

Service  
Service  
**Service**



# Service Manual



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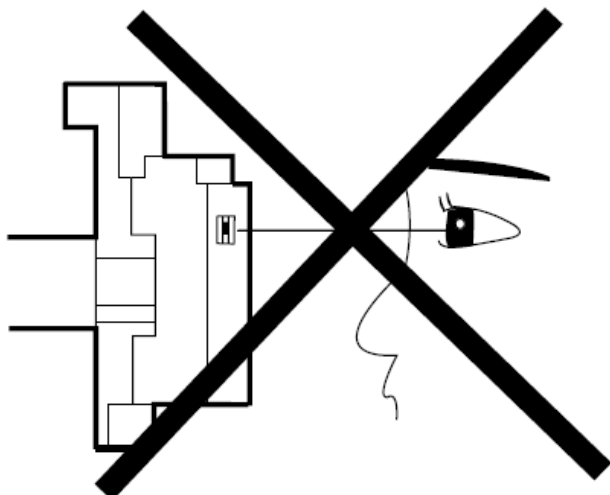
Version 1.0



# PHILIPS

# LASER BEAM SAFETY PRECAUTIONS

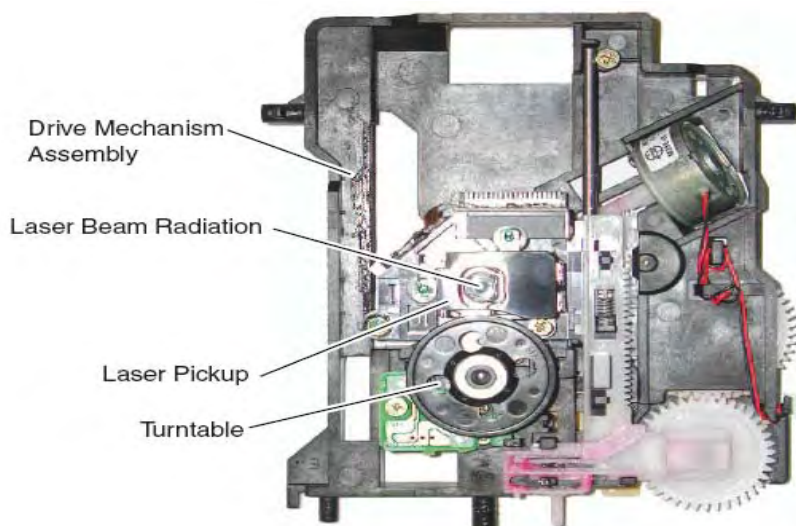
This DVD player uses a pickup that emits a laser beam.



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.



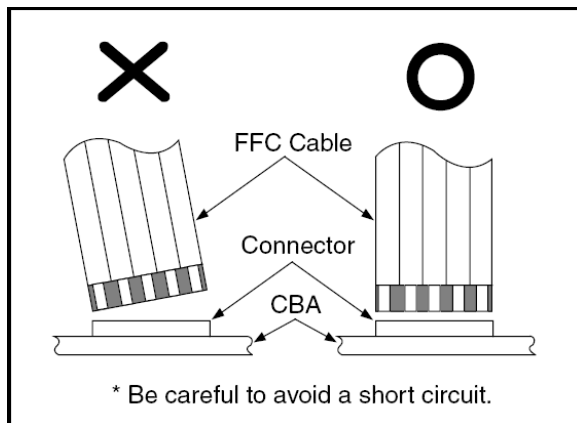
**CAUTION**  
LASER RADIATION  
WHEN OPEN. DO NOT  
STARE INTO BEAM.

**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](http://www.atyourservice.ce.Philips.com) you find more information to:

- BGA-de-/soldering (+ baking instructions)
- Heating-profiles of BGAs and other ICs used in Philips-sets.

You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

## 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)

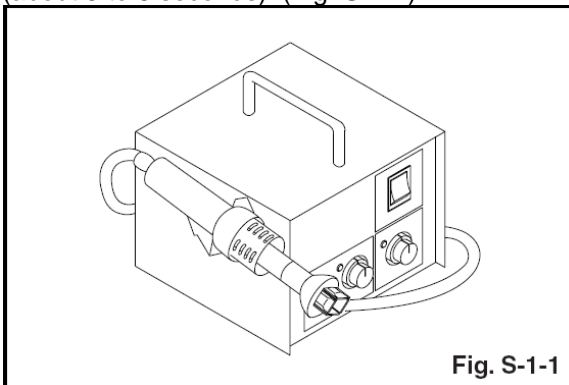


Fig. S-1-1

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.

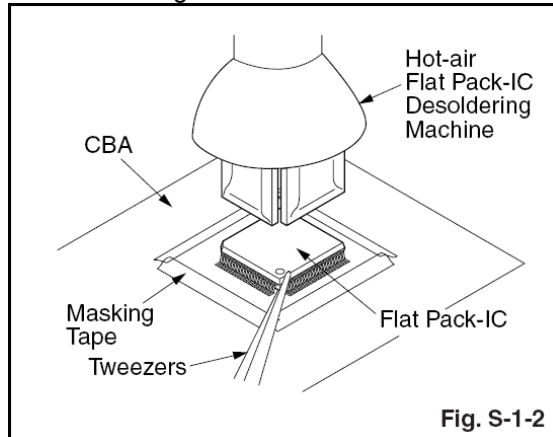


Fig. S-1-2

#### 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)

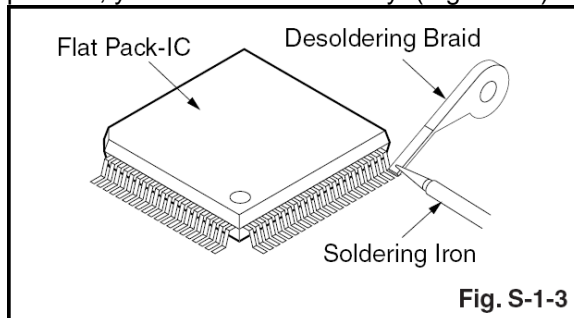


Fig. S-1-3

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)

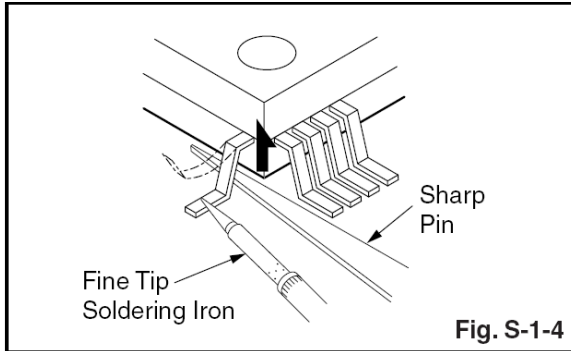


Fig. S-1-4

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.

