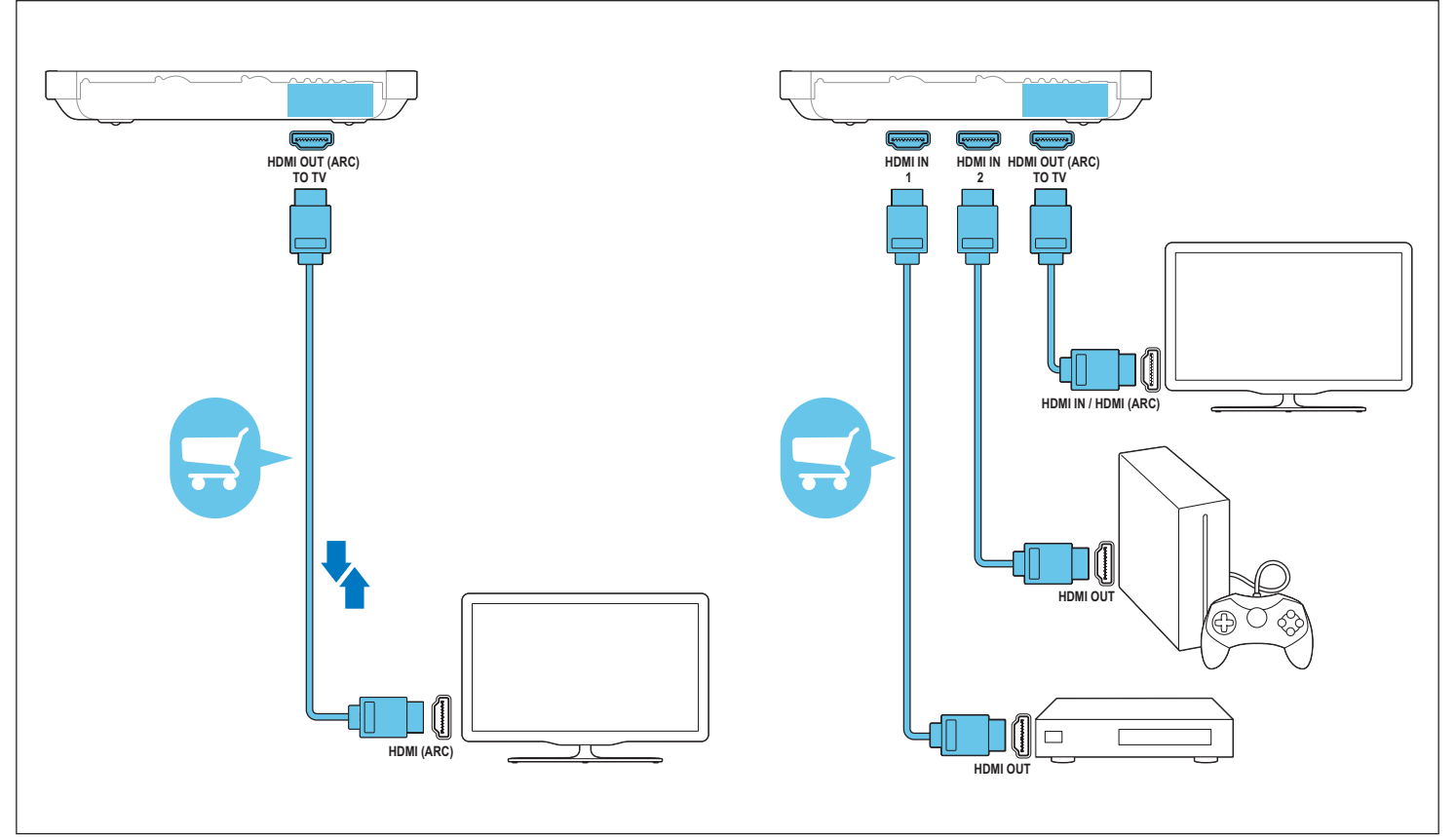
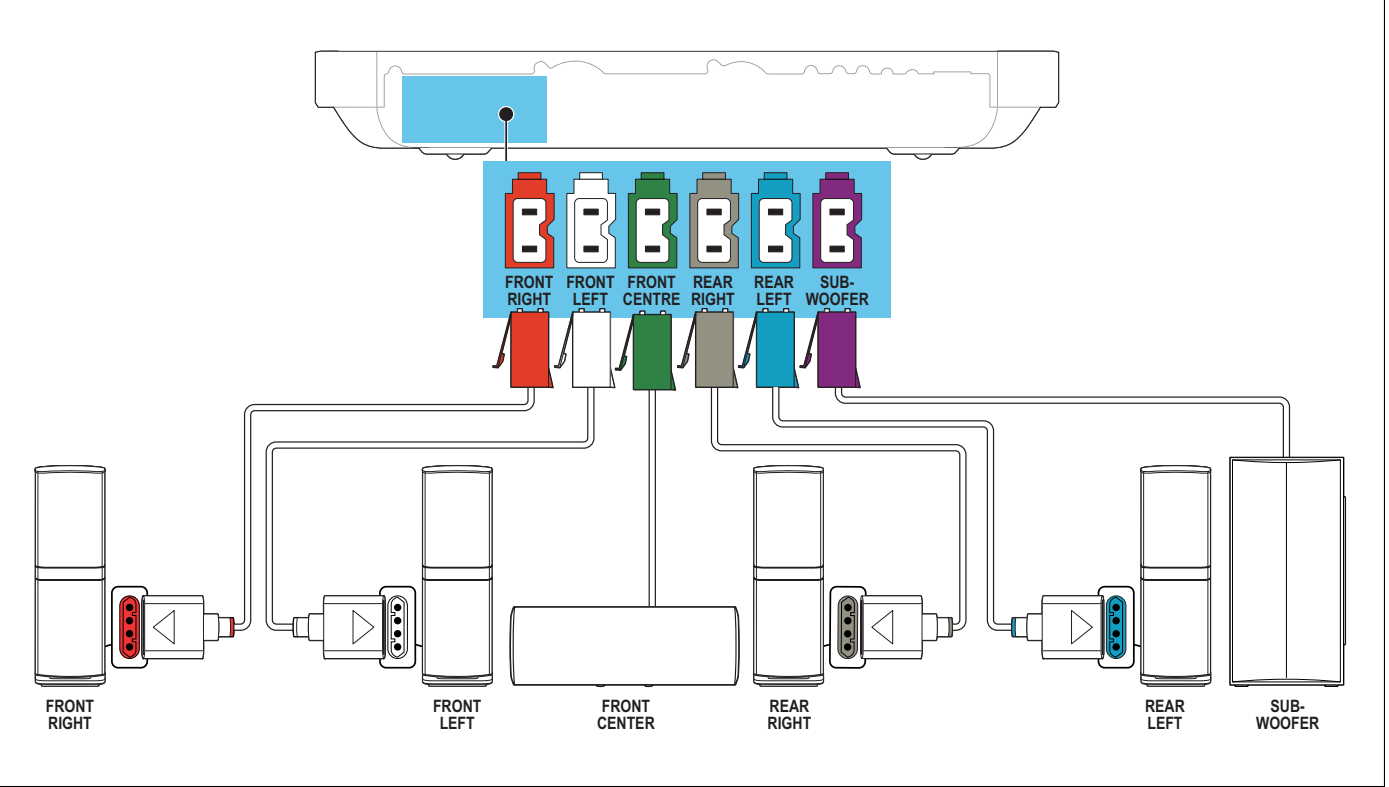
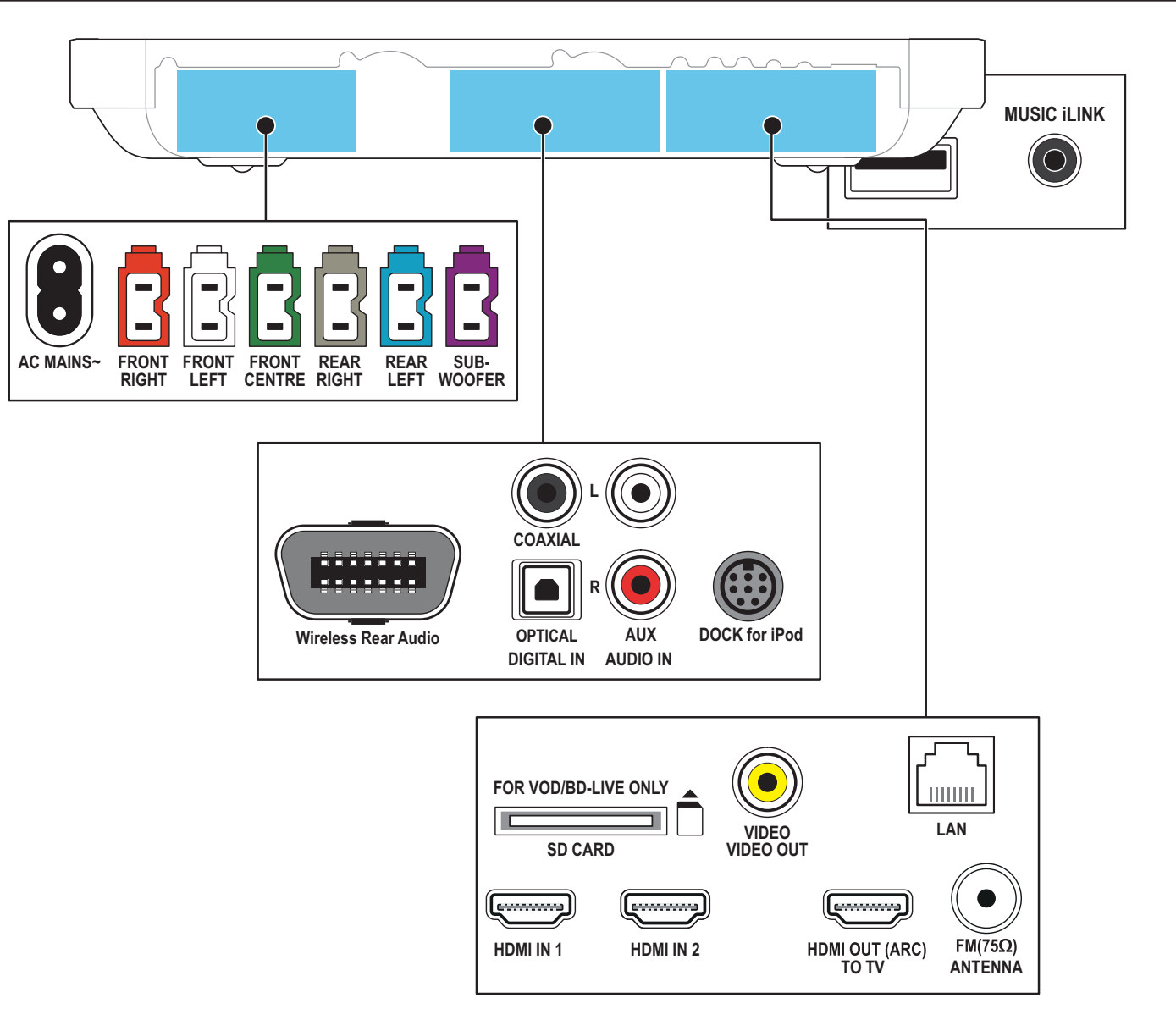


QUICK START GUIDE

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.

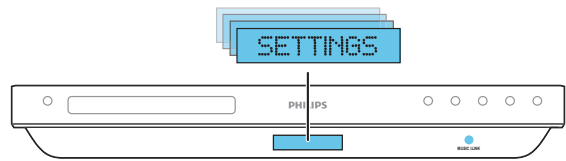
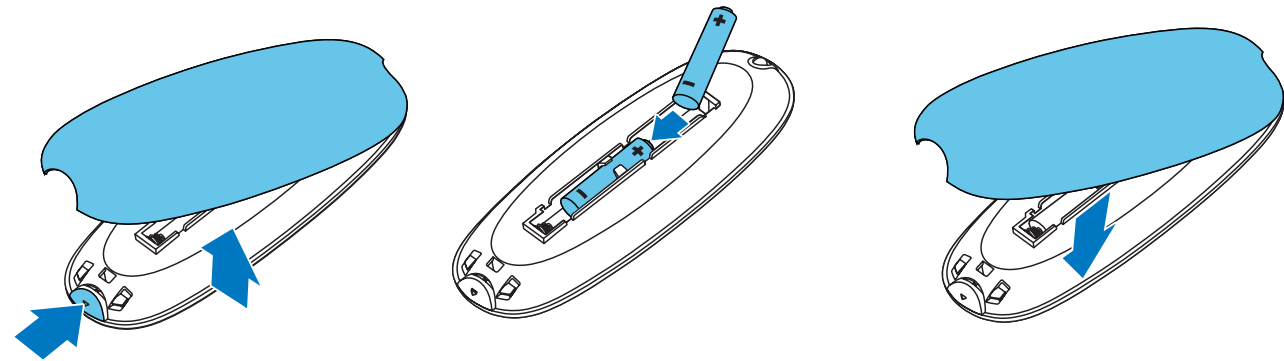




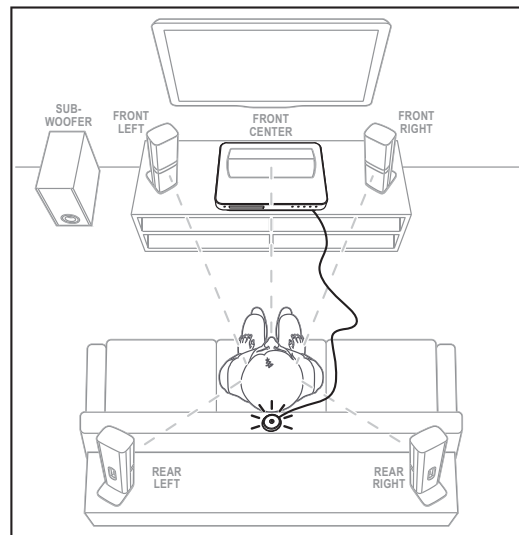
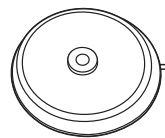
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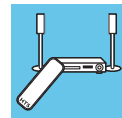
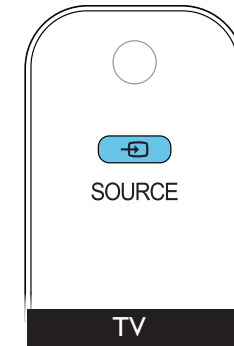
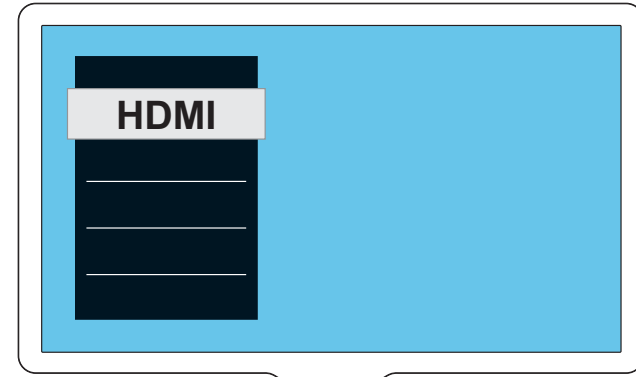
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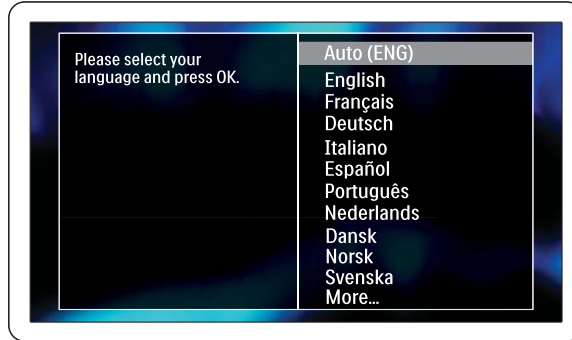
MUSIC
iLINK



