

Service
Service
Service



Service Manual



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GB 3139 785 35050

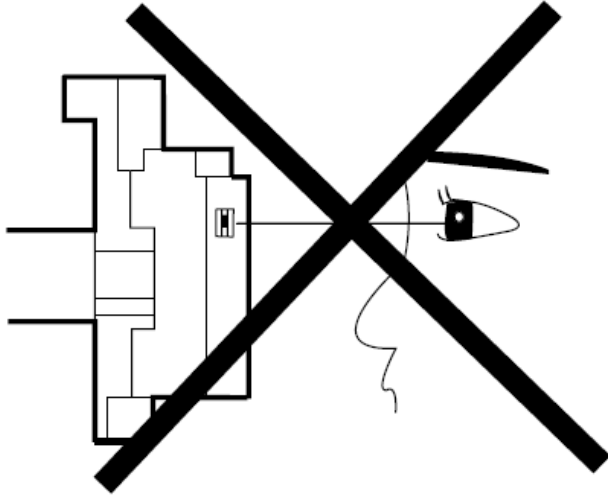
Version 1.0



PHILIPS

LASER BEAM SAFETY PRECAUTIONS

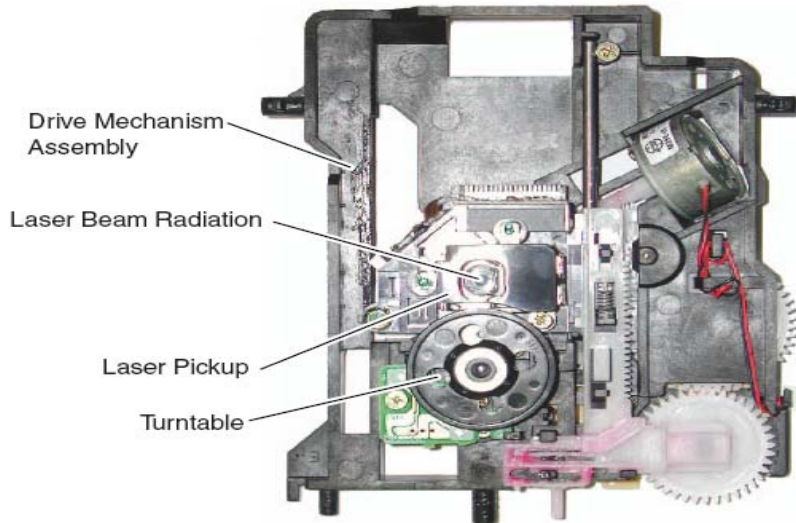
This DVD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



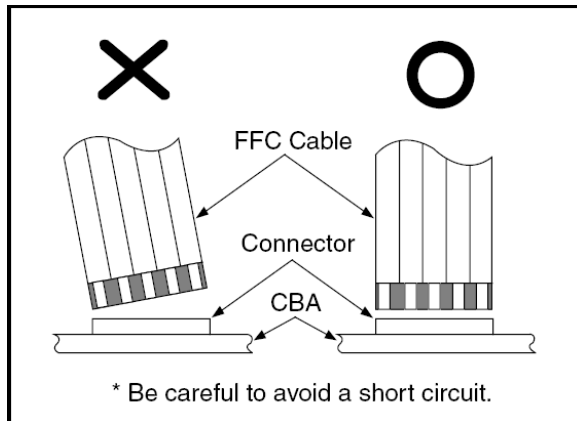
CAUTION
LASER RADIATION
WHEN OPEN. DO NOT
STARE INTO BEAM.

Location: Top of DVD mechanism.

STANDARD NOTES FOR SERVICING

Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



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 1.1.2005 onwards, according next rules.

Important note: In fact also products a little older can also 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 leadfree solder alloy. The solder tool must be able
 - To reach at least a solder-temperature of 400°C,
 - To stabilize the adjusted temperature at the solder-tip
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C - 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free). If one cannot avoid, 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 highest 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 indicatorlabel in the bag, the BGA-IC possibly still has to be baked dry. This will be communicated via AYS-website.

Do not re-use BGAs at all.

- For sets produced before 1.1.2005, containing leaded soldering-tin 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.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

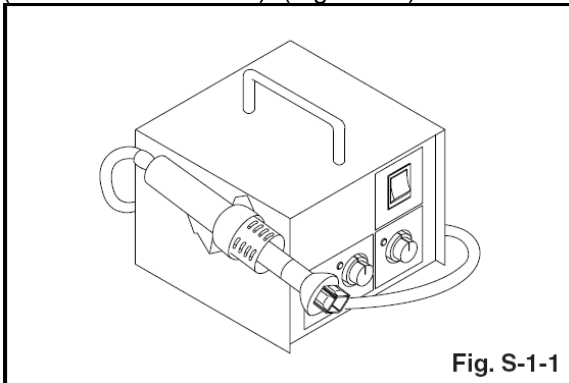


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will

be melted). (Fig. S-1-6)

4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

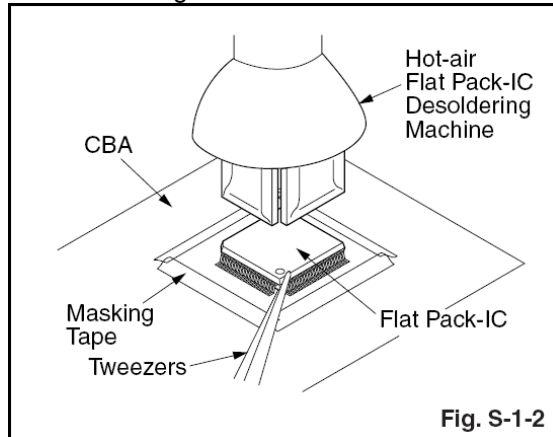


Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

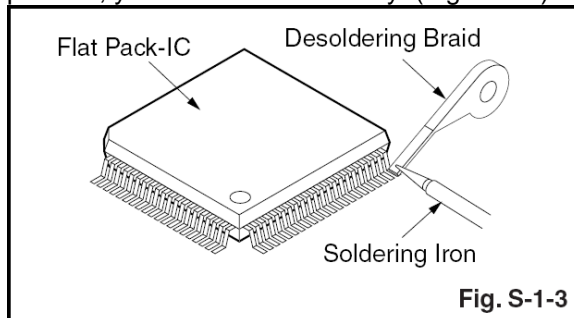
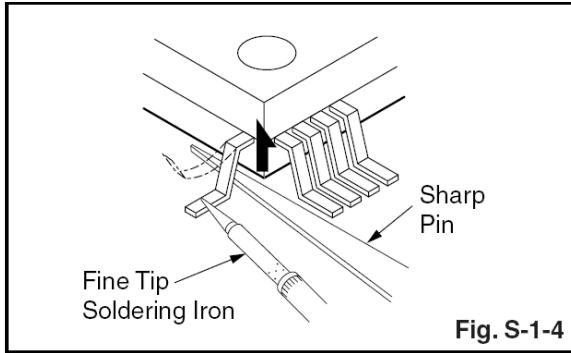


Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

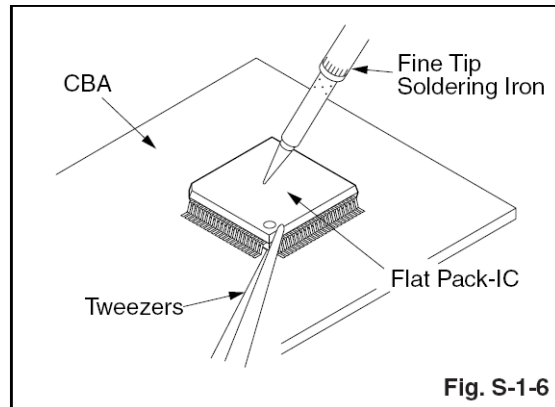
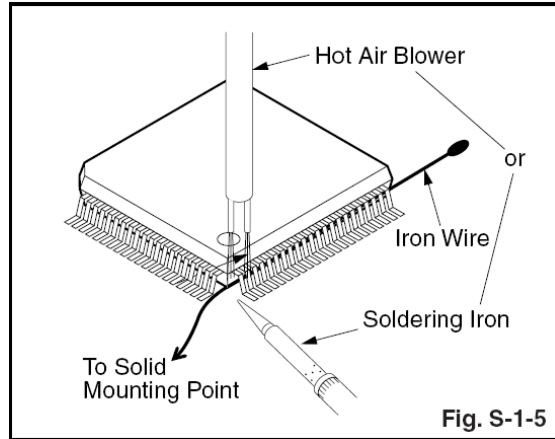
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.

3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.

4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



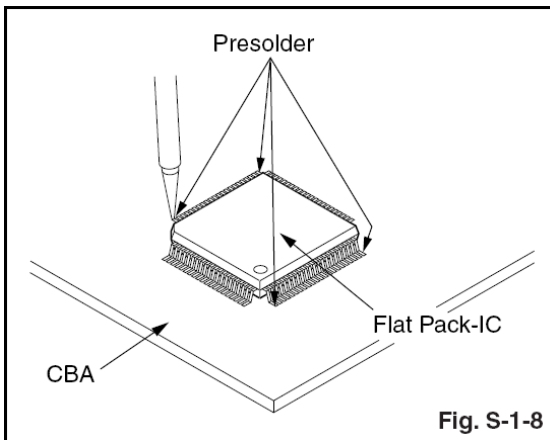
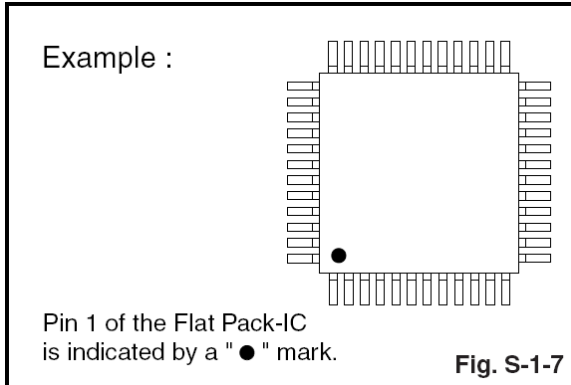
2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA

so you can install a replacement flat pack-IC more easily.

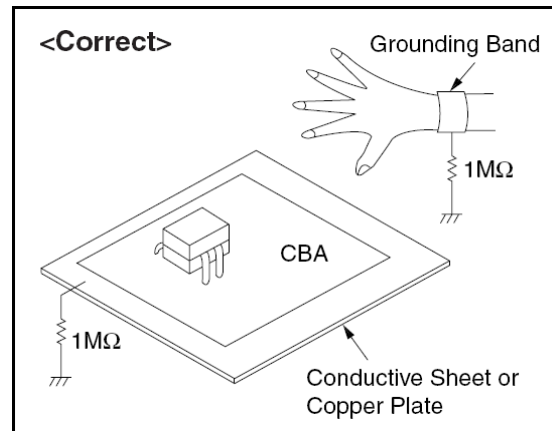
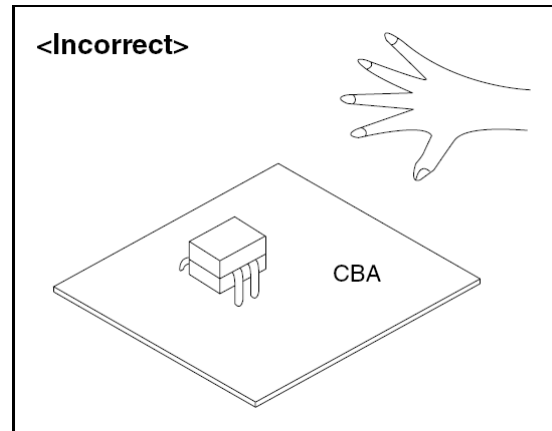
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)

3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding ($1\text{ M}\Omega$) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



Instructions for Handling

Semiconductors

Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band ($1\text{ M}\Omega$) that is properly grounded to remove any static electricity that may be charged on the body.

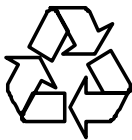
Safety and important notice



Warning

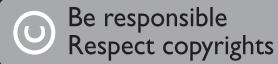
- Risk of overheating! Never install the Home Theater System in a confined space. Always leave a space of at least 4 inches around the Home Theater System for ventilation. Ensure curtains or other objects never cover the ventilation slots on the Home Theater System.
- Never place the Home Theater System, remote control or batteries near naked flames or other heat sources, including direct sunlight.
- Only use this Home Theater System indoors. Keep this Home Theater System away from water, moisture and liquid-filled objects.
- Never place this Home Theater System on other electrical equipment.
- Keep away from this Home Theater System during lightning storms.
- Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- Visible and invisible laser radiation when open. Avoid exposure to beam.

Recycle notice



This electronic equipment contains a large number of materials that can be recycled or reused if disassembled by a specialized company. If you are disposing of an old machine, please take it to a recycling center. Please observe the local regulations regarding disposal of packaging materials, exhausted batteries and old equipment.

Copyright notice

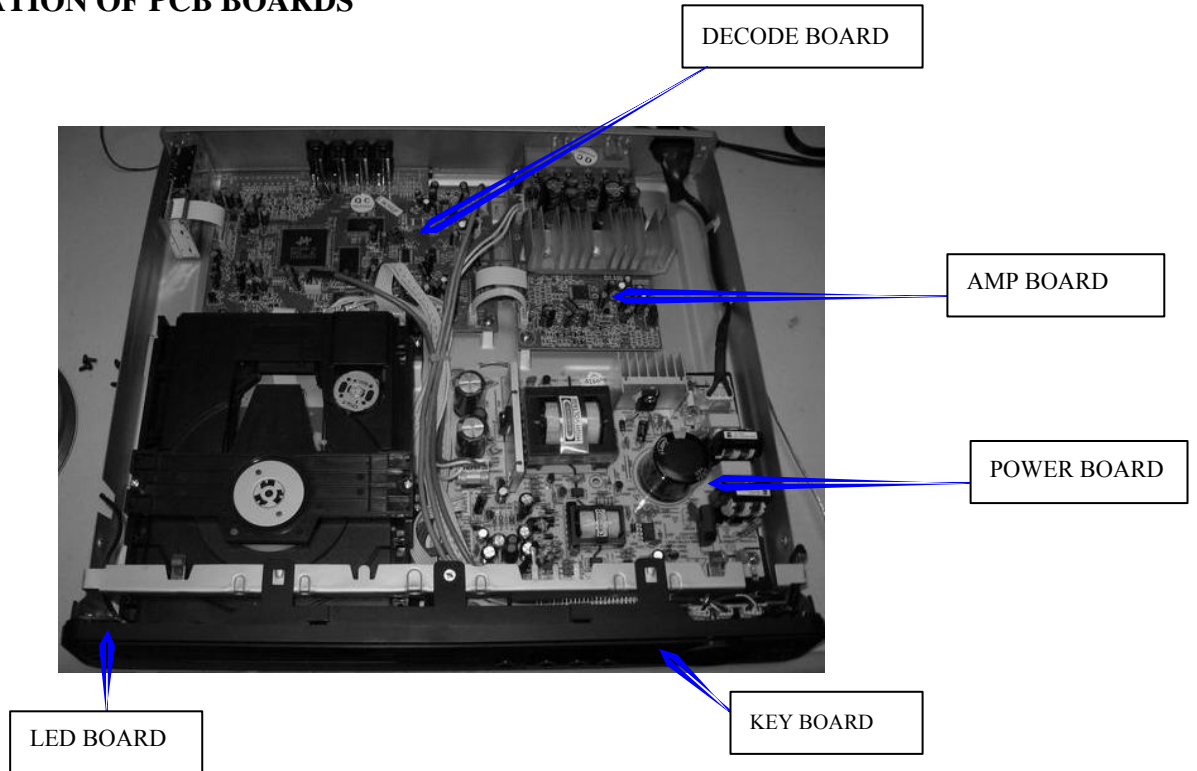


This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

About Progressive Scan

Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of 525 or 625 progressive scan picture problems, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding our TV set compatibility with this model 525p and 625p DVD player, please contact our customer service center.

LOCATION OF PCB BOARDS



VERSION VARIATION:

Type/Versions	HTS3181	HTS3181X
Features	/55	/78
Output Power-300W	X	X
Voltage(110V-240V)	X	X

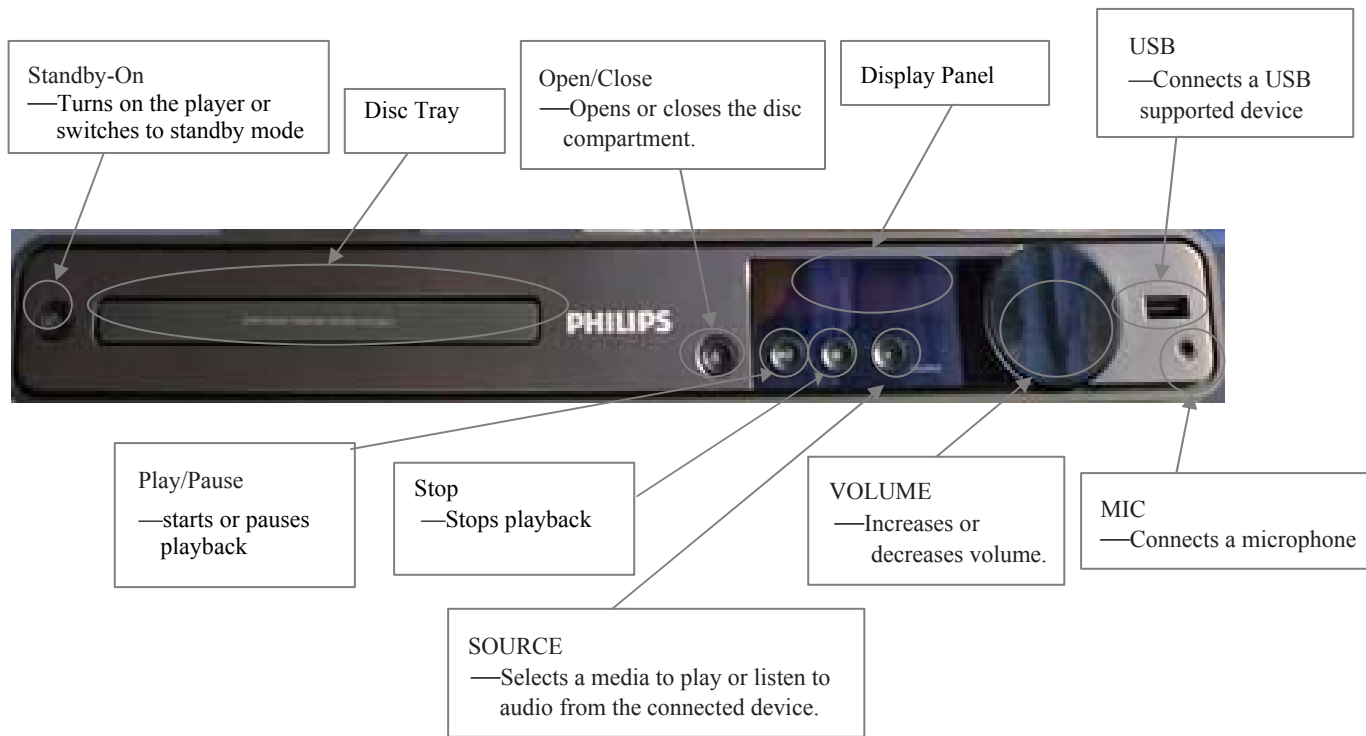
SERVICE SCENARIO MATRIX:

Type/Versions	HTS3181	HTS3181X
Board in used	/55	/78
DECODE board	C	C
POWER board	C	C
AMP board	C	C
LED board	C	C
KEY board	C	C

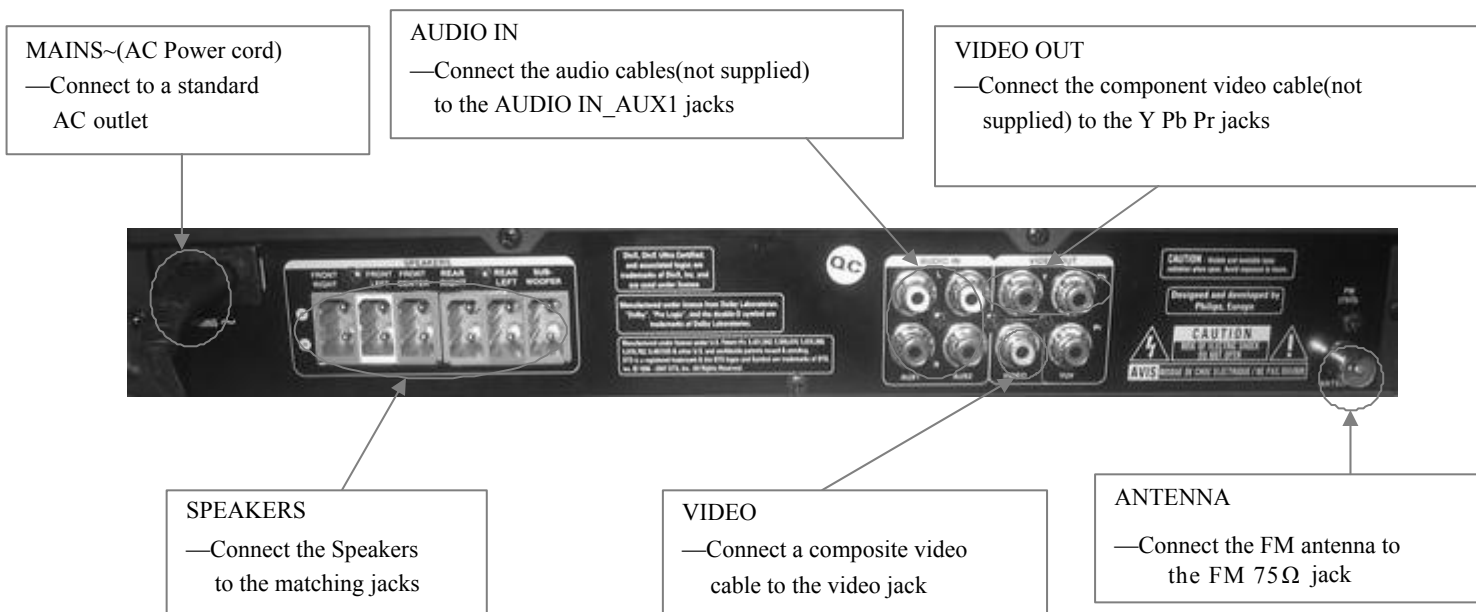
*C=Component Level Repair

OPERATING CONTROLS AND FUNCTIONS

Front Panel



Back Panel



SPECIFICATIONS

AMPLIFIER

Total output power 300 W RMS(30%THD)
Frequency Response180Hz – 18kHz / ± 3 dB
Signal-to-Noise Ratio>- 60 dB (A-weighted)
Input Sensitivity
- AUX1.....500 mV
- AUX2..... 500 mV

RADIO

Tuning RangeFM 87.5-108 MHz
.....(100kHz)
.....26 dB Quieting
Sensitivity.....FM 22 dBf,
IF Rejection RatioFM 50 dB
Signal-to-Noise RatioFM 30 dB
Harmonic Distortion FM 3%
Frequency Response FM 180 Hz–10 kHz / ± 3 dB
Stereo Separation FM 26 dB (1 kHz)
Stereo ThresholdFM 23.5 dB

DISC

Laser TypeSemiconductor
Disc Diameter12cm / 8cm
Video DecodingMPEG-1 / MPEG-2 /DivX
..... / DivX Ultra
Video DAC12 Bits,108MHz
Signal SystemPAL / NTSC
Video S/N 56 dB
Audio DAC..... 24bits/96KHz
Frequency Response 4 Hz–20 kHz (44.1 kHz)
.....4 Hz–22 kHz (48 kHz)
.....4 Hz–44 kHz (96 kHz)
PCM IEC 60958
Dolby Digital IEC 60958, IEC 61937

MAIN UNIT

Power Supply.....110 - 240 V~50-60Hz
Standby power consumption.....<1W
Power Consumption60 W
Dimensions 360 x 55 x 332 (mm)
.....(w x h x d)
Weight2.64 kg