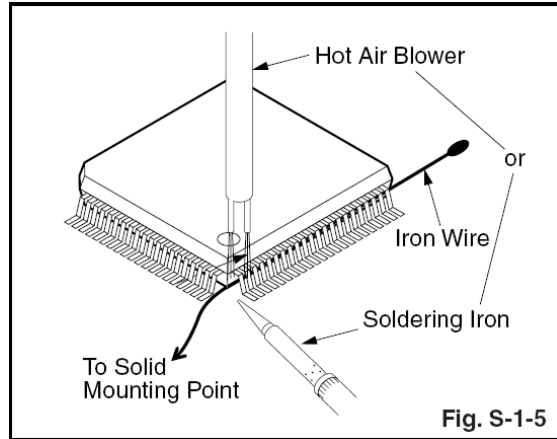


Fig. S-1-5

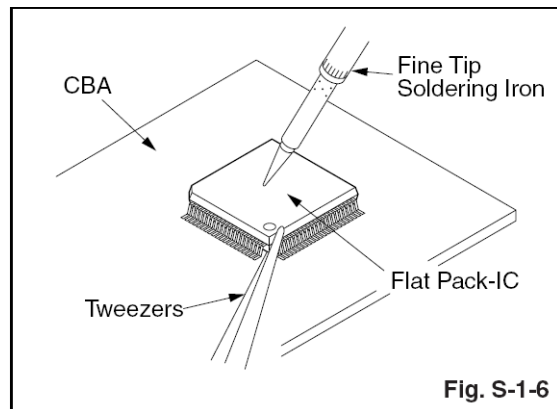


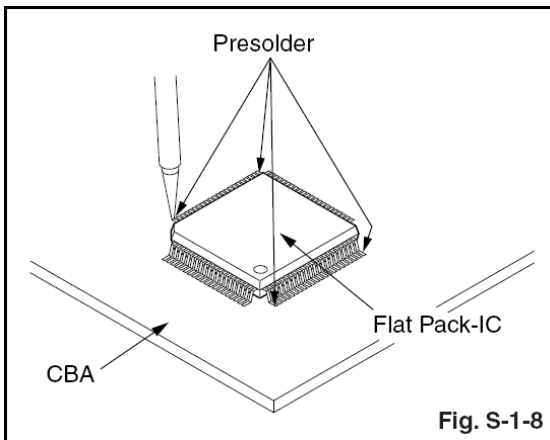
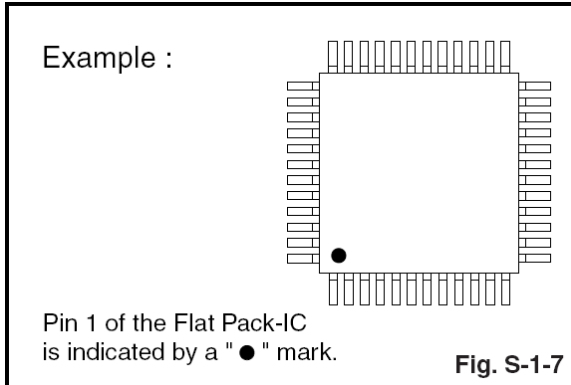
Fig. S-1-6

**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.

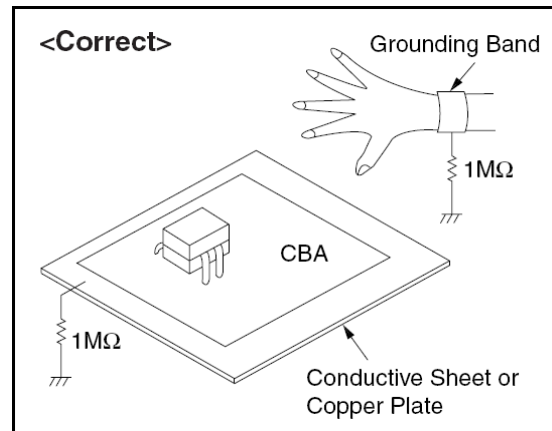
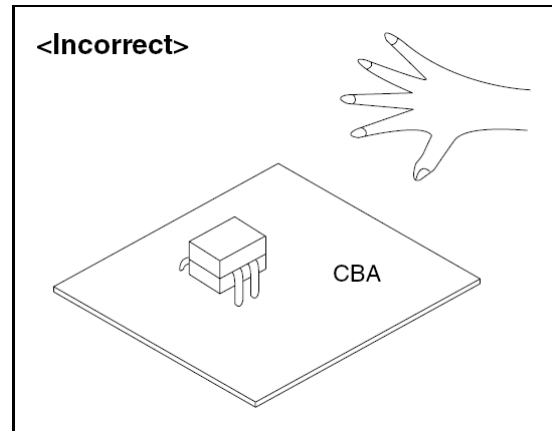
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)

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

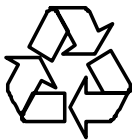


### Warning

- 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



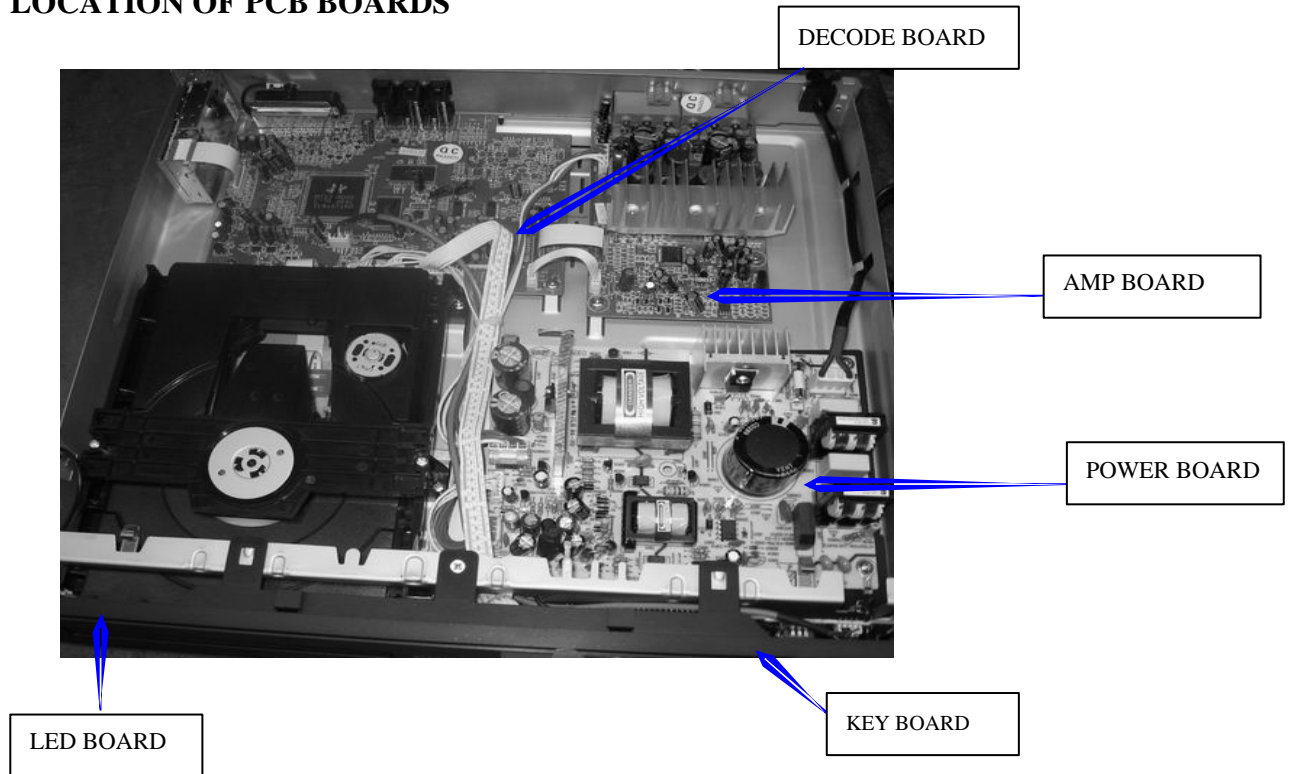
This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation,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

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### 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	HTS3180	
	/12	/51
Features		
Output Power-300W	X	X
Voltage(220V-240V)	X	X

## SERVICE SCENARIO MATRIX:

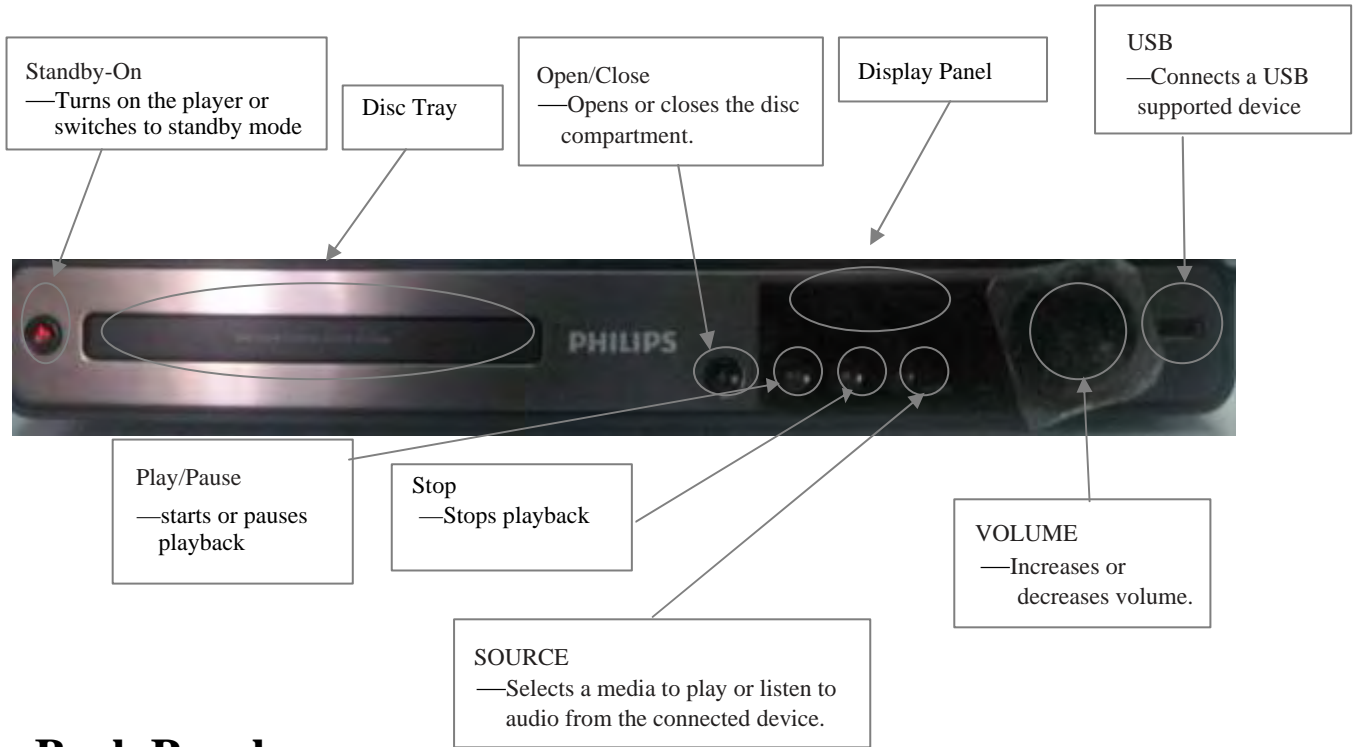
Type/Versions	HTS3180	
	/12	/51
Board in used		
DECODE board	C	C
POWER board	C	C
AMP board	C	C
LED board	C	C
KEY board	C	C