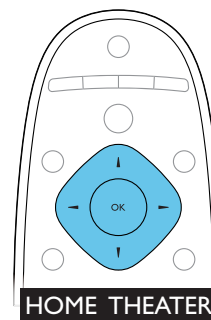
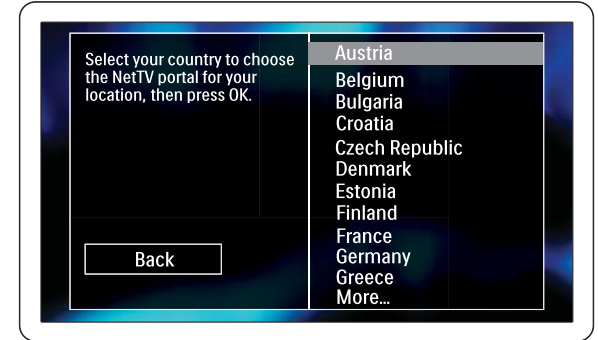
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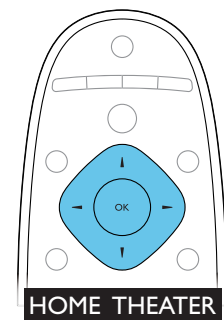
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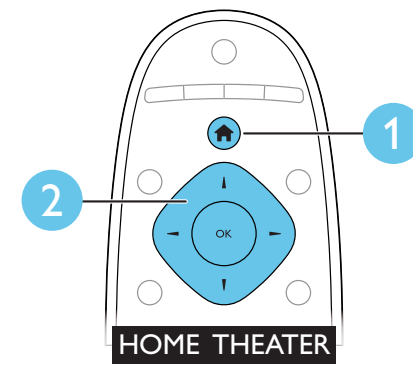
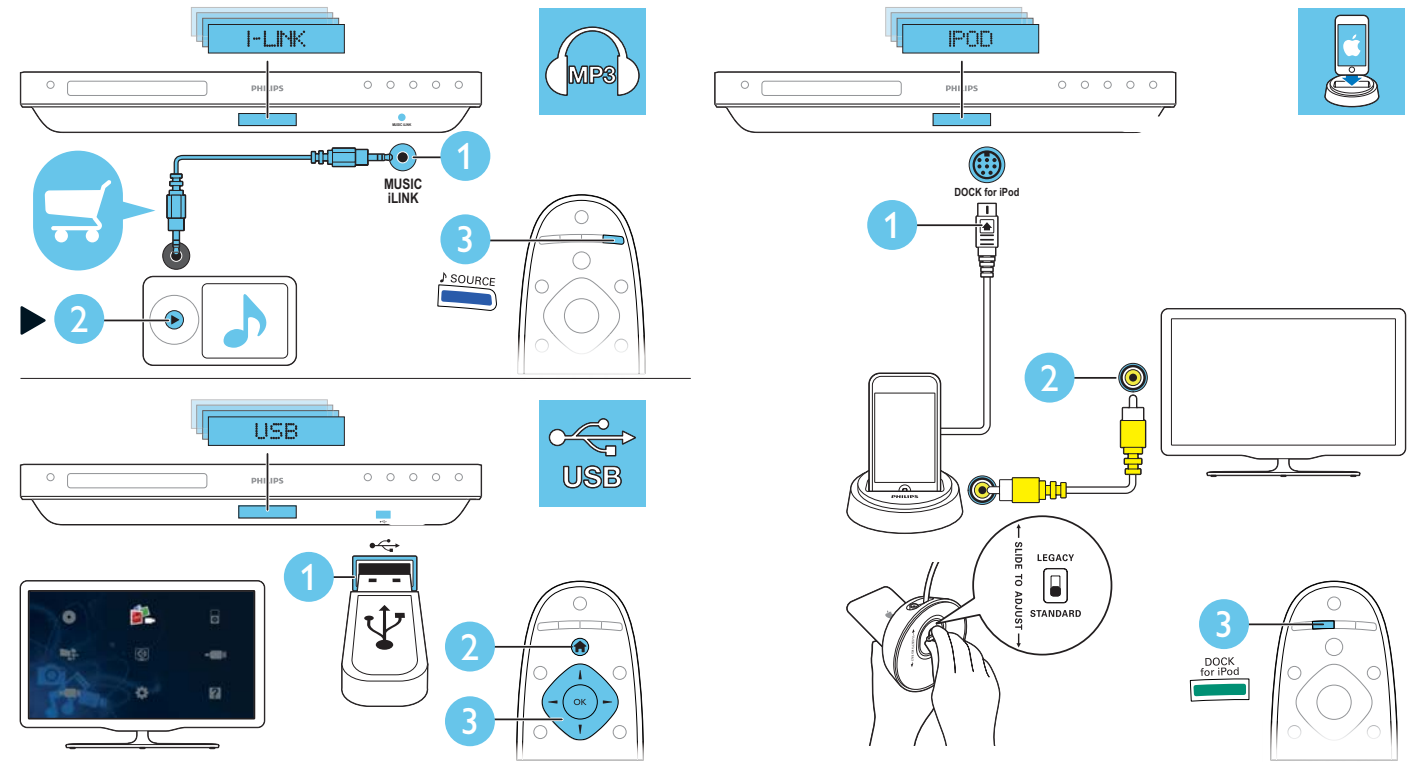
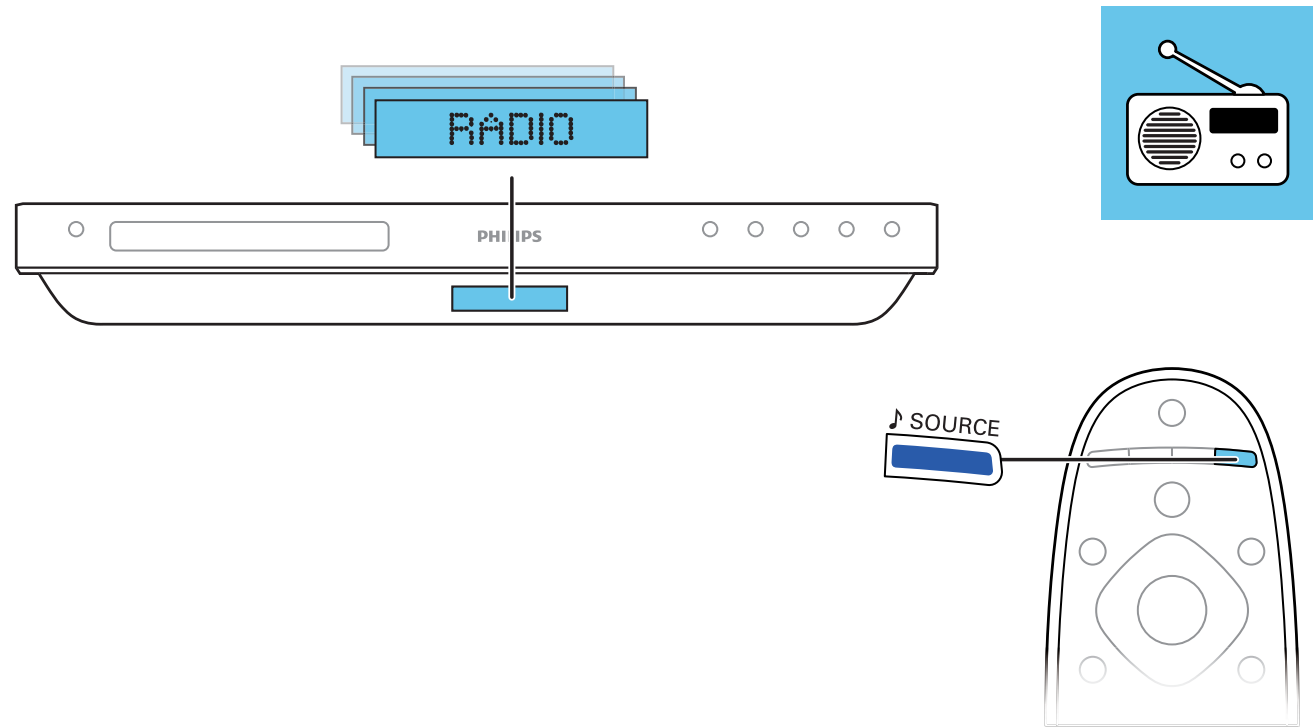
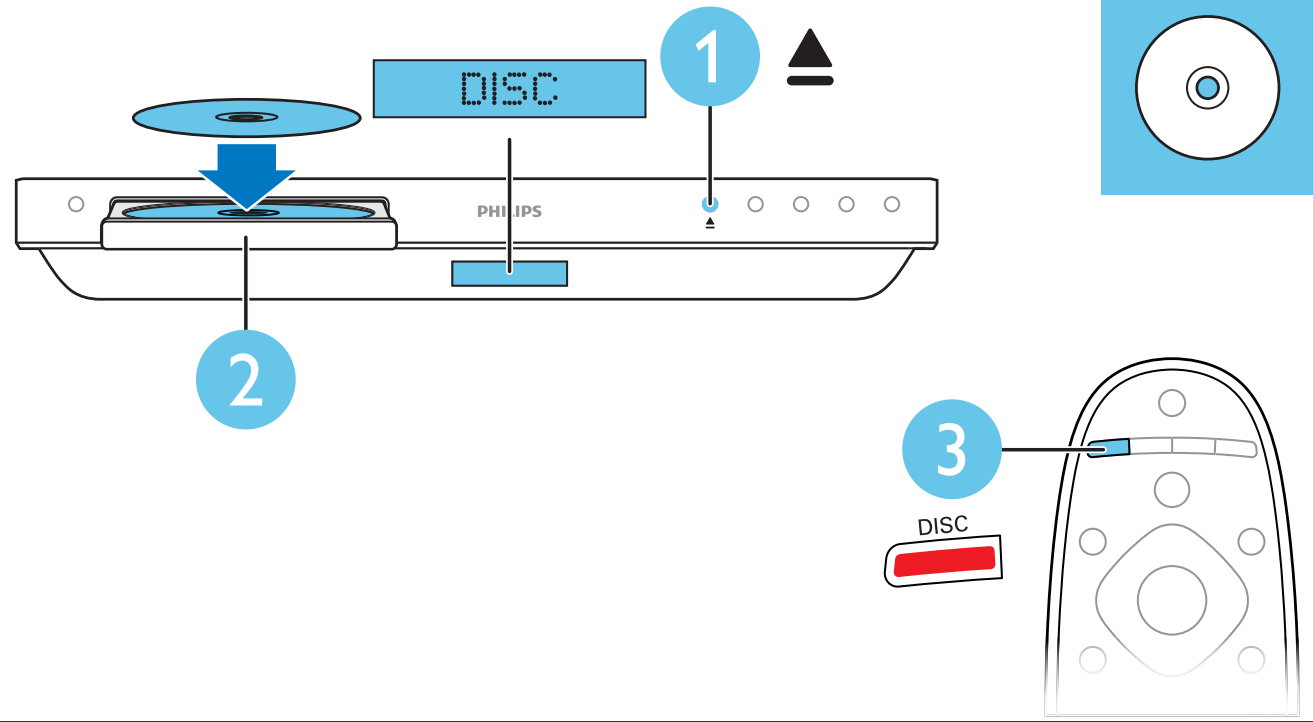
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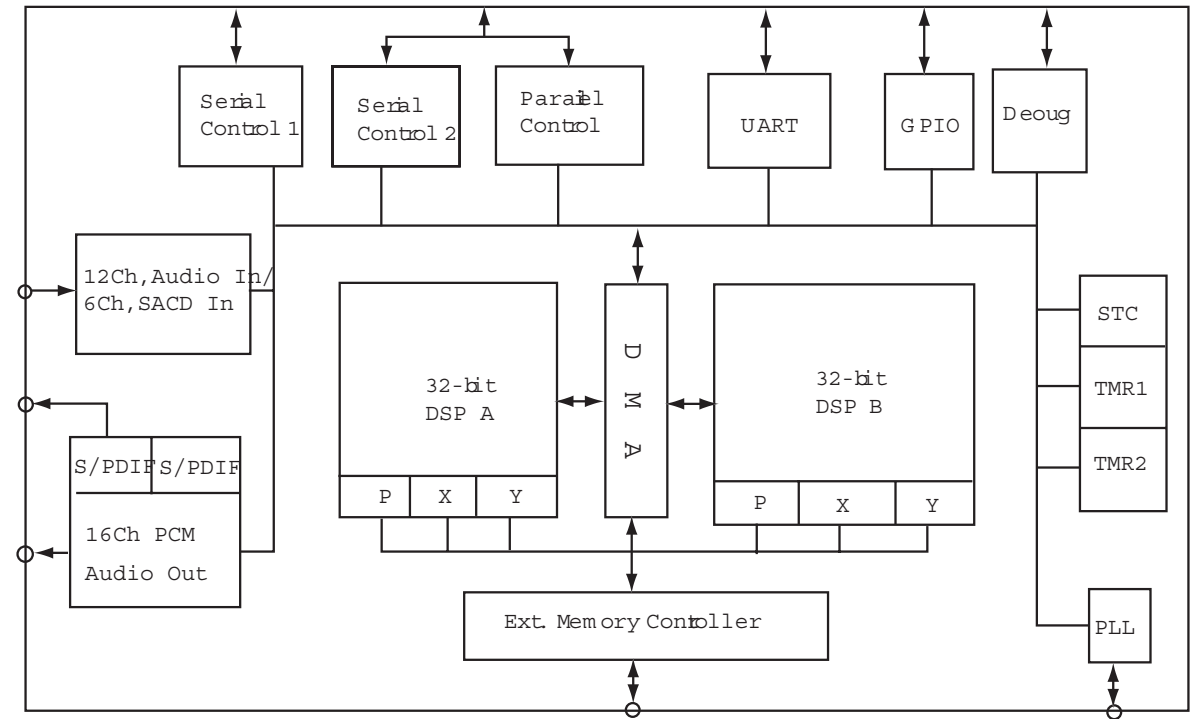
HOME THEATER



HOME THEATER



6 - 1
INTERNAL IC DIAGRAM - CS495313-CVZ

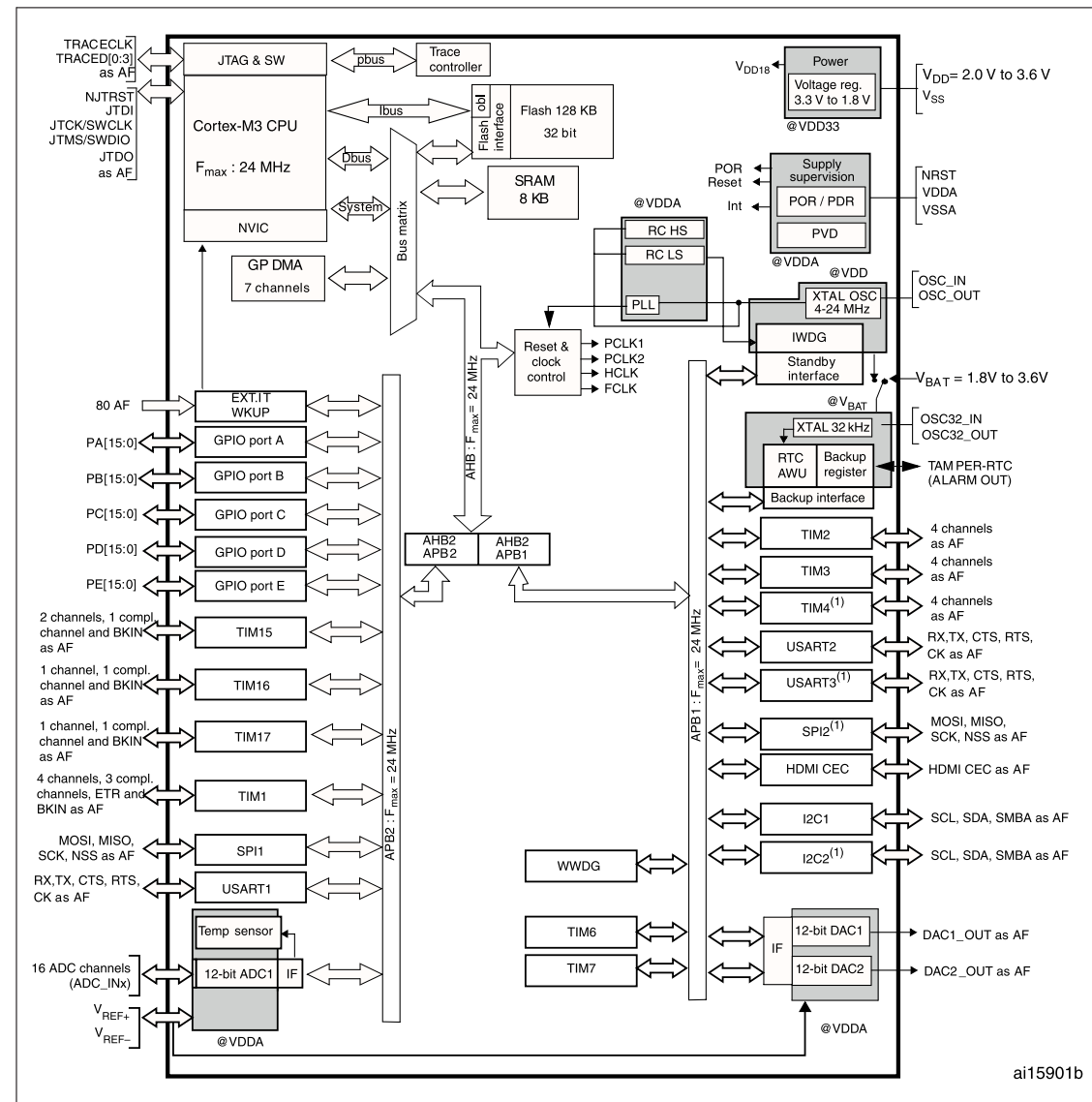


MAIN+VFD+USB&MP3+KARA+WILE+KEY+STBY BOARD

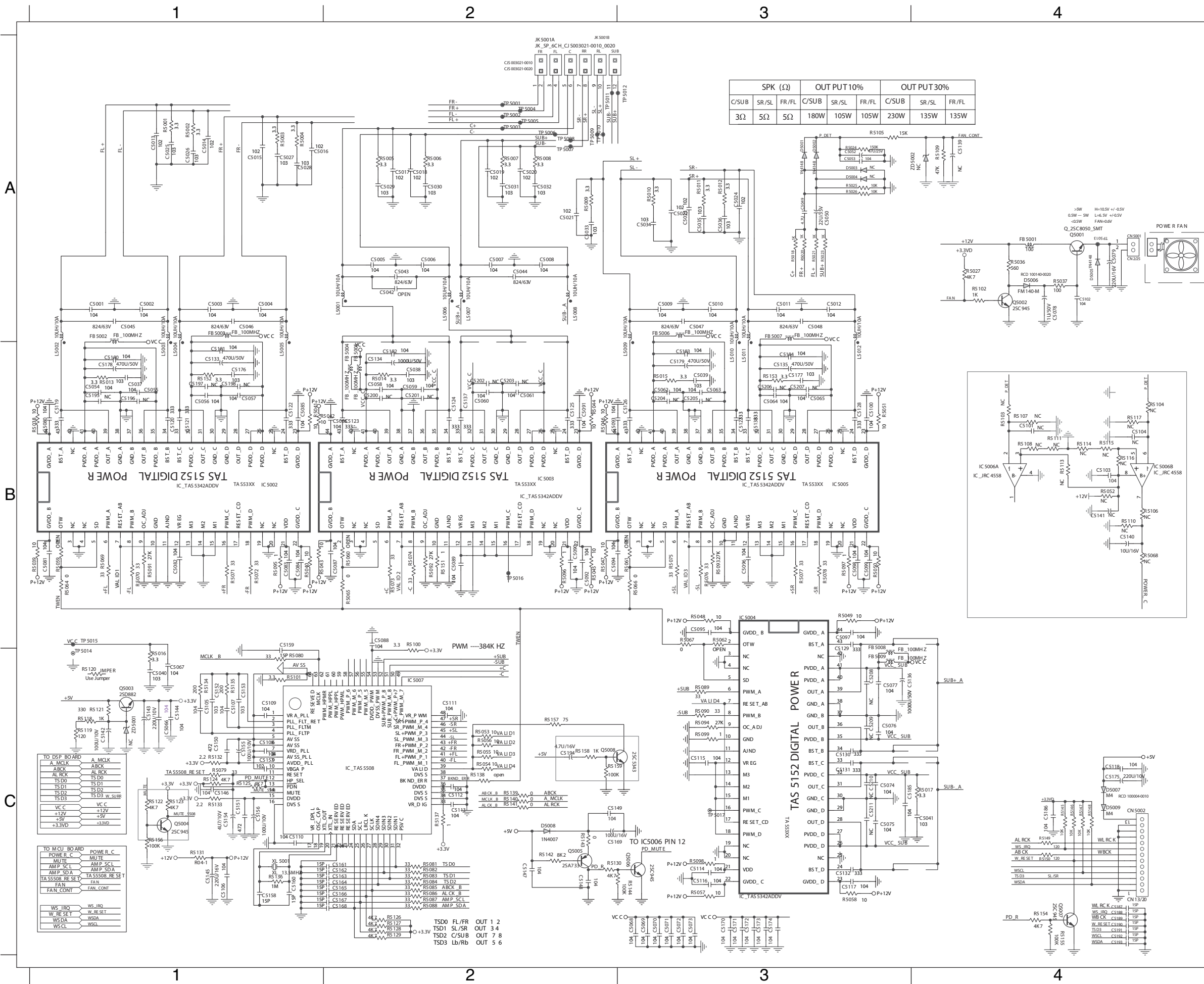
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 PCB Layout Bottom View 6-9