SPEAKERS

System Full range satellite
Speaker impedance8 ohm(centre),4 ohm(Front/Rear)
Speaker drivers 3" full range speaker
Frequency response150 Hz – 20 kHz
Dimensions:
-Center100 x 100x 75 (mm)
-Front/Rear..... 100 x 100x 75 (mm)
.....(w x h x d)
Weight:
-Center0.38kg
-Front/Rear.....0.38 kg/each

USB

Compatibility USB
Class support UMS(USB Mass storage Class)
File system.....FAT12,FAT16,FAT32

SUBWOOFER

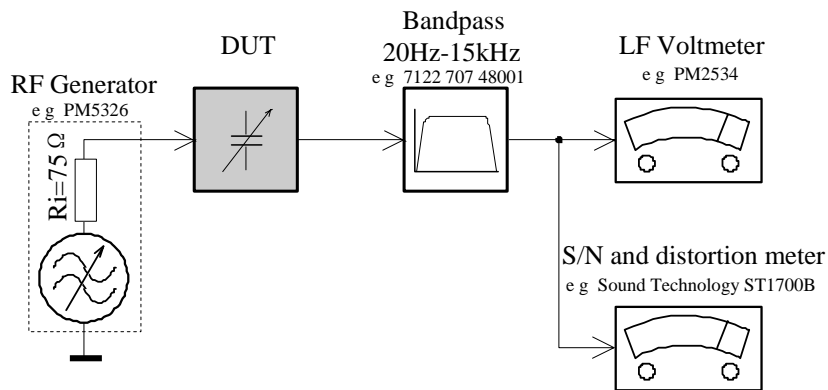
Impedance8 ohm
Speaker drivers 165mm (6.5") woofer
Frequency response45Hz – 150 Hz
Dimensions122.6x 309.5 x 369 (mm)
.....(w x h x d)
Weight3.54kg

Laser specification

Type.....Semiconductor laser GaAlAs(CD)
Wave length..... 645-665nm (DVD) 770-800nm(CD)
Output power 6Mw(DVD) 7Mw(VCD/CD)
Beam divergence..... 60 degrees

MEASUREMENT SETUP

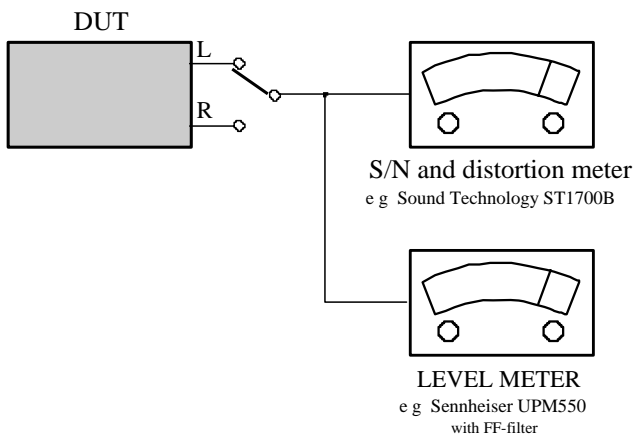
Tuner FM



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

CD

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



System , Region Code , etc. Setting Prochure

1)System Reset

- a) Press "SETUP" button on RC,TV will show setup menu
- b) Select the menu using the▼ and ► on RC
- c) Go preference page to do system reset

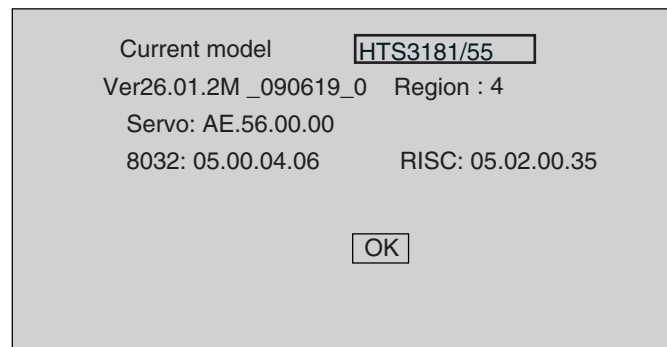
2)Region Code Change

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

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

3)Version Control Change

- a) In open model, press "1" "5" "9" on RC
- b) Press ► and select version you want using ▼
- c) Press ► and "ok" button to confirm
- d) TV will show message as below:



4)Password Change

- a) Press "SETUP" button on R/C,TV will show setup menu
 - b) Select the menu using the▼ and ► on RC
 - c) Go preference page select "password" to change
- * 136900 is default password supplied.

5)Check on the Sofeware Version

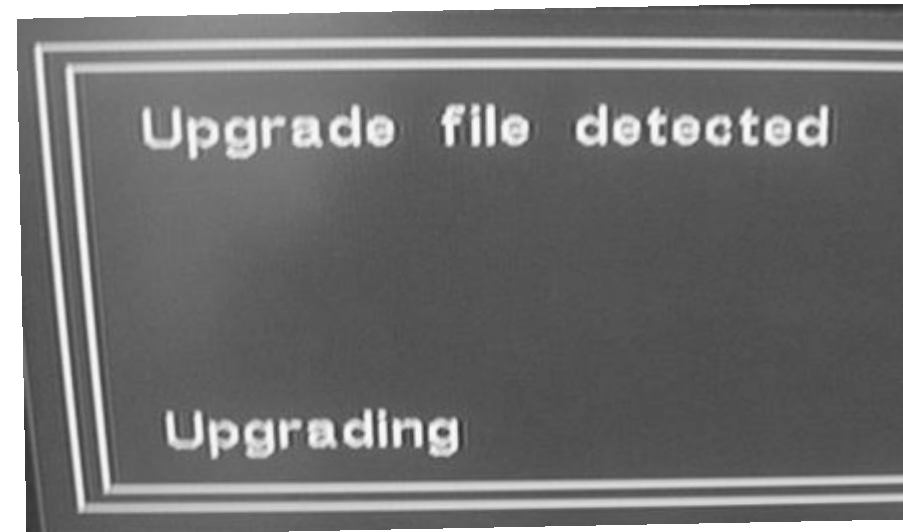
- a) Press "SETUP" button on R/C,TV will show setup menu
- b) Select the menu using the▼ and ► on RC
- c) Go preference page select "Version Info".
TV will show the version on screen.

6)Trade model

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

7) Upgrading new sofeware

- a) Copy "software files" into a CD-R or USB flash drive.
- b) Insert the CD-R disc or USB flash drive.
- c) Press DISC or USB, the system will identify the update file autometically.
- d) VFD will show "Updating" until update is complete.
* the system will switch off to standby automatically after update is complete.
- e) OSD will show:

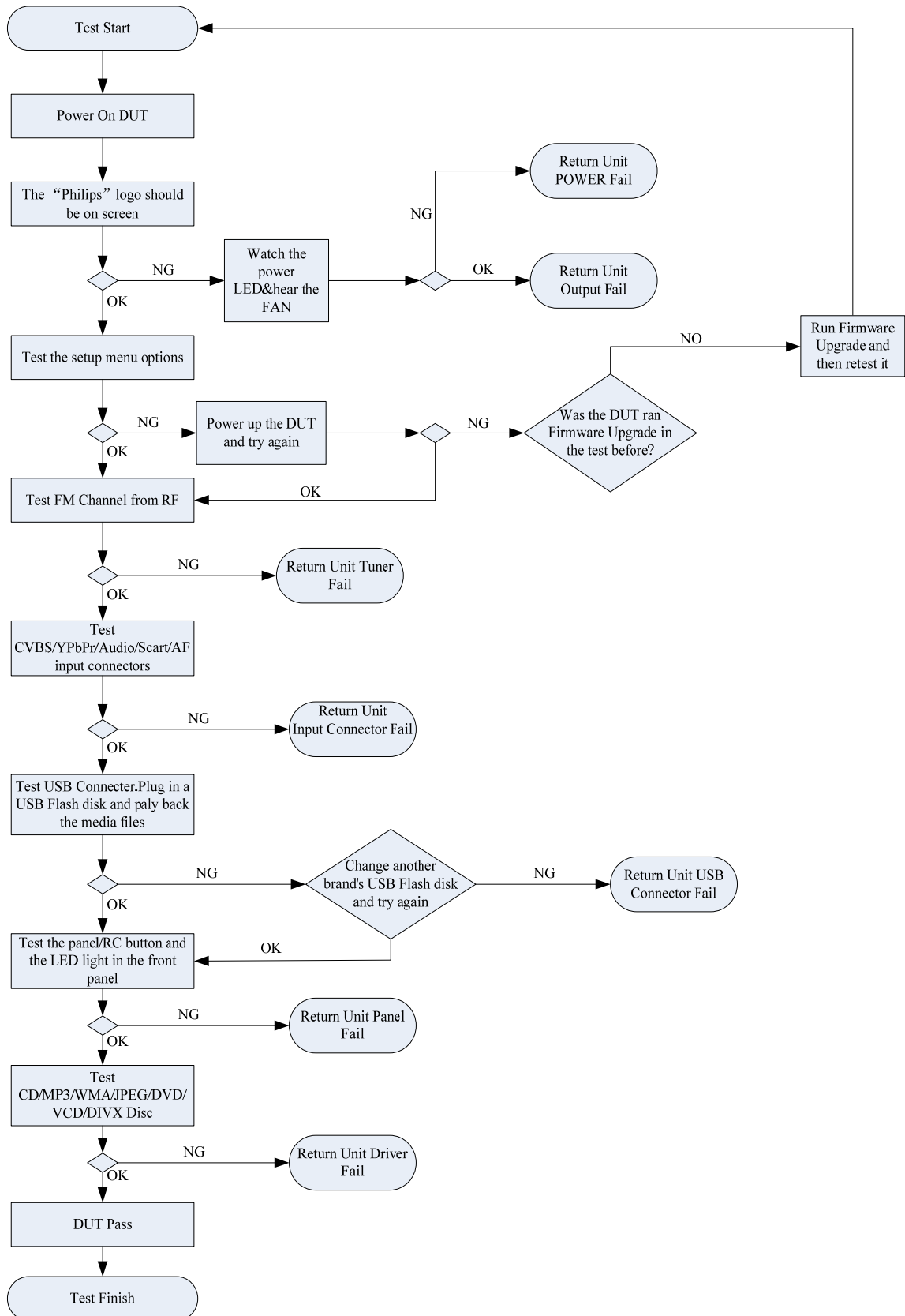


CAUTION!

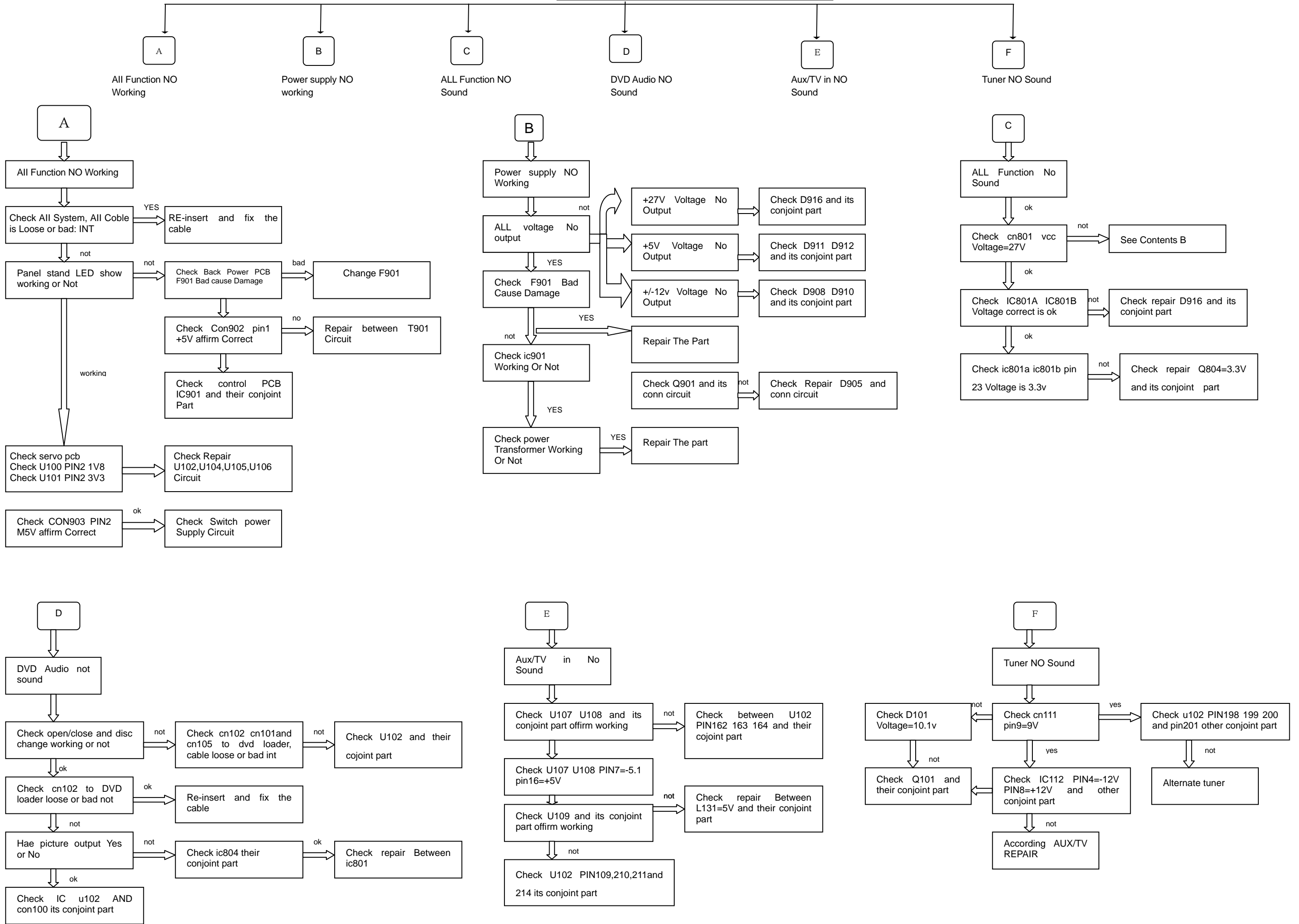
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

Flow chart on how to filter between working & defective sets

Return Unit Test Flow



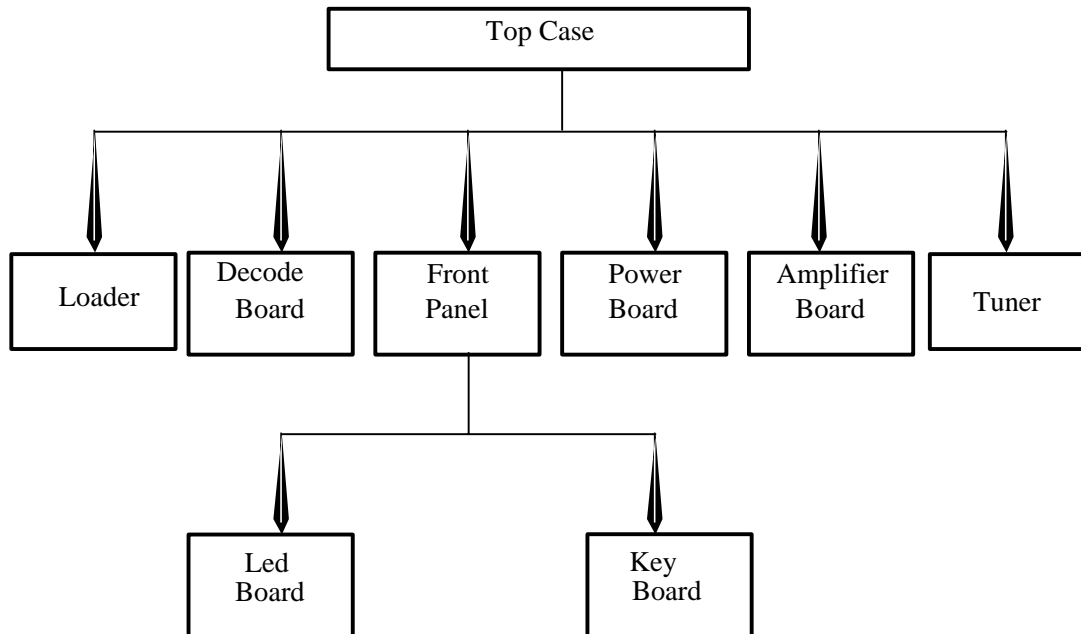
MAIN UNIT REPAIR CHART



DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Dismantling of top case

2-1. Ensure no disc in the tray and keep tray close, turn off the DVD player and then disconnect the mains supply. Loosen 6 screws "A" as shown in figure 2-1.

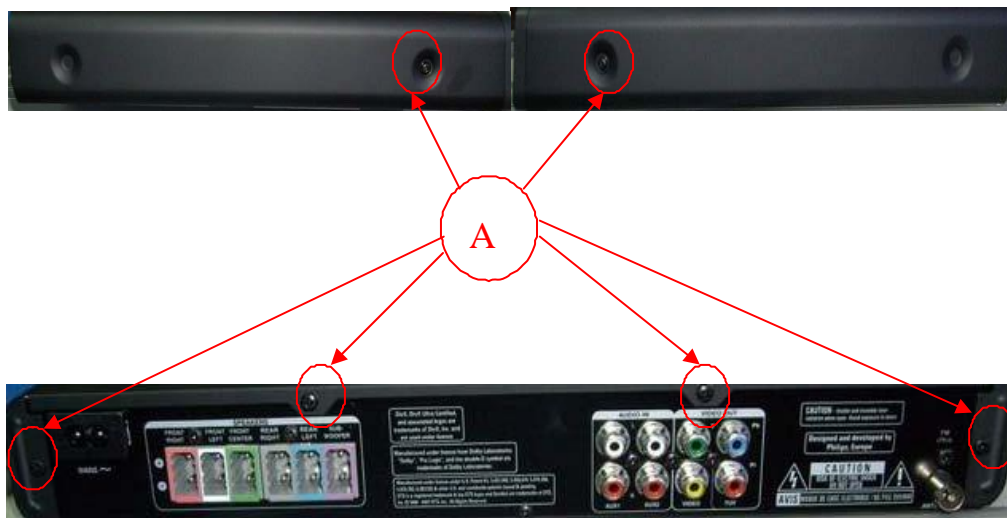


Figure 2-1.

2-2. Take off the top case as shown in figure 2-2.



Figure 2-2.

3. Dismantling of led+key board

3-1. Loosen 4 screws "B" as shown in figure 3-1.

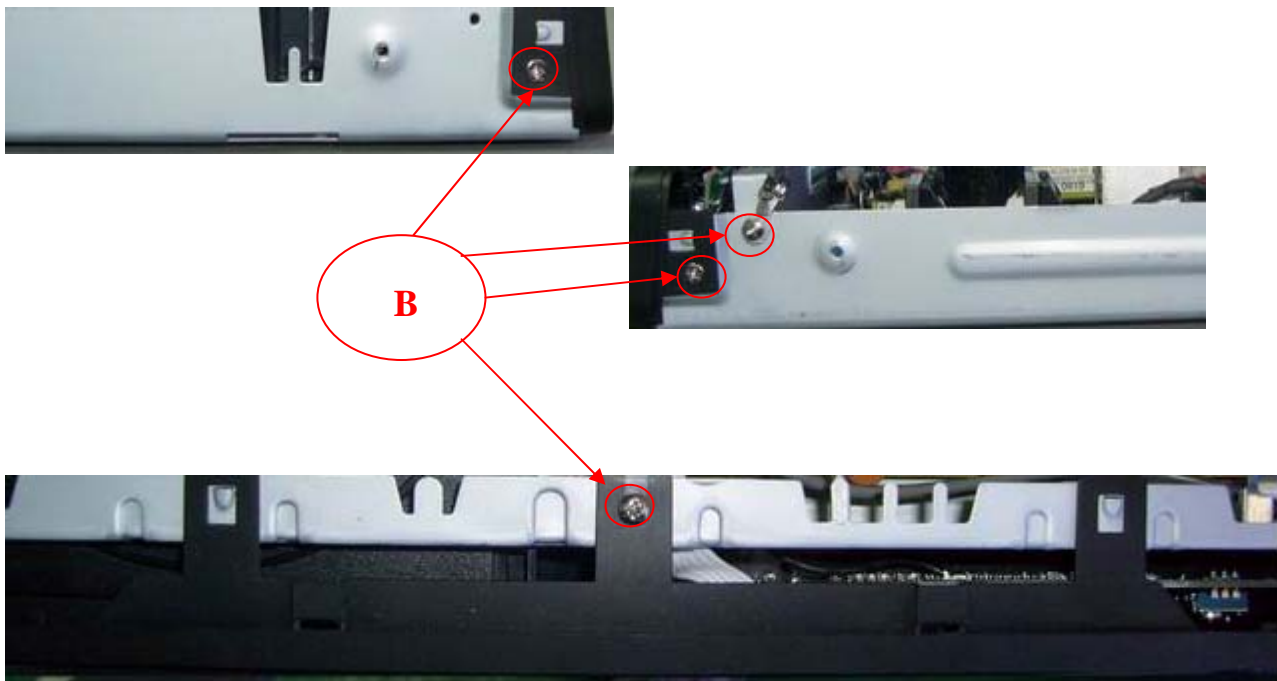


Figure 3-1

3-2. Release the lock “C” at the same time as shown figure 3-2.

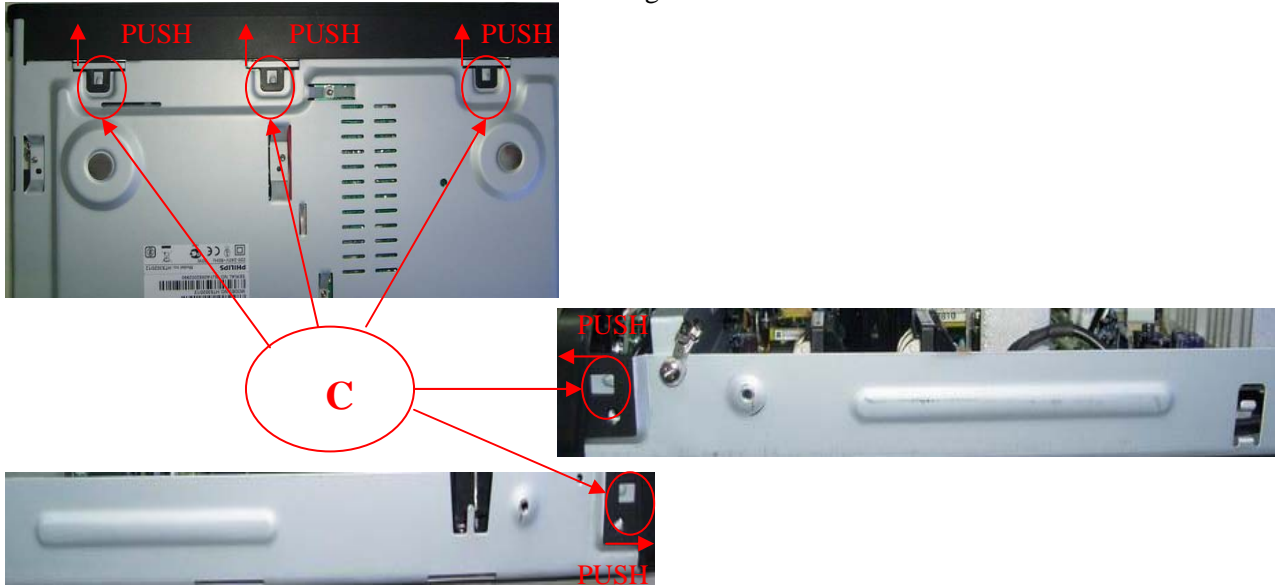


Figure 3-2

3-3. Loosen 5 screws “D” as shown in figure 3-3.