\*C=Component Level Repair

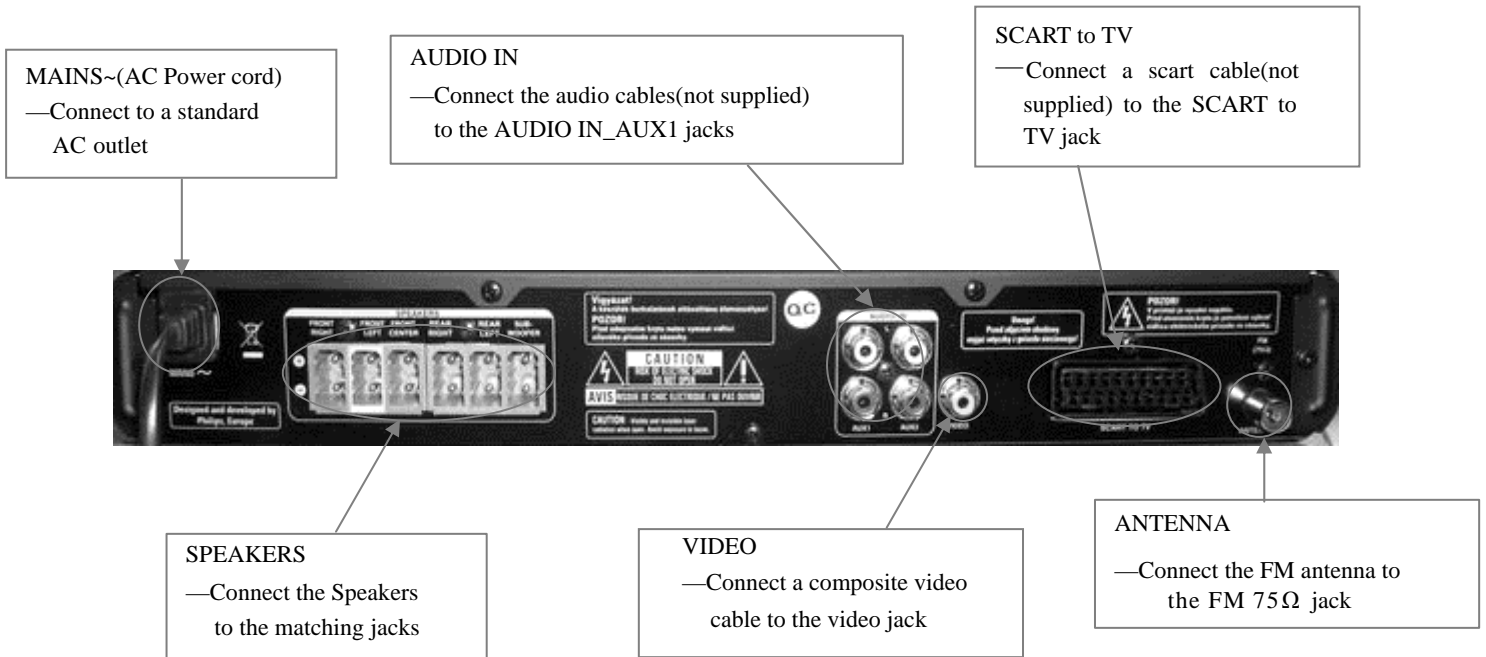


# OPERATING CONTROLS AND FUNCTIONS

## Front Panel



## Back Panel



# SPECIFICATIONS

## AMPLIFIER

---

Total output power ..... 300 W RMS(30% THD)  
Frequency Response .....180Hz – 18kHz /  $\pm 3$  dB  
Signal-to-Noise Ratio .....>- 60 dB (A-weighted)  
Input Sensitivity  
- AUX.....500 mV  
- SCART TO TV .....500 mV

## RADIO

---

Tuning Range ..... FM 87.5-108 MHz  
.....(50kHz)  
.....26 dB Quieting  
Sensitivity..... FM 22 dBf,  
IF Rejection Ratio .....FM 50 dB  
Signal-to-Noise Ratio .....FM 30 dB  
Harmonic Distortion ..... FM 3%  
Frequency Response ..... FM 180 Hz–10 kHz /  $\pm 3$  dB  
Stereo Separation ..... FM 26 dB (1 kHz)  
Stereo Threshold .....FM 23.5 dB

## DISC

---

Laser Type .....Semiconductor  
Disc Diameter .....12cm / 8cm  
Video Decoding ..... MPEG-1 / MPEG-2 /DivX  
..... / DivX Ultra  
Video DAC .....12 Bits,108MHz  
Signal System .....PAL / 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.....220 - 240 V~50Hz  
Standby power consumption.....<1W  
Power Consumption .....60 W  
Dimensions ..... 360 x 55 x 332 (mm)  
.....(w x h x d)  
Weight .....2.64 kg

## SPEAKERS

---

System ..... Full range satellite  
Speaker impedance .....8 ohm(centre),4 ohm(Front/Rear)  
Speaker drivers ..... 3" full range speaker  
Frequency response .....150 Hz – 20 kHz  
Dimensions:  
-Center .....100 x 100x 75 (mm)  
-Front/Rear..... 100 x 100x 75 (mm)  
.....(w x h x d)  
Weight:  
-Center .....0.38kg  
-Front/Rear .....0.38 kg/each

## USB

---

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

## SUBWOOFER

---

Impedance .....8 ohm  
Speaker drivers ..... 165mm (6.5") woofer  
Frequency response .....45Hz – 150 Hz  
Dimensions .....122.6x 309.5 x 369 (mm)  
.....(w x h x d)  
Weight .....3.54kg