INTERNAL IC DIAGRAM - STM32F100VCT6

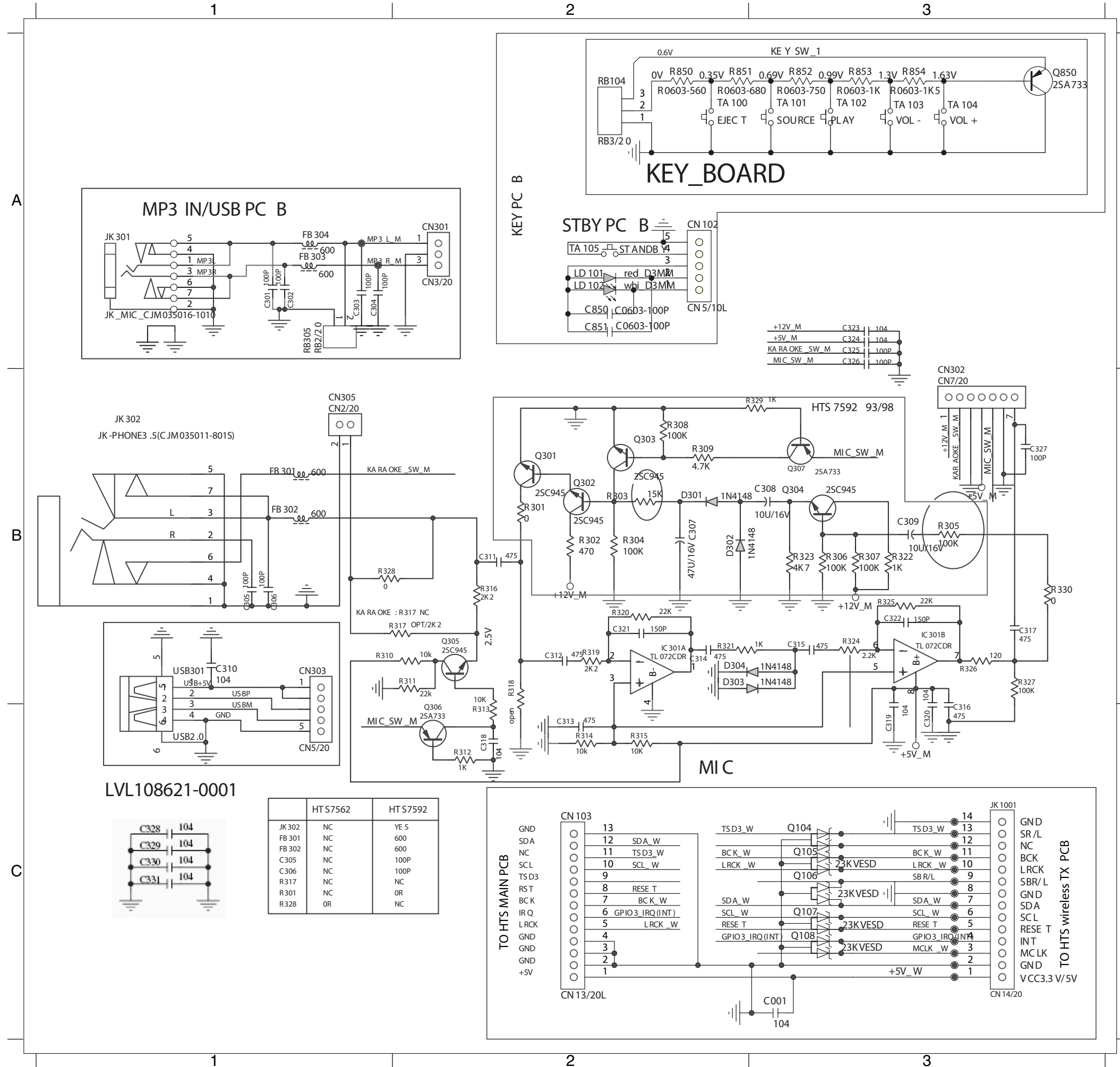


CIRCUIT DIAGRAM(part one)



- C5001 A1 C5093 B2 C5189 C4 R5050 B3
- C5002 A1 C5094 B2 C5190 C4 R5051 B3
- C5003 A1 C5095 B3 C5191 C4 R5053 C2
- C5004 A1 C5096 B3 C5192 C4 R5054 C2
- C5005 A2 C5097 B3 C5193 C4 R5055 C2
- C5006 A2 C5098 B3 C5194 C2 R5056 C2
- C5007 A2 C5099 B3 CN5001 A4 R5057 C3
- C5008 A2 C5100 B3 CN5002 C4 R5058 C3
- C5009 A3 C5102 A4 D5001 A3 R5064 B1
- C5010 A3 C5105 C1 D5002 A3 R5065 B2
- C5011 A3 C5106 C1 D5003 A3 R5066 B3
- C5012 A3 C5107 C1 D5004 A3 R5067 B3
- C5013 A1 C5108 C1 D5005 A4 R5069 B1
- C5014 A1 C5109 C1 D5006 A4 R5070 B1
- C5015 A1 C5110 C1 D5007 C4 R5071 B1
- C5016 A1 C5111 C2 D5008 C2 R5072 B2
- C5017 A2 C5112 C2 D5009 C4 R5073 B1
- C5018 A2 C5113 C2 FB5001 A4 R5074 B2
- C5019 A2 C5114 C3 FB5002 A1 R5075 B3
- C5020 A2 C5115 C3 FB5003 A1 R5076 B3
- C5021 A2 C5116 C3 FB5004 B2 R5077 B3
- C5022 A3 C5117 C3 FB5005 B2 R5078 B3
- C5023 A3 C5118 C4 FB5006 A3 R5079 C1
- C5024 A3 C5119 B1 FB5007 A3 R5080 C1
- C5025 A1 C5120 B1 FB5008 B3 R5081 C2
- C5026 A1 C5121 B1 FB5009 C3 R5082 C2
- C5027 A1 C5122 B1 IC5002 B1 R5083 C2
- C5028 A1 C5123 B2 IC5003 B2 R5084 C2
- C5029 A2 C5124 B2 IC5004 B3 R5085 C2
- C5030 A2 C5125 B2 IC5005 B3 R5086 C2
- C5031 A2 C5126 B3 IC5007 C2 R5087 C2
- C5032 A2 C5127 B3 JK5001A A2 R5088 C2
- C5033 A2 C5128 B3 JK5001B A2 R5089 C3
- C5034 A3 C5129 B3 L5001 A2 R5090 C3
- C5035 A3 C5130 C3 L5002 B1 R5091 B1
- C5036 A3 C5131 C3 L5003 B1 R5092 B2
- C5037 B1 C5132 C3 L5004 B1 R5093 B3
- C5038 B2 C5133 B1 L5005 B1 R5094 C3
- C5039 B3 C5134 B2 L5006 A2 R5095 B1
- C5040 C1 C5135 B3 L5007 A2 R5096 B2
- C5041 C4 C5136 C3 L5008 A2 R5097 B3
- C5042 A2 C5137 B2 L5009 B3 R5098 C3
- C5044 A2 C5138 B3 L5010 B3 R5099 C3
- C5045 A1 C5142 C1 L5011 B3 R5100 B2
- C5046 A1 C5143 C1 L5012 B3 R5101 C1
- C5047 A3 C5144 C1 Q5001 A4 R5102 A4
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- C5058 B2 C5154 C1 R5003 A1 R5126 C2
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- C5069 C3 C5165 C2 R5014 B2 R5139 C2
- C5070 C3 C5166 C2 R5015 B3 R5140 C2
- C5071 C3 C5167 C2 R5016 C1 R5141 C2
- C5072 C3 C5168 C2 R5017 C4 R5142 C2
- C5073 C3 C5169 C2 R5018 A3 R5143 C2
- C5074 C3 C5170 C3 R5020 A3 R5144 C3
- C5075 C3 C5171 C3 R5021 A3 R5145 C4
- C5076 C3 C5172 C3 R5023 A3 R5146 C4
- C5077 C3 C5173 C3 R5024 A3 R5147 C4
- C5078 A4 C5174 C3 R5027 A4 R5148 C4
- C5079 A4 C5175 C4 R5036 A4 R5149 C4
- C5080 B1 C5176 B1 R5037 A4 R5150 C4
- C5081 B1 C5177 B3 R5038 B1 R5151 B2
- C5082 B1 C5178 B1 R5039 B1 R5152 B1
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- C5086 B2 C5182 B2 R5043 B1 R5156 C1
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- C5089 B2 C5185 C3 R5046 B2 R5159 C2
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- C5091 B2 C5187 C4 R5048 B3
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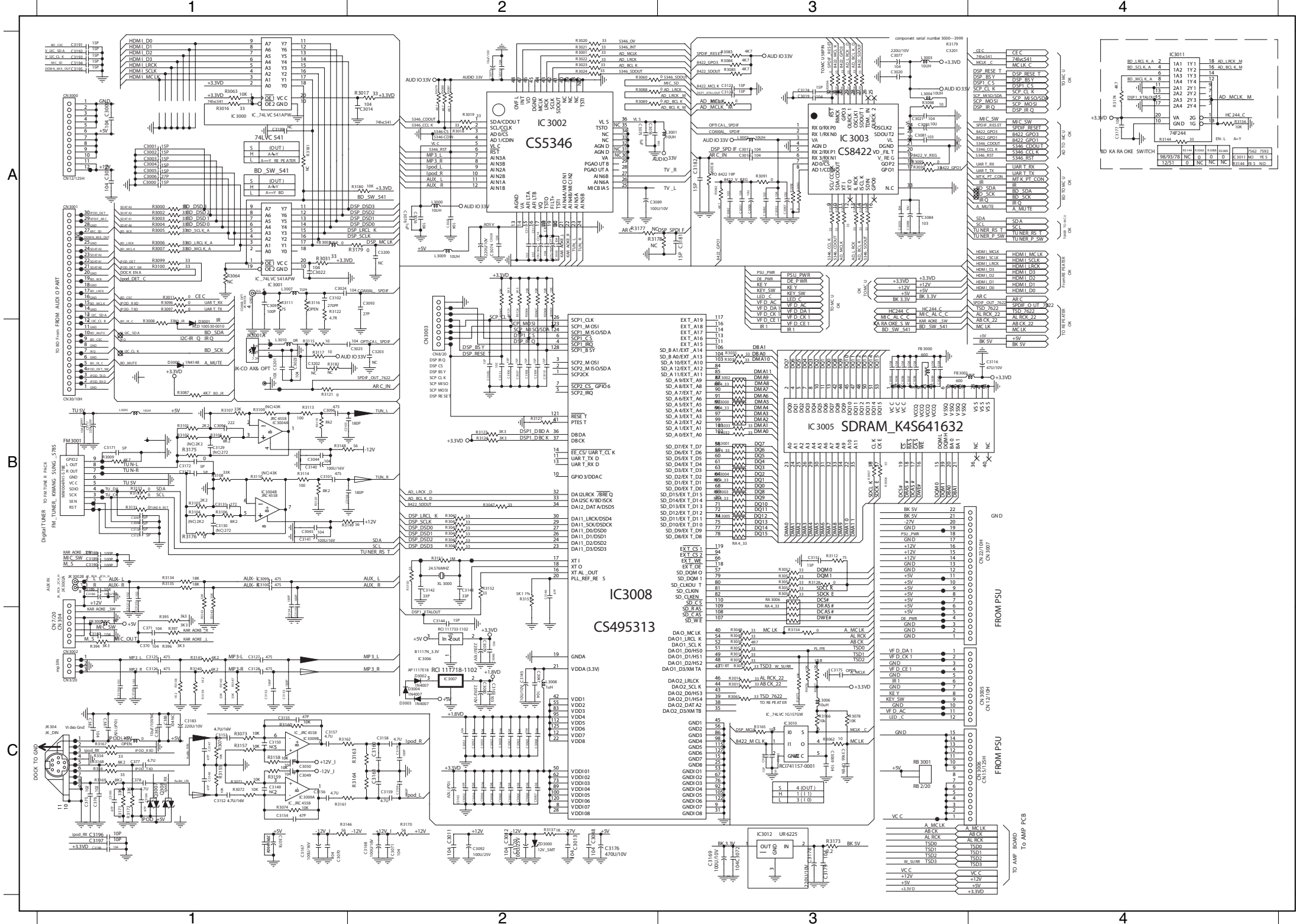
CIRCUIT DIAGRAM(part two)



- C001 C3 R319 B2
- C301 A1 R320 B2
- C302 A1 R321 B2
- C303 A1 R322 B3
- C304 A1 R323 B3
- C307 B2 R324 B3
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- C331 C1
- C850 A2
- CN102 A2
- CN103 C2
- CN301 A2
- CN302 B3
- CN303 B1
- CN305 B1
- D301 B2
- D302 B2
- D303 B2
- D304 B2
- FB303 A1
- FB304 A1
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- JK301 A1
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- LD102 A2
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- Q303 B2
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- Q306 C2
- Q307 B3
- Q850 A3
- R302 B2
- R303 B2
- R304 B2
- R305 B3
- R306 B3
- R307 B3
- R308 B2
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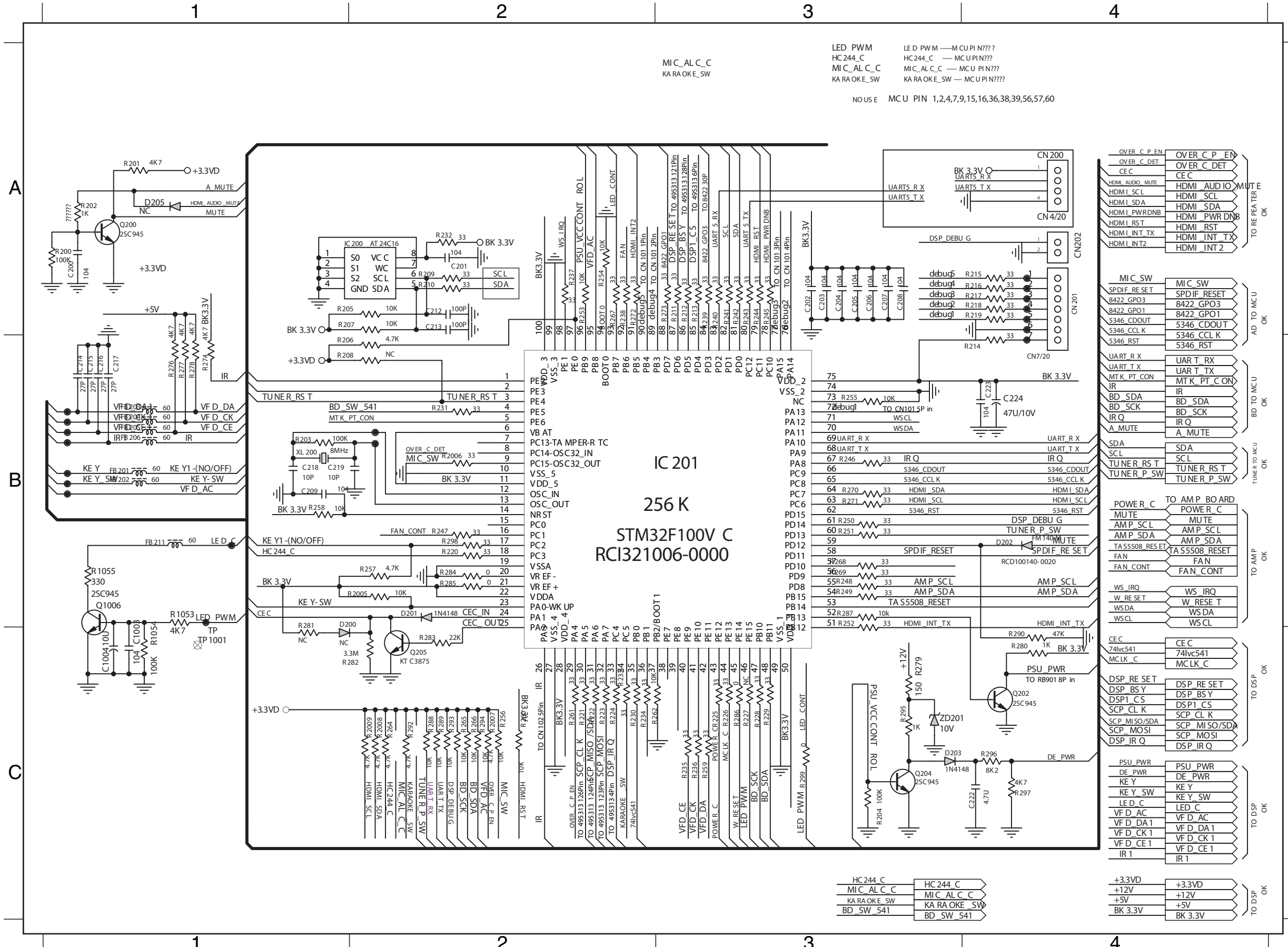
CIRCUIT DIAGRAM(part three)