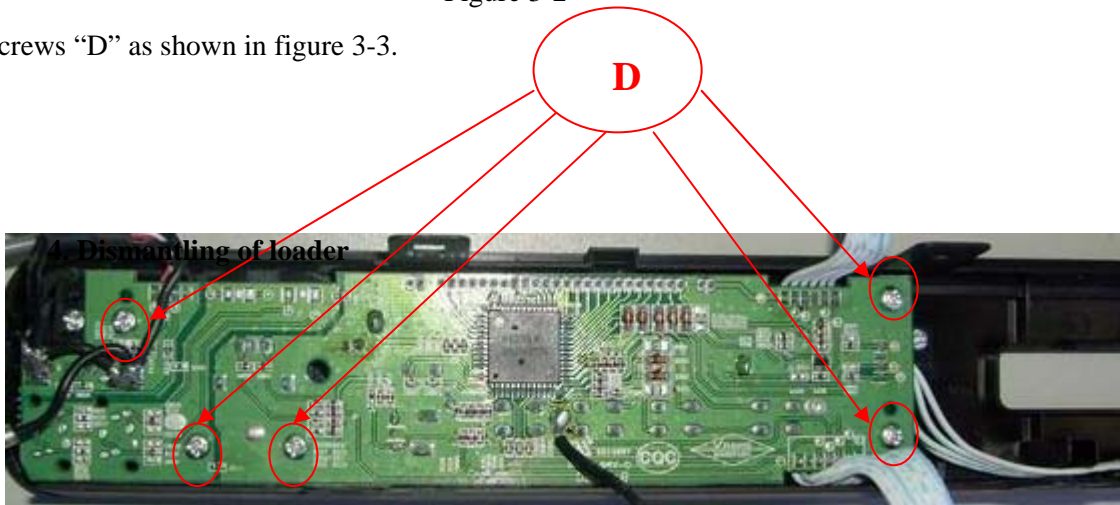


Figure 3-3

4-1. Loosen 4 screws “E” as shown in figure 4-1.

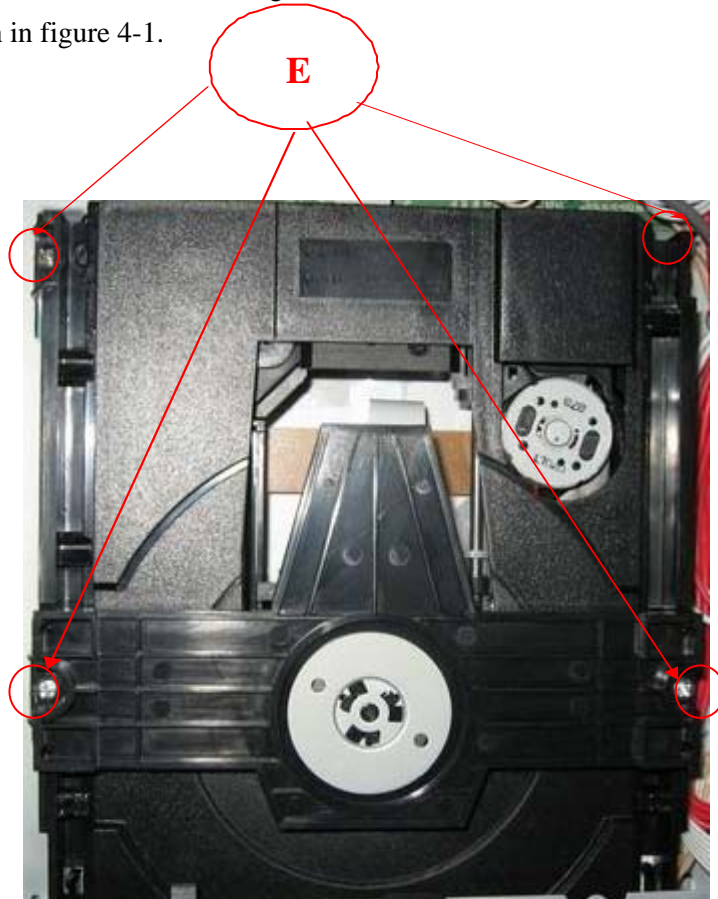


Figure 4-1

5. Dismantling of decode board

5-1. Loosen 5 screws as shown in figure 5-1.

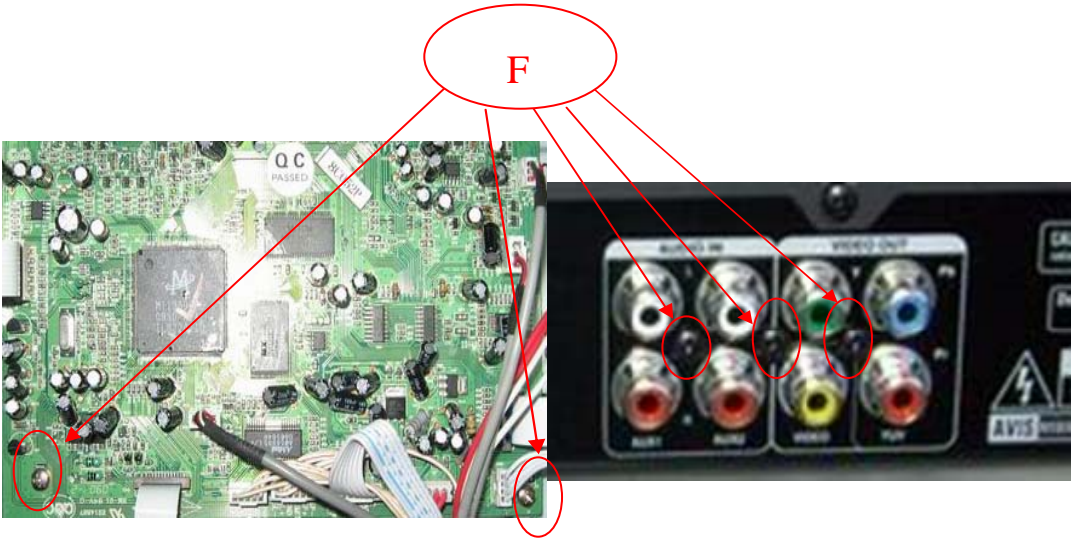


Figure 5-1

6. Dismantling of power board

6-1. Loosen 4 screws “G” as shown in figure 6-1.

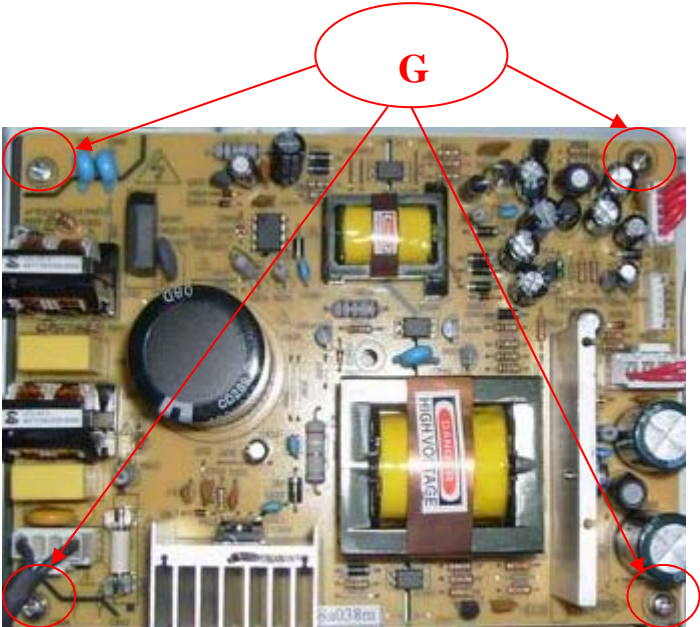


Figure 6-1

7. Dismantling of amplifier board

7-1. Loosen 4 screw "H" as shown in figure 7-1

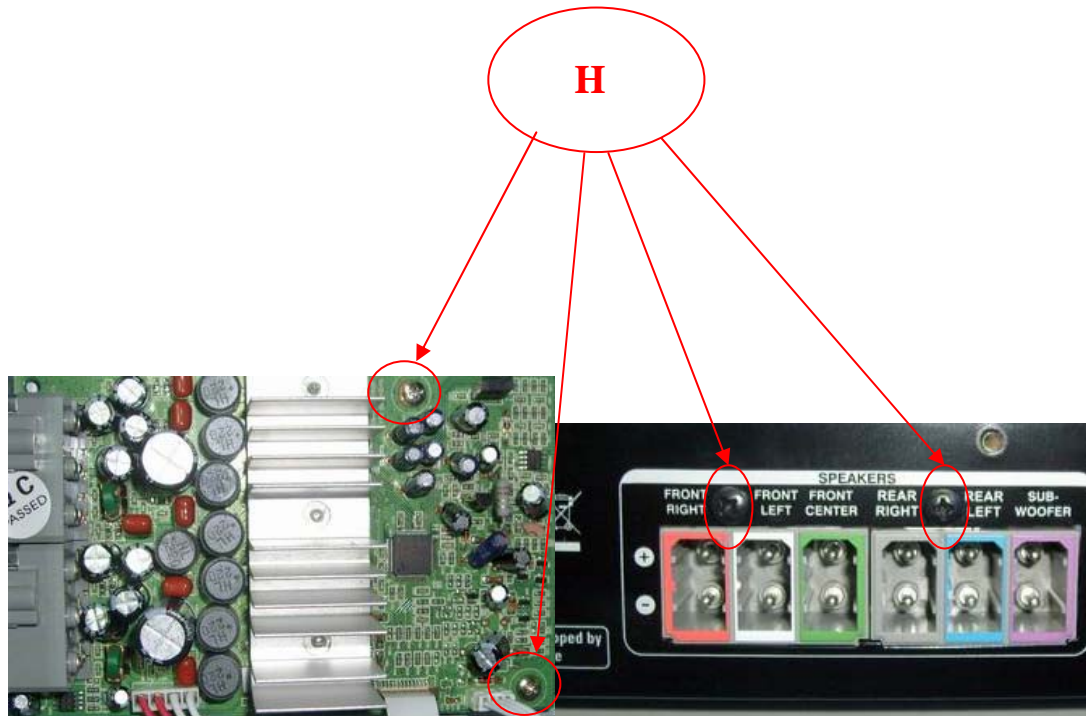


Figure 7-1.

8. Dismantling of tuner

8-1. Loosen 1 screws "I" as shown in figure 8-1.



Figure 8-1.

9. Dismantling of Led board

9-1. Loosen 2 screws "J" as shown in figure 9-1.

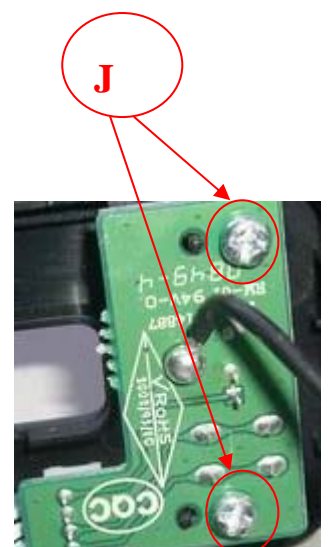
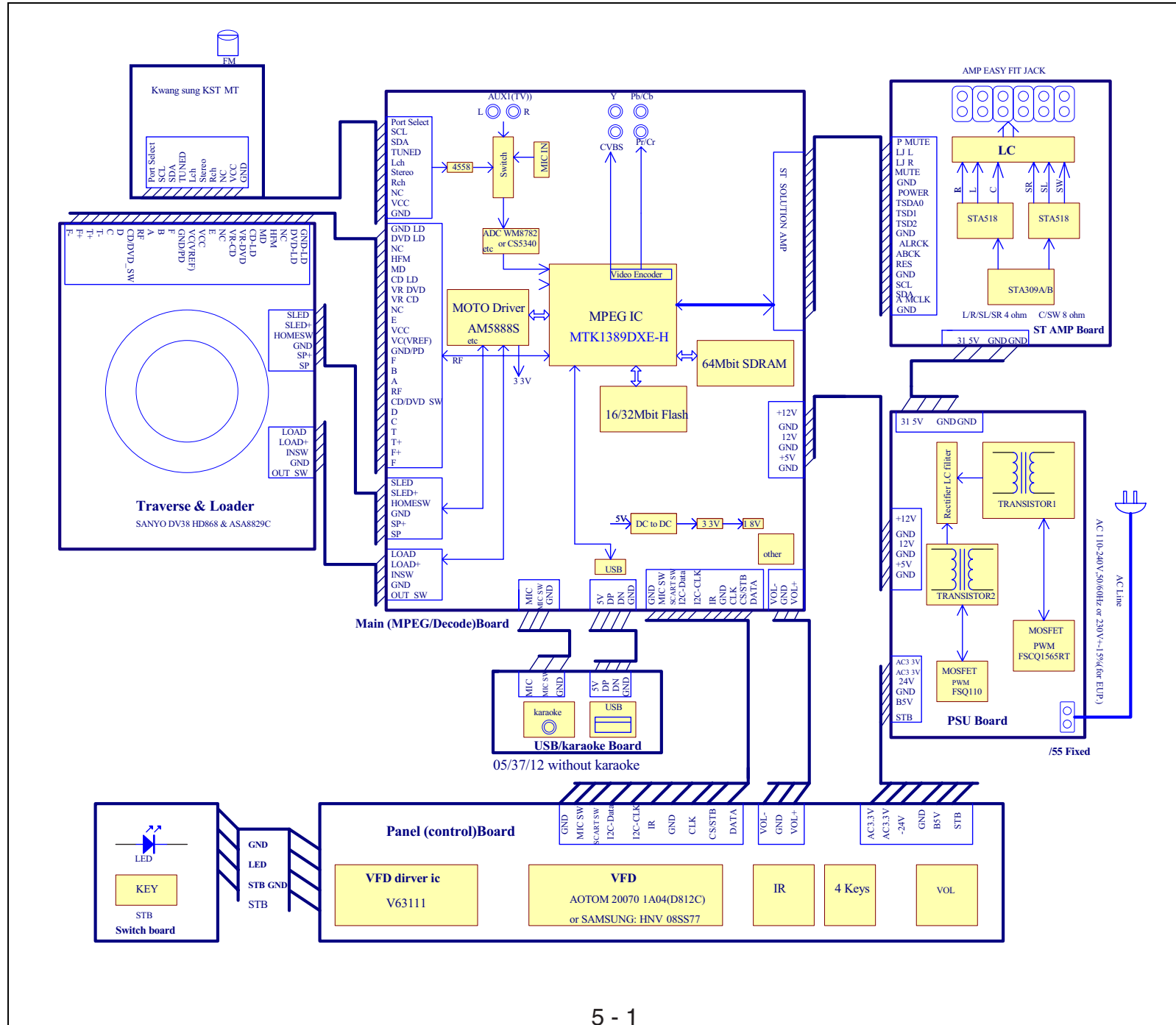


Figure 9-1.

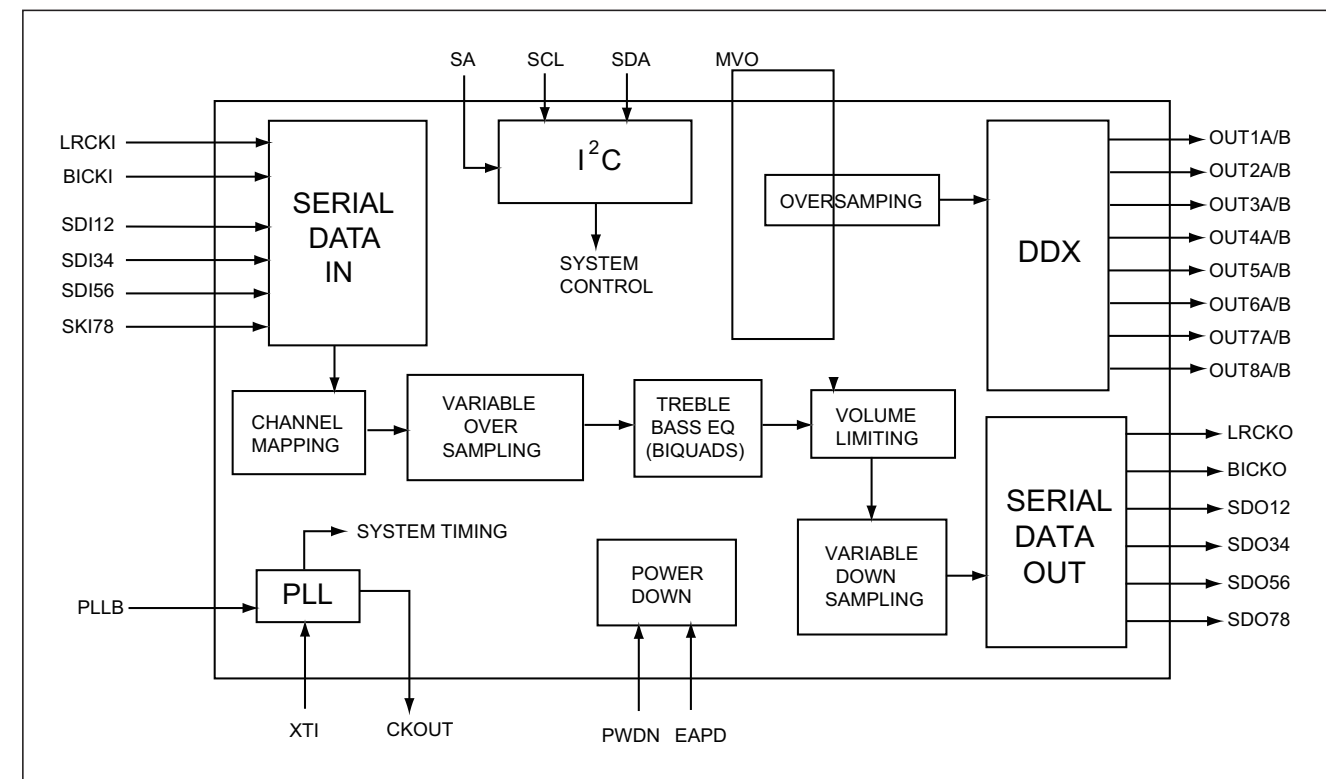


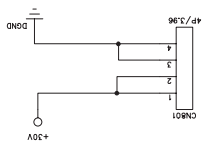
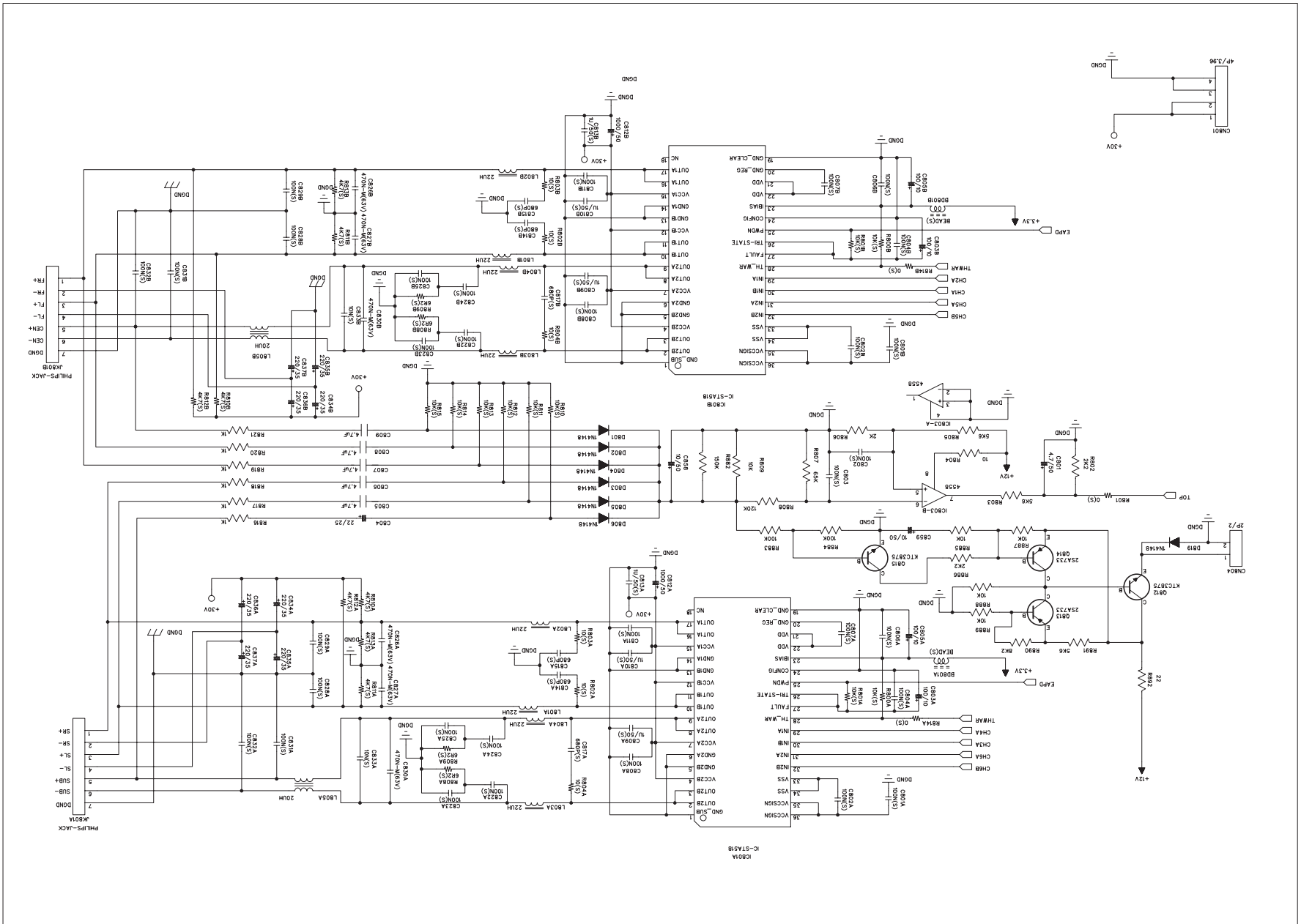
AMPLIFIER BOARD