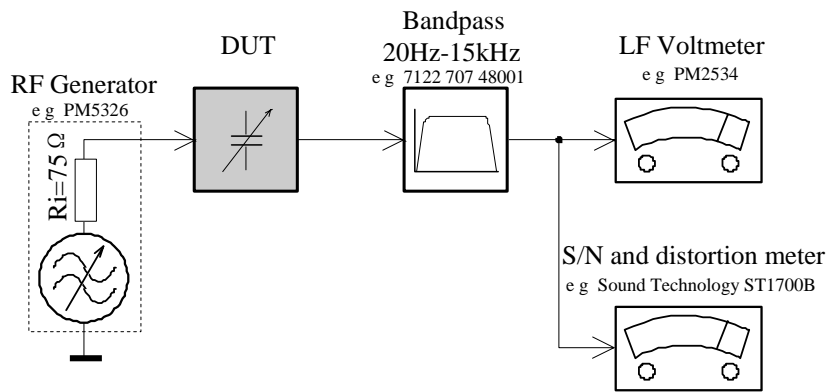
## Laser specification

---

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

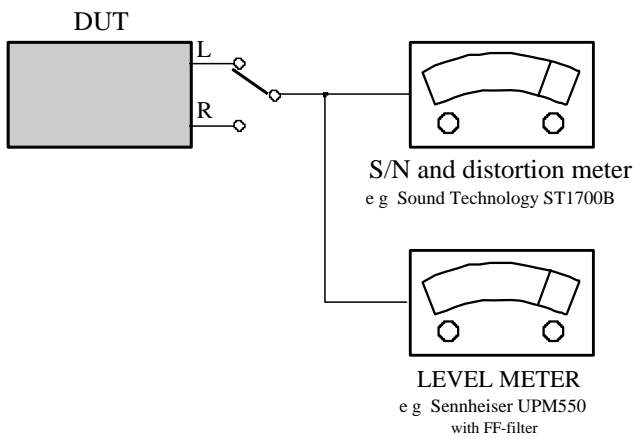
## Tuner FM



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

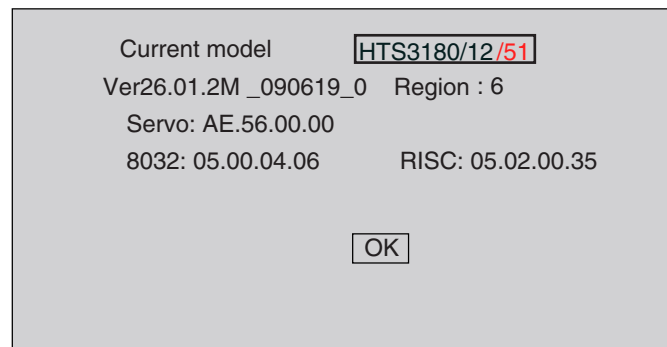
### **2)Region Code Change**

- 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**

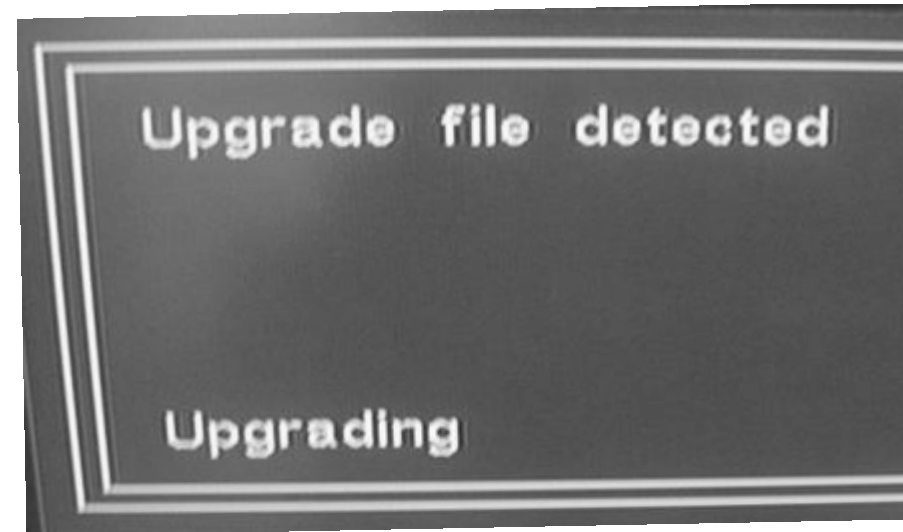
- a) Press "SETUP" button on R/C,TV will show setup menu
- b) Select the menu using the▼ and ► on RC
- c) Go preference page select "Version Info".  
TV will show the version on screen.