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C3001	A1	C3021	A3	C3039	B3	C3058	C2	C3076	A2	C3096	B1	C3114	A2	C3135	C1	C3155	C1	C3177	B4	C371	C1	D3004	C2	L3002	A3	R3007	A1	R3025	A3	R3043	B2	R3062	C3	R3081	A2	R3103	B1	R3126	A2	R3146	C1	R3164	C2	R396	C1
C3002	A1	C3022	A3	C3040	B3	C3059	C2	C3077	A3	C3097	B1	C3115	A2	C3136	B1	C3156	C1	C3178	C3	C375	C1	FB3000	B3	L3003	A3	R3008	B1	R3026	A3	R3044	B2	R3063	A1	R3082	A3	R3105	B1	R3127	B2	R3147	C1	R3165	C3	R397	C1
C3003	A1	C3023	B1	C3041	B1	C3060	C2	C3078	C1	C3098	B1	C3116	B4	C3137	B1	C3157	C1	C3179	C3	C376	C1	FB3001	B3	L3004	A3	R3009	B1	R3027	A3	R3045	B2	R3065	A2	R3083	A3	R3106	B1	R3128	B3	R3148	B2	R3166	C3	RA3000	B3
C3004	A1	C3024	A1	C3043	C1	C3061	C2	C3079	C2	C3099	B1	C3117	B1	C3138	C2	C3158	C2	C3180	B1	C377	C1	FB3002	C1	L3005	B1	R3010	C3	R3028	A3	R3046	B2	R3066	A2	R3084	A3	R3107	B1	R3130	A3	R3149	B2	R3168	C1	RA3001	B3
C3005	A1	C3025	B2	C3044	B1	C3062	C2	C3080	C2	C3100	B1	C3119	C1	C3139	C2	C3159	C2	C3184	C1	C378	C1	FB3003	A1	L3006	C3	R3011	A1	R3029	A3	R3047	B2	R3067	A2	R3085	A3	R3108	B1	R3131	B1	R3150	B2	R3169	C1	RA3002	B3
C3006	A1	C3026	A2	C3045	B1	C3063	C2	C3081	A3	C3101	B1	C3120	C1	C3140	B2	C3162	C2	C3185	C1	C381	C1	IC3000	A1	L3007	A1	R3012	A3	R3030	A3	R3048	C3	R3068	A2	R3087	B1	R3111	A1	R3132	B1	R3151	B2	R3170	C2	RA3003	B3
C3009	A1	C3027	A2	C3046	C2	C3064	C2	C3082	A3	C3102	A1	C3121	B1	C3141	B2	C3163	C2	C3186	B1	C382	C1	IC3002	A2	L3008	C2	R3013	C3	R3031	A1	R3049	C3	R3069	A2	R3090	A3	R3112	B3	R3133	B1	R3152	B2	R3171	C1	RA3004	B3
C3010	A1	C3028	A2	C3047	C2	C3065	C2	C3083	A3	C3103	B2	C3122	B1	C3142	B2	C3164	C3	C3187	C1	CN3000	A1	IC3005	B3	L3009	A2	R3014	C3	R3032	B3	R3050	C3	R3070	C1	R3091	A3	R3113	B1	R3134	B1	R3153	B2	R3172	C1	RA3005	B3
C3011	C2	C3029	A2	C3048	C2	C3066	C2	C3084	A3	C3104	B2	C3123	A3	C3143	B2	C3165	C3	C3188	B1	CN3001	A1	IC3006	C2	L3010	B1	R3015	A2	R3033	B3	R3051	C3	R3071	C1	R3092	A3	R3114	B1	R3135	B1	R3154	C3	RA3006	B3		
C3012	C2	C3030	A2	C3049	C1	C3067	C2	C3085	A3	C3105	B2	C3124	A3	C3144	C2	C3167	C1	C3189	B1	CN3002	A1	IC3007	C2	L307	C1	R3016	A1	R3034	B3	R3052	B3	R3072	C1	R3093	A3	R3115	B1	R3137	C2	R3155	C1	R3174	B4	RB3001	C3
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C3014	A2	C3032	A3	C3051	C2	C3069	C3	C3087	A3	C3107	B2	C3126	C1	C3146	B2	C3169	C3	C3192	A1	CN3006	C4	IC3010	C3	R3000	A1	R3018	A2	R3036	A3	R3054	B3	R3074	C1	R3095	A1	R3119	B1	R3139	C1	R3157	C1	R3176	B1	ZD3000	C2
C3015	A2	C3033	B3	C3052	C2	C3070	C1	C3088	A3	C3108	B2	C3127	C1	C3147	C1	C3170	C2	C3193	A1	CN3007	B4	IC3012	C3	R3001	A2	R3019	A2	R3037	A3	R3055	B3	R3075	A2	R3096	A1	R3120	B1	R3140	C1	R3158	C1	R3179	A2	ZD3000	C2
C3016	A2	C3034	B3	C3053	C2	C3071	C2	C3089	A2	C3109	B2	C3128	C1	C3148	C1	C3171	B1	C3194	A1	CN304	C1	IC3012	C3	R3002	A1	R3020	A2	R3038	A3	R3056	B3	R3076	C3	R3097	A1	R3121	B1	R3141	C1	R3159	C1	R3180	A2		
C3017	A3	C3035	A3	C3054	C2	C3072	C3	C3092	C2	C3110	B2	C3131	B1	C3151	B3	C3172	B1	C3195	A1	D3000	B1	JK3001	B1	R3003	A1	R3021	A2	R3039	A3	R3057	B3	R3077	C3	R3098	A3	R3122	A1	R3142	C1	R3160	C1	R354	C1		
C3018	A3	C3036	B3	C3055	C2	C3073	A2	C3093	A2	C3111	B2	C3132	C1	C3152	C1	C3173	B1	C3198	C1	D3001	B1	JK304	C1	R3004	A1	R3022	A2	R3040	A3	R3058	B3	R3078	C3	R3099	A1	R3123	B2	R3143	C1	R3161	C1	R356	C1		
C3019	A3	C3037	B3	C3056	C2	C3074	A2	C3094	B1	C3112	A2	C3133	C1	C3153	C1	C3174	A3	C3201	B1	D3002	C2	L3000	A2	R3005	A1	R3023	A2	R3041	B2	R3059	C3	R3079	A2	R3100	A1	R3124	B2	R3144	B4	R3162	C1	R394	C1		



CIRCUIT DIAGRAM(part five)

C1003	B1	C205	A3	C214	B1	C223	B4	FB203	B1	Q1006	B1	R1055	B1	R201	A1	R209	A2	R216	A4	R223	C2	R231	B2	R239	A3	R246	B3	R253	A2	R260	C2	R268	B3	R277	B1	R285	B2	R293	C2	XL200	B1
C1004	C1	C206	A3	C215	B1	C224	B4	FB204	B1	Q200	A1	R200	A1	R202	A1	R210	A2	R217	A4	R224	C2	R232	A2	R240	A3	R247	B2	R254	A2	R261	C2	R269	B3	R278	B1	R286	C3	R294	C2	ZD201	C3
C200	A1	C207	A3	C216	B1	D201	B2	FB205	B1	Q202	C4	R2005	B2	R203	B1	R211	A3	R218	A4	R225	C3	R234	C2	R241	A3	R248	B3	R255	B3	R262	C2	R270	B3	R279	C3	R287	B3	R295	C3		
C201	A2	C208	A3	C217	B1	D202	B4	FB206	B1	Q204	C3	R2006	B2	R204	C3	R212	A3	R219	A4	R226	C3	R235	C3	R242	A3	R249	B3	R256	C2	R264	C2	R271	B3	R280	C4	R288	C2	R296	C4		
C202	A3	C209	B1	C218	B1	D203	C3	FB211	B1	Q205	C2	R2007	C2	R205	A1	R213	A3	R220	B2	R228	C3	R236	C3	R243	A3	R250	B3	R257	B2	R265	C2	R272	A2	R282	C2	R289	C2	R297	C4		
C203	A3	C212	A2	C219	B1	FB201	B1	IC200	A2	R1053	B1	R2008	C2	R206	B2	R214	B4	R221	C2	R229	C3	R237	A2	R244	A3	R251	B3	R258	B1	R266	C2	R273	A3	R283	C2	R290	C4	R298	B2		
C204	A3	C213	A2	C222	C4	FB202	B1	IC201	B3	R1054	C1	R2009	C2	R207	A1	R215	A4	R222	C2	R230	C2	R238	A2	R245	A3	R252	B3	R259	C3	R267	A2	R276	B1	R284	B2	R292	C2	R299	C3		



LED PWM
 HC244_C
 MIC_ALC_C
 KA RAOKE_SW

LE D PWM —MCU PI N???

HC244_C — MCU PI N???

MIC_ALC_C — MCU PI N???

KA RAOKE_SW — MCU PI N???

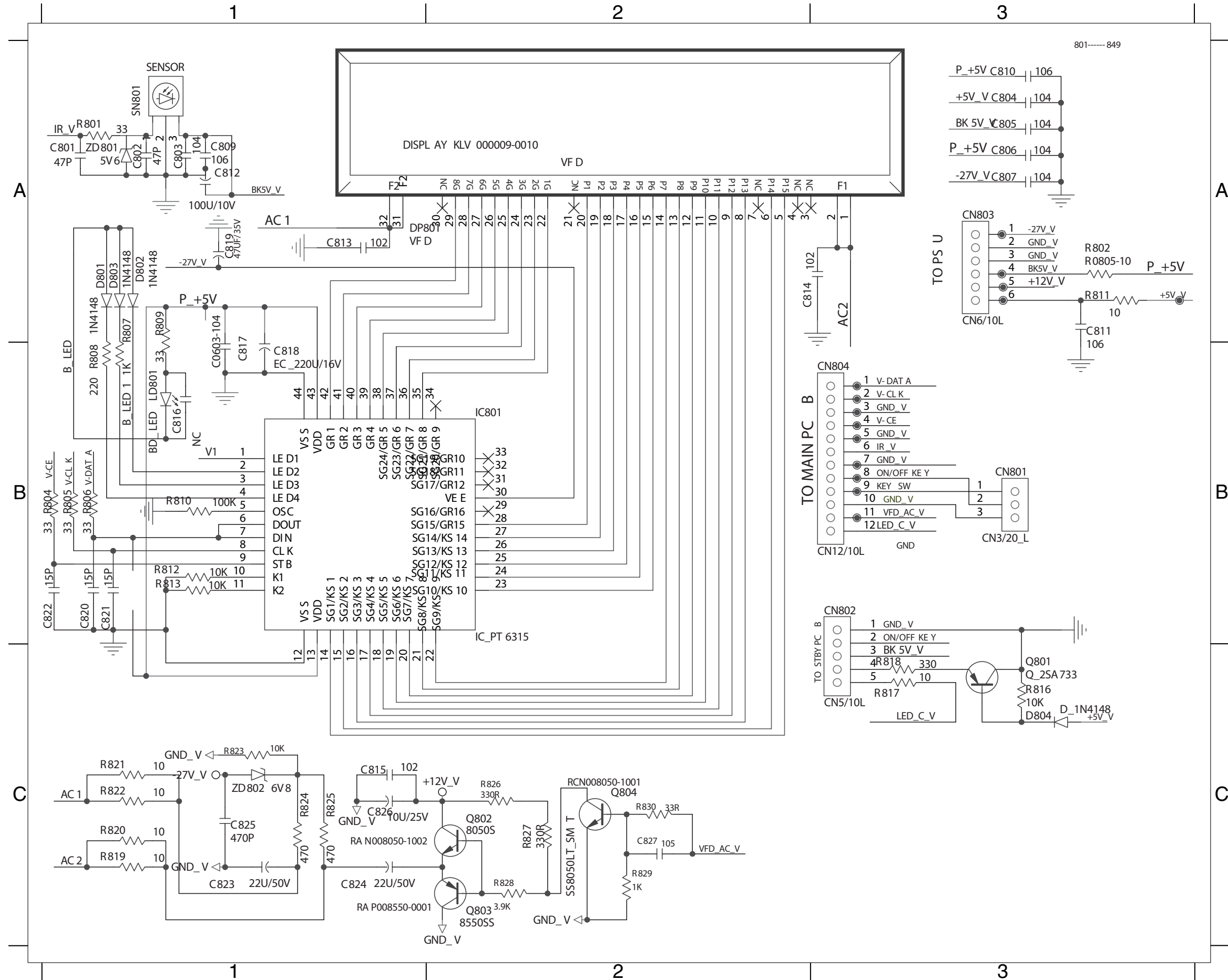
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IC 201
 256 K
 STM32F100V C
 RCI321006-0000

HC244_C	HC244_C	+3.3VD	+3.3VD
MIC_ALC_C	MIC_ALC_C	+12V	+12V
KA RAOKE_SW	KA RAOKE_SW	5V	+5V
BD SW 541	BD SW 541	BK 3.3V	BK 3.3V

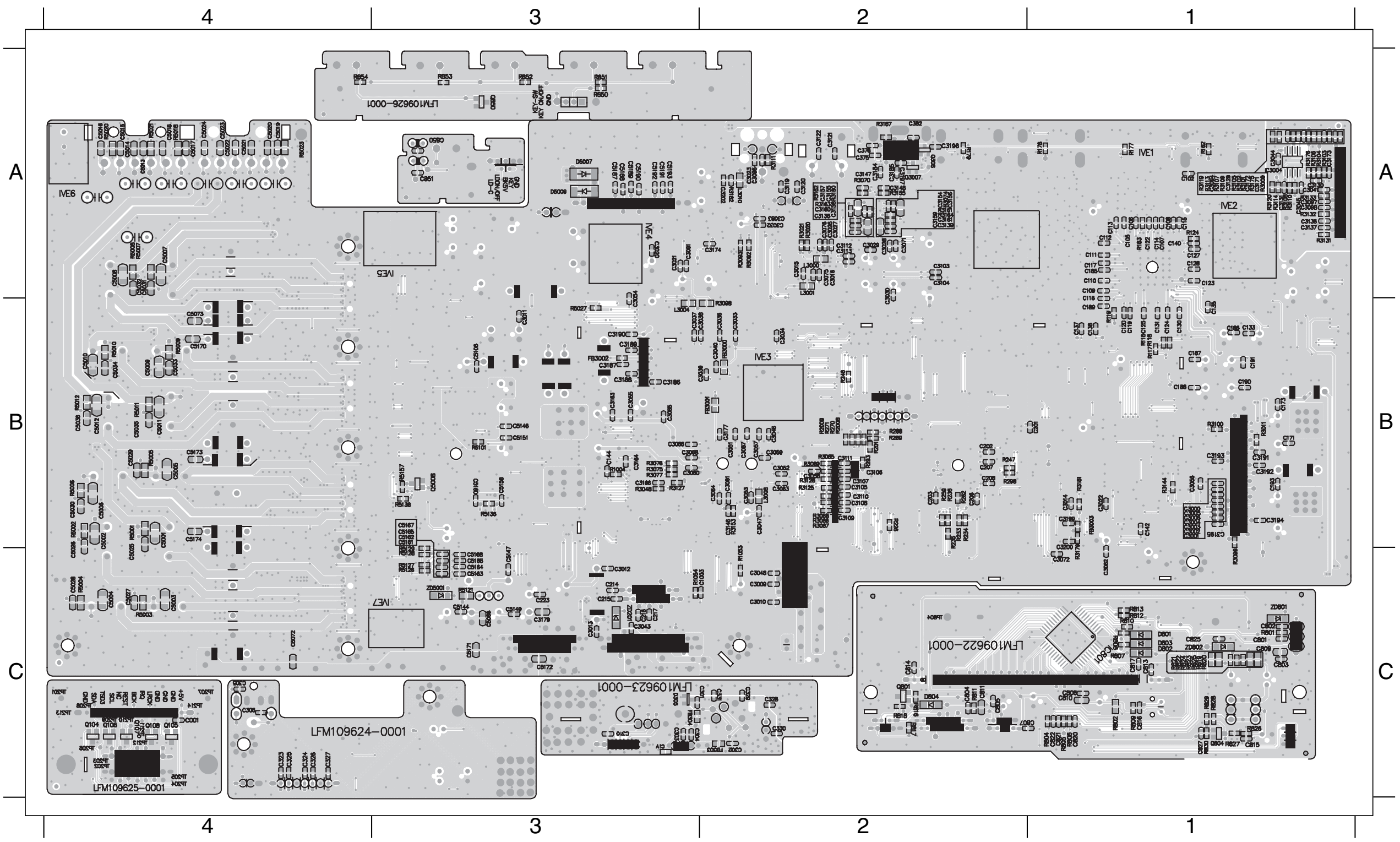
CIRCUIT DIAGRAM(part six)