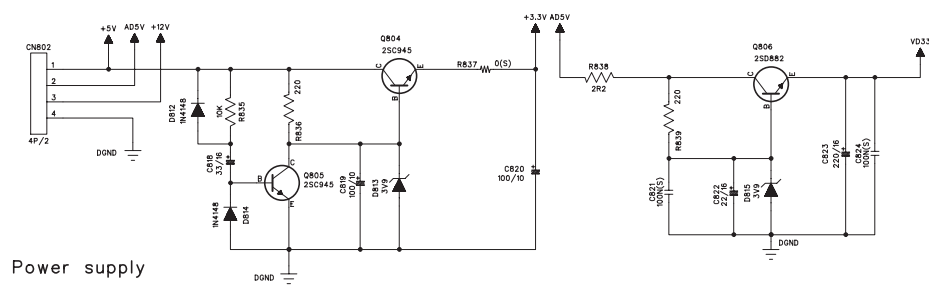
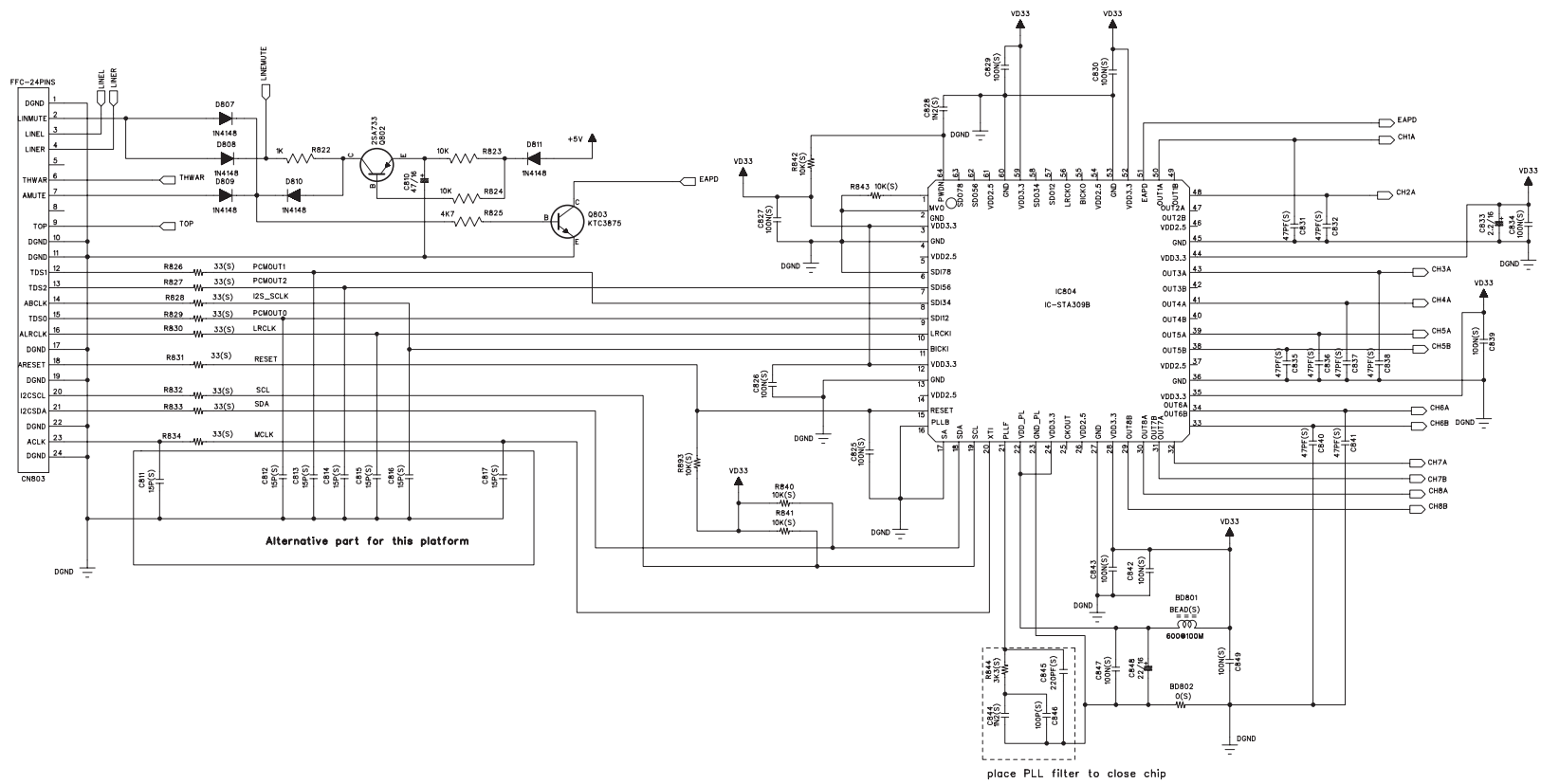
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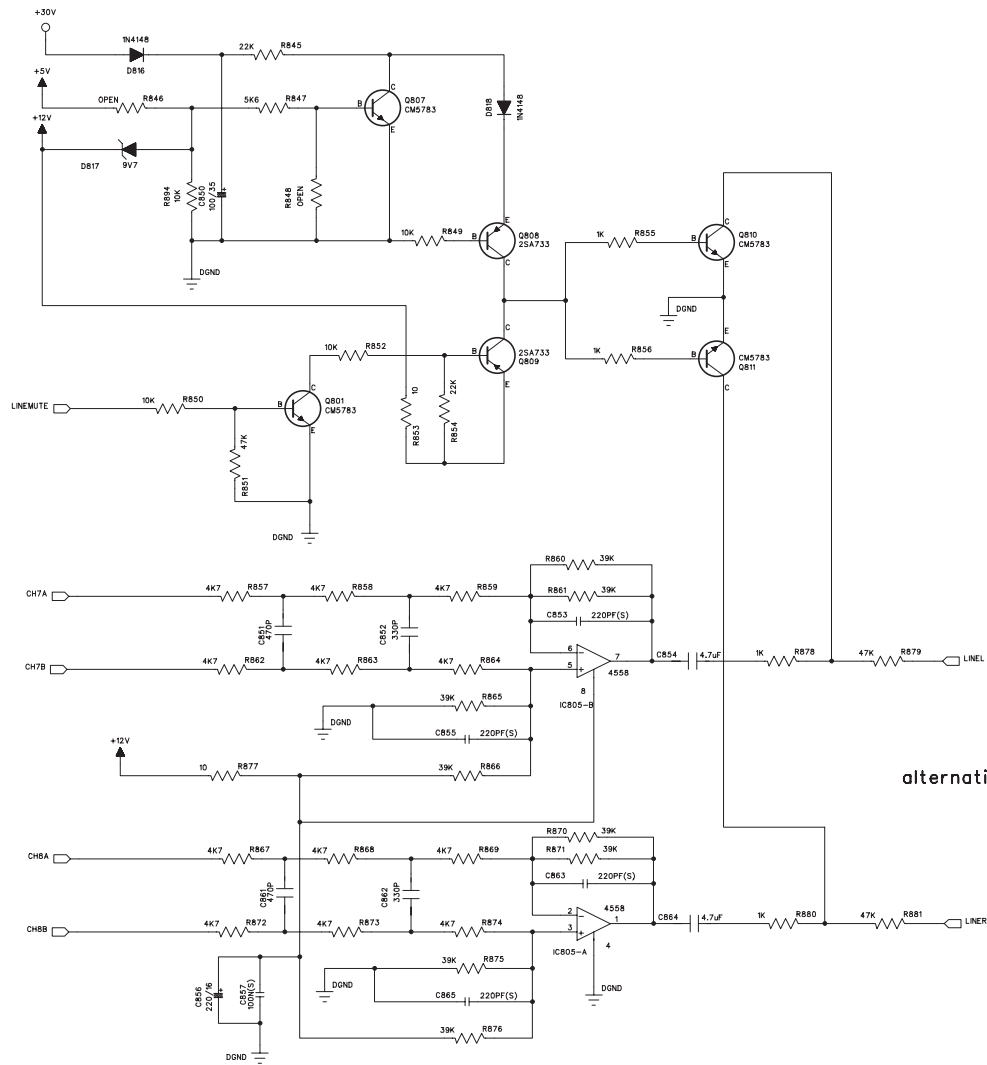
INTERNAL IC DIAGRAM - STA309A



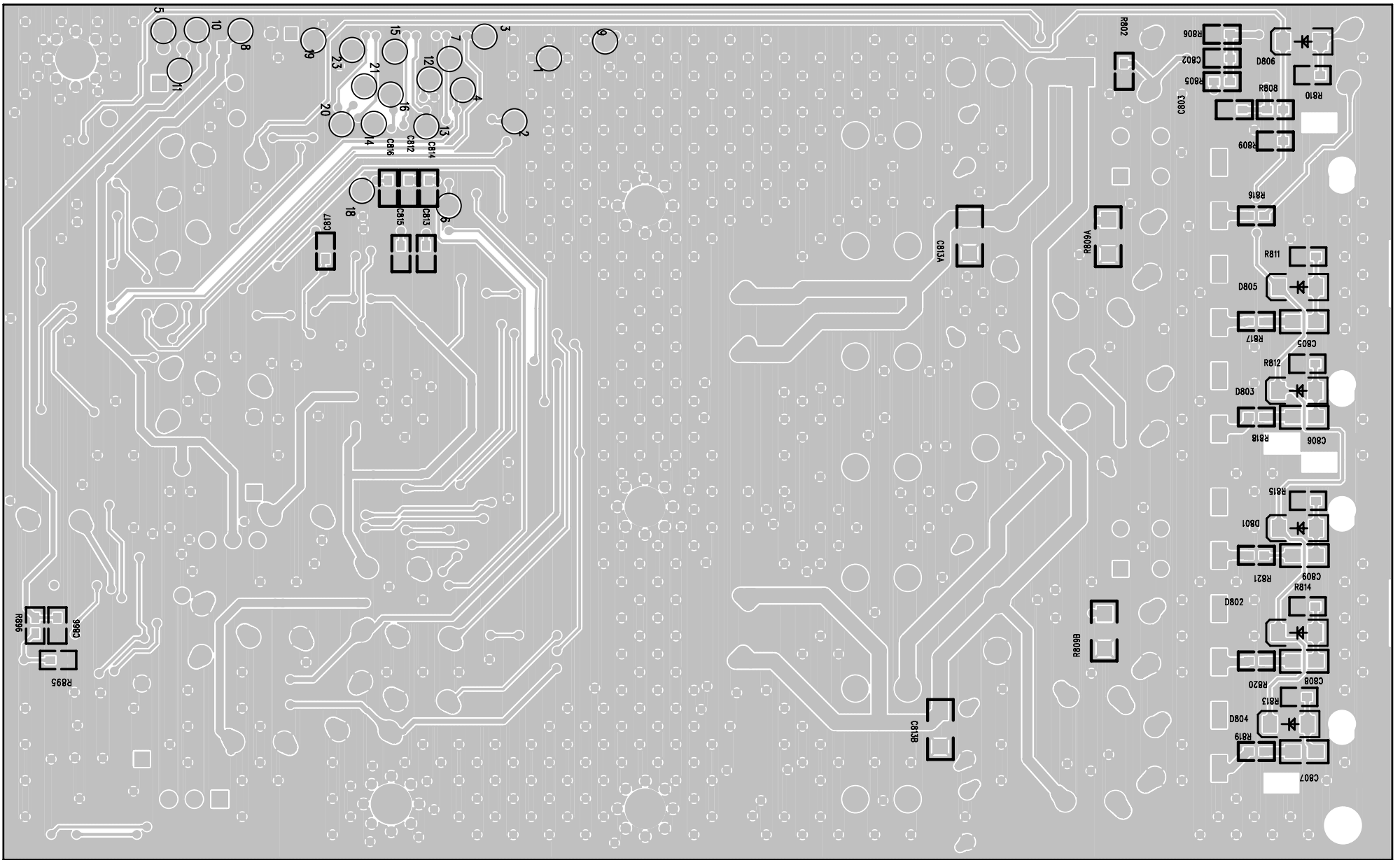




Power supply



alternative part for this platform

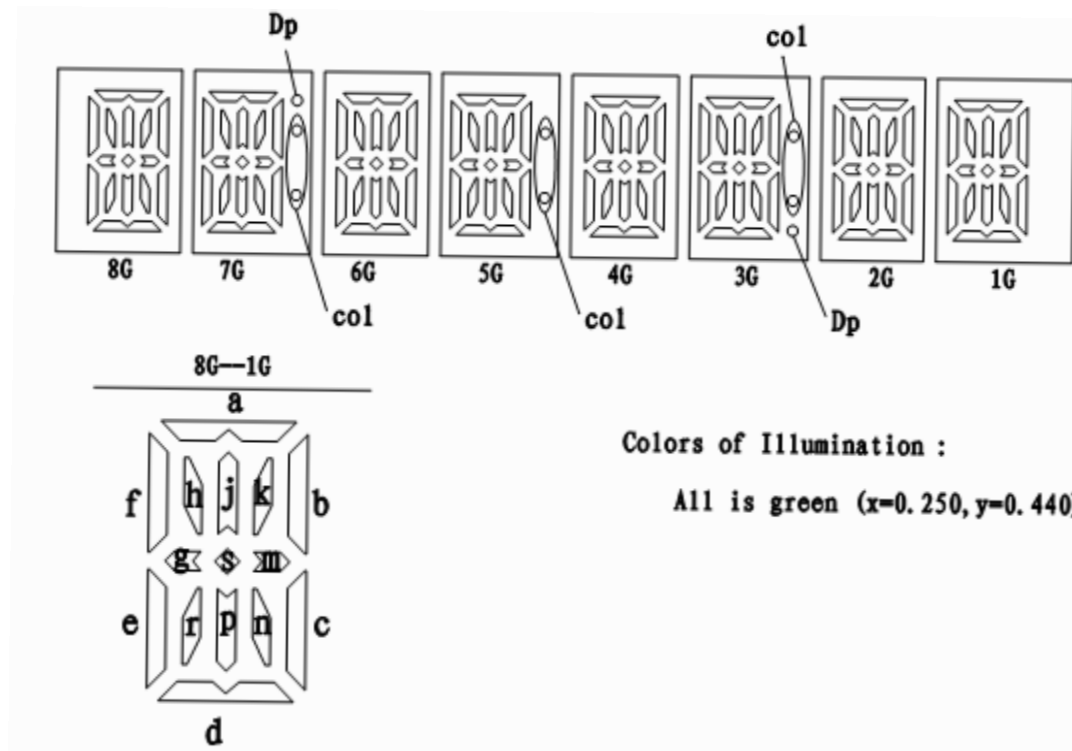


LED & KEY BOARD

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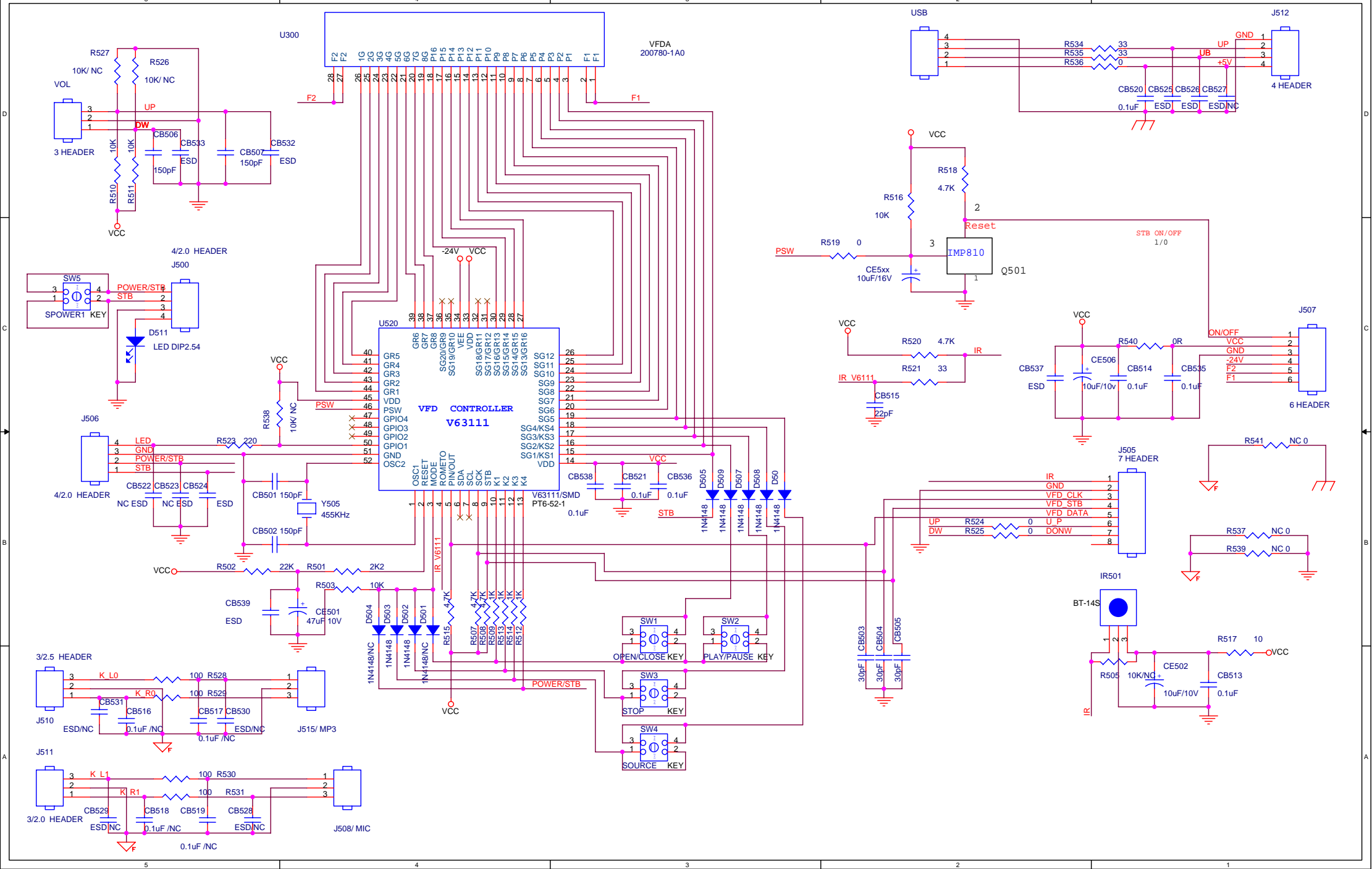
FTD Display Pin Assignment.....7-1
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FTD DISPLAY PIN ASSIGNMENT

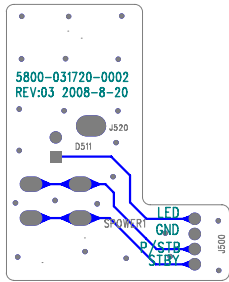


Colors of Illumination :
 All is green (x=0.250,y=0.440).

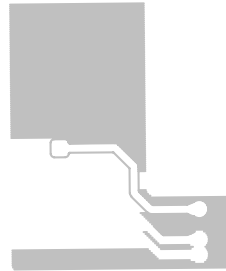
	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a
P2	j, p	j, p	j, p	j, p	j, p	j, p	j, p	j, p
P3	h	h	h	h	h	h	h	h
P4	k	k	k	k	k	k	k	k
P5	b	b	b	b	b	b	b	b
P6	f	f	f	f	f	f	f	f
P7	m	m	m	m	m	m	m	m
P8	g	g	g	g	g	g	g	g
P9	c	c	c	c	c	c	c	c
P10	e	e	e	e	e	e	e	e
P11	r	r	r	r	r	r	r	r
P12	n	n	n	n	n	n	n	n
P13	d	d	d	d	d	d	d	d
P14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



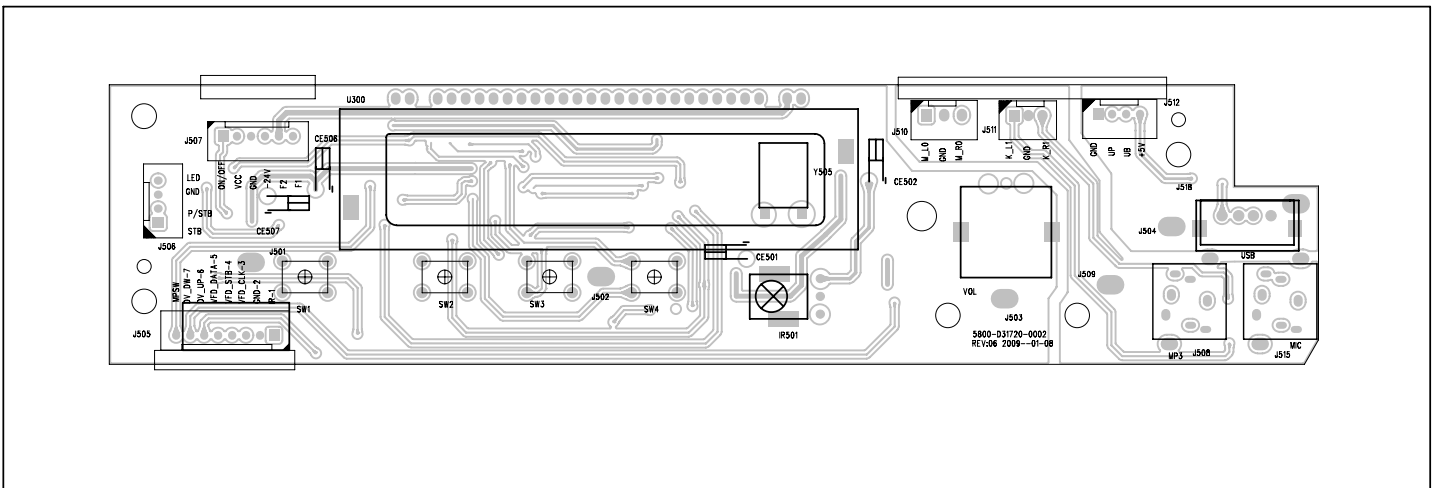
LED BOARD TOP VIEW



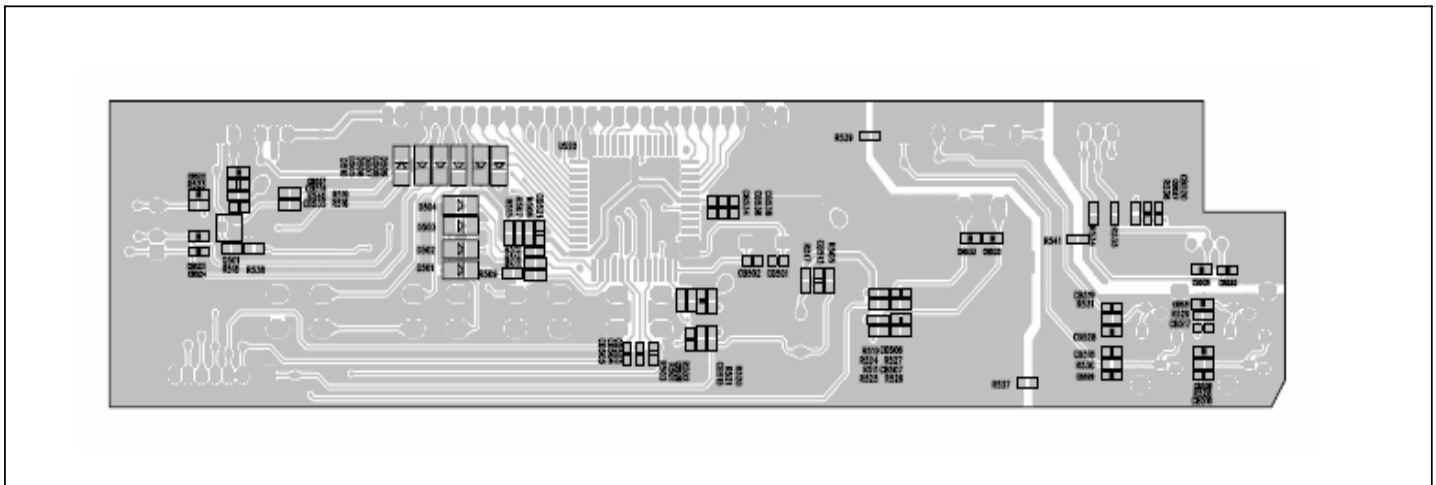
LED BOARD BOTTOM VIEW



KEY BOARD TOP VIEW



KEY BOARD BOTTOM VIEW

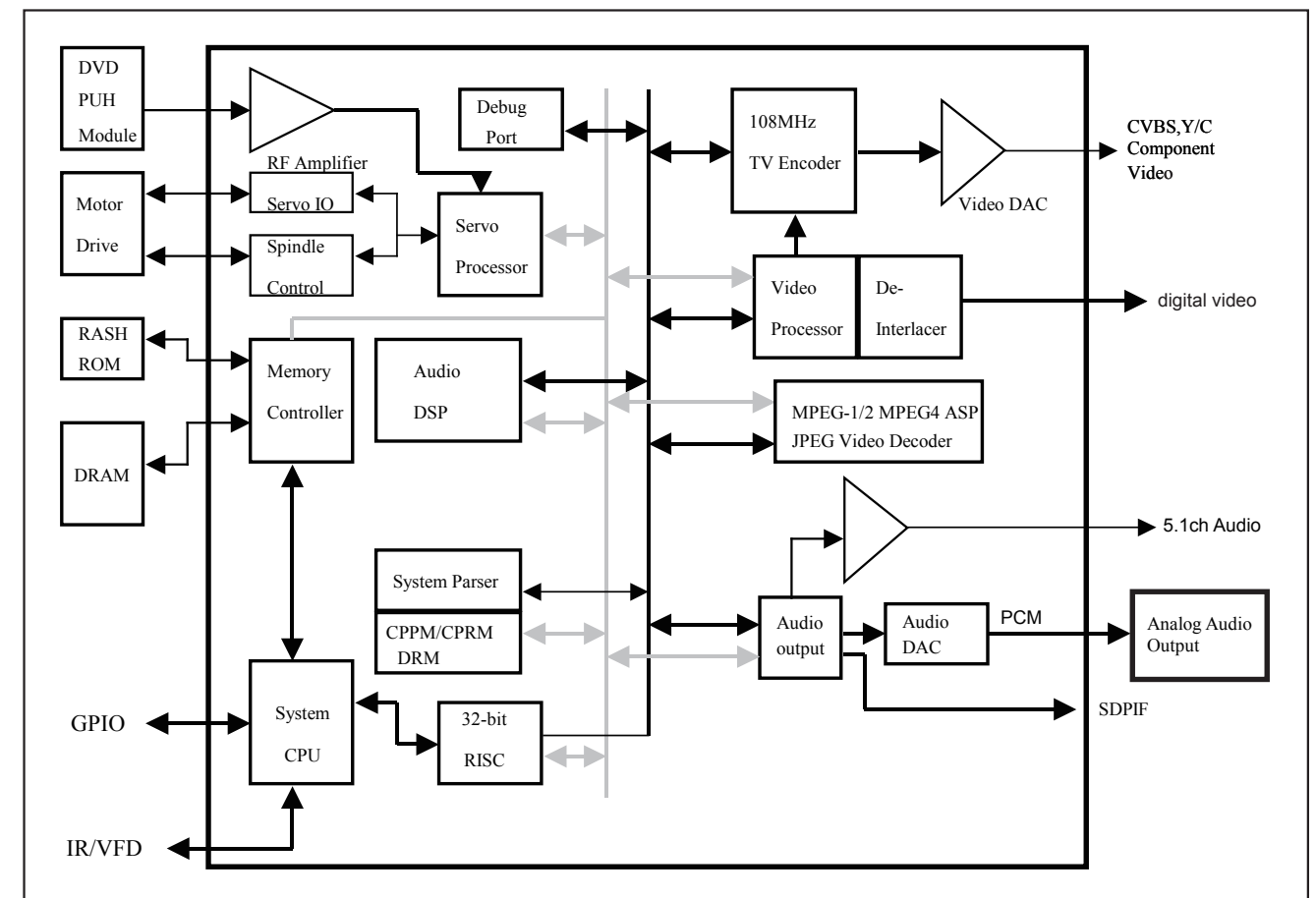


DECODE BOARD

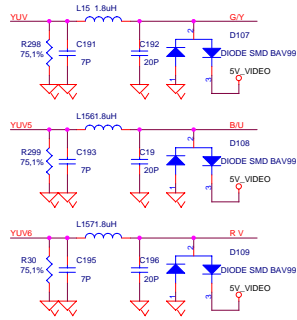
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INTERNAL IC DIAGRAM - MT1389HD