### **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:

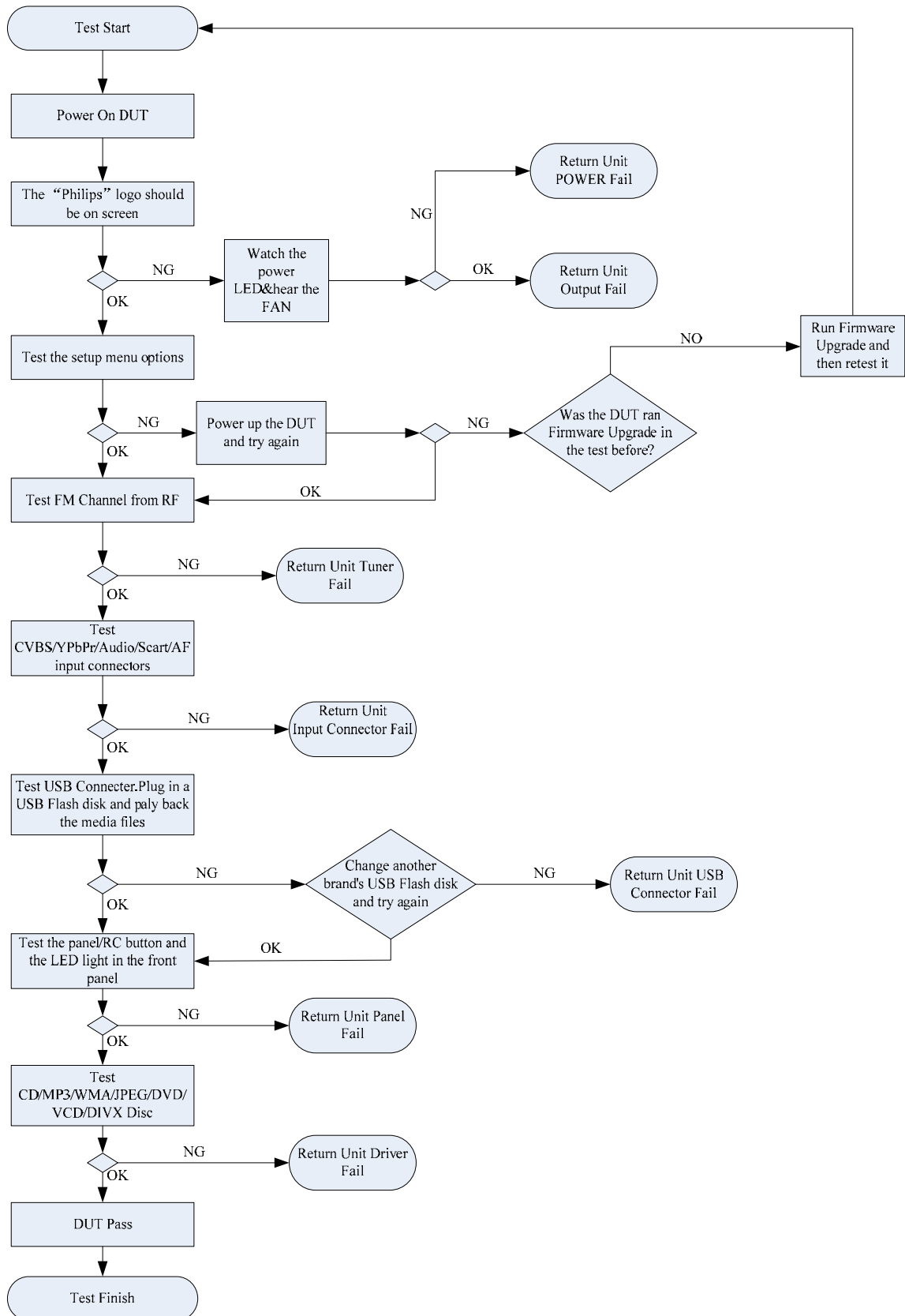


### **CAUTION!**

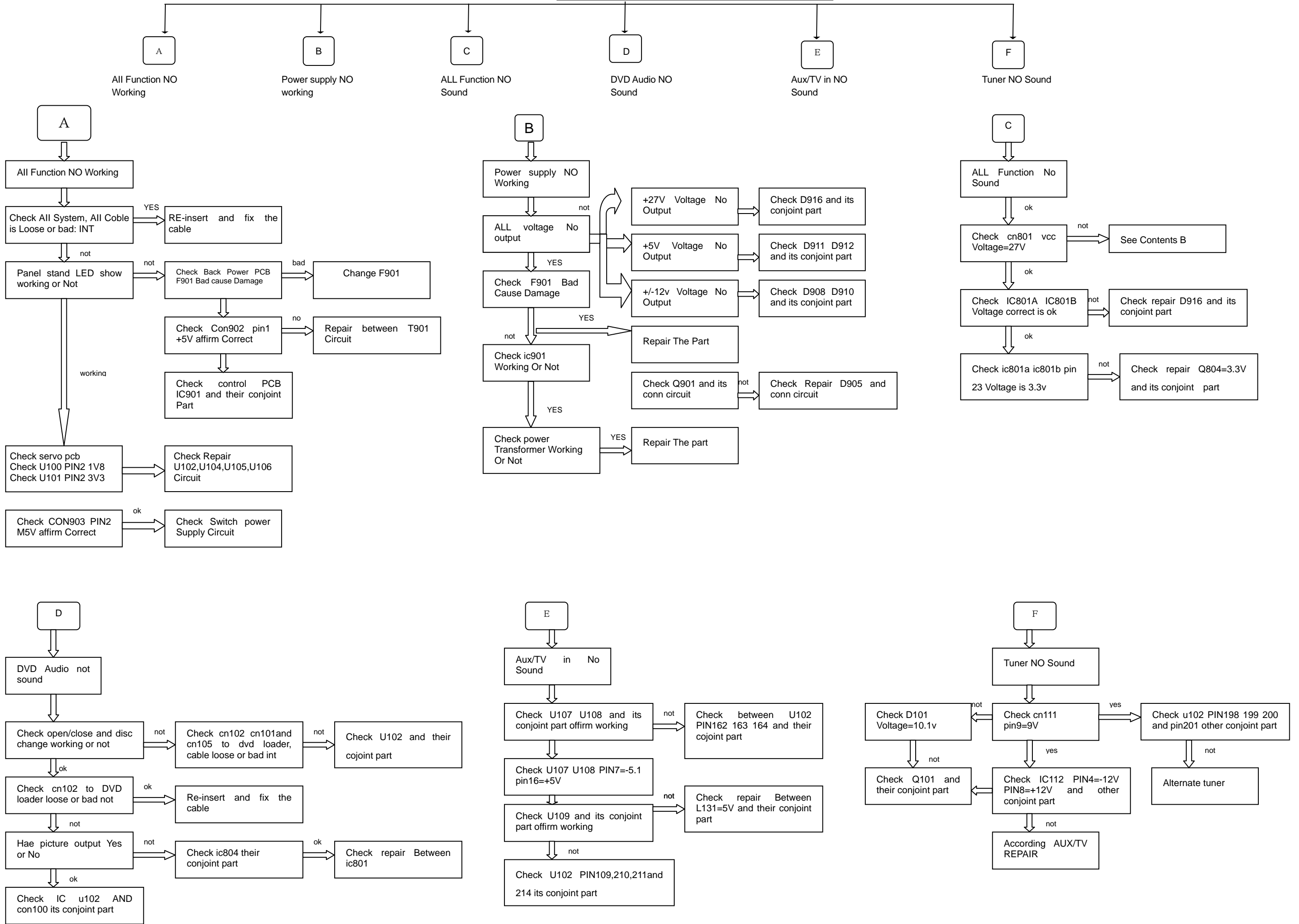
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

## Flow chart on how to filter between working & defective sets

Return Unit Test Flow



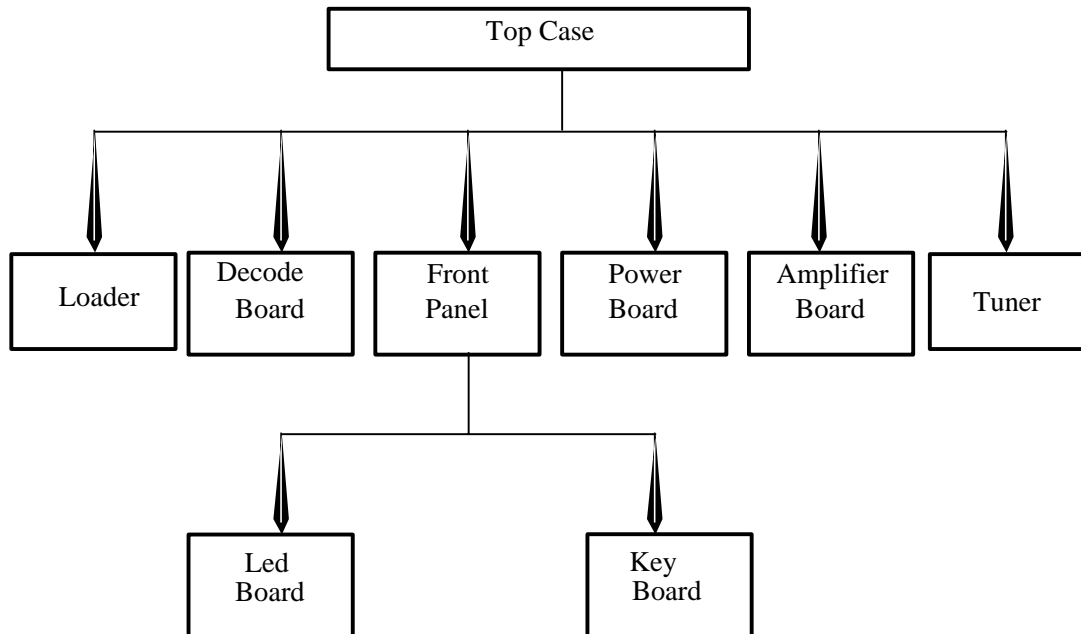
# MAIN UNIT REPAIR CHART



# 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.

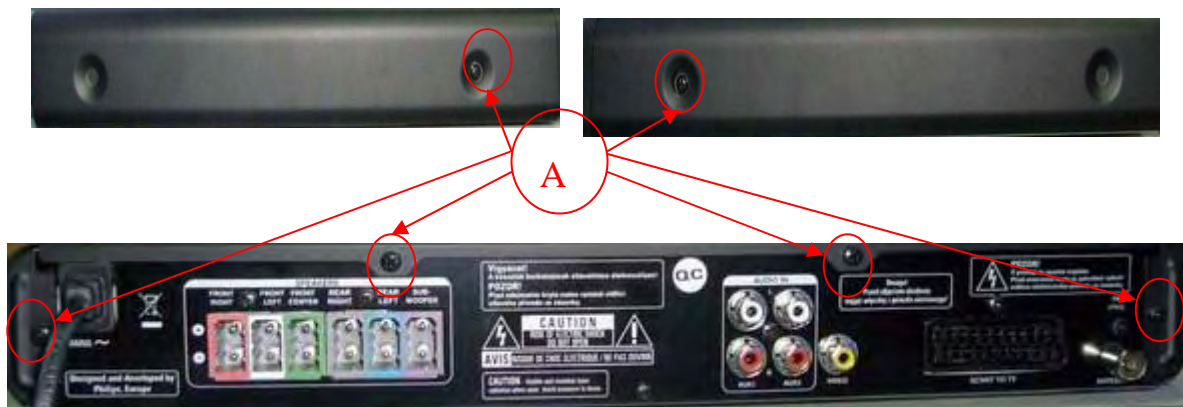


Figure 2-1.

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.