C801	A1	C805	A3	C810	A3	C814	A2	C819	A1	C823	C1	C827	C2	CN804	B3	D804	C3	Q801	C3	R801	A1	R806	B1	R810	B1	R816	C3	R820	C1	R824	C1	R828	C2	ZD801	A1		
C802	A1	C806	A3	C811	A3	C815	C1	C820	B1	C824	C1	CN801	B3	D801	A1	DP801	A1	Q802	C2	R802	A3	R807	A1	R811	A3	R817	C3	R821	C1	R825	C1	R829	C1	R830	C2	ZD802	C1
C803	A1	C807	A3	C812	A1	C817	A1	C821	B1	C825	C1	CN802	B3	D802	A1	IC801	B2	Q803	C2	R804	B1	R808	B1	R812	B1	R818	C3	R822	C1	R826	C2	R830	C2	ZD802	C1		
C804	A3	C809	A1	C813	A1	C818	B1	C822	B1	C826	C1	CN803	A3	D803	A1	LD801	B1	Q804	C2	R805	B1	R809	A1	R813	B1	R819	C1	R823	C1	R827	C2	SN801	A1				



PCB LAYOUT - BOTTOM VIEW

C001	C4	C122	A1	C189	B1	C3003	B1	C3026	A2	C3045	A1	C3065	B3	C3106	B2	C3147	A2	C3186	B3	C375	A2	C5016	A4	C5034	B4	C5165	B3	C803	C1	D5007	A3	Q3007	A2	R183	A1	R298	B2	R3098	B2	R3132	A1	R5006	B4	R5136	B3	R820	C1	ZD802	C1
C1003	C2	C123	A1	C190	B1	C3004	B1	C3027	A2	C3046	B2	C3066	B3	C3107	B2	C3148	A2	C3187	B3	C376	A2	C5017	A4	C5035	B4	C5166	C3	C804	C2	D5009	A3	Q308	A2	R2008	B2	R3009	A1	R3099	C1	R3133	A1	R5007	A4	R5157	B3	R821	C1	ZD802	C1
C102	A1	C124	B1	C191	B1	C3005	B1	C3028	A2	C3047	B2	C3067	B2	C3108	B2	C3154	A2	C3188	B3	C382	A2	C5018	A4	C5036	B4	C5167	B3	C805	C2	D801	C1	Q5008	B3	R2009	B2	R3011	B1	R3100	B1	R3144	B1	R5008	A4	R801	C1	R822	C1		
C105	A1	C125	B1	C193	B1	C3006	B1	C3029	A2	C3048	C2	C3068	B3	C3109	B2	C3155	A2	C3189	B3	C5001	B4	C5019	A4	C5066	C3	C5168	C3	C806	C1	D802	C1	Q801	C2	R201	B2	R3020	A2	R3101	A1	R3153	B2	R5009	B4	R802	C1	R823	C1		
C106	A1	C127	A1	C201	B1	C3009	C2	C303	C3	C3051	B2	C3071	A2	C3110	B2	C3156	A2	C3190	B3	C5002	B4	C5020	A4	C5072	C4	C5170	B4	C807	C2	D803	C1	Q804	C1	R226	B2	R3021	A2	R3103	A1	R3155	A2	R5010	B4	R804	C1	R824	C1		
C107	A1	C128	A1	C202	B2	C3001	C2	C3030	A2	C3052	B2	C3072	C1	C3111	B2	C3157	A2	C3192	B1	C5003	C4	C5021	A4	C5073	B4	C5171	C3	C809	C1	D804	C2	Q850	A3	R233	B2	R3048	B3	R3105	A1	R3160	A2	R5011	B4	R805	C1	R825	C1		
C108	A1	C130	B1	C203	B2	C3010	C2	C3032	A2	C3053	B2	C3075	A2	C3112	A2	C3158	A2	C3193	B1	C5004	C4	C5022	A4	C5106	B3	C5172	C3	C810	C1	FB3000B2	R1004	B3	R234	B2	R3065	B2	R3106	A1	R3161	A2	R5012	B4	R806	C1	R826	C1			
C109	A1	C131	B1	C206	B2	C3011	B3	C3033	B2	C3054	B3	C3076	A2	C3113	A2	C3159	A2	C3194	B1	C5005	B4	C5023	A4	C5144	C3	C5173	B4	C811	C2	FB3001B2	R1053	C3	R235	B2	R3066	B2	R3107	A1	R3162	A2	R5018	A4	R807	C1	R827	C1			
C110	A1	C133	B1	C207	B2	C3012	C3	C3034	B2	C3055	B3	C3081	A3	C3119	A2	C3163	B3	C3195	B1	C5006	A4	C5024	A4	C5146	B3	C5174	B4	C813	C1	FB3002B3	R1054	C2	R236	B2	R3067	B2	R3108	A1	R3163	A2	R5020	A4	R808	C1	R828	C1			
C111	A1	C135	B1	C208	B2	C3013	C3	C3036	B2	C3056	B1	C3083	A2	C3120	A2	C3164	B3	C323	C4	C5007	A4	C5025	B4	C5147	C3	C5187	A3	C814	C2	FB3003B1	R116	B1	R246	B2	R3068	B2	R3111	A2	R3164	A2	R5021	A4	R809	C1	R829	C1			
C112	A1	C137	B1	C214	C3	C3014	B1	C3037	B2	C3057	B2	C3094	A1	C3121	A2	C3171	A1	C324	C4	C5008	A4	C5026	B4	C5149	C3	C5188	A3	C815	C1	FB303	C2	R117	B1	R247	B2	R3069	B2	R3113	A1	R3175	A1	R5023	A4	R810	C1	R830	C1		
C113	A1	C138	B1	C215	C3	C3015	A2	C3038	B2	C3058	B2	C3095	A2	C3122	A2	C3172	A1	C325	C4	C5009	B4	C5027	C4	C5151	B3	C5189	A3	C817	C1	FB304	C3	R118	B1	R259	B2	R3070	A2	R3114	A1	R3176	A1	R5027	B3	R811	C2	R850	A3		
C114	A1	C171	B1	C216	C3	C3016	A2	C3039	B2	C3059	B2	C3097	A1	C3131	A1	C3173	A1	C326	C4	C5010	B4	C5028	C4	C5158	B3	C5190	A3	C820	C1	IC801	C1	R119	B1	R262	B2	R3074	A2	R3119	A1	R3179	C1	R5101	B3	R812	C1	R851	A3		
C115	A1	C173	B1	C217	C3	C302	C2	C304	C3	C3060	B2	C3098	A1	C3136	A1	C3174	A2	C327	C4	C5011	B4	C5029	B4	C5160	B3	C5191	A3	C821	C1	L3000	A2	R124	A1	R270	B2	R3075	B3	R3120	A1	R5001	B4	R5121	C3	R813	C1	R852	A3		
C116	B1	C185	A1	C223	C3	C3020	A3	C3040	B2	C3061	B2	C310	C3	C3137	A2	C3177	B2	C328	C2	C5012	B4	C5030	B4	C5161	B3	C5192	A3	C822	C1	L3001	A2	R162	A1	R271	B1	R3076	B3	R3125	B2	R5002	B4	R5126	C3	R816	C2	R853	A3		
C117	B1	C186	B1	C3000	B1	C3021	A3	C3041	A1	C3062	C1	C3103	A2	C3138	A2	C3179	C3	C329	C2	C5013	A4	C5031	A4	C5162	B3	C5193	A3	C825	C1	L3004	B3	R177	A1	R288	B2	R3077	B3	R3126	B2	R5003	C4	R5127	C3	R817	C2	R854	A4		
C119	B1	C187	B1	C3001	B1	C3022	B1	C3043	C3	C3063	B2	C3104	A2	C3139	A2	C3184	C2	C330	C2	C5014	A4	C5032	A4	C5163	C3	C801	C1	C827	C1	L3008	B2	R178	A1	R289	B2	R3092	A2	R3127	B3	R5004	C4	R5128	C3	R818	C2	ZD201	C3		
C120	B1	C188	B1	C3002	B1	C3023	A2	C3044	A1	C3064	B2	C3105	B2	C3146	B2	C3185	A2	C331	C2	C5015	A4	C5033	B4	C5164	C3	C802	C1	C850	A3	L3010	A2	R179	A2	R293	B2	R3093	A2	R3131	A1	R5005	B4	R5129	C3	R819	C1	ZD801	C1		

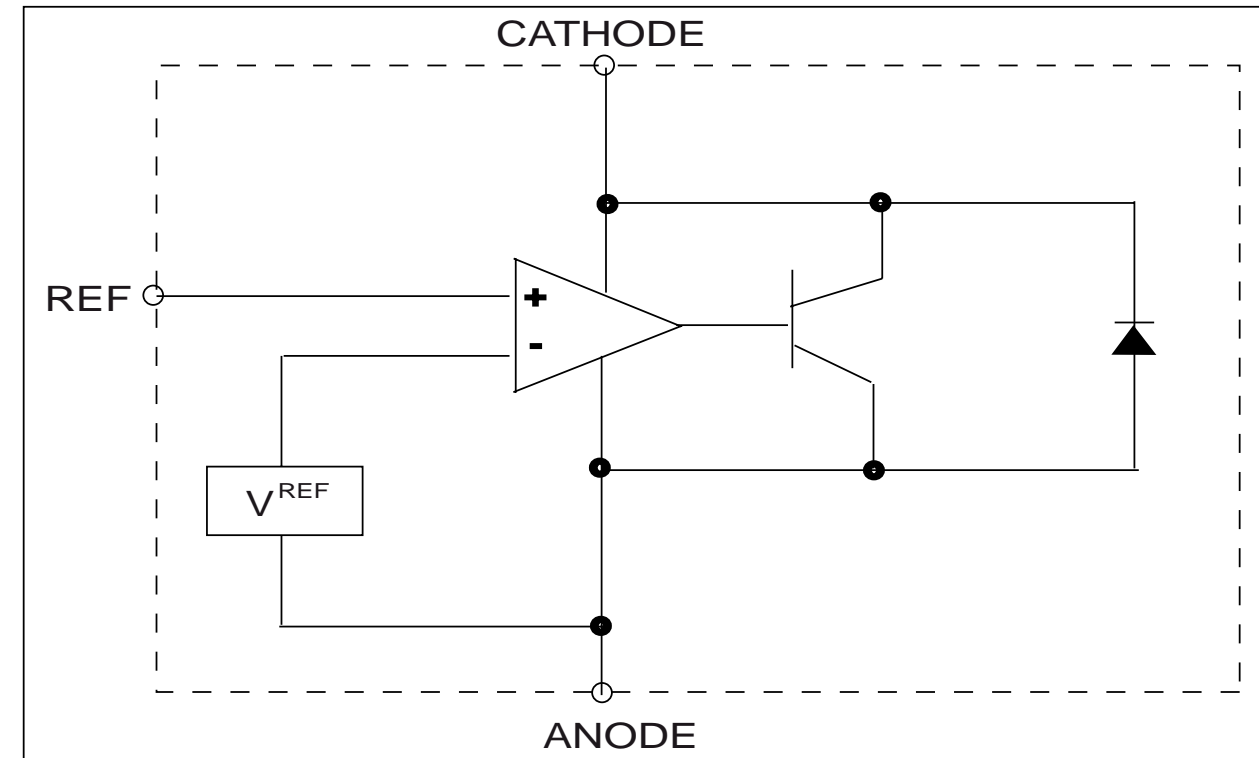


POWER BOARD

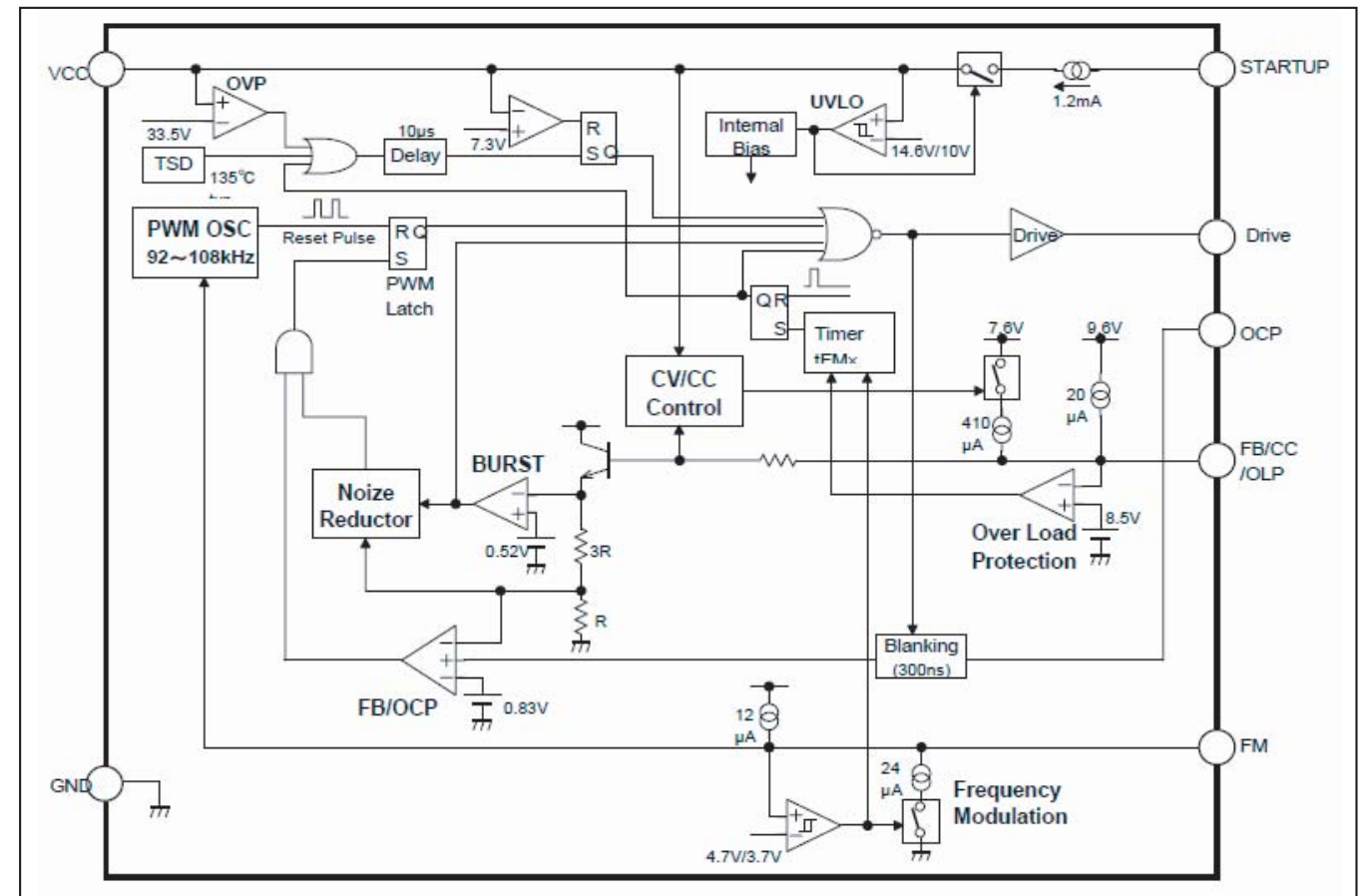
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INTERNAL IC DIAGRAM - AZ431