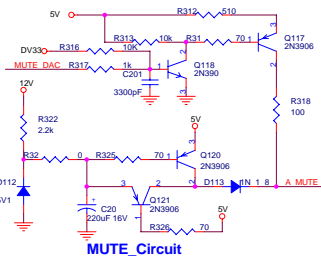
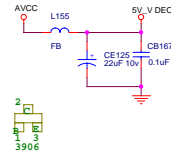
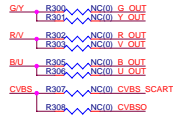
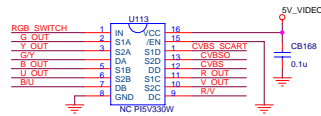


- [2] YUV[3,6] >> YUV[3,6]
- [2] MUTE_DAC >> MUTE_DAC
- [2] FS0 >> FS0
- [2] FS1 >> FS1
- [2] RGB_SWITCH >> RGB_SWITCH
- [5] SCART_L >> SCART_L
- [5] SCART_R >> SCART_R
- [5] A_MUTE >> A_MUTE
- [1,2,5] AVCC << AVCC
- [1,5,6] 12V << 12V
- [1,2,3,5,6] DV33 << DV33
- [1,2] 5V << 5V
- [5] SCART_L_IN << SCART_L_IN
- [5] SCART_R_IN << SCART_R_IN

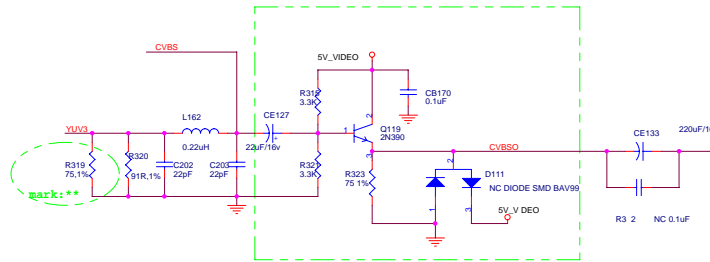


Low Impedance Mode

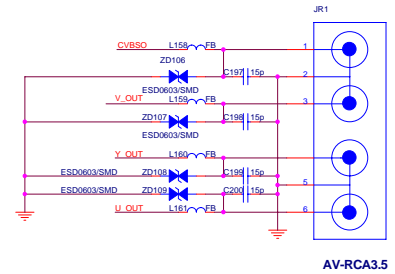
RGB_SWITCH: 0--->RGB,
1--->CVBS/YUV



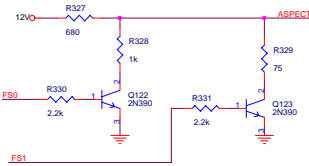
MUTE_Circuit



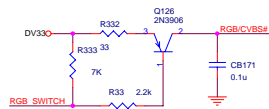
Only when both signal CVBSO & SCART CVBS need output, then the parts mark "**" will need to be added.



AV-RCA35

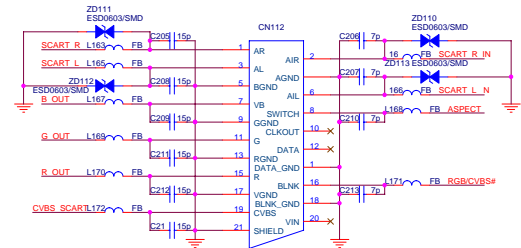


ASPECT



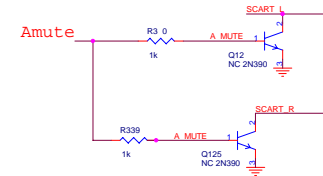
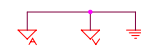
SCART CONTROL

FS0	FS1	W1383
F13155	F13157	W1383
0	0	4 3 / 008
0	1	
1	0	16 9
1	1	S1B / AUX IN / M03 IN / SCART IN / PK IR



SCART CONNECTOR

RGB_SWITCH#: 1-3V RGB, 0-0.4V CVBS

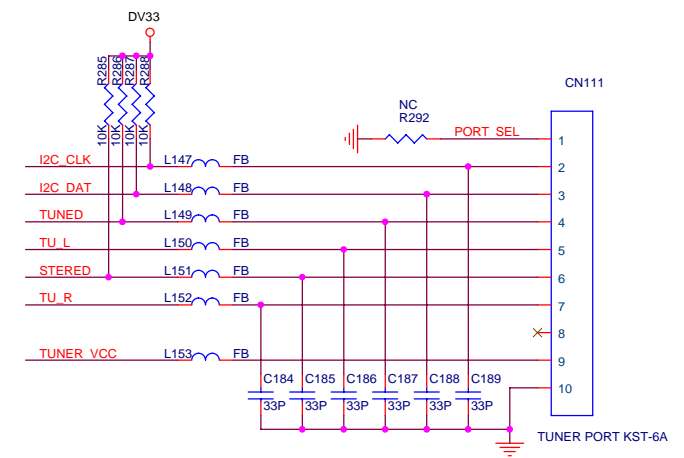
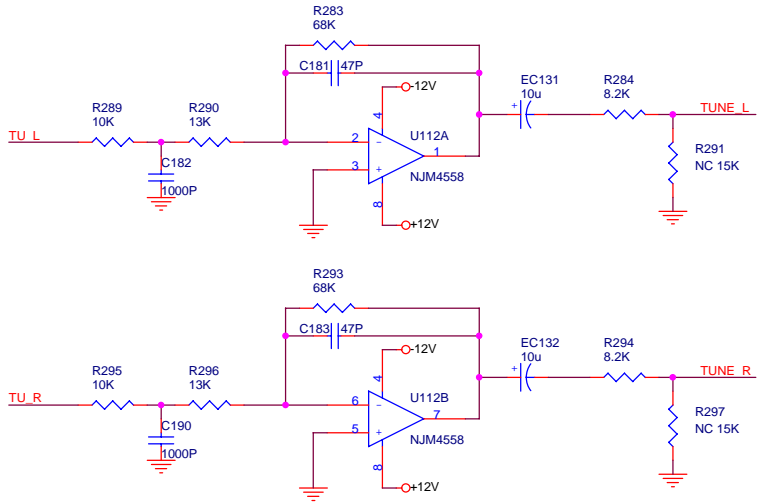
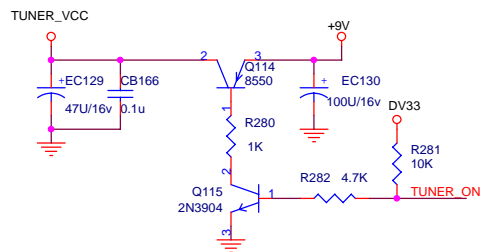


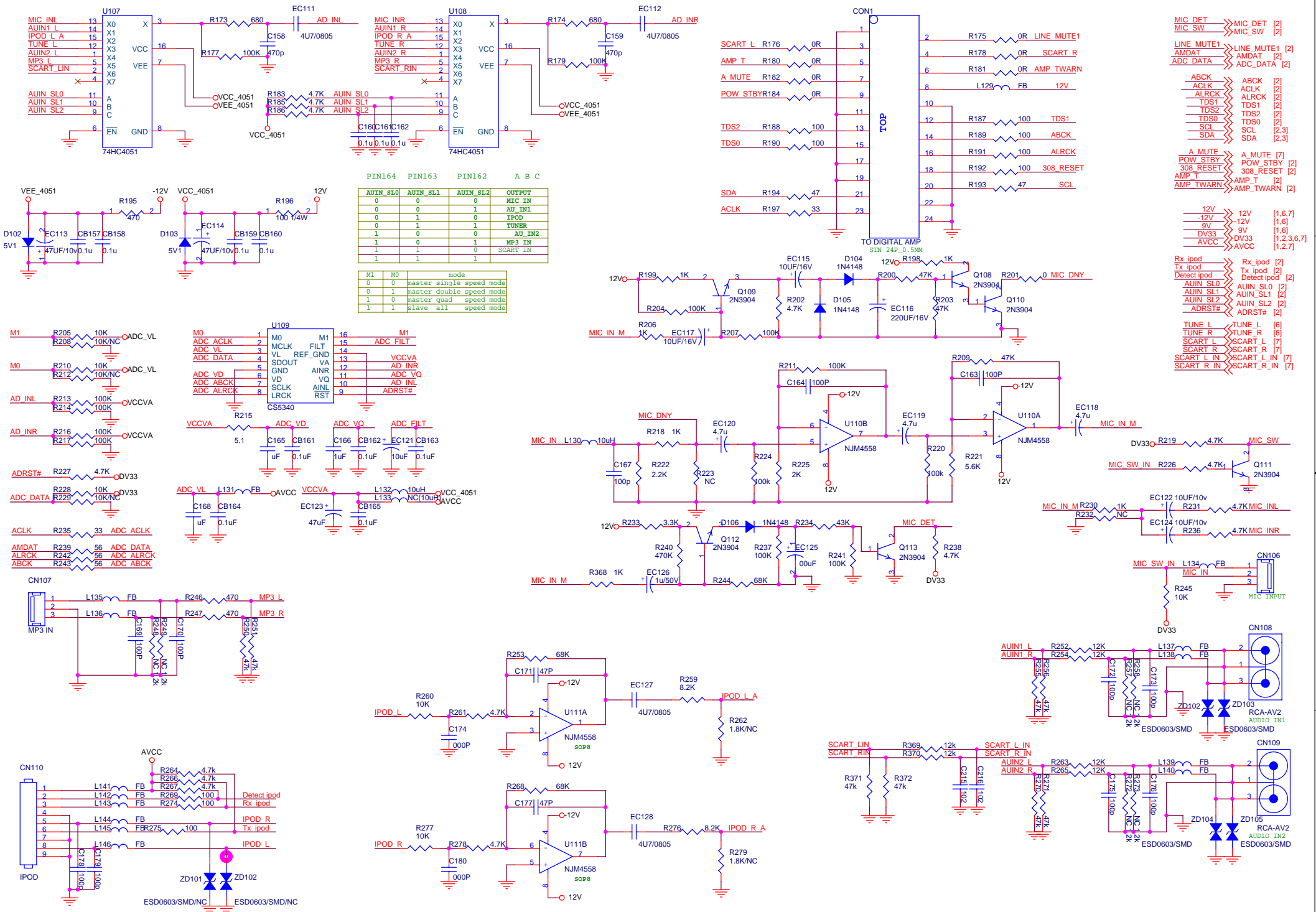
Amute

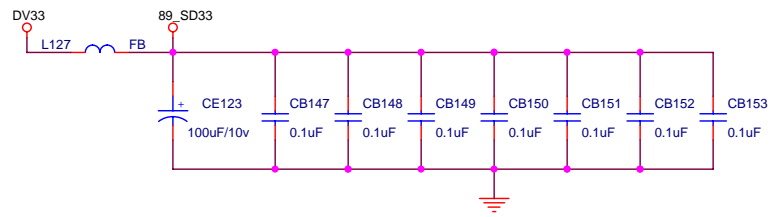
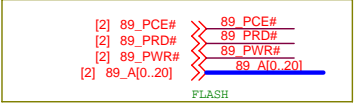
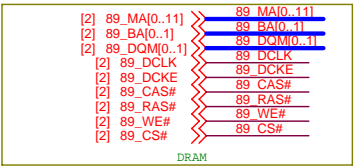
[2] TUNER_ON >> TUNER_ON
 [2] TUNED >> TUNED
 [2] STERED >> STERED
 [2] I2C_CLK >> I2C_CLK
 [2] I2C_DAT >> I2C_DAT

TUNE_L >> TUNE_L [5]
 TUNE_R >> TUNE_R [5]

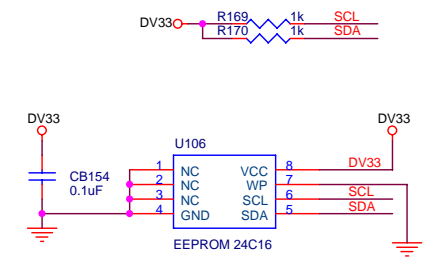
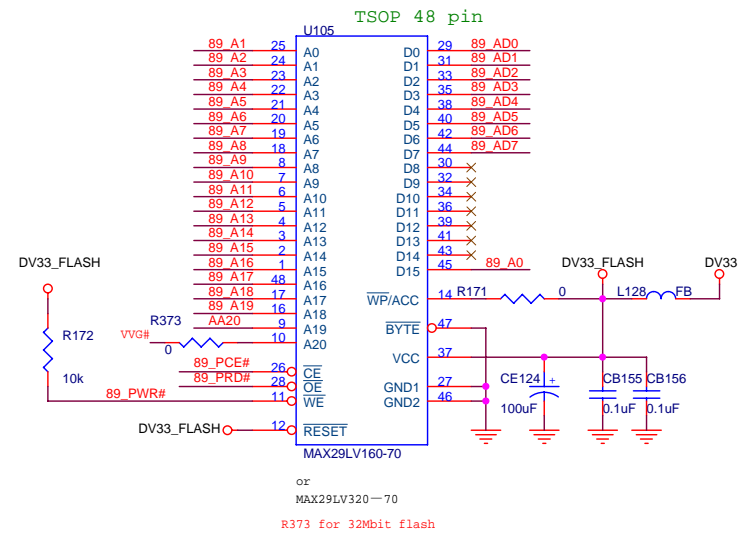
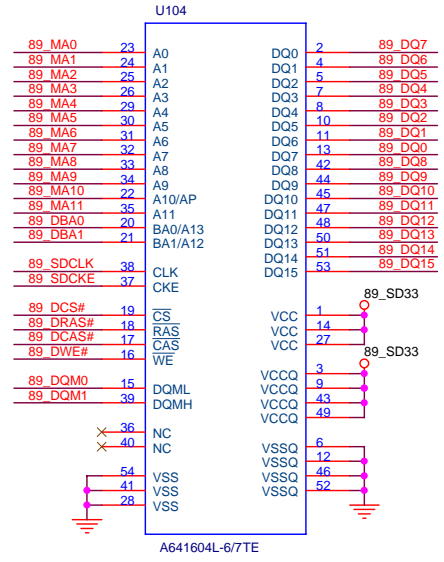
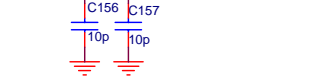
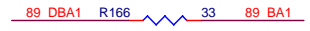
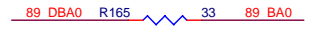
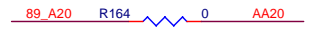
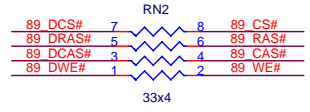
+9V >> +9V [1]
 DV33 >> DV33 [1,2,3,5,7]
 +12V >> +12V [1,5,7]
 -12V >> -12V [1,5]

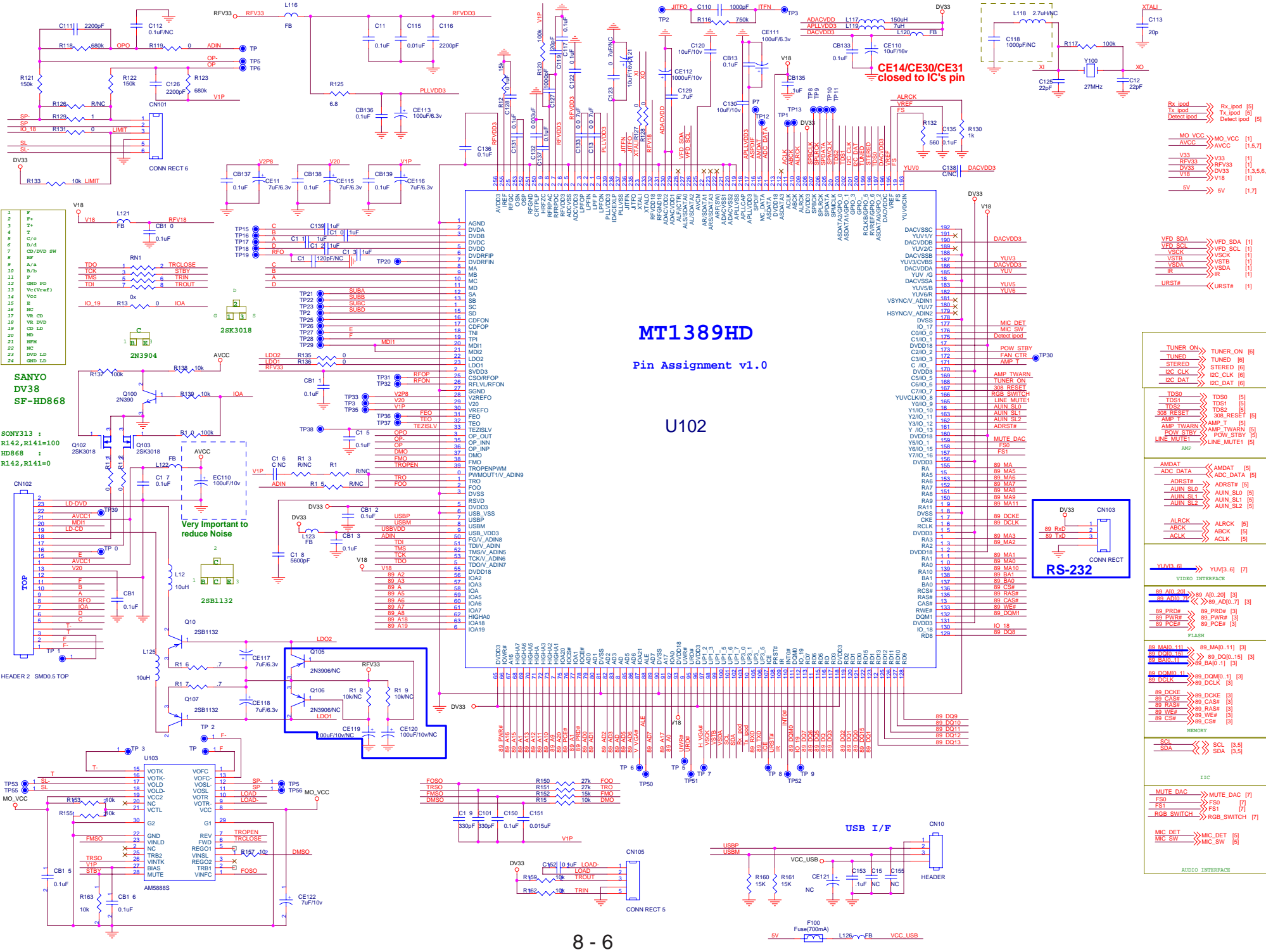






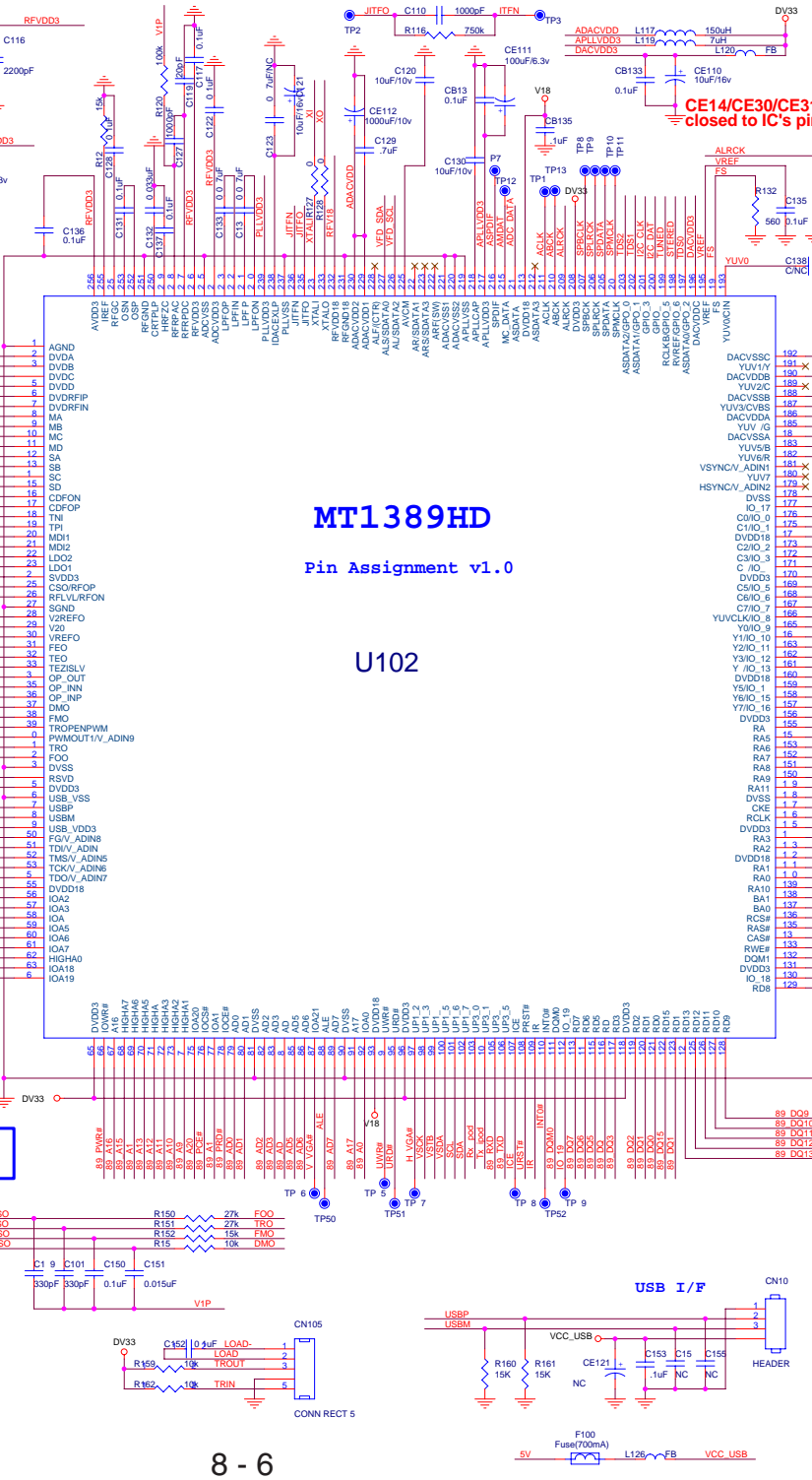
DV33 >>> DV33 [1,2,5,6,7]