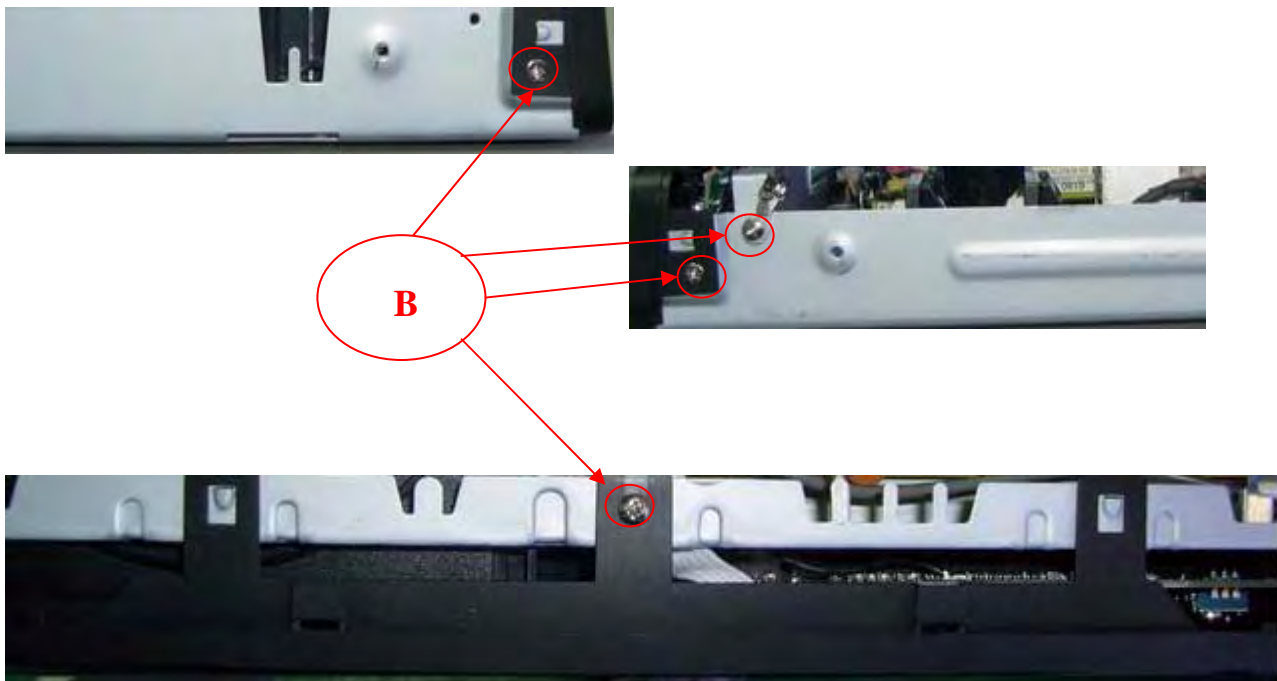


Figure 3-1



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

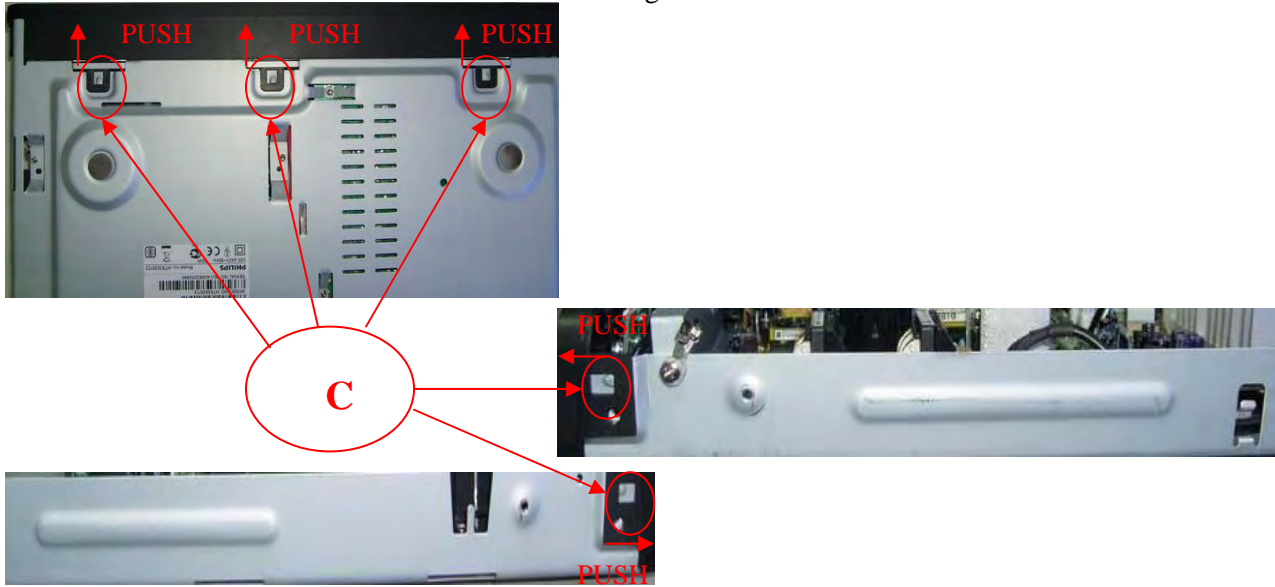


Figure 3-2

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

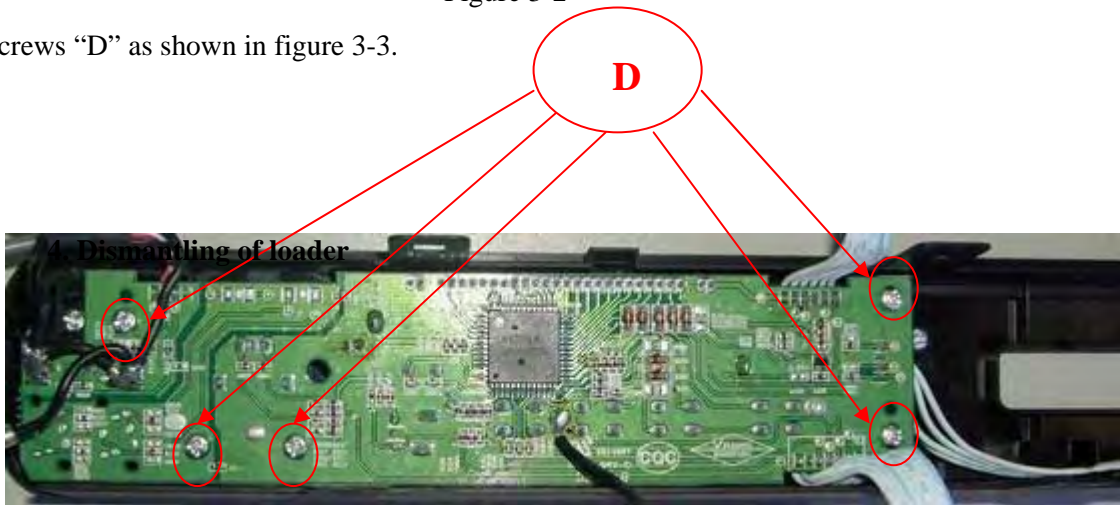


Figure 3-3

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

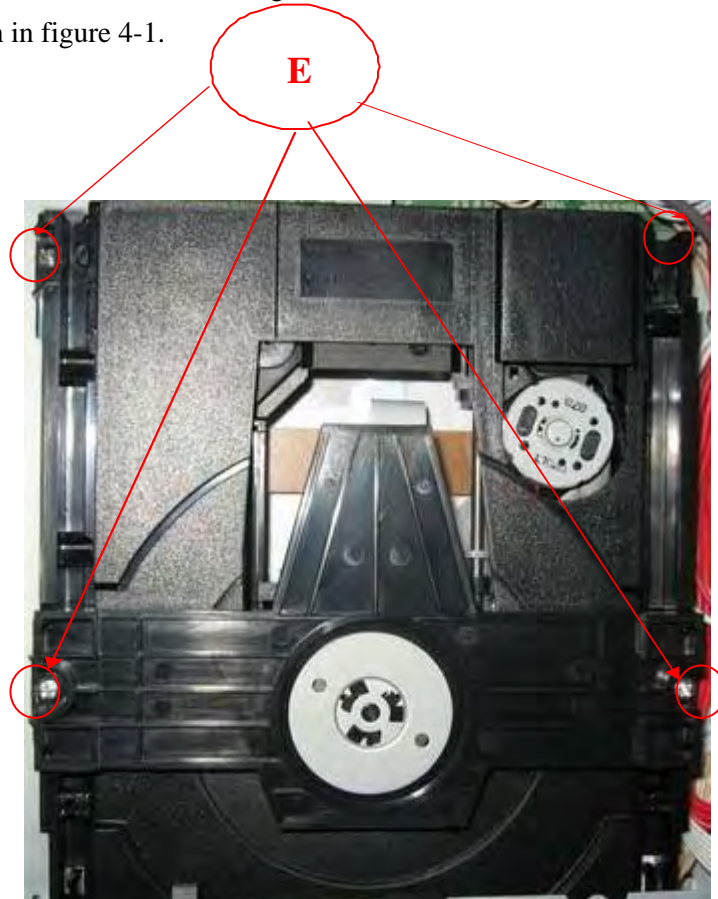


Figure 4-1

**5. Dismantling of decode board**

5-1. Loosen 4 screws as shown in figure 5-1.