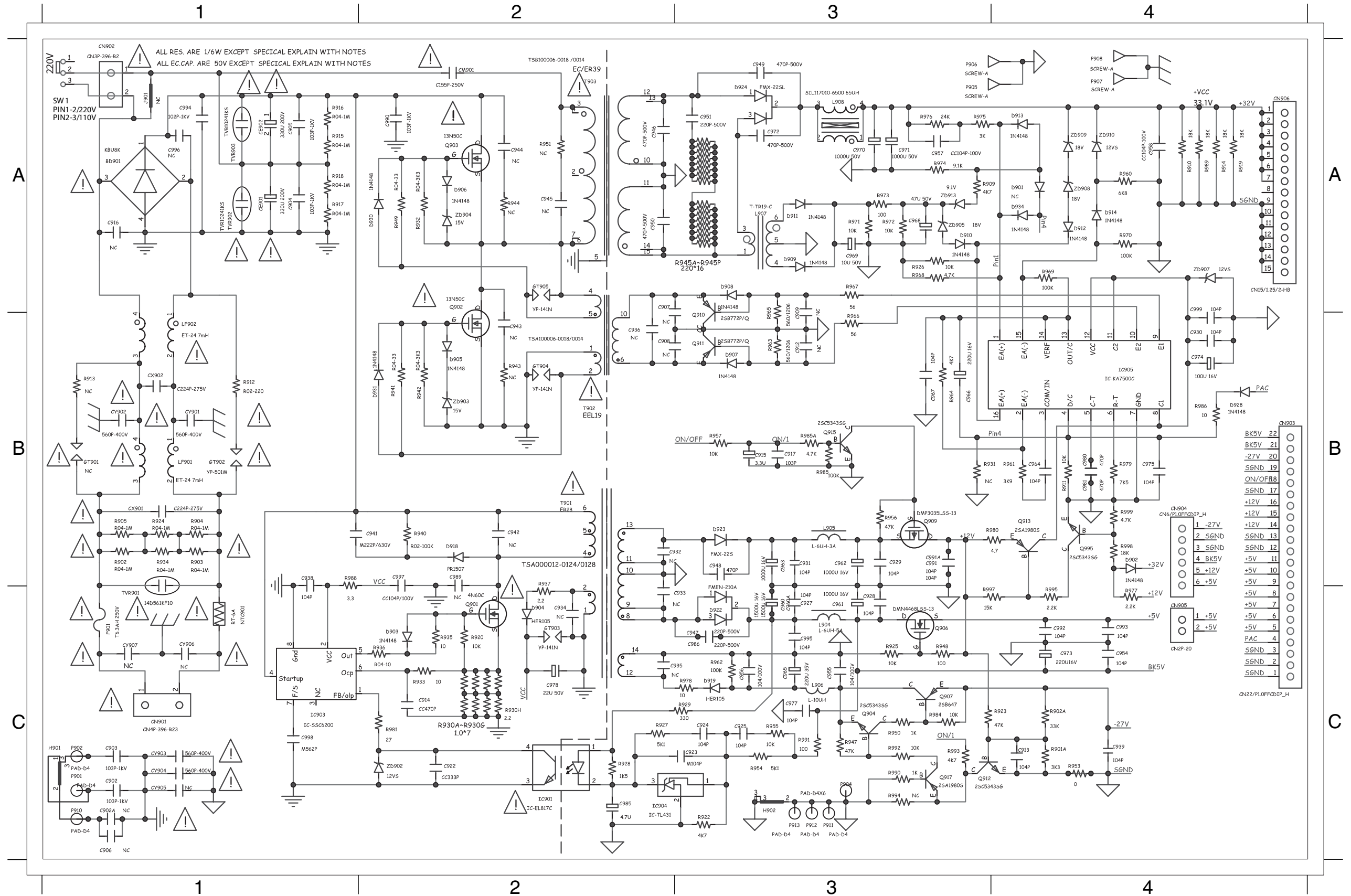


INTERNAL IC DIAGRAM - SSC620S SOP



CIRCUIT DIAGRAM

BD901	A1	C925	C3	C949	A3	C961	C3	C970	A3	C986	C3	CE901	A1	CY902	B1	D911	A3	D934	A4	L905	B3	Q904	C3	Q995	B4	R915	A1	R928	C2	R934	B1	R945F	A3	R948	C3	R964	B3	R976	A3	R990	C3	T903	A2	ZD908	A4
C902	C1	C927	C3	C950	A2	C962	B3	C971	A3	C990	A2	CE902	A1	CY903	C1	D912	A4	F901	C1	L906	C3	Q906	C3	R901A	C4	R916	A1	R929	C2	R935	C2	R945G	A3	R949	A2	R965	B3	R977	C3	R991	C3	T903	A2	ZD909	A4
C903	C1	C928	C3	C951	A3	C962	B3	C971	A3	C991	B3	CE902	A1	CY904	C1	D913	A4	GT902	B1	L907	A3	Q907	C3	R902	B4	R917	A1	R930A	C2	R936	C2	R945H	A3	R950	C3	R966	B3	R978	C3	R992	C3	TVR901	C1	ZD910	A4
C904	A1	C929	B3	C954	C4	C963	B3	C972	A3	C991A	B3	CM901	A2	D902	B4	D914	A4	GT903	C2	L908	A3	Q909	B3	R902A	C4	R918	A1	R930B	C2	R937	B2	R945I	A3	R953	C4	R967	B3	R979	B4	R993	C3	TVR902	A1	ZD910	A4
C905	A1	C930	B4	C955	C3	C963	B3	C973	C4	C992	C4	CN901	C1	D903	C2	D918	B2	GT904	B2	LF901	B1	Q910	B3	R903	B1	R919	A4	R930C	C2	R940	B2	R945J	A3	R954	C3	R968	A3	R980	B3	R995	C4	TVR903	A1	ZD913	A3
C913	C4	C931	B3	C956	C3	C964	B4	C974	B4	C993	C4	CN903	B4	D904	C2	D919	C3	GT905	A2	LF901	B1	Q910	B3	R904	B1	R920	C2	R930D	C2	R941	B2	R945K	A3	R955	C3	R969	A4	R981	C2	R997	C3	ZD902	C2		
C914	C2	C938	B1	C957	A3	C965	C3	C975	B4	C994	A1	CN904	B4	D905	B2	D922	C3	IC901	C2	LF902	B1	Q911	B3	R905	B1	R922	C3	R930E	C2	R942	B2	R945L	A3	R956	B3	R970	A4	R984	C3	R998	B4	ZD902	C2		
C915	B3	C939	C4	C958	A4	C966	B3	C977	C3	C995	C3	CN905	C4	D906	A3	D923	B3	IC903	C1	LF902	B1	Q911	B3	R909	A3	R923	C4	R930F	C2	R945A	A3	R945M	A3	R957	B3	R971	A3	R985	B3	R999	B4	ZD903	B2		
C917	B3	C941	B2	C960	C3	C967	B3	C978	C2	C997	B2	CN906	A4	D907	B3	D924	A3	IC904	C2	NTC901	C1	Q912	C3	R910	A4	R924	B1	R930G	C2	R945B	A3	R945N	A3	R960	A4	R972	A3	R985A	B3	T901	B2	ZD904	A2		
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C924	C3	C948	B3	C961	C3	C970	A3	C985	C2	CE901	A1	CY901	B1	D910	A3	D931	B2	L904	C3	Q903	A2	Q917	C3	R914	A4	R927	C2	R933	C2	R945E	A3	R947	C3	R963	B3	R975	A3	R989	A4	T902	B2	ZD907	A4		

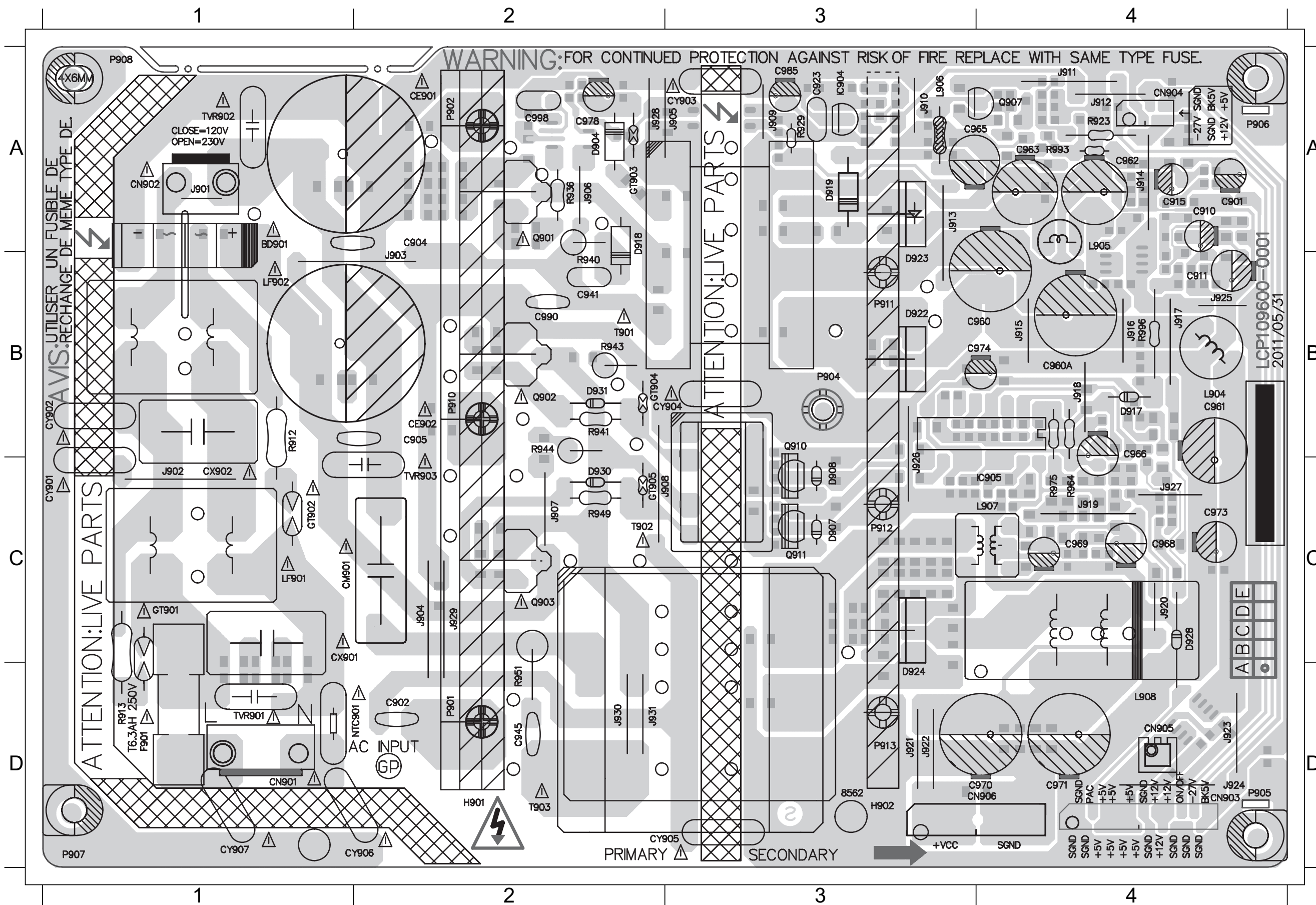


PCB LAYOUT - TOP VIEW

7-3

7-3

BD901	A1	C915	A4	C961	B4	C968	C4	C974	B4	CE902	B2	CN906	D4	D904	A2	D923	B3	GT903	A2	J903	B2	J911	A4	J918	B4	J925	B4	L904	B4	LF902	B1	Q910	B3	R936	A2	R996	B4	TVR901	D1
C901	A4	C923	A3	C962	A4	C969	C4	C978	A2	CE902	B2	CX901	C1	D907	C3	D924	D3	GT904	B2	J904	C2	J912	A4	J919	C4	J926	B3	L905	A4	LF902	B1	Q910	B3	R940	B2	T901	B2	TVR902	A1
C902	D2	C941	B2	C962	A4	C970	D4	C985	A3	CM901	C1	CX902	C1	D908	C3	D928	C4	GT905	C2	J905	A3	J913	A3	J920	C4	J927	C4	L906	A3	NTC901	D2	Q911	C3	R941	B2	T901	B2	TVR903	C2
C904	A2	C960	B4	C963	A4	C970	D4	C990	B2	CN901	D1	CY901	C1	D917	B4	D930	C2	IC904	A2	J906	A2	J914	A4	J921	D3	J928	A2	L907	C4	Q901	A2	Q911	C3	R949	C2	T902	C2		
C905	B2	C960	B4	C963	A4	C971	D4	C998	A2	CN903	D4	CY902	B1	D918	A2	D931	B2	IC904	A3	J908	C2	J915	B4	J922	D3	J929	C2	L908	D4	Q902	B2	R912	B1	R964	C4	T902	C2		
C910	A4	C960A	B4	C965	A3	C971	D4	CE901	A2	CN904	A4	CY903	A3	D919	A3	F901	D1	IC905	C4	J909	A3	J916	B4	J923	D4	J930	D2	LF901	C1	Q903	C2	R923	A4	R975	C4	T903	D2		
C911	B4	C961	B4	C966	B4	C973	C4	CE901	A2	CN905	D4	CY904	B3	D922	B3	GT902	C1	J902	C1	J910	A3	J917	B4	J924	D4	J931	D2	LF901	C1	Q907	A4	R929	A3	R993	A4	T903	D2		

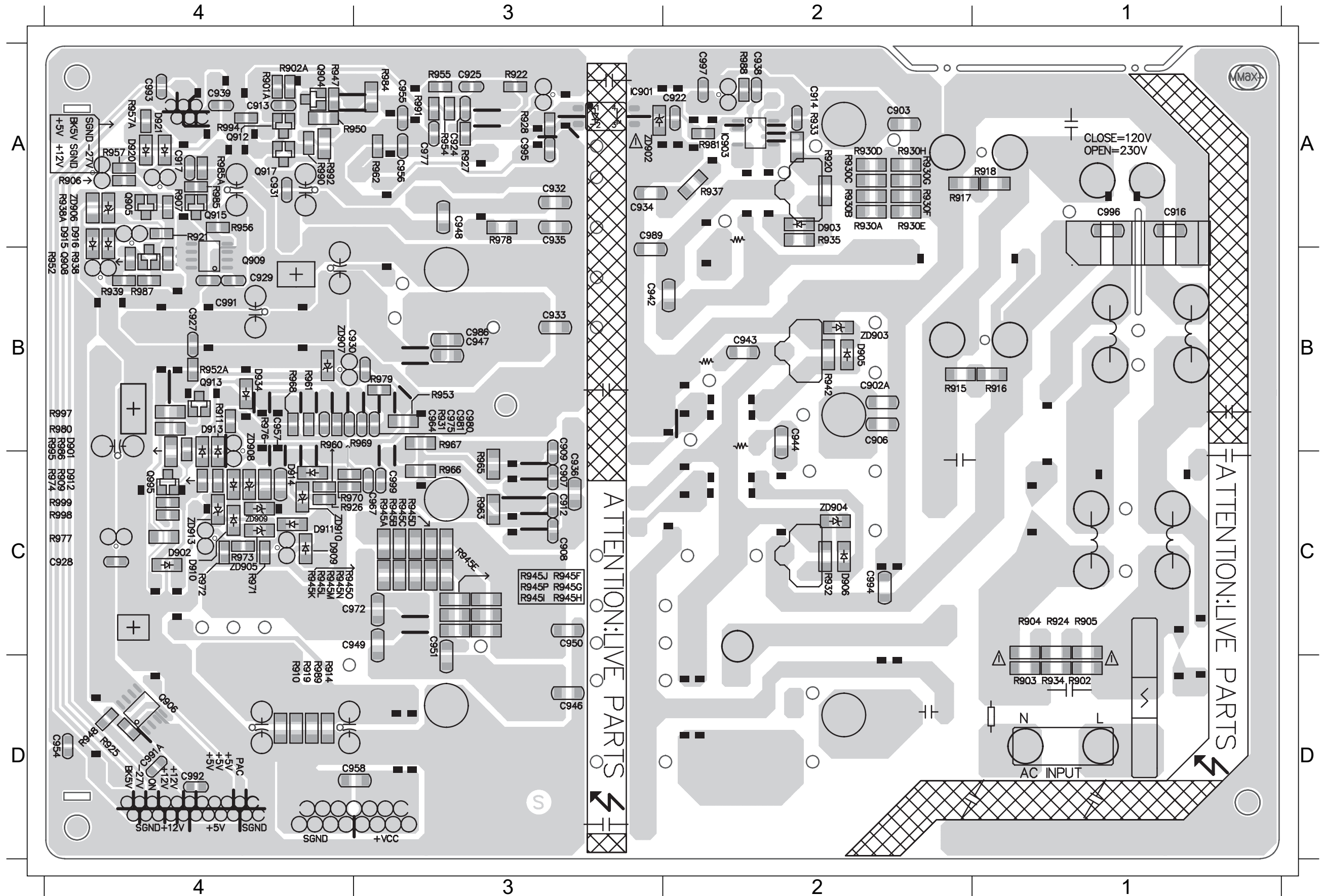


PCB LAYOUT - BOTTOM VIEW

7 - 4

7 - 4

C903	A2	C928	C4	C948	C3	C964	B3	C991	B4	D902	C4	D913	B4	IC903	A2	Q915	A4	R905	C1	R916	B1	R925	D4	R930E	A2	R937	A2	R945D	C3	R945L	C4	R952	B3	R961	B4	R970	C4	R979	B3	R988	A2	R999	C4	ZD907	B4		
C913	A4	C929	B4	C949	C4	C967	C3	C991A	D4	D903	A2	D914	C4	Q904	A4	Q917	A4	R906	A4	R917	A2	R926	C4	R930F	A2	R938	B4	R945E	C3	R945M	C4	R953	B3	R962	C3	R971	C4	R980	B4	R989	D4	ZD902	C3	ZD908	B4		
C914	A2	C930	B3	C950	C2	C972	C4	C992	D4	D905	B2	D915	A4	Q905	A4	Q995	C4	R907	A4	R918	A1	R927	C3	R930G	A2	R938A	A4	R945F	C2	R945N	C4	R954	C3	R963	C2	R972	C4	R981	A2	R990	A4	ZD902	C3	ZD909	C4		
C917	A4	C931	A4	C951	C2	C975	B3	C993	A4	D906	C3	D916	A4	Q906	D4	R901A	A4	R909	C4	R919	D4	R928	C3	R930H	A2	R939	B4	R945G	C2	R945O	C4	R955	C3	R965	C2	R973	C4	R984	C3	R991	C3	ZD903	B2	ZD910	C4		
C922	A2	C938	A2	C954	D4	C977	C3	C994	D1	D909	C4	D920	A4	Q908	B4	R902	D1	R910	D4	R920	A2	R930A	A2	R932	C3	R942	B2	R945H	C2	R945P	C2	R956	A4	R966	C2	R974	C4	R985	A4	R992	A4	ZD904	C3	ZD910	C4		
C924	C3	C939	A4	C955	C3	C980	B3	C995	C3	D910	C4	D921	A4	Q909	B4	R902A	A4	R911	B4	R921	A4	R930B	A2	R933	A2	R945A	C3	R945I	C2	R947	A4	R957	A4	R967	B3	R976	B4	R985A	A4	R995	B4	ZD905	C4	ZD913	C4		
C925	C3	C946	D3	C956	C3	C981	B3	C997	A2	D911	C4	D934	B4	Q912	A4	R903	D1	R914	D4	R922	C3	R930C	A2	R934	D1	R945B	C3	R945J	C2	R948	D4	R957A	A4	R968	B4	R977	C4	R986	B4	R997	B4	ZD906	A4				
C927	B4	C947	B3	C957	B4	C986	B3	C999	C3	D912	C4	IC901	C3	Q913	B4	R904	C1	R915	B2	R924	C1	R930D	A2	R935	A2	R945C	C3	R945K	C4	R950	A4	R960	B4	R969	B3	R978	C3	R987	B4	R998	C4	ZD907	B4				