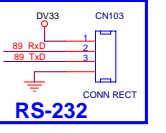


MT1389HD Pin Assignment v1.0

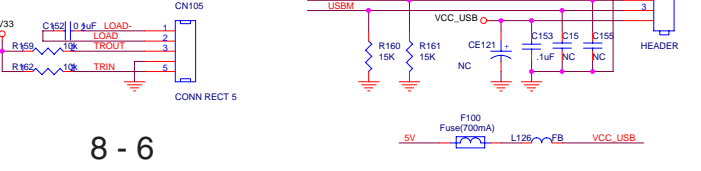
U102



CE14/CE30/CE31 closed to IC's pin

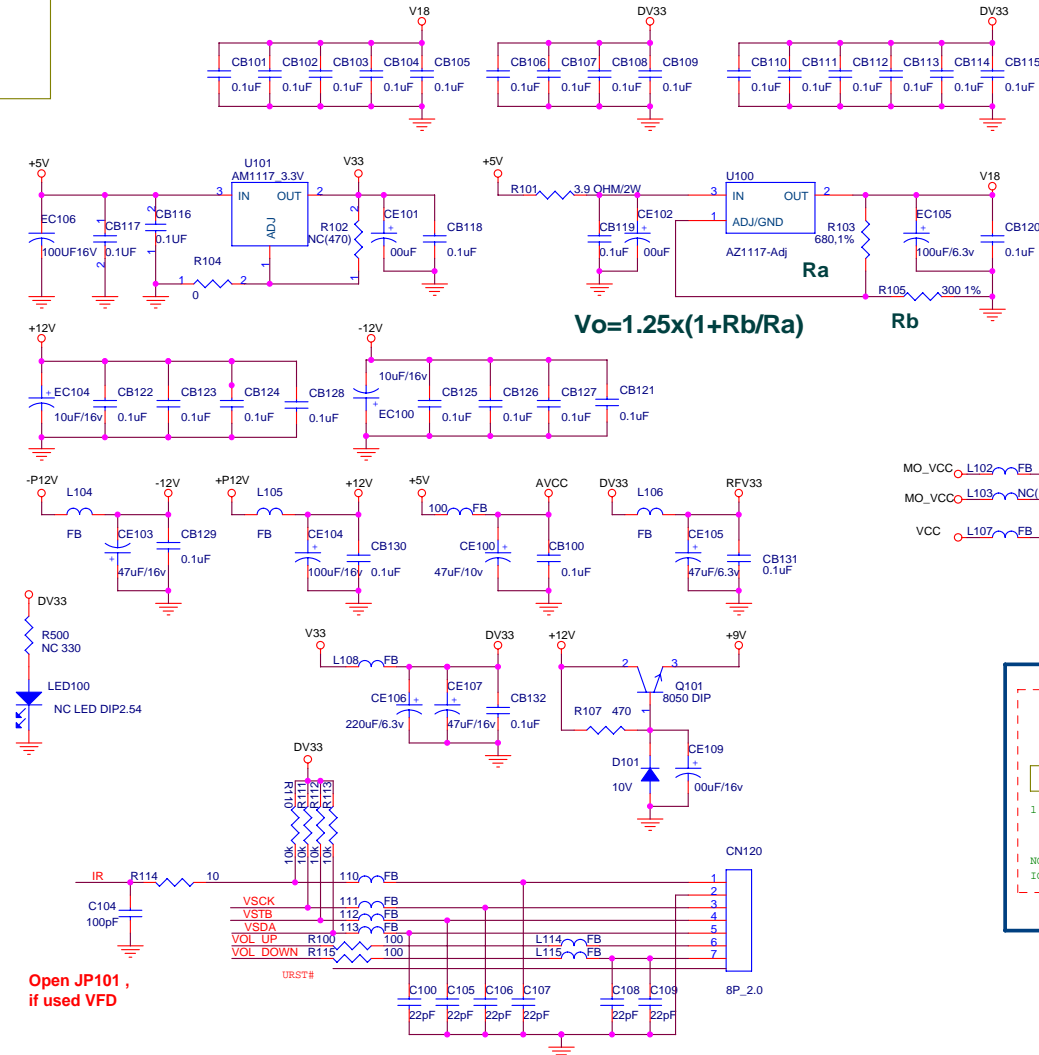


USB I/F



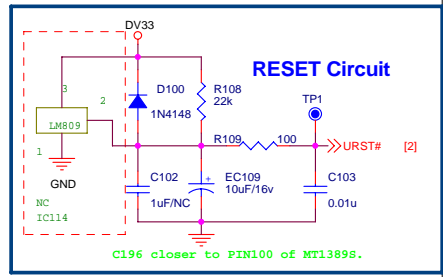
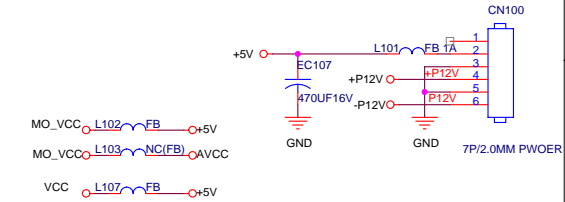
- Rx_pos [5] >> Rx_pos [5]
- Detect_pos [5] >> Detect_pos [5]
- MO_VCC [1] >> MO_VCC [1]
- AVCC [1,5,7] >> AVCC [1,5,7]
- V33 [1] >> V33 [1]
- RVF33 [1] >> RVF33 [1]
- DV33 [1,3,5,6,7] >> DV33 [1,3,5,6,7]
- V18 [1] >> V18 [1]
- V16 [1,7] >> V16 [1,7]
- VFD_SCL [1] >> VFD_SCL [1]
- VFD_SDA [1] >> VFD_SDA [1]
- V50K [1] >> V50K [1]
- V50A [1] >> V50A [1]
- V50B [1] >> V50B [1]
- IR [1] >> IR [1]
- URST# [1] >> URST# [1]
- TUNER_ON [6] >> TUNER_ON [6]
- TUNED [6] >> TUNED [6]
- STEREO [6] >> STEREO [6]
- I2C_CLK [6] >> I2C_CLK [6]
- I2C_DAT [6] >> I2C_DAT [6]
- TD50 [6] >> TD50 [6]
- TD51 [6] >> TD51 [6]
- TD52 [6] >> TD52 [6]
- 308_RESET [6] >> 308_RESET [6]
- AMP_T [6] >> AMP_T [6]
- AMP_TWRN [6] >> AMP_TWRN [6]
- AMP_TWRN [6] >> AMP_TWRN [6]
- MUTE_DAC [6] >> MUTE_DAC [6]
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- FS24

NAME	TYPE	DEVICE
VCC/+5V	Digital 5V	SUPPLY
DV33	Digital 3.3V	MT1389HD
RFV33	Servo 3.3V	MT1389HD
AV33	Laser Diode 3.3V	
V18	Digital 1.8V	MT1389HD
SD33	Digital 3.3V	SDRAM
+12V	Audio +12V	OP AMP.
-12V	Audio -12V	OP AMP.
AVDD5	Audio 5V	Audio DAC
DVDD3	Audio 3.3V	Audio DAC
MCU_3V3	Nxp Mcu 3.3V	MCU

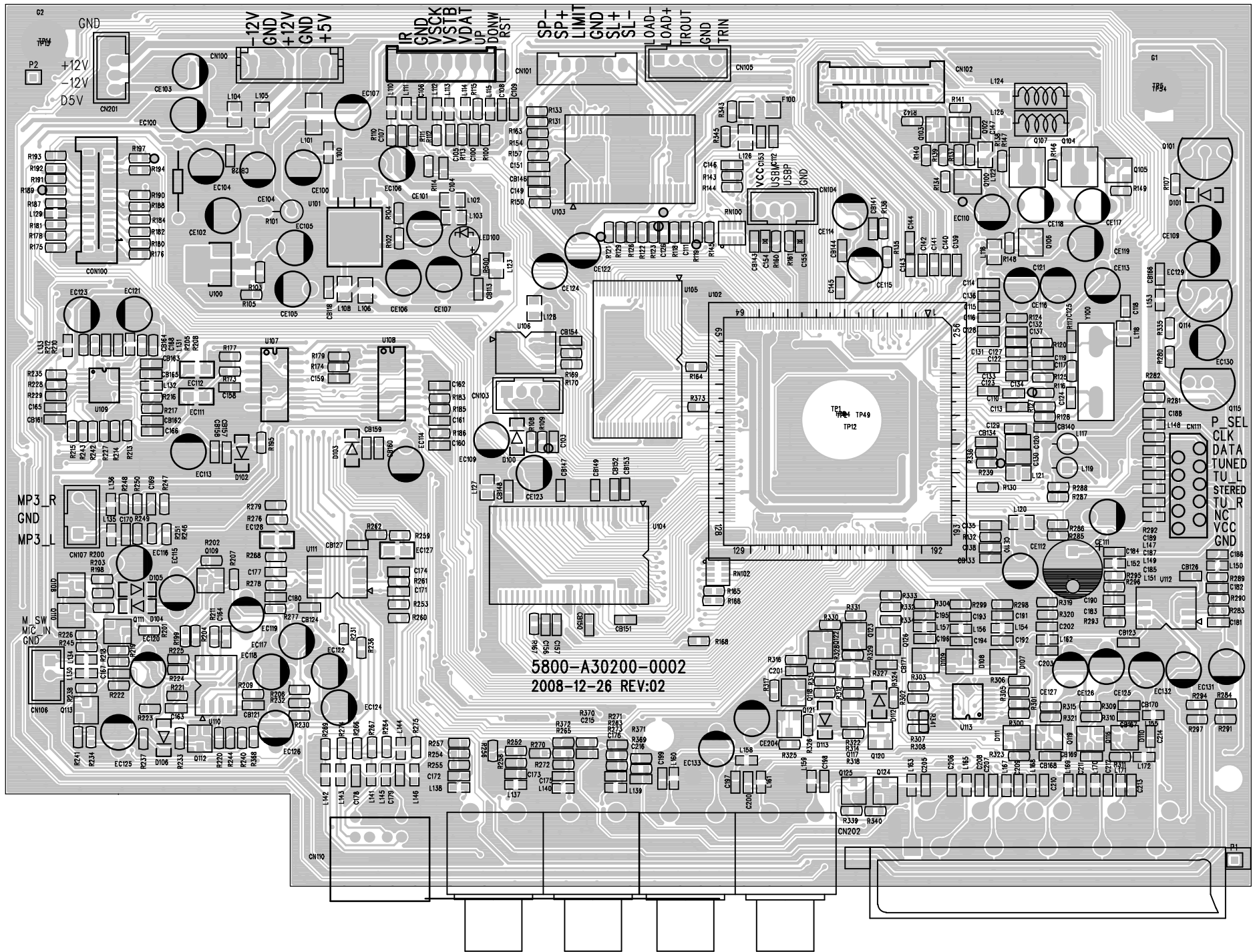


- URST# >>> URST# [2]
- V33 >>> V33
- RFV33 >>> RFV33 [2]
- DV33 >>> DV33 [2,3,5,6,7]
- V18 >>> V18 [2]
- AVCC >>> AVCC [2,5,7]
- +12V >>> +12V [5,6,7]
- 12V >>> -12V [5,6]
- +9V >>> +9V [6]
- +5V >>> +5V [2,7]
- MO_VCC >>> MO_VCC [2]
- VSCK >>> VSCK [2]
- VSTB >>> VSTB [2]
- VSDA >>> VSDA [2]
- IR >>> IR [2]
- VFD_SDA >>> VFD_SDA [2]
- VFD_SCL >>> VFD_SCL [2]