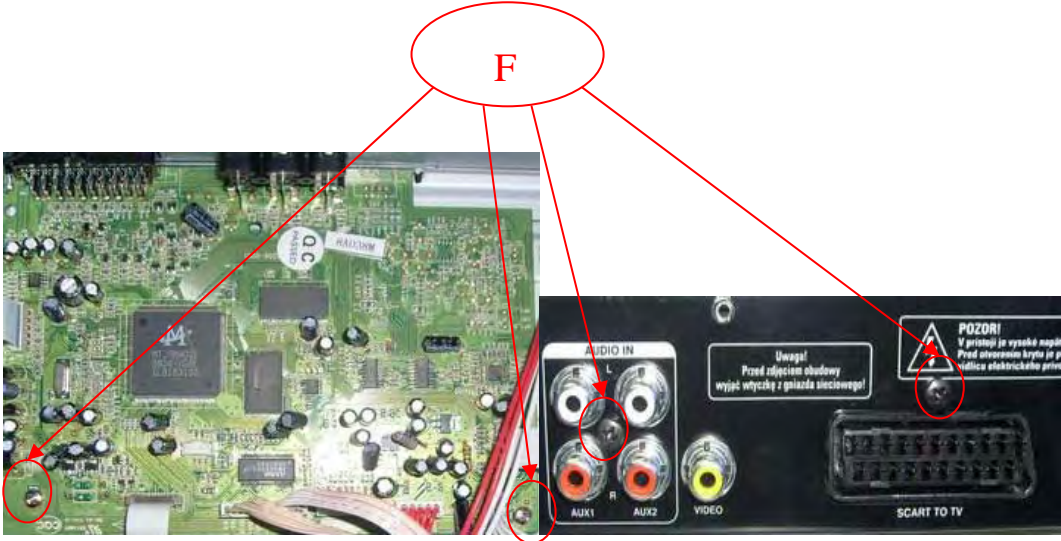


Figure 5-1

**6. Dismantling of power board**

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

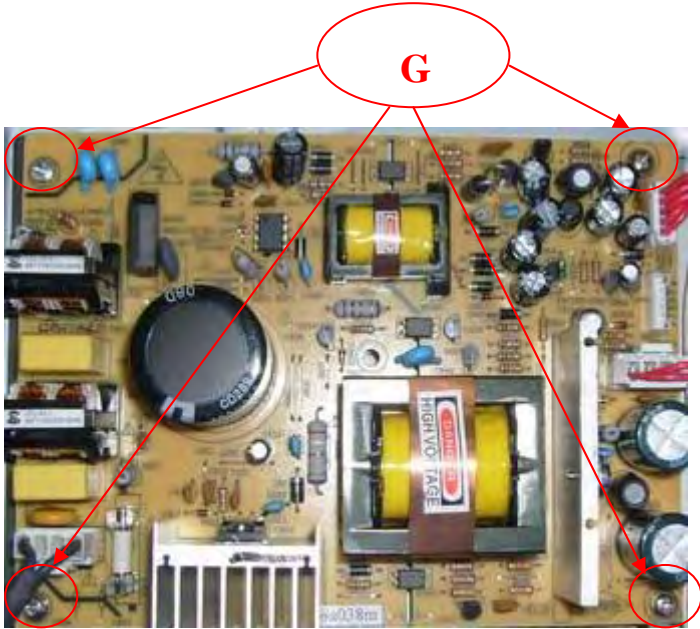


Figure 6-1

## 7. Dismantling of amplifier board

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

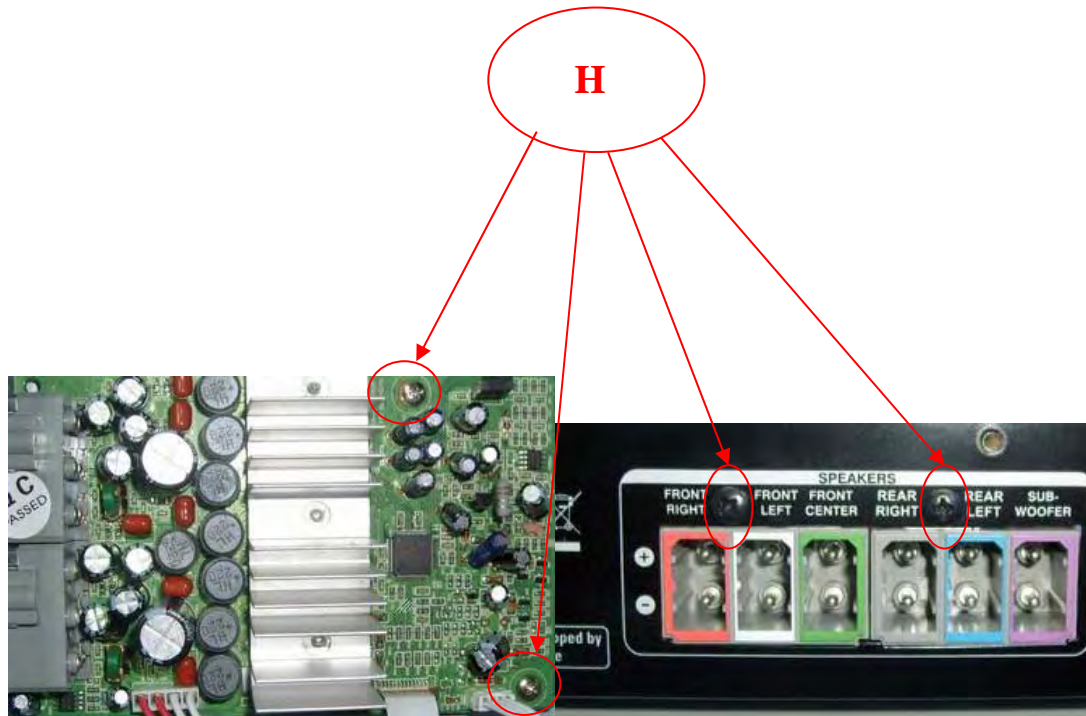


Figure 7-1.

## 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.

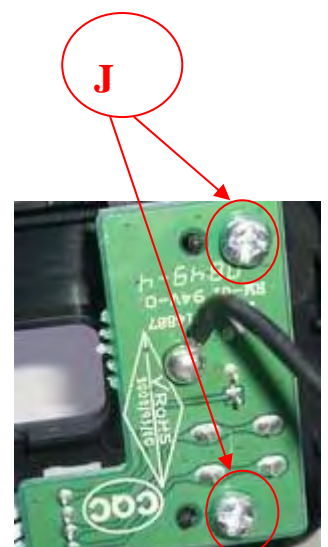
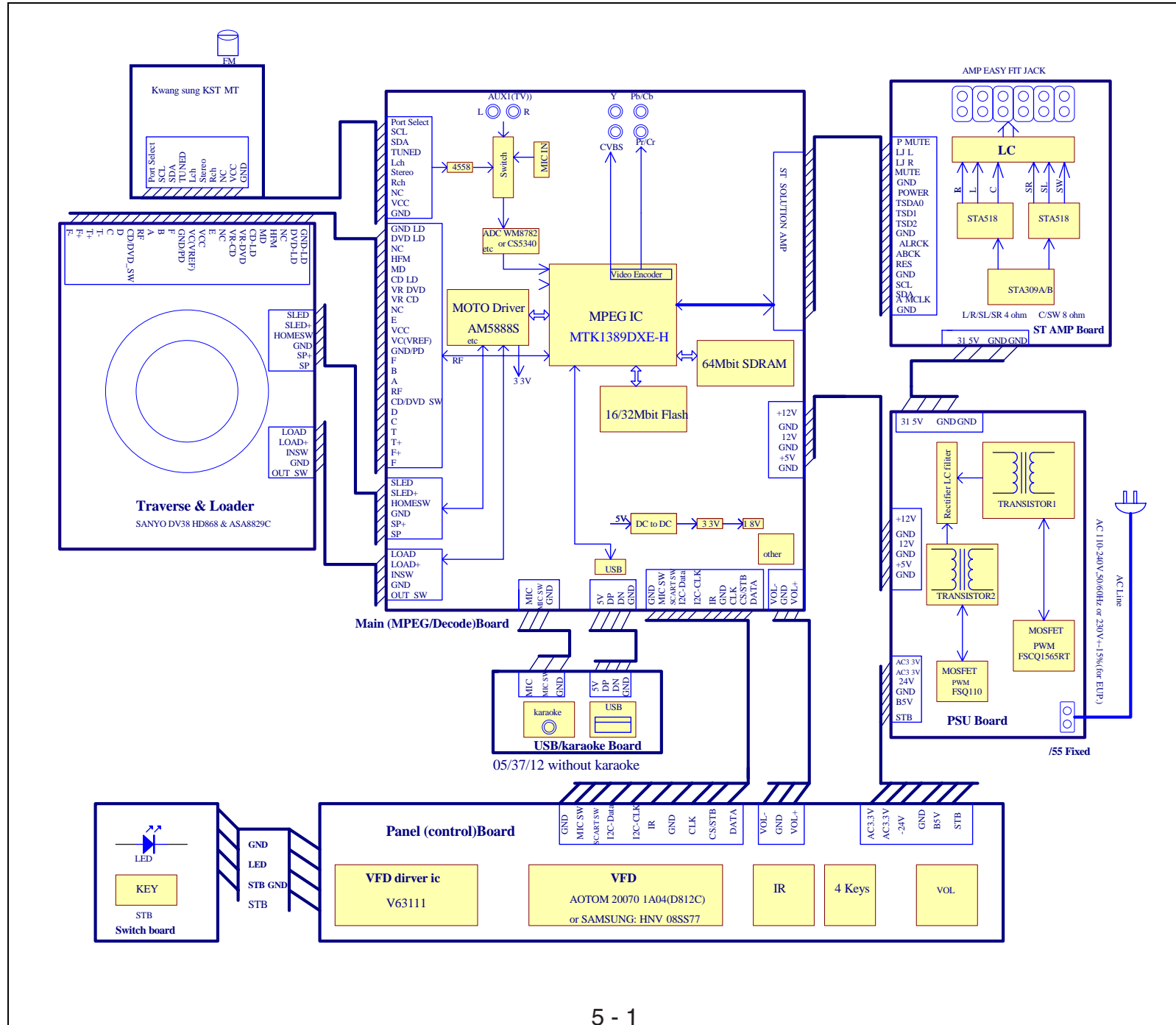


Figure 9-1.