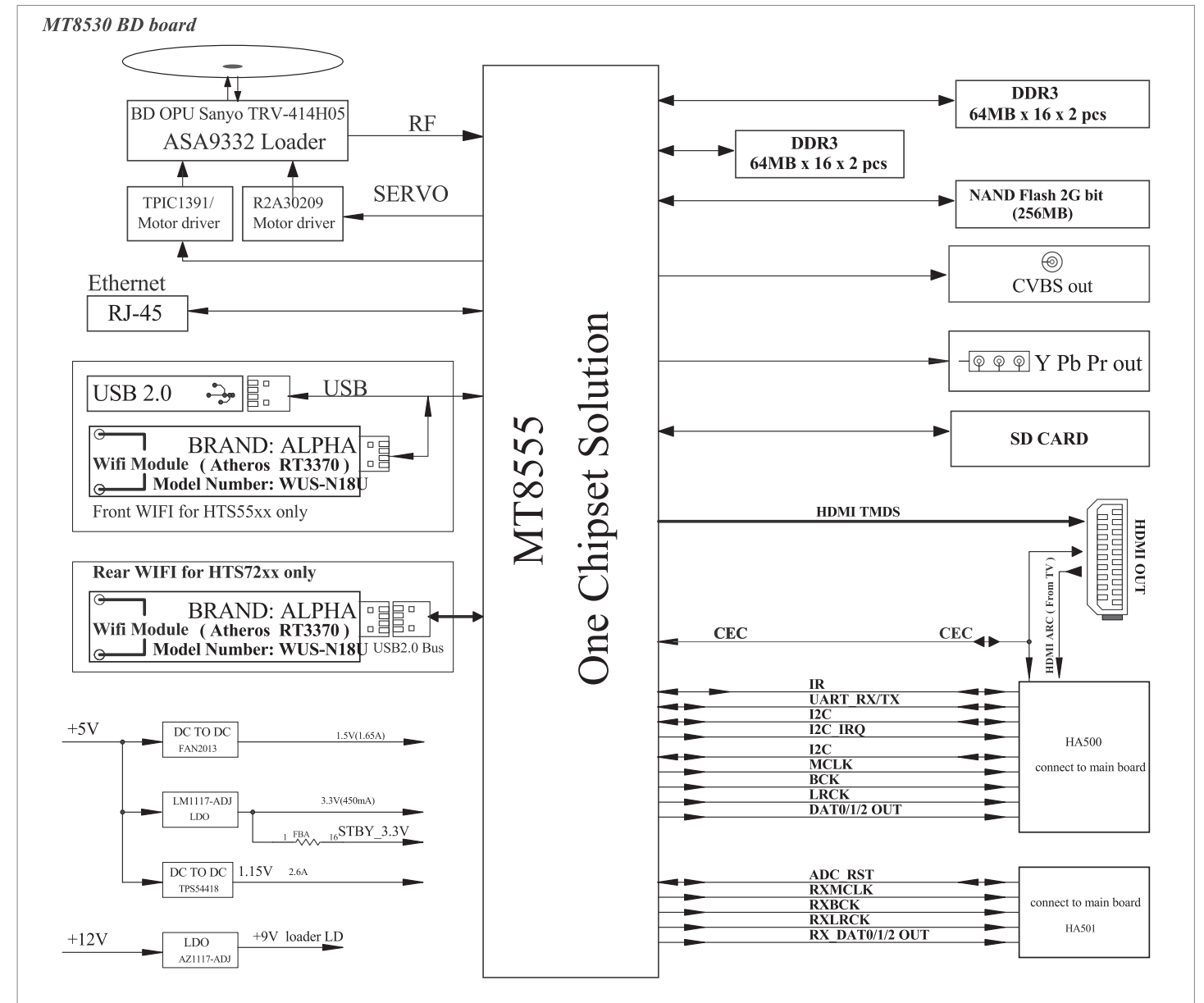


BD BOARD

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Block Diagram(BD Board) 8-1
 Voltages for connector pin..... 8-2
 Waveforms for measure point 8-3

BLOCK DIAGRAM



Voltages for per connection pin

1. HA500--->>from BD board connect to main board

PIN NO	PIN Assign	Remarks
1	GND	
2	IPOD_TXD	
3	IPOD_RXD	
4	IPOD_DET_SW	
5	IR	
6	GND	
7	I2C_IRQ	
8	GND	
9	CEC	
10	AMUTE	
11	GND	
12	SCL	
13	SDA	
14	GND	
15	MCLK	
16	GND	
17	LRCK	
18	GND	
19	BCK	
20	GND	
21	DATA0	
22	DATA1	
23	DATA2	
24	DATA3 N/A	
25	GND	
26	DATA4 N/A	
27	MIC_IN	
28	GND	
29	HDMI_ARC	
30	POD_DET N/A	

2. CN202--->>from BD board connect to USB connect PCB

PIN NO	PIN Assign	Remarks
1	USB+5V	4.75V-5.25V
2	USB+5V	
3	USBP	High speed
4	USBM	difference
5	GND	

3. J900 --->>from BD board connect to BD loader(SERVO use)

PIN NO	PIN Assign	Remarks
1	A+	0-11.6V
2	A-	0-11.6V
3	B-	0-1.6V
4	B+	0-1.6V
5	U	4.52V
6	V	4.52V
7	W	4.52V
8	COMMON	4.52V

4. J905 --->>from BD board connect to BD loader(SERVO use)

PIN NO	PIN Assign	Remarks
1	LOAD-	0.65V
2	LOAD+	0.65V
3	GND	GND
4	TYAY_IN	0V-->>open/close 3.3V
5	TYAY_OUT N/A	

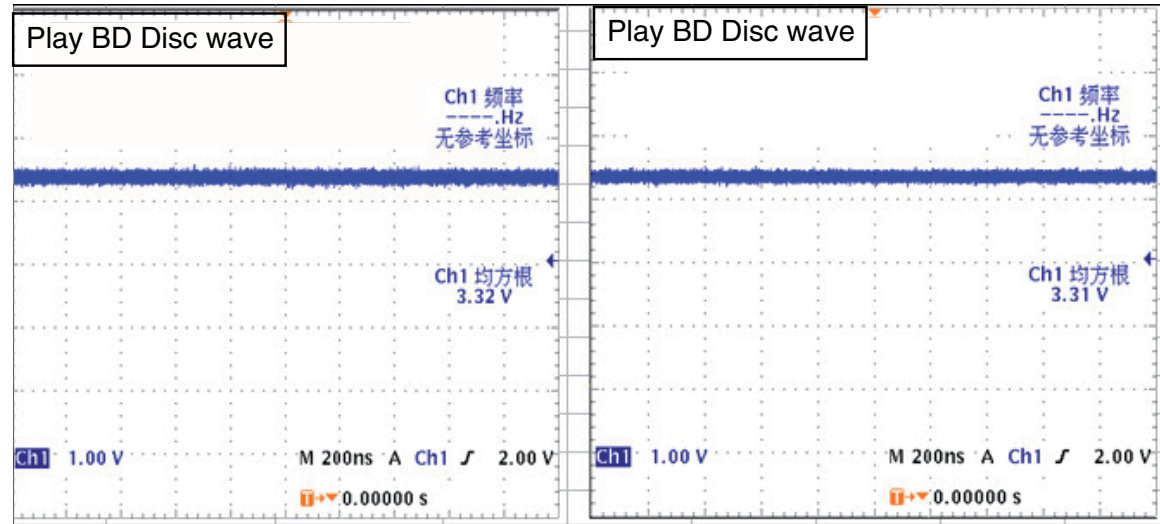
5. J800--->>from BD board connect to BD loader(SERVO use)

PIN NO	PIN Assign	Remarks
1	FOC2+	2.66V 2.4V 2.68V
2	FOC2-	2.49V 2.8V 2.52V
3	TR-	2.58V 2.59V 2.55V
4	FOC1+	2.66V 2.59V 2.7V
5	TR+	2.59V 2.62V 2.58V
6	FOC1-	2.48V 2.66V 2.52V
7	A-	0.49V 0.26V 0.48V
8	B-	0.49V 0.35V 0.4V
9	A+	0.72V 0.26V 0.42V
10	B+	0.72V 0.35V 0.4V
11	GND	GND
12	SIG_PO	n/a
13	GND	GND
14	B	2.22V 2.05V 2.36V
15	A	2.22V 2.05V 2.44V
16	D	2.26V 2.05V 2.45V
17	C	2.23V 2.06V 2.31V
18	G	2.09V 1.9V 2.37V
19	H	2.09V 1.9V 2.30V
20	F	2.09V 1.88V 2.43V
21	E	2.09V 1.9V 2.24V
22	LDO_SDIO	2.35V 2.15V 0V
23	RFO+	3.11V 2.82V 2.72V
24	RFO-	2.11V 1.92V 2.54V
25	LDO_CLK	3.25V 3.04V 0V
26	LDO_SEN	3.25V 3.02V 3.3V
27	HAVC	2.09V 1.8V 2.1V
28	VCC_PDIC	4.95V
29	GND	GND
30	GAIN_SW	3.25V 0V 1.65V
31	GND	GND
32	BD_LD	0V 0V 4.54V
33	CD_LD	1.74V 0V 0V
34	DVD_LD	0V 1.96V 0V
35	GND	GND
36	AUX1	1.55V 1.23V 1.48V
37	VCC_HFM	4.92V
38	MDI_DVD	0.15V 0V 0.15V
39	MDI_BD	0V 0V 0.08V
40	DVD_VR	0.15V 0V 0.15V
41	CD_VR	0V 0V 0V
42	DVD_HFM	0V 0V 0V
43	CD_HFM	0V 0V 0V
44	GND	GND
45	GND	GND
Disc type voltage	CD DVD BD	

Waveforms for measure point

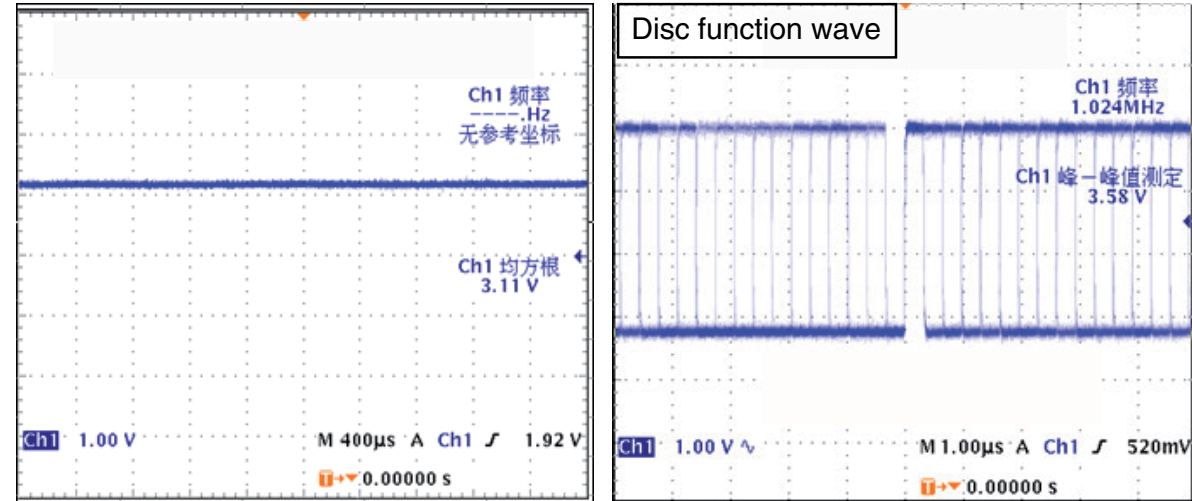
HA500 PIN2_Ipod_TX

HA500 PIN3_Ipod_RX



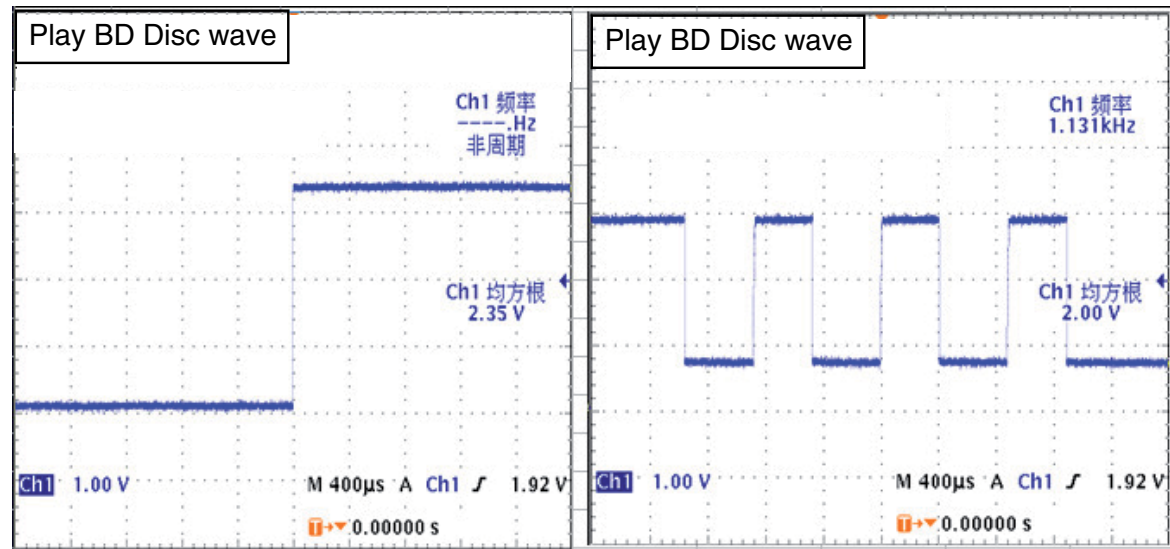
HA500 PIN9_CEC(no single)

HA500 PIN10_MIC_IN



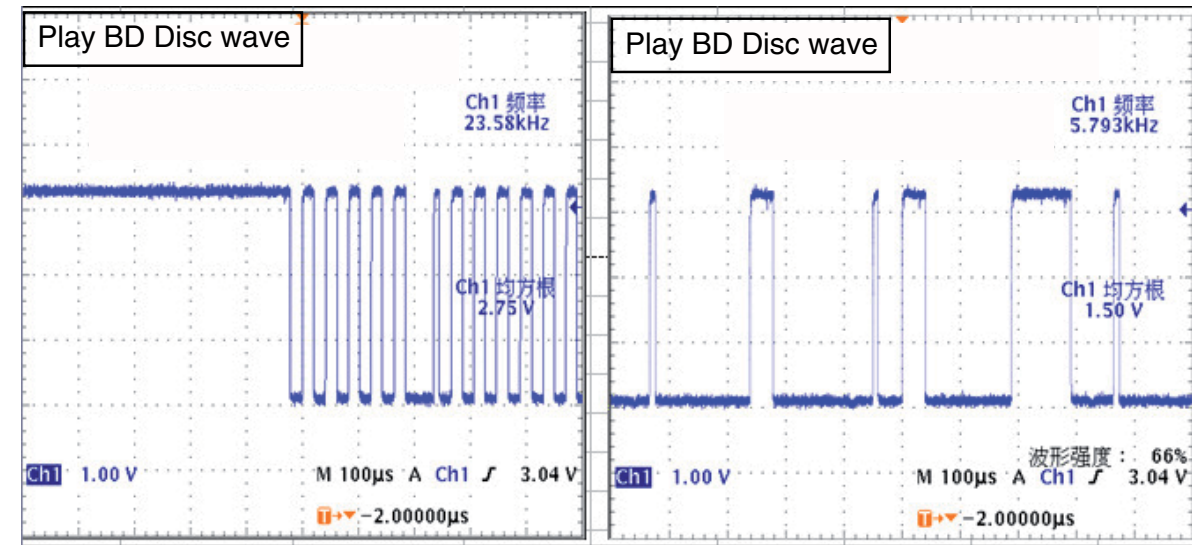
HA500 PIN5_12C_IRQ

HA500 PIN7_IR(VOL up/down)