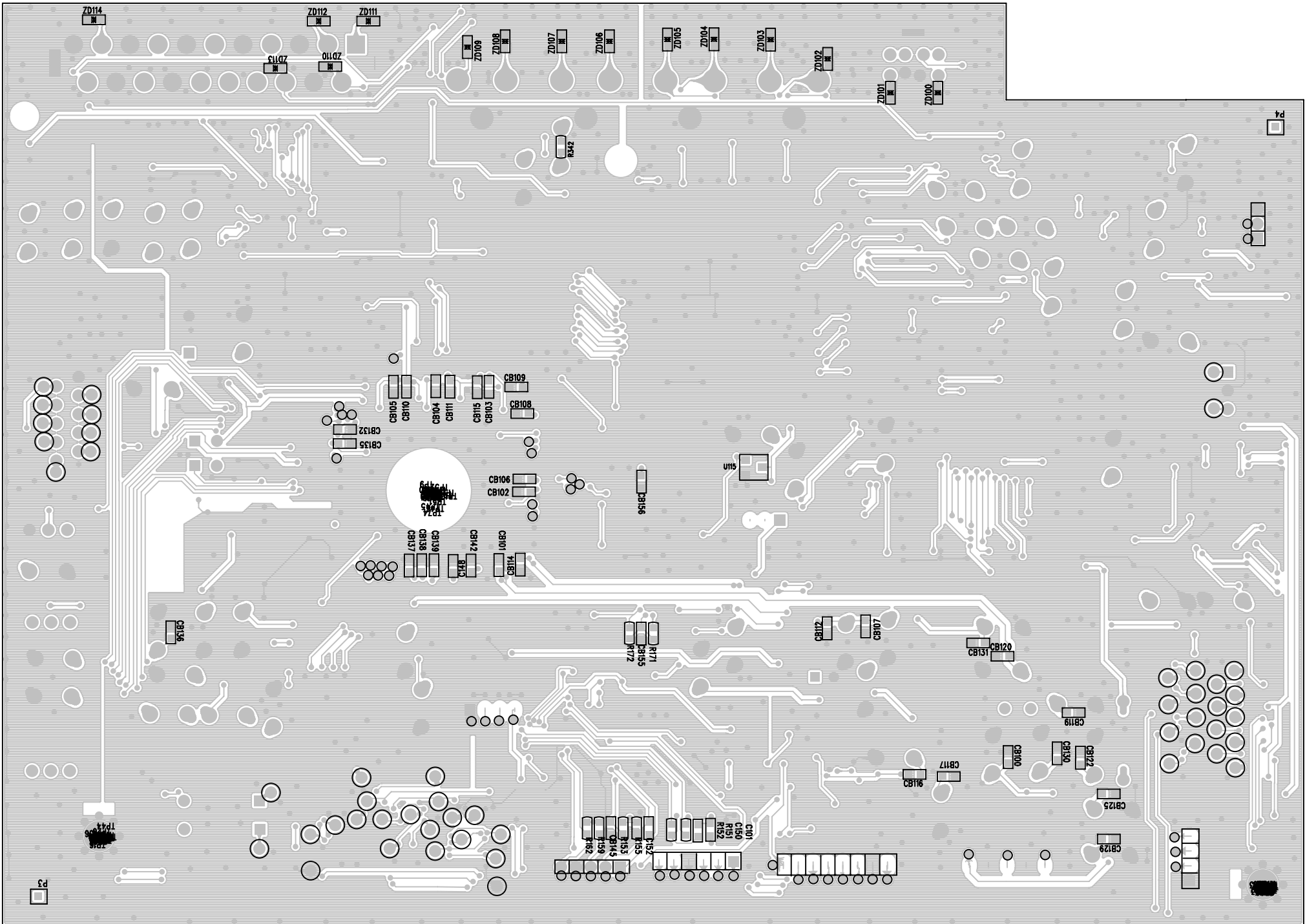
$$V_o = 1.25 \times (1 + R_b/R_a)$$



Open JP101, if used VFD



5800-A30200-0002
2008-12-26 REV:02

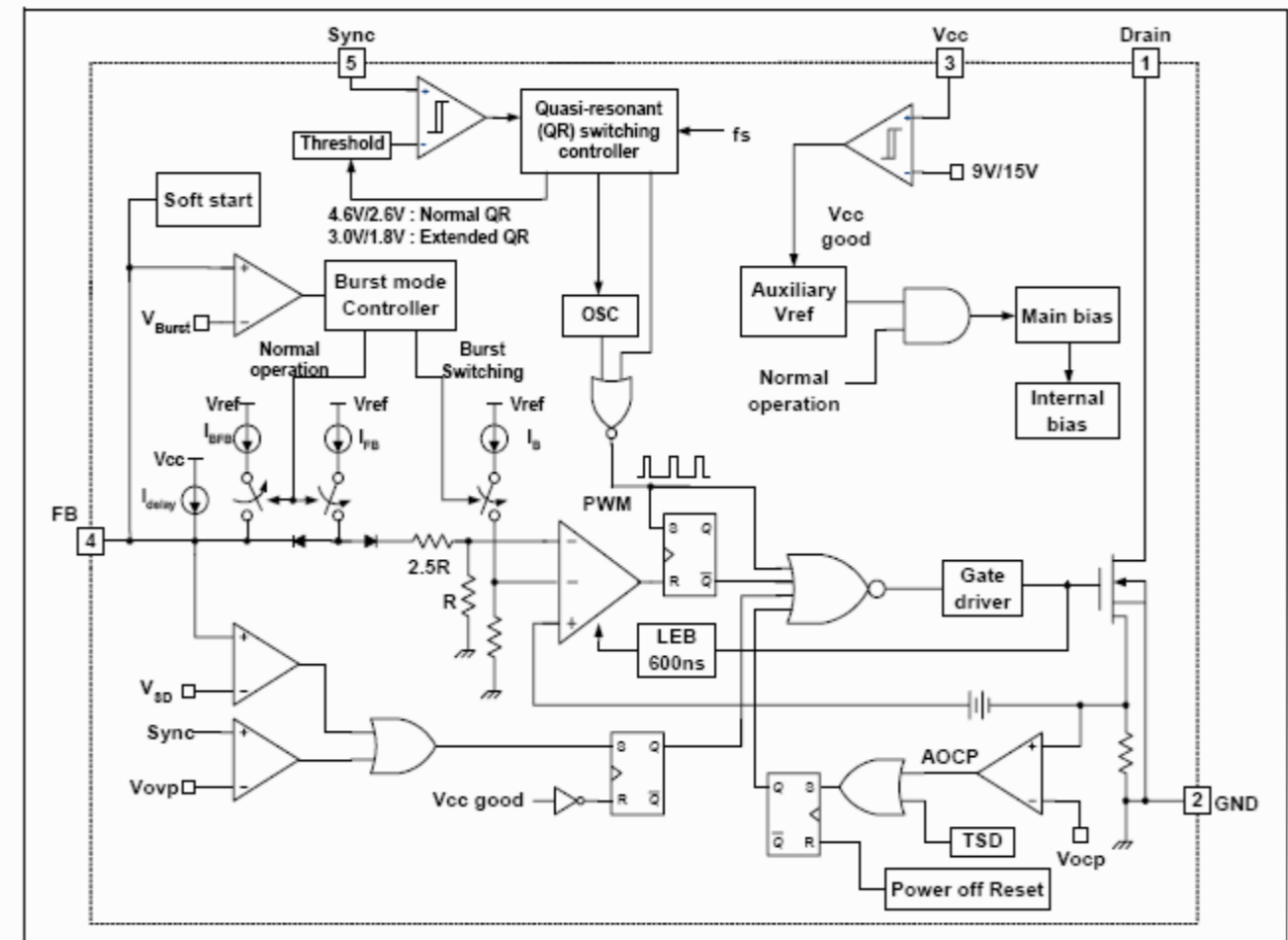


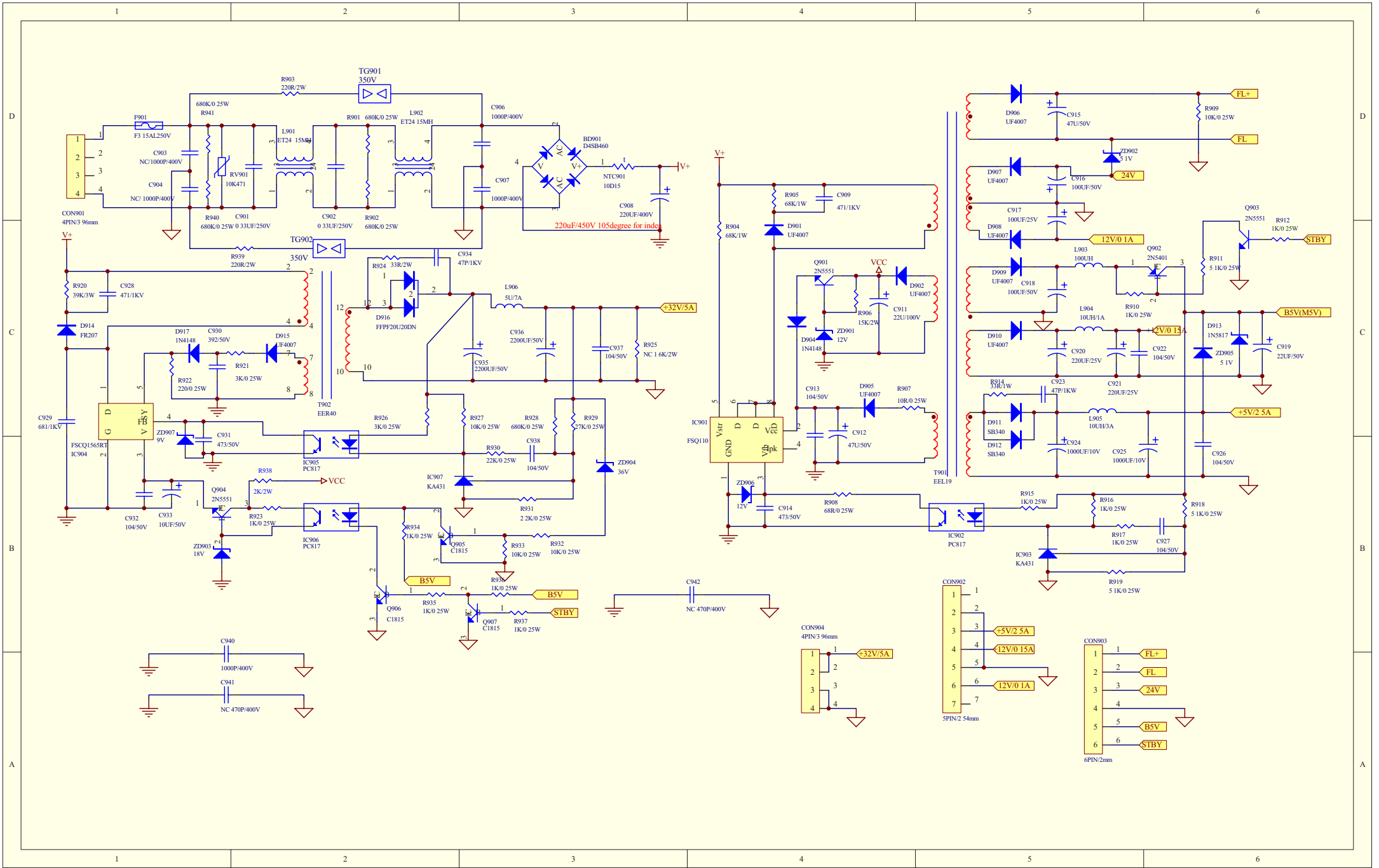
POWER BOARD

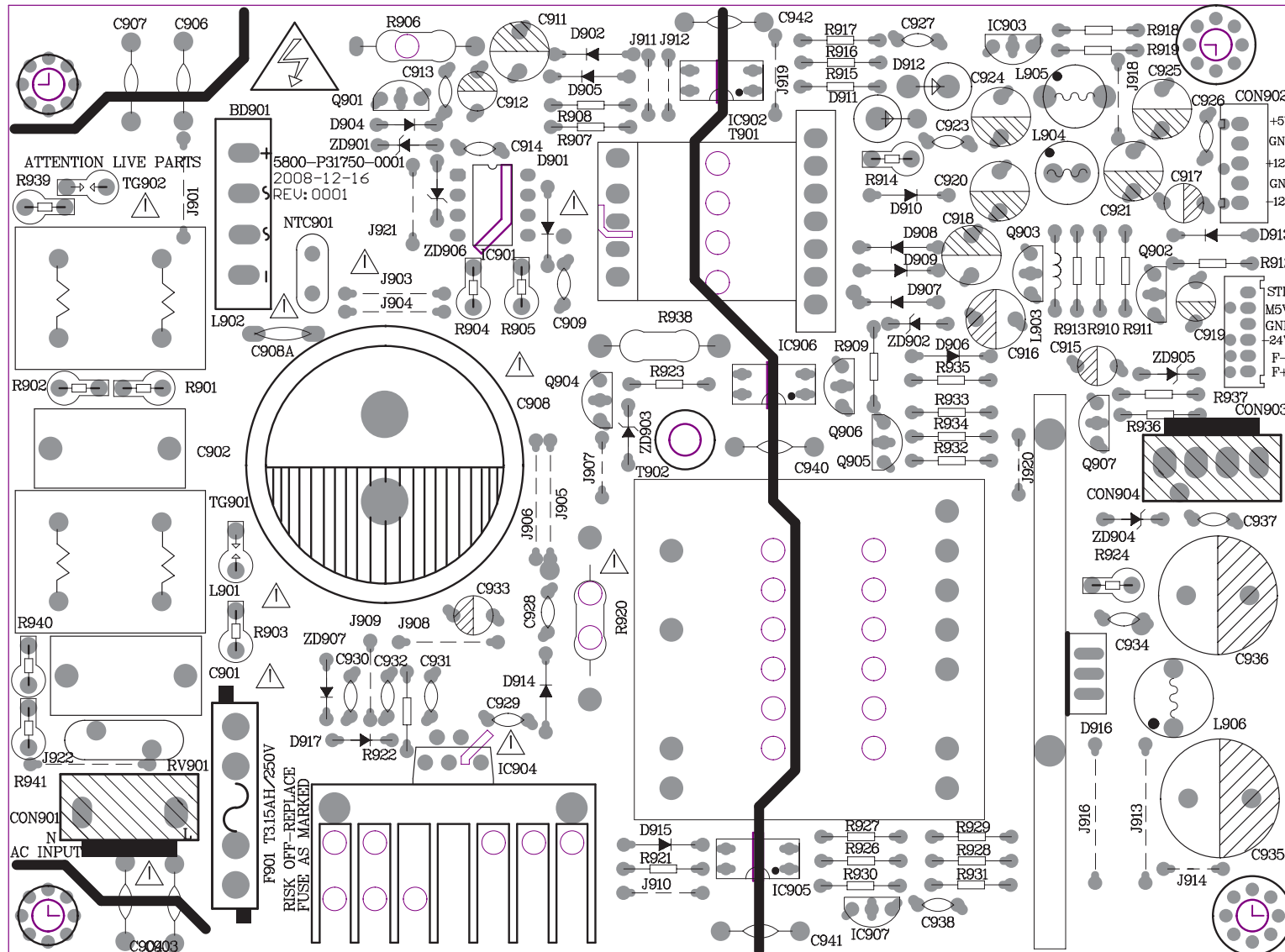
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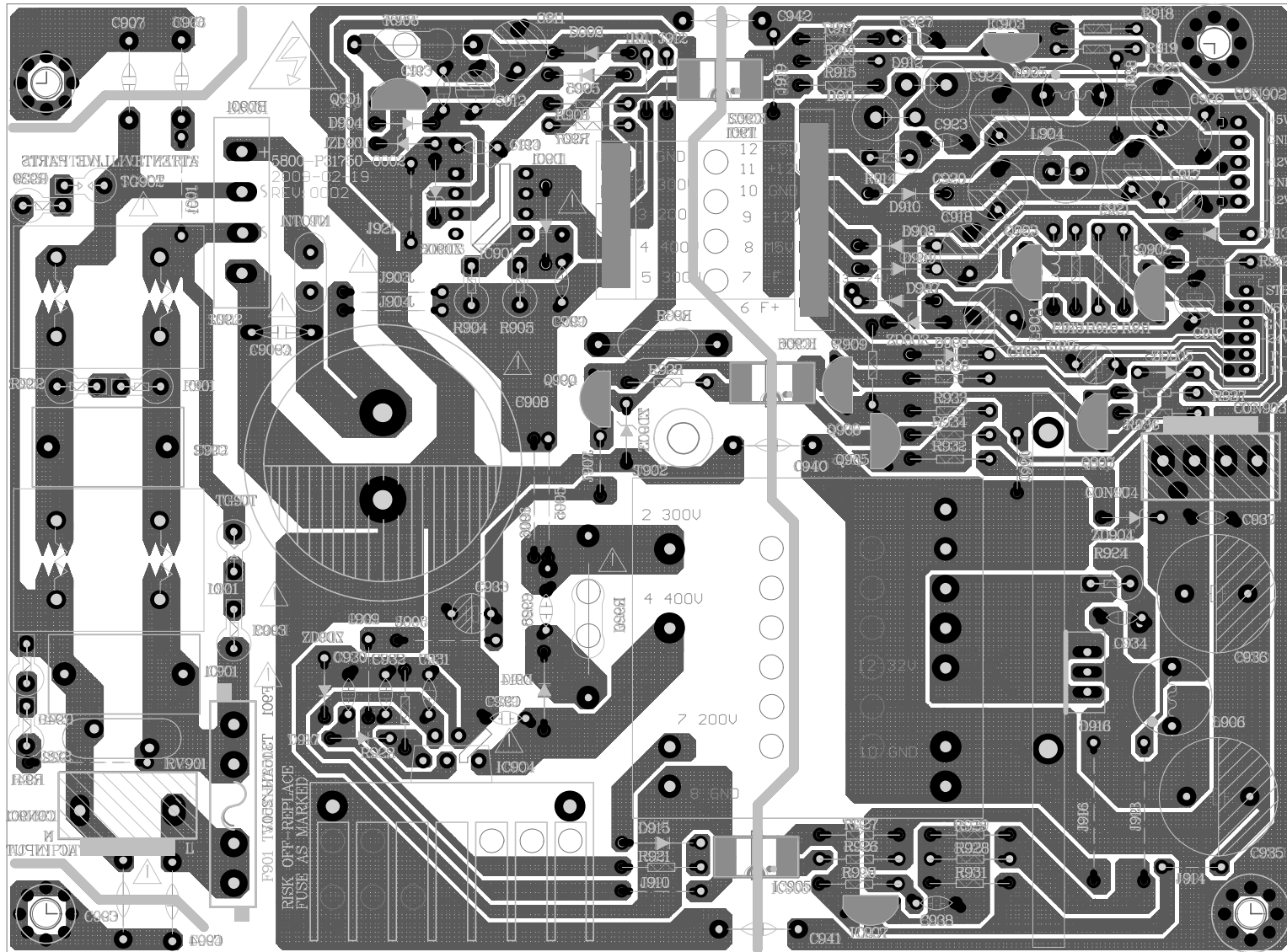
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Bottom View.....	9-4

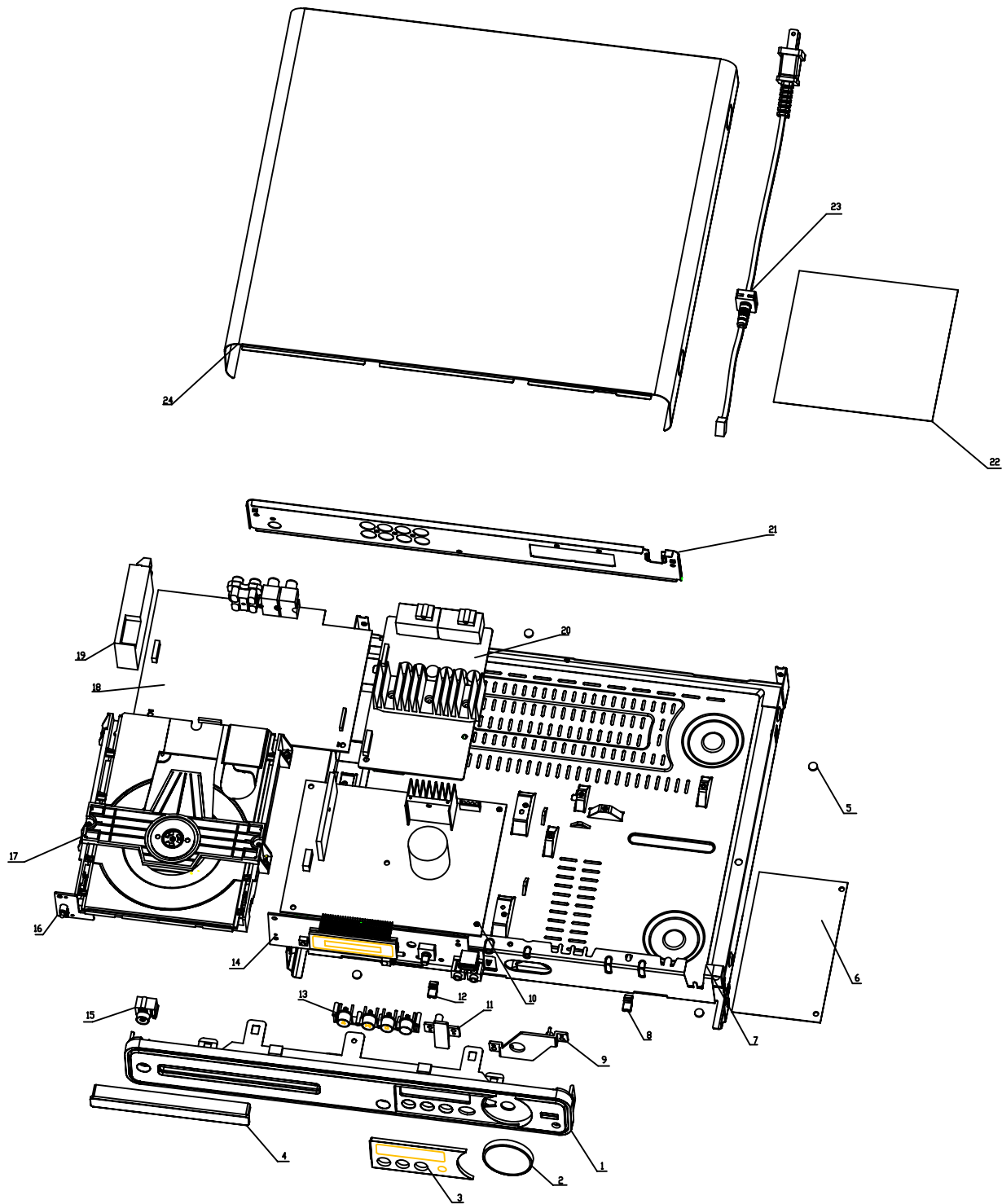
INTERNAL IC DIAGRAM - FSC1565RT











MECHANICAL PART LIST(FOR HTS3181/55)

LOC.	Alt.	12NC	Safety	Description	LOC	Alt	12NC	Safety	Description
1		996510022355		FR PANEL-ABS/80301/FOILED HL-3	SPEAKER ASSY				
2		996510028174		VOLUME BUTTON-ABS/BLACK 80007	SPKSW		996510028137		SUB-WF SPEAKER BOX
3		996510028172		FRONT LENS-PMMA/BLACK80248	KEY BOARD				
4		996510028166		CD DOOR-ABS/BLACK	C5		996510021738		90 DEGREE P N 04+90 DEGREE P N
5		996510021707		RUBBER FOOT	C6		996510022267		90 DEGREE P N 03+HOUS NG 03+42
6		996510028162		INSULATED PLATE(BOTTOM)-BLACK	C8		996510021728		90 DEGREE P N 07+ HOUSING 07+2
7		996510021709		BOTTOM CASE -SECC	C9		996510021736		90 DEGREE P N 04+HOUS NG 04+40
8		996510028164		TOP CASE SUPPORT(CU)	C10		996510021724		90 DEGREE P N 06+ HOUSING 06+1
9		996510028159		FUNCTION BOARD SUPPORT(RIGHT)	CB503		996510028165		SMD CERAMIC CHIP CAPACITOR
10		996510028184		MY01-HTS3181/55(HI)POWER BOARD	CB504		996510028165		SMD CERAMIC CHIP CAPACITOR
11		996510028161		FUNCTION BOARD SUPPORT(LEFT)	CB505		996510028165		SMD CERAMIC CHIP CAPACITOR
12		996510028164		TOP CASE SUPPORT(CU)	CB524		996510028186		SMD ESD PROTECTION 0603ESDA-05
13		996510028155		FUNCTION BUTTON-ABS/BLACK	CB525		996510028186		SMD ESD PROTECTION 0603ESDA-05
14		996510028158		MY01-HTS3181/55(HI) KEY BOARD	CB526		996510028186		SMD ESD PROTECTION 0603ESDA-05
15		996510028188		POWER BUTTON-ABS/BLACK	CB532		996510028186		SMD ESD PROTECTION 0603ESDA-05
16		996510028185		MY01-HTS3181/55(HI)LED BOARD	CB533		996510028186		SMD ESD PROTECTION 0603ESDA-05
17		996510021696		LOADER &LOADER SUPPORT	CB537		996510028186		SMD ESD PROTECTION 0603ESDA-05
18		996510028177		MY01-HTS3181/55(HI) DECODE BOA	CB539		996510028186		SMD ESD PROTECTION 0603ESDA-05
19		996510021718		AM/FM TUNER MODEL10.7MHZ KST-M	D502		996510022228		SNRD. LS4148 150mA/100V (3.5 X
20		996510028183		MY01-HTS3181/55(HI)AMPLIFIER B	D503		996510022228		SNRD. LS4148 150mA/100V (3.5 X
21		996510028189		BACK PANEL-SECC(FIXED)	D505		996510022228		SNRD. LS4148 150mA/100V (3.5 X
22		996510021701		INSULATED PLATE(TOP)-BLACK PVC	D506		996510022228		SNRD. LS4148 150mA/100V (3.5 X
23		996510028178	▲	AC L NE CORD 1500MM BRAZ L UC	D507		996510022228		SNRD. LS4148 150mA/100V (3.5 X
24		996510022324		TOP CASE-SPCC/BLACK 80301/NO D	D508		996510022228		SNRD. LS4148 150mA/100V (3 5 X
C1		996510021699		FILM FLAT CABLE 24 PIN PITCH=0	D509		996510022228		SNRD. LS4148 150mA/100V (3 5 X
C2		996510021729		FILM FLAT CABLE 10 PIN PITCH=1	IR501		996510022211		INFRARED RECEIVER MODULE 36KHZ
C4		996510021712		HOUSING 05+ HOUS NG 05+230MM M	PCB		996510028156		MD P.C.BOARD 40 00X175.00mm
C7		996510028182		HOUSING 04+ HOUS NG 04+50MM FL	Q501		996510022195		I.CI IMP810SEUR-T IMP (RESET I
C11		996510021725		HOUSING 05(2.5) + HOUS NG 05(2	SW1		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
C12		996510021697		FILM FLAT CABLE 24 PIN PITCH=0	SW2		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
CVBS		996510021741		RCA TO RCA AV SIGNAL CABLE1515	SW3		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
FMC		996510021732		FM antenna	SW4		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
LAS		996510028176		LOADER SUPPOREER ASM	U300		996510022232		VACUUM FLUORESCENT DISPLAY 200
RC		996510022188		REMOTE CONTROL 41 KEYS FOR HTS	U520		996510022218		SMD IC V63111LF H LED(1/8-TO 1
LOADER ASSY					VOL		996510022264		ROTARY VOLUMEL RESISTOR 0.5MA
C3		996510021714		HOUSING 06+ HOUS NG 06+190MM F	Y505		996510022238		CERAMIC RESONATOR 455KHz TW455
OPU		996510022224		DVD PLAY HEAD OPTICAL PICK-UP	DECODE BOA				
SPEAKER ASSY					D100		996510022228		SNRD. LS4148 150mA/100V (3 5 X
SSUB		996510028135		CUBE SPEAKER & SUBWOOFER WITH	D101		996510022208		ZENER DIODE 10V 1/2W SMD
SPKC		996510028139		CENTER SPEAKER BOX	D102		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
SPKFL		996510028136		FRONT SPEAKER BOX-L	D103		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
SPKFR		996510028141		FRONT SPEAKER BOX-R	D104		996510022228		SNRD. LS4148 150mA/100V (3 5 X
SPKSL		996510028142		SURROUND SPEAKER BOX-L	D105		996510022228		SNRD. LS4148 150mA/100V (3 5 X
SPKSR		996510028138		SURROUND SPEAKER BOX-R	D106		996510022228		SNRD. LS4148 150mA/100V (3 5 X

LOC.	Alt.	12NC.	Safety	Description	LOC	Alt	12NC	Safety	Description
DECODE BOA					DECODE BOA				
D107		996510028154		SMD SWITCHING DIODE BAV99 (TAP	L154		996510022206		SMD CHIP CO L 1 8UH +/-10%(1 6
D108		996510028154		SMD SWITCHING DIODE BAV99 (TAP	L155		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D109		996510028154		SMD SWITCHING DIODE BAV99 (TAP	L156		996510022206		SMD CHIP CO L 1 8UH +/-10%(1 6
D111		996510028154		SMD SWITCHING DIODE BAV99 (TAP	L157		996510022206		SMD CHIP CO L 1 8UH +/-10%(1 6
D112		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA	L158		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D113		996510022228		SNRD. LS4148 150mA/100V (3 5 X	L159		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
L100		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	L160		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
L101		996510022164		SMD FERRITE BEAD(3.2 X 1.6mm)Z	L161		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
L102		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	L162		996510022204		SMD CHIP CO L 0 22UH +/-10%(1.
L104		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	PCB		996510028181		MA P.C.BOARD 124.00X175.00mm
L105		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q100		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L106		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q101		996510022225		TRANSISTOR 8050 PNP TO-92 TAPE
L108		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q102		996510022171		TRANSISTOR 2SK3018 (30V
L110		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Q103		996510022171		TRANSISTOR 2SK3018 (30V
L111		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Q104		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE
L112		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Q107		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE
L113		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Q108		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L114		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Q109		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L115		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Q110		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L116		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q111		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L117		996510022173		PEAKING CO L 150UH+/-10%(TAPE	Q112		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L119		996510022207		PEAKING CO L 47uH +/-10%(TAPE	Q113		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L120		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q114		996510028168		TRANSISTOR ST8550C PNP TO-92 T
L121		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q115		996510022202		TRANSISTOR 2N3904 PNP TO-92 TA
L122		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q117		996500041188		TRANSISTOR SST3906/MMBT3906/PM
L123		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q118		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L124		996500040252		PEAKING CO L 10uH /-10%	Q119		996500041187		TRANSISTOR SST3904/MMBT3904/PM
L125		996500040252		PEAKING CO L 10uH /-10%	Q120		996500041188		TRANSISTOR SST3906/MMBT3906/PM
L126		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	Q121		996500041188		TRANSISTOR SST3906/MMBT3906/PM
L127		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	U100		996510022212		I.C. CX117-ADJ SILICON CORD (R
L128		996510022216		SMD FERRITE BEAD (2 X 1 25mm)	U101		996510022245		SMD IC APL1085 ANPEC TO-252
L129		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U102		996510022327		SMD I.C MT1389HD/DXE MEDIATEK
L130		996510022178		SMD CHIP COIL 10UH +/-10% (1.6	U103		996510016158		I.C.AM5888S HSOP28
L131		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U104		996510022162		SMD IC A641604L-6TE AOTOM TSOP
L132		996510022178		SMD CHIP COIL 10UH +/-10% (1.6	U105		996510022325		I.C. MX29LV160DBTI-70G MXIC TS
L134		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U106		996510022169		I.C. AT24C16N-10SA-2.7C ATMEL
L137		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U107		996510022265		SMD I. C HEF4051B PHILIPS SO-1
L138		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U108		996510022265		SMD I. C HEF4051B PHILIPS SO-1
L139		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U109		996510022191		I.C CS5340 C RRUS LOGIC (101DB
L140		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U110		996510022236		I.C. TJM4558CD SGS (WIDE BANDW
L147		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	U112		996510022236		I.C. TJM4558CD SGS (WIDE BANDW
L148		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	Y100		996510022332		SMD CRYSTAL 27 000000MHZ MS3HA
L149		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	ZD102		996510028186		SMD ESD PROTECTION 0603ESDA-05
L150		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	ZD103		996510028186		SMD ESD PROTECTION 0603ESDA-05
L151		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	ZD104		996510028186		SMD ESD PROTECTION 0603ESDA-05
L152		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	ZD105		996510028186		SMD ESD PROTECTION 0603ESDA-05
L153		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)	ZD106		996510028186		SMD ESD PROTECTION 0603ESDA-05

LOC.	Alt.	12NC	Safety	Description	LOC	Alt	12NC	Safety	Description
<u>DECODE BOA</u>					<u>AMPLIF ER BOA</u>				
ZD107	996510028186			SMD ESD PROTECTION 0603ESDA-05	Q805		996510022243		SMD TRANSISTOR 2SC945LT1 NPN S
ZD108	996510028186			SMD ESD PROTECTION 0603ESDA-05	Q806		996510022254		TRANSISTOR 2SD882 PNP SILICON
ZD109	996510028186			SMD ESD PROTECTION 0603ESDA-05	Q807		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
					Q808		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
					Q809		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
<u>AMPL FIER BOA</u>					Q810		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
BD801	996510022216			SMD FERRITE BEAD (2 X 1 25mm)	Q811		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
BD801A	996510022216			SMD FERRITE BEAD (2 X 1 25mm)	<u>POWER BOARD</u>				
BD801B	996510022216			SMD FERRITE BEAD (2 X 1 25mm)	BD901		996510022174		BRIDGE RECT FER DIODE RS406 4A
C13	996510021716			PIN 04(3.96)+HOUSING 04(3.96)	C906		996500040565	⚠	SCC.0.001UF AC250V 400V /-20%
CN803	996510019261			CONNECTOR:24PIN	C907		996500040565	⚠	SCC.0.001UF AC250V 400V /-20%
D801	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C908		996510022198		ELECTROLYTIC CAPACITOR 220UF 4
D802	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C909		996510004875		CAPACITOR 470PF 1KV +/-10%
D803	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C923		996510004875		CAPACITOR 470PF 1KV +/-10%
D804	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C928		996510004875		CAPACITOR 470PF 1KV +/-10%
D805	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C929		996510004875		CAPACITOR 470PF 1KV +/-10%
D806	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C934		996510004875		CAPACITOR 470PF 1KV +/-10%
D807	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C935		996510028167		ELECTROLYTIC CAPACITOR 2200uF
D808	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C936		996510028167		ELECTROLYTIC CAPACITOR 2200uF
D809	996510022228			SNRD. LS4148 150mA/100V (3 5 X	C940		996500040565	⚠	SCC.0.001UF AC250V 400V /-20%
D810	996510022228			SNRD. LS4148 150mA/100V (3 5 X	D901		996510022246		HIGH SPEED RECT FIER DIODE UF4
D811	996510022228			SNRD. LS4148 150mA/100V (3 5 X	D902		996510022246		HIGH SPEED RECT FIER DIODE UF4
D812	996510022228			SNRD. LS4148 150mA/100V (3 5 X	D904		996500040218		NRD. 1N4148 150mA/100V
D813	996500040220			ZENER DIODE 3V9 1/2W /-5%	D905		996510022246		HIGH SPEED RECT FIER DIODE UF4
D814	996510022228			SNRD. LS4148 150mA/100V (3 5 X	D906		996510022246		HIGH SPEED RECT FIER DIODE UF4
D815	996500040220			ZENER DIODE 3V9 1/2W /-5%	D907		996510022246		HIGH SPEED RECT FIER DIODE UF4
D816	996510022228			SNRD. LS4148 150mA/100V (3 5 X	D908		996510022246		HIGH SPEED RECT FIER DIODE UF4
D817	996500040573			ZENER DIODE 10V 1/2W	D909		996510022246		HIGH SPEED RECT FIER DIODE UF4
D818	996510022228			SNRD. LS4148 150mA/100V (3 5 X	D910		996510022246		HIGH SPEED RECT FIER DIODE UF4
IC801A	996510022229			SMD IC STA518 ST(40V 3 5A QUAD	D911		996510022176		SCHOTTKY BARR ER RECT FIER SB3
IC801B	996510022229			SMD IC STA518 ST(40V 3 5A QUAD	D912		996510022176		SCHOTTKY BARR ER RECT FIER SB3
IC803	996510022236			I.C. TJM4558CD SGS (W DE BANDW	D913		996510022241		NORMAL RECTIF ER DIODE 1N5817
IC804	996510022237			SMD IC STA309A ST TQFP-64	D914		996510028171		SWITCHING DIODE FR207 DO-15 (T
L801A	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	D915		996510022246		HIGH SPEED RECT FIER DIODE UF4
L801B	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	D916		996510016190		NORMAL RECTIF ER DIODE FFPF20U
L802A	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	D917		996500040218		NRD. 1N4148 150mA/100V
L802B	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	F901		996500040615	⚠	FUSE T3.15A 250V 5X20MM
L803A	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	IC901		996510022249		I.C. FSQ110 FAIRCHILD(FAIRCH L
L803B	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	IC902		996500040601	⚠	I.C. PC817C (PHOTOCOUPLER)
L804A	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	IC903		996510006016		I.C.KA431Z FAIRCH LD
L804B	996510022161			CHOKE COIL 22UH+-15% 10.5MM X1	IC904		996510028169		I.C. FSCQ1565RT FAIRCH LD(POWE
L805A	996510022217			CHOKE COIL 20UH+-10% PITCH=4.0	IC905		996500040601	⚠	I.C. PC817C (PHOTOCOUPLER)
L805B	996510022217			CHOKE COIL 20UH+-10% PITCH=4.0	IC906		996500040601	⚠	I.C. PC817C (PHOTOCOUPLER)
PCB	996510028175			MJ P.C.BOARD 85.00X138 00mm	IC907		996510006016		I.C.KA431Z FAIRCH LD
Q801	996510022235			SMD TRANSISTOR KTC3875LT1 NPN	L901		996510022256	⚠	AC LINE FILTER 20MHX2 LCL-20-2
Q802	996510022253			SMD TRANSISTOR 2SA733LTA NPN S	L902		996510022256	⚠	AC LINE FILTER 20MHX2 LCL-20-2
Q803	996510022235			SMD TRANSISTOR KTC3875LT1 NPN					
Q804	996510022182			TRANSISTOR 2SC945 PNP SILICON					

LOC.	Alt.	12NC	Safety	Description
POWER BOARD				
L903		996500040253		PEAKING COIL 100uH +/-10%
L904		996510022165		CHOKER COIL 10UH+/-10%7.5MMX9.5
L905		996510022163		CHOKER COIL5UH+/-15% 9MMX21MM P
L906		996510022186		CHOKER COIL 10UH+/-10%7.5MMX9.5
NTC901		996510016185	⚠	NTC THERMISTOR RESISTOR 5D2-10
PCB		996510028191		MP P.C.BOARD140.00X162.00mm R
Q901		996510028157		TRANSISTOR 2N5551 PNP TO-92 PA
Q902		996510028173		TRANSISTOR 2N5401 PNP TO-92 PA
Q903		996510028157		TRANSISTOR 2N5551 PNP TO-92 PA
Q904		996510028157		TRANSISTOR 2N5551 PNP TO-92 PA
Q905		996500040232		TRANSISTOR 2SC1815Y/2PC1815
Q906		996500040232		TRANSISTOR 2SC1815Y/2PC1815
Q907		996500040232		TRANSISTOR 2SC1815Y/2PC1815
R920		996510022203		METAL OXIDE FILM RESISTOR39K OHM
RV901		996510016184		VARISTOR 10D471K 10%
T901		996510022226	⚠	SWITCHING TRANSFORMER BK-35-L0
T902		996510028187	⚠	SWITCHING TRANSFORMER BCK-60-L
TG901		996510028163		GAS DISCHARGE TUBE DSP-301N-C
TG902		996510028163		GAS DISCHARGE TUBE DSP-301N-C
ZD901		996500040575		ZENER DIODE 12V 1/2W +/-5%
ZD902		996500040221		ZENER DIODE 5V1 1/2W +/-5%
ZD903		996510004909		ZENER DIODE 18V 1/2W
ZD904		996510022199		ZENER DIODE 36V 1/2W (TAPE TYPE)
ZD905		996500040221		ZENER DIODE 5V1 1/2W +/-5%
ZD906		996500040575		ZENER DIODE 12V 1/2W +/-5%
ZD907		996500040225		ZENER DIODE 9V1 1/2W +/-5%

LED BOARD

D511		996500040273		LED 3.1mm RED LONG LEAD
PCB		996510028179		MO P.C BOARD 28.00X35.00mm
SPOW		996510022201		TSVT H = 5mm KPT-1105A 4 PINS

MECHANICAL PART LIST(FOR HTS3181X/78)

LOC.	Alt.	12NC	Safety	Description	LOC.	Alt.	12NC	Safety	Description
1		996510028247		FR PANEL-ABS/80301/FOL ED HL-3	<u>SPEAKER ASSY</u>				
2		996510028219		VOLUM BUTTON-ABS/BLACK	SSUB		996510028135		CUBE SPEAKER & SUBWOOFER WITH
3		996510028225		FRONT LENS-PMMA/BLACK	SPKC		996510028139		CENTER SPEAKER BOX
4		996510028223		CD DOOR-ABS/BLACK	SPKFL		996510028136		FRONT SPEAKER BOX-L
5		996510021707		RUBBER FOOT	SPKFR		996510028141		FRONT SPEAKER BOX-R
6		996510028162		INSULATED PLATE(BOTTOM)-BLACK	SPKSL		996510028142		SURROUND SPEAKER BOX-L
7		996510028231		BOTTOM CASE-SECC(CKD)	SPKSR		996510028138		SURROUND SPEAKER BOX-R
8		996510028164		TOP CASE SUPPORT(CU)	SPKSW		996510028137		SUB-WF SPEAKER BOX
9		996510028159		FUNCTION BOARD SUPPORT(RIGHT)	<u>KEY BOARD</u>				
10		996510028237		MY01-HTS3181/78(HI)POWER BOARD	CB503		996510028165		SMD CERAMIC CHIP CAPACITOR
11		996510028161		FUNCTION BOARD SUPPORT(LEFT)	CB504		996510028165		SMD CERAMIC CHIP CAPACITOR
12		996510028164		TOP CASE SUPPORT(CU)	CB505		996510028165		SMD CERAMIC CHIP CAPACITOR
13		996510028227		FUNCTION BUTTON-ABS/BLACK	CB524		996510028186		SMD ESD PROTECTION 0603ESDA-05
14		996510028241		MY01-HTS3181/78(HI) KEY BOARD	CB525		996510028186		SMD ESD PROTECTION 0603ESDA-05
15		996510028232		POWER BUTTON-ABS/BLACK	CB526		996510028186		SMD ESD PROTECTION 0603ESDA-05
16		996510028239		MY01-HTS3181/78(HI)LED BOARD	CB532		996510028186		SMD ESD PROTECTION 0603ESDA-05
18		996510028236		MY01-HTS3181/78(HI) DECODE BOA	CB533		996510028186		SMD ESD PROTECTION 0603ESDA-05
19		996510021718		AM/FM TUNER MODEL10.7MHZ KST-M	CB537		996510028186		SMD ESD PROTECTION 0603ESDA-05
20		996510028233		MY01-HTS3181/78(HI)AMPLIF ER B	CB539		996510028186		SMD ESD PROTECTION 0603ESDA-05
21		996510028246		BACK PANEL-SECC(FIXED)	D502		996510022228		SNRD. LS4148 150mA/100V (3 5 X
22		996510021701		INSULATED PLATE(TOP)-BLACK PVC	D503		996510022228		SNRD. LS4148 150mA/100V (3 5 X
23		996510028178	▲	AC LINE CORD 1500MM BRAZIL UC	D505		996510022228		SNRD. LS4148 150mA/100V (3 5 X
24		996510028235		TOP CASE-SPCC/BLACK	D506		996510022228		SNRD. LS4148 150mA/100V (3 5 X
AFPPA		996510028222		SKD FOR PSU PCB ASSEMBLY	D507		996510022228		SNRD. LS4148 150mA/100V (3 5 X
C1		996510021699		FILM FLAT CABLE 24 PIN PITCH=0	D508		996510022228		SNRD. LS4148 150mA/100V (3 5 X
C2		996510021729		FILM FLAT CABLE 10 PIN PITCH=1	D509		996510022228		SNRD. LS4148 150mA/100V (3 5 X
C4		996510021712		HOUSING 05+ HOUS NG 05+230MM M	R501		996510022211		INFRARED RECEIVER MODULE 36KHZ
C6		996510022267		90 DEGREE PIN 03+HOUSING 03+42	J504		996510028229		ULTI TWIST WIRE 45MM BLACK UL
C7		996510028182		HOUSING 04+ HOUS NG 04+50MM FL	PCB		996510028156		MD P.C.BOARD 40 00X175.00mm
C8		996510021728		90 DEGREE PIN 07+ HOUSING 07+2	Q501		996510022195		I.CI IMP810SEUR-T IMP (RESET I
C9		996510021736		90 DEGREE PIN 04+HOUSING 04+40	SW1		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
C10		996510021724		90 DEGREE PIN 06+ HOUSING 06+1	SW2		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
C11		996510021725		HOUSING 05(2.5) + HOUS NG 05(2	SW3		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
C12		996510021697		FILM FLAT CABLE 24 PIN PITCH=0	SW4		996510022201		TSVT H = 5mm KPT-1105A 4 PINS
CB		996510028242		CARTON BOX FOR PH L PS CKD(B)4	U300		996510022232		VACUUM FLUORESCENT DISPLAY 200
CB		996510028234		CARTON BOX FOR PH L PS CKD(A)5	U520		996510022218		SMD IC V63111LF H LED(1/8-TO 1
CB		996510028224		CARTON BOX FOR PH L PS CKD(C)3	VOL		996510022264		ROTARY VOLUMEL RESISTOR 0.5MA
CB		996510028234		CARTON BOX FOR PH L PS CKD(A)5	Y505		996510022238		CERAMIC RESONATOR 455KHz TW455
CVBS		996510021741		RCA TO RCA AV SIGNAL CABLE1515	<u>DECODE BOA</u>				
FMC		996510021732		FM antenna	D100		996510022228		SNRD. LS4148 150mA/100V (3 5 X
SCS		996510028226		SKD FOR CONTROL & STANDBY P	D101		996510022208		ZENER DIODE 10V 1/2W SMD
SFAPA		996510028238		SKD FOR AMPLIFIER PCB ASSEMB	D102		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
SFMPA		996510028243		SKD FOR MEFG PCB ASSEMBLY	D103		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
RC		996510022188		REMOTE CONTROL 41 KEYS FOR HTS	D104		996510022228		SNRD. LS4148 150mA/100V (3.5 X
<u>LOADER ASSY</u>					D105		996510022228		SNRD. LS4148 150mA/100V (3.5 X
LSA		996510022159		LOADER SUPPOREER ASM	D106		996510022228		SNRD. LS4148 150mA/100V (3.5 X
C3		996510021714		HOUSING 06+ HOUSING 06+190MM F	D107		996510028154		SMD SWITCH NG DIODE BAV99 (TAP
OPU		996510022224		DVD PLAY HEAD OPTICAL PICK-UP					

LOC.	Alt.	12N	Safety	Description
DECODE BOA				
D108		996510028154		SMD SWITCHING DIODE BAV99 (TAP
D109		996510028154		SMD SWITCHING DIODE BAV99 (TAP
D111		996510028154		SMD SWITCHING DIODE BAV99 (TAP
D112		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
D113		996510022228		SNRD. LS4148 150mA/100V (3 5 X
L100		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L101		996510022164		SMD FERRITE BEAD(3.2 X 1.6mm)Z
L102		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L104		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L105		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L106		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L108		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L110		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L111		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L112		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L113		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L114		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L115		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L116		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L117		996510022173		PEAKING CO L 150UH+/-10%(TAPE
L119		996510022207		PEAKING CO L 47uH +/-10%(TAPE
L120		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L121		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L122		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L123		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L124		996500040252		PEAKING CO L 10uH /-10%
L125		996500040252		PEAKING CO L 10uH /-10%
L126		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L127		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L128		996510022216		SMD FERRITE BEAD (2 X 1 25mm)
L129		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L130		996510022178		SMD CHIP COIL 10UH +/-10% (1.6
L131		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L132		996510022178		SMD CHIP COIL 10UH +/-10% (1.6
L134		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L137		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L138		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L139		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L140		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L147		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L148		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L149		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L150		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L151		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L152		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L153		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L154		996510022206		SMD CHIP COIL 1.8UH +/-10%(1.6
L155		996510022193		SMD FERRITE BEAD (1.6 X 0 8mm)
L156		996510022206		SMD CHIP COIL 1.8UH +/-10%(1.6

LOC.	Alt.	12N	Safety	Description
DECODE BOA				
L157		996510022206		SMD CH P COIL 1.8UH +/-10%(1 6
L158		996510022193		SMD FERRITE BEAD (1 6 X 0.8mm)
L159		996510022193		SMD FERRITE BEAD (1 6 X 0.8mm)
L160		996510022193		SMD FERRITE BEAD (1 6 X 0.8mm)
L161		996510022193		SMD FERRITE BEAD (1 6 X 0.8mm)
L162		996510022204		SMD CH P COIL 0.22UH +/-10%(1.
PCB		996510028181		MA P.C BOARD 124.00X175 00mm
Q100		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q101		996510022225		TRANSISTOR 8050 PNP TO-92 TAPE
Q102		996510022171		TRANSISTOR 2SK3018 (30V
Q103		996510022171		TRANSISTOR 2SK3018 (30V
Q104		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE
Q107		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE
Q108		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q109		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q110		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q111		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q112		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q113		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q114		996510028168		TRANSISTOR ST8550C PNP TO-92 T
Q115		996510022202		TRANSISTOR 2N3904 PNP TO-92 TA
Q117		996500041188		TRANSISTOR SST3906/MMBT3906/PM
Q118		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q119		996500041187		TRANSISTOR SST3904/MMBT3904/PM
Q120		996500041188		TRANSISTOR SST3906/MMBT3906/PM
Q121		996500041188		TRANSISTOR SST3906/MMBT3906/PM
U100		996510022212		I.C. CX117-ADJ SILICON CORD (R
U101		996510022245		SMD IC APL1085 ANPEC TO-252
U102		996510022327		SMD I.C MT1389HD/DXE MEDIATEK
U103		996510016158		I.C AM5888S HSOP28
U104		996510022162		SMD IC A641604L-6TE AOTOM TSOP
U105		996510022325		I.C. MX29LV160DBTI-70G MXIC TS
U106		996510022169		I.C. AT24C16N-10SA-2.7C ATMEL
U107		996510022265		SMD I. C HEF4051B PHILIPS SO-1
U108		996510022265		SMD I. C HEF4051B PHILIPS SO-1
U109		996510022191		I.C CS5340 CIRRUS LOGIC (101DB
U110		996510022236		I.C. TJM4558CD SGS (WIDE BANDW
U112		996510022236		I.C. TJM4558CD SGS (WIDE BANDW
Y100		996510022332		SMD CRYSTAL 27.000000MHZ MS3HA
ZD102		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD103		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD104		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD105		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD106		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD107		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD108		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD109		996510028186		SMD ESD PROTECTION 0603ESDA-05

LOC.	Alt.	12N	Safety	Description
<u>AMPLIF ER BOA</u>				
BD801	996510022216			SMD FERRITE BEAD (2 X 1.25mm)
BD801A	996510022216			SMD FERRITE BEAD (2 X 1.25mm)
BD801B	996510022216			SMD FERRITE BEAD (2 X 1.25mm)
C13	996510021716			P N 04(3.96)+HOUS NG 04(3.96)
C801	996500040181			EC.4.7uF 50V-100V +/-20%
CN802	996510022187			WAFER 2mm H X 4 P N
CN803	996510019261			CONNECTOR:24P N
D801	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D802	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D803	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D804	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D805	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D806	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D807	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D808	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D809	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D810	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D811	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D812	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D813	996500040220			ZENER DIODE 3V9 1/2W +/-5%
D814	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D815	996500040220			ZENER DIODE 3V9 1/2W +/-5%
D816	996510022228			SNRD. LS4148 150mA/100V (3.5 X
D817	996500040573			ZENER DIODE 10V 1/2W
D818	996510022228			SNRD. LS4148 150mA/100V (3.5 X
IC801A	996510022229			SMD IC STA518 ST(40V 3.5A QUAD
IC801B	996510022229			SMD IC STA518 ST(40V 3.5A QUAD
IC803	996510022236			I.C. TJM4558CD SGS (WIDE BANDW
IC804	996510022237			SMD IC STA309A ST TQFP-64
L801A	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L801B	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L802A	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L802B	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L803A	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L803B	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L804A	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L804B	996510022161			CHOKE CO L 22UH+-15% 10 5MM X1
L805A	996510022217			CHOKE CO L 20UH+-10% PITCH=4 0
L805B	996510022217			CHOKE CO L 20UH+-10% PITCH=4 0
PCB	996510028175			MJ P.C.BOARD 85 00X138.00mm
Q801	996510022235			SMD TRANSISTOR KTC3875LT1 NPN
Q802	996510022253			SMD TRANSISTOR 2SA733LTA NPN S
Q803	996510022235			SMD TRANSISTOR KTC3875LT1 NPN
Q804	996510022182			TRANSISTOR 2SC945 PNP SILICON
Q805	996510022243			SMD TRANSISTOR 2SC945LT1 NPN S
Q806	996510022254			TRANSISTOR 2SD882 PNP S LICON
Q807	996510022235			SMD TRANSISTOR KTC3875LT1 NPN
Q808	996510022253			SMD TRANSISTOR 2SA733LTA NPN S
Q809	996510022253			SMD TRANSISTOR 2SA733LTA NPN S

LOC.	Alt.	12N	Safety	Description
<u>AMPLIFIER BOA</u>				
Q810	996510022235			SMD TRANSISTOR KTC3875LT1 NPN
Q811	996510022235			SMD TRANSISTOR KTC3875LT1 NPN
<u>POWER BOARD</u>				
BD901	996510022174			BR DGE RECTIFER DIODE RS406 4A
C901	996510028221			M.P.F.C 0.33UF +/-10%
C902	996510028221			M.P.F.C 0.33UF +/-10%
C906	996500040565		⚠	SCC.0.001UF AC250V 400V +/-20%
C907	996500040565		⚠	SCC.0.001UF AC250V 400V +/-20%
C908	996510022198			ELECTROLYTIC CAPACITOR 220UF 4
C909	996510004875			CAPACITOR 470PF 1KV +/-10%
C911	996510022221			EC 22uF 100V +/-20%
C916	996510004900			EC CAPACITOR 100uF 50V +/-20%
C923	996510004875			CAPACITOR 470PF 1KV +/-10%
C928	996510004875			CAPACITOR 470PF 1KV +/-10%
C929	996510004875			CAPACITOR 470PF 1KV +/-10%
C934	996510004875			CAPACITOR 470PF 1KV +/-10%
C935	996510028167			ELECTROLYTIC CAPACITOR 2200uF
C936	996510028167			ELECTROLYTIC CAPACITOR 2200uF
C940	996500040565		⚠	SCC.0.001UF AC250V 400V +/-20%
D901	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D902	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D904	996500040218			NRD. 1N4148 150mA/100V
D905	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D906	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D907	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D908	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D909	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D910	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D911	996510022176			SCHOTTKY BARRIER RECTIF ER SB3
D912	996510022176			SCHOTTKY BARRIER RECTIF ER SB3
D913	996510022241			NORMAL RECTIFIER DIODE 1N5817
D914	996510028171			SWITCHING DIODE FR207 DO-15 (T
D915	996510022246			HIGH SPEED RECTIF ER DIODE UF4
D916	996510016190			NORMAL RECTIFIER DIODE FFPF20U
D917	996500040218			NRD. 1N4148 150mA/100V
F901	996500040615		⚠	FUSE T3.15A 250V 5X20MM
IC901	996510022249			I.C. FSQ110 FAIRCH LD(FA RCHIL
IC902	996500040601		⚠	I.C. PC817C (PHOTOCOUPLER)
IC903	996510006016			I.C.KA431Z FA RCHILD
IC904	996510028169			I.C. FSCQ1565RT FA RCHILD(POWE
IC905	996500040601		⚠	I.C. PC817C (PHOTOCOUPLER)
IC906	996500040601		⚠	I.C. PC817C (PHOTOCOUPLER)
IC907	996510006016			I.C.KA431Z FA RCHILD
L901	996510022256		⚠	AC LINE FILTER 20MHX2 LCL-20-2
L902	996510022256		⚠	AC LINE FILTER 20MHX2 LCL-20-2
L903	996500040253			PEAK NG COIL 100uH +/-10%
L904	996510022165			CHOKE CO L 10UH+/-10%7.5MMX9.5
L905	996510022163			CHOKE CO L5UH+/-15% 9MMX21MM P

LOC.	Alt. 12Nc	Safety	Description
POWER BOARD			
L906	996510022186		CHOKO COIL 10UH+/-10%7.5MMX9.5
NTC901	996510016185	▲	NTC THERMISTOR RESISTOR 5D2-10
PCB	996510028191		MP P.C.BOARD140.00X162.00mm R
Q901	996510028157		TRANSISTOR 2N5551 PNP TO-92 PA
Q902	996510028173		TRANSISTOR 2N5401 PNP TO-92 PA
Q903	996510028157		TRANSISTOR 2N5551 PNP TO-92 PA
Q904	996510028157		TRANSISTOR 2N5551 PNP TO-92 PA
Q905	996500040232		TRANSISTOR 2SC1815Y/2PC1815
Q906	996500040232		TRANSISTOR 2SC1815Y/2PC1815
Q907	996500040232		TRANSISTOR 2SC1815Y/2PC1815
R920	996510022203		METAL OXIDE FILM RESISTOR39K O
RV901	996510028228		VARISTOR 470V +/-10% FNR-10K47
T901	996510022226	▲	SWITCHING TRANSFORMER BK-35-L0
T902	996510028187	▲	SWITCHING TRANSFORMER BCK-60-L
TG901	996510028163		GAS DISCHARGE TUBE DSP-301N-C
TG902	996510028163		GAS DISCHARGE TUBE DSP-301N-C
ZD901	996500040575		ZENER DIODE 12V 1/2W /-5%
ZD902	996500040221		ZENER DIODE 5V1 1/2W /-5%
ZD903	996510004909		ZENER DIODE 18V 1/2W
ZD904	996510022199		ZENER DIODE 36V 1/2W (TAPE TYP
ZD905	996500040221		ZENER DIODE 5V1 1/2W /-5%
ZD906	996500040575		ZENER DIODE 12V 1/2W /-5%
ZD907	996500040225		ZENER DIODE 9V1 1/2W /-5%

LED BOARD			
D511	996500040273		LED 3.1mm RED LONG LEAD
PCB	996510028179		MO P.C.BOARD 28.00X35.00mm
SPOW	996510022201		TSVT.H = 5mm KPT-1105A 4 P NS

REVISION LIST

Version 1.0

*Initial release

#=Alternative Codes

 =Safety Symbol