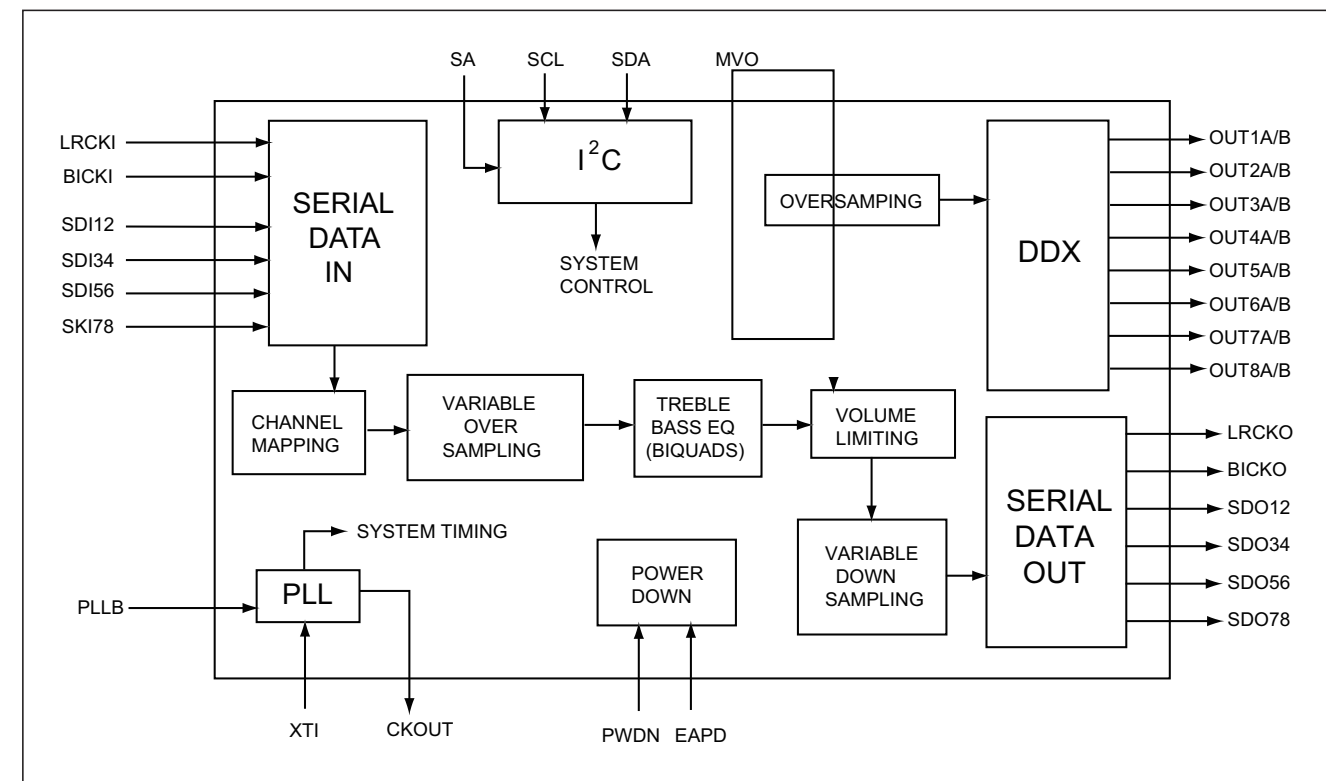


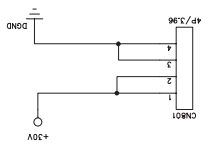
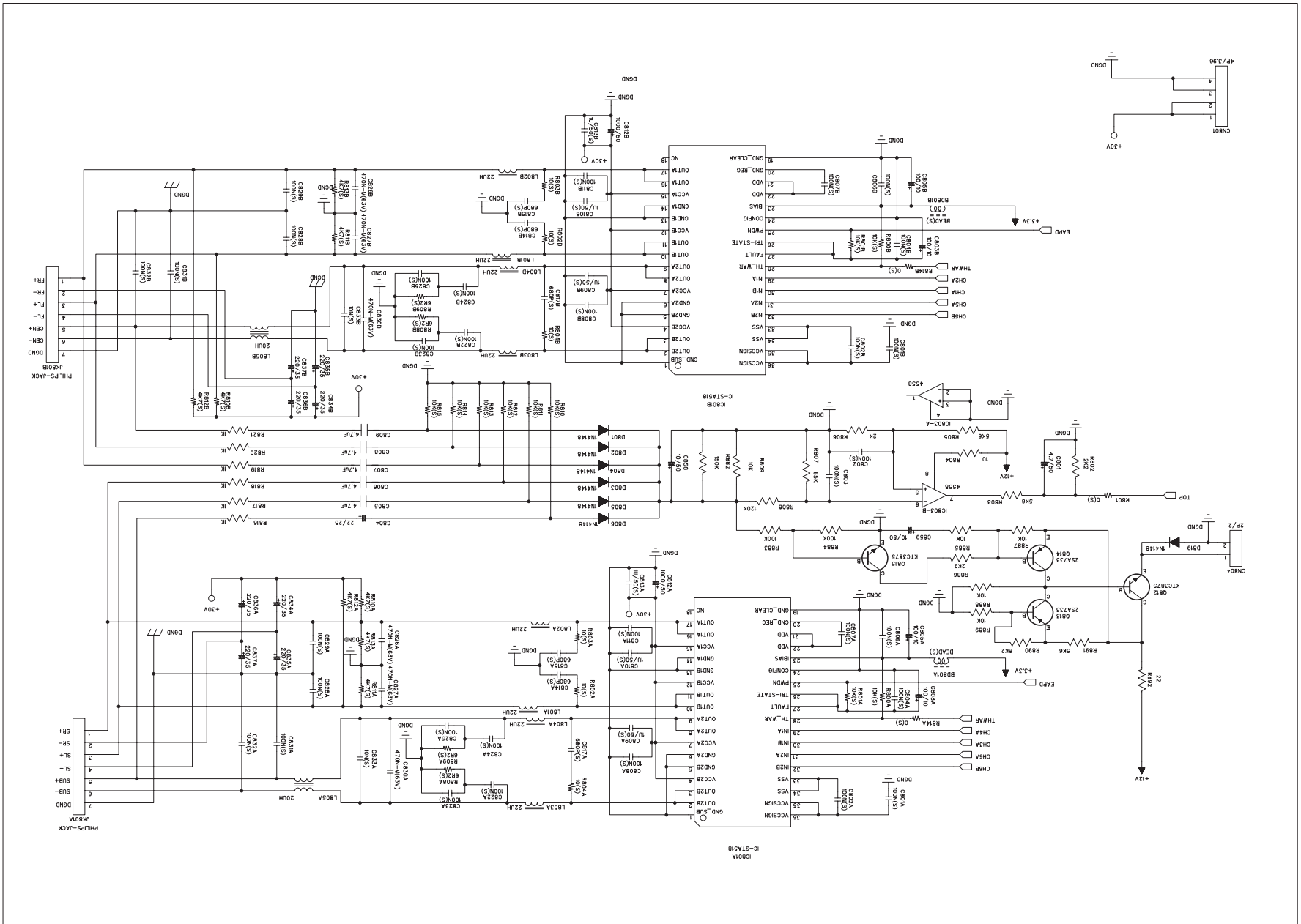
# AMPLIFIER BOARD