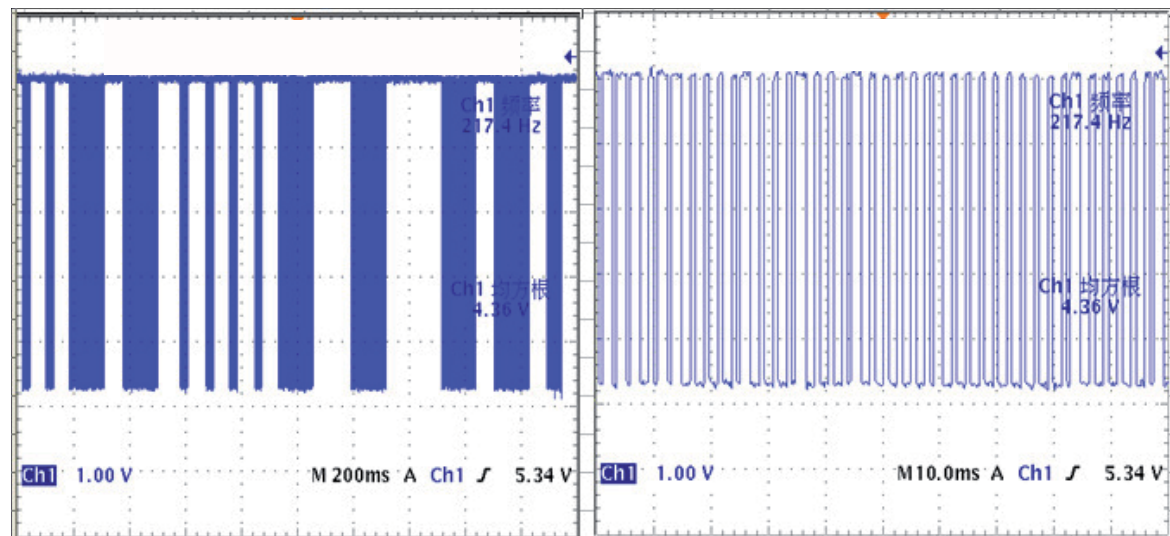
HA500 PIN12_SCL

HA500 PIN13_SDA



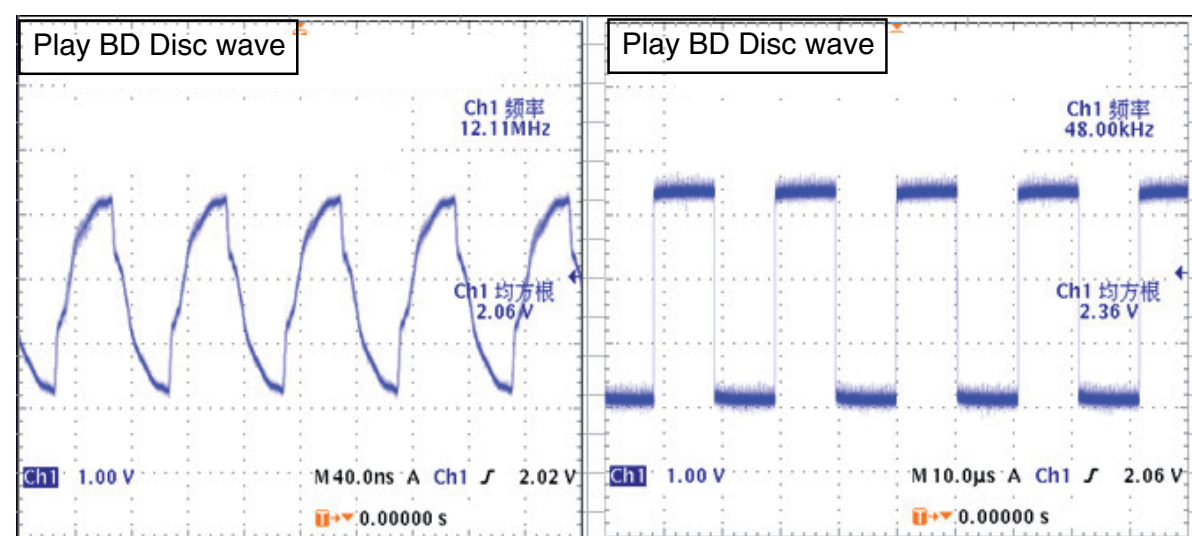
HA500 PIN9_CEC

HA500 PIN9_CEC



HA500 PIN15_MCLK

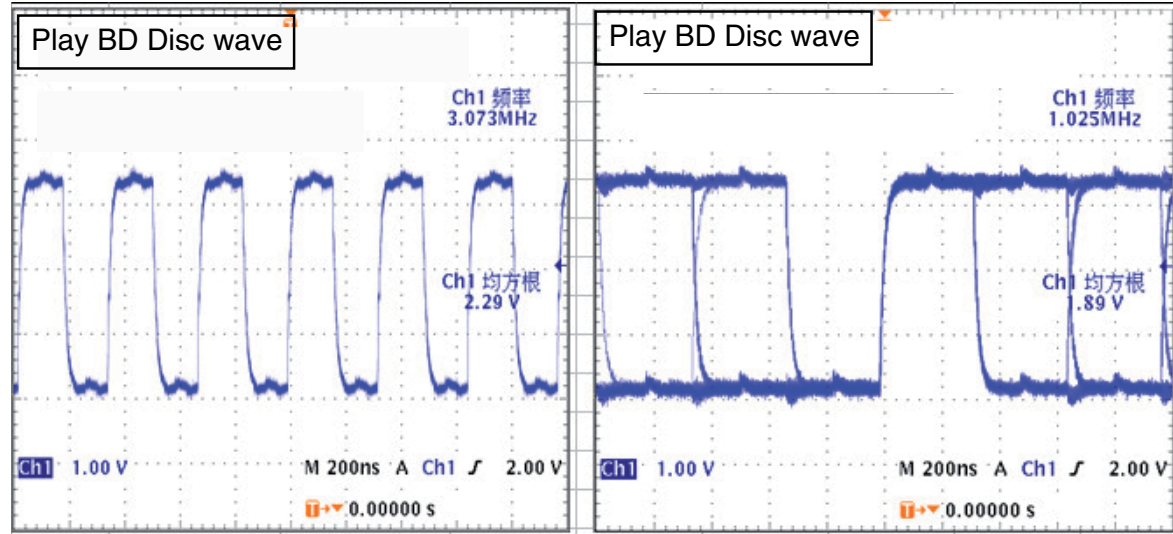
HA500 PIN17_LRCK



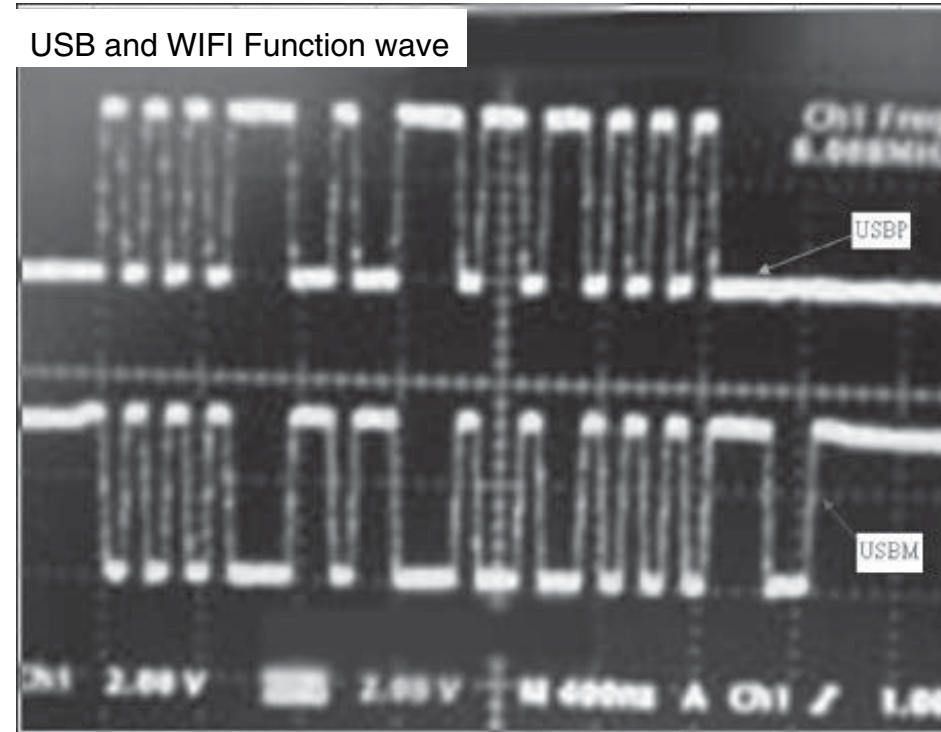
Waveforms for measure point

HA500 PIN19_BCK

HA500 PIN21_AOSDAT0

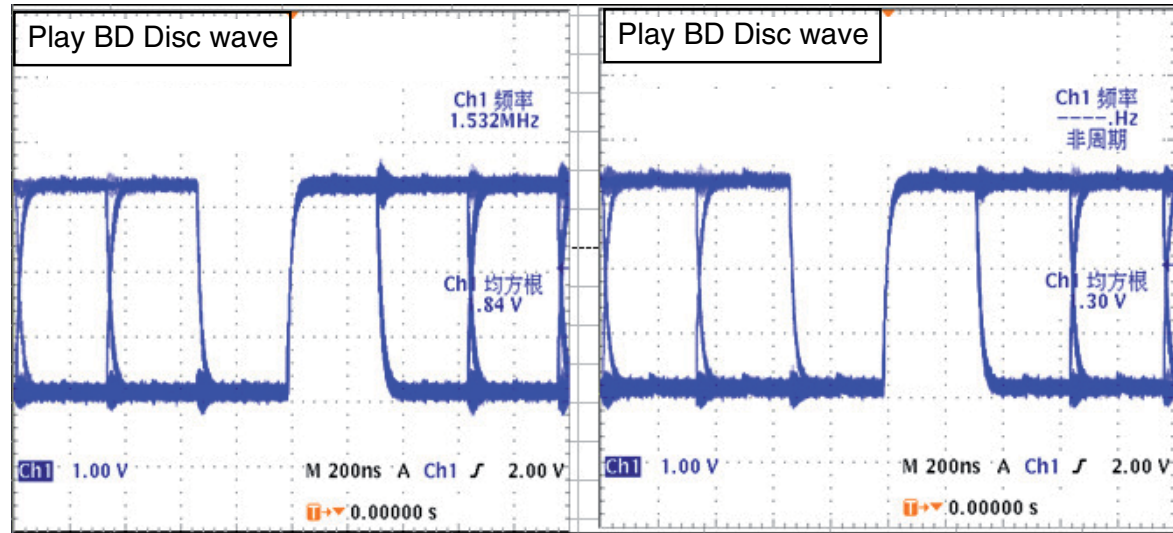


CN203 Pin3 USBM pin4 USBP



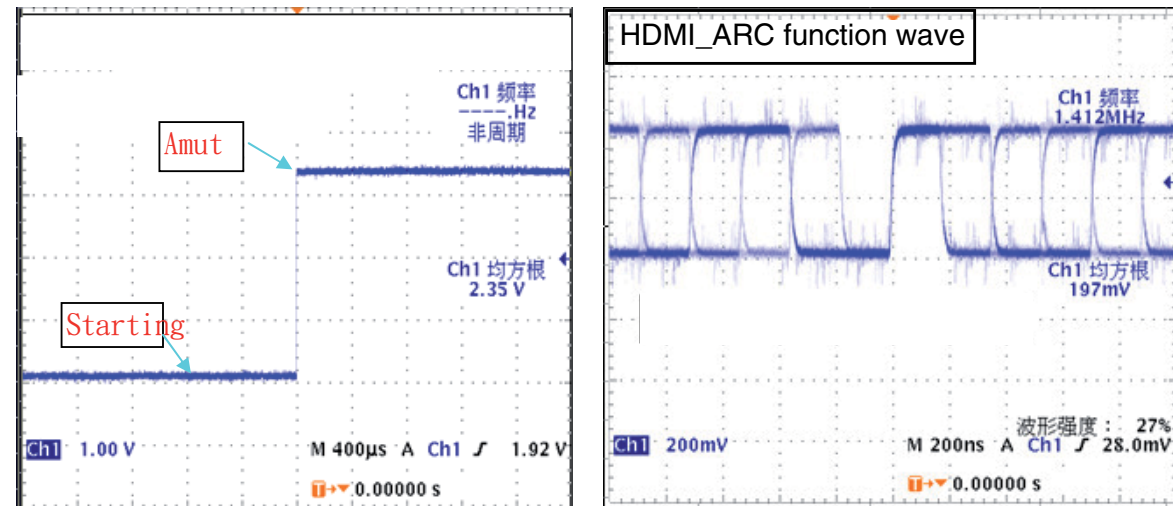
HA500 PIN22_AOSDAT1

HA500 PIN23_AOSDAT2



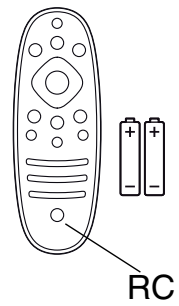
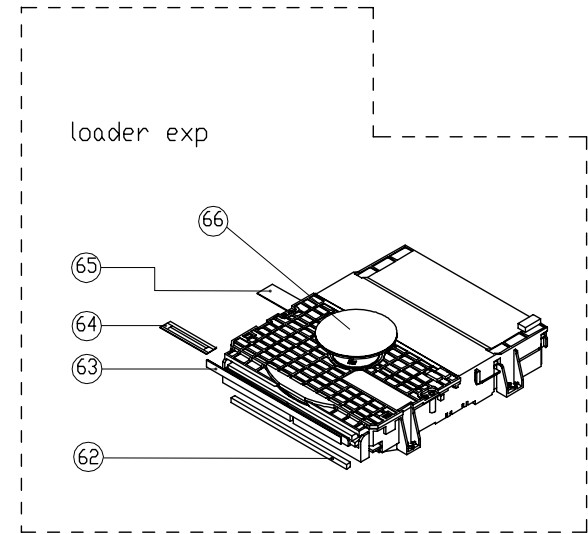
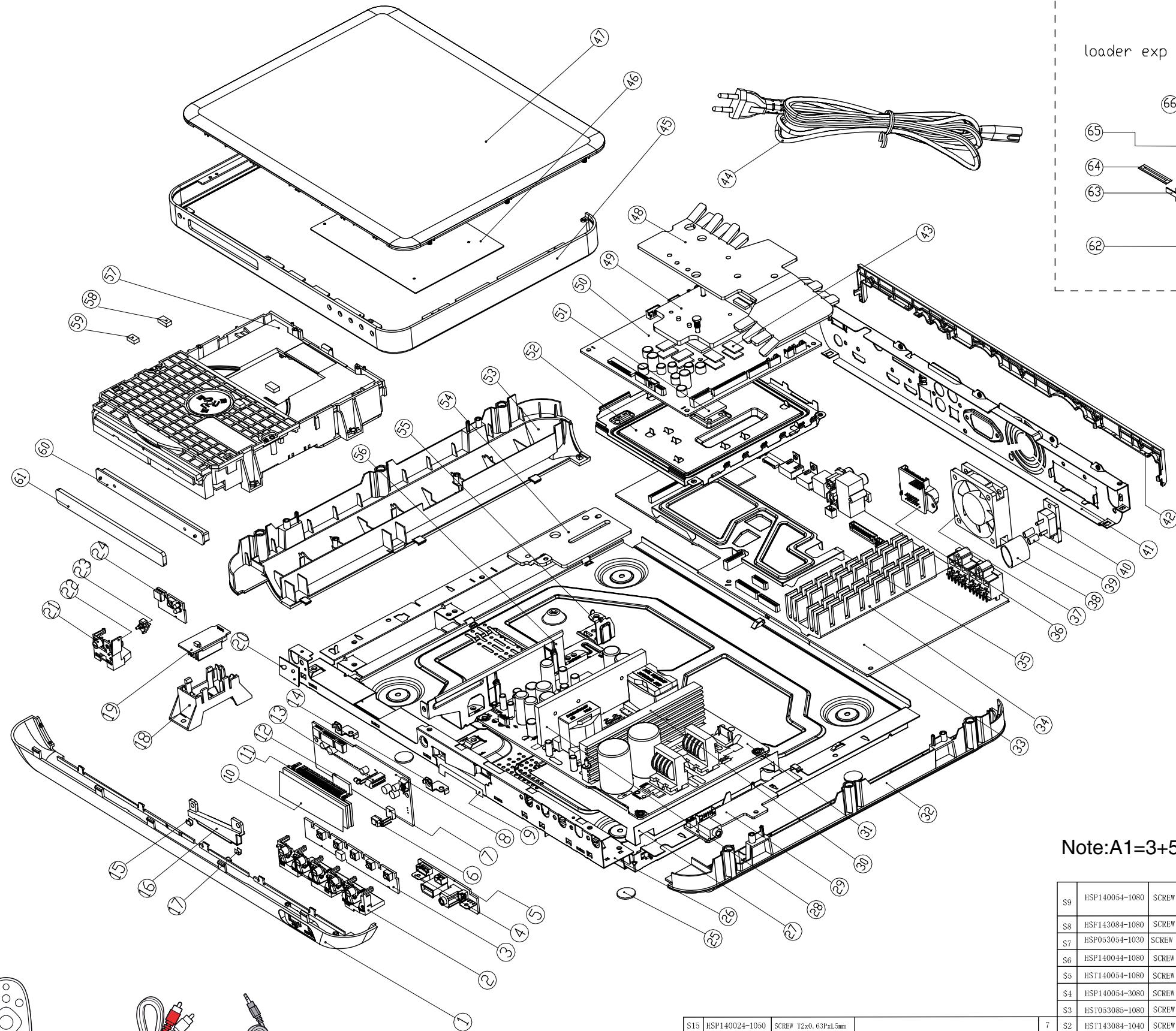
HA500 PIN10_A_MUTE

HA500 PIN29_HDMI_ARC

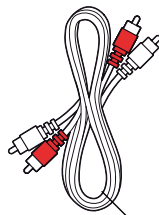


Mechanical Exploded View

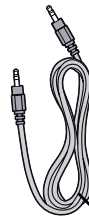
9 - 1



RC



MIC



FM

Note:A1=3+5+8+24+29+33+36

ITEM	PART NUMBER	DESCRIPTION	DISTRIBUTION	QTY.	ITEM	PART NUMBER	DESCRIPTION	DISTRIBUTION
S9	HSP140054-1080	SCREW M3xP0.5xL8	FOR FIX KARAOKE-2					
			FOR FIX AL RING-4 FOR BIM-4					
S8	HSP143084-1080	SCREW M3xP0.5xL8	FUNCTION BUTTON TO BOTTOM-2					
S7	HSP053054-1030	SCREW M2.0x0.4PxL3.0	DVD DOOR-2					
S6	HSP140044-1080	SCREW T2.6xP0.91xL8						
S5	HST140054-1080	SCREW T3.0xP1.06xL8	FOR VIDEO-1 FOR DIGITAL -2 FOR SPK JACK-2					
S4	HSP140054-3080	SCREW 3.0xL1.06PxL8	FOR FIX TOP COVER-6					
S3	HST053085-1080	SCREW M3xP0.5xL8	LOADER TO BIM-4					
S2	HST143084-1040	SCREW M3xP0.5xL4	BACK TO BIM-1					
S15	HSP140024-1050	SCREW T2x0.63PxL5mm		7				
S14	HSP140044-1040	SCREW T2.5x0.91xL4.0	PVC TO TOP PANEL-3	3				
S13	HSP140132-1100	SCREW T5xP2.12xL10	TO FAN-2	2				
S12	HSP143084-1060	SCREW M3.0xP0.5xL6	HD41 TO BACK*3 TUNER TO BACK*1	4				
S11	HSP140054-3080	SCREW T3.0xP1.06xL8	HIPS BACK PANEL FOR SECC BACK PANEL-5	5				
			FOR FIX WIRE TIE-1					
S10	HSP143084-1060	SCREW M3xP0.5xL6	FOR STANDBY TO BIM-1 FUN BTN TO BIM-2	9				
			AL RING TO BIM-4 LOADER BKT TO BIM-1					
					S1	HST140054-1060	SCREW M3.0x0.5xL6	BD BKT R/L TO BIM-2 BD BKT L/R TO BD-2
								PSU TO BIM-3 BD TO EMI COVER-2
								WIRELESS TO BACK-2 PSU TO LOADER BKT-2
								WIFI BKT TO BIM-1

REVISION LIST

Version 1.0

*Initial release

Version 1.1

*HTS8562/12 combine with HTS8562/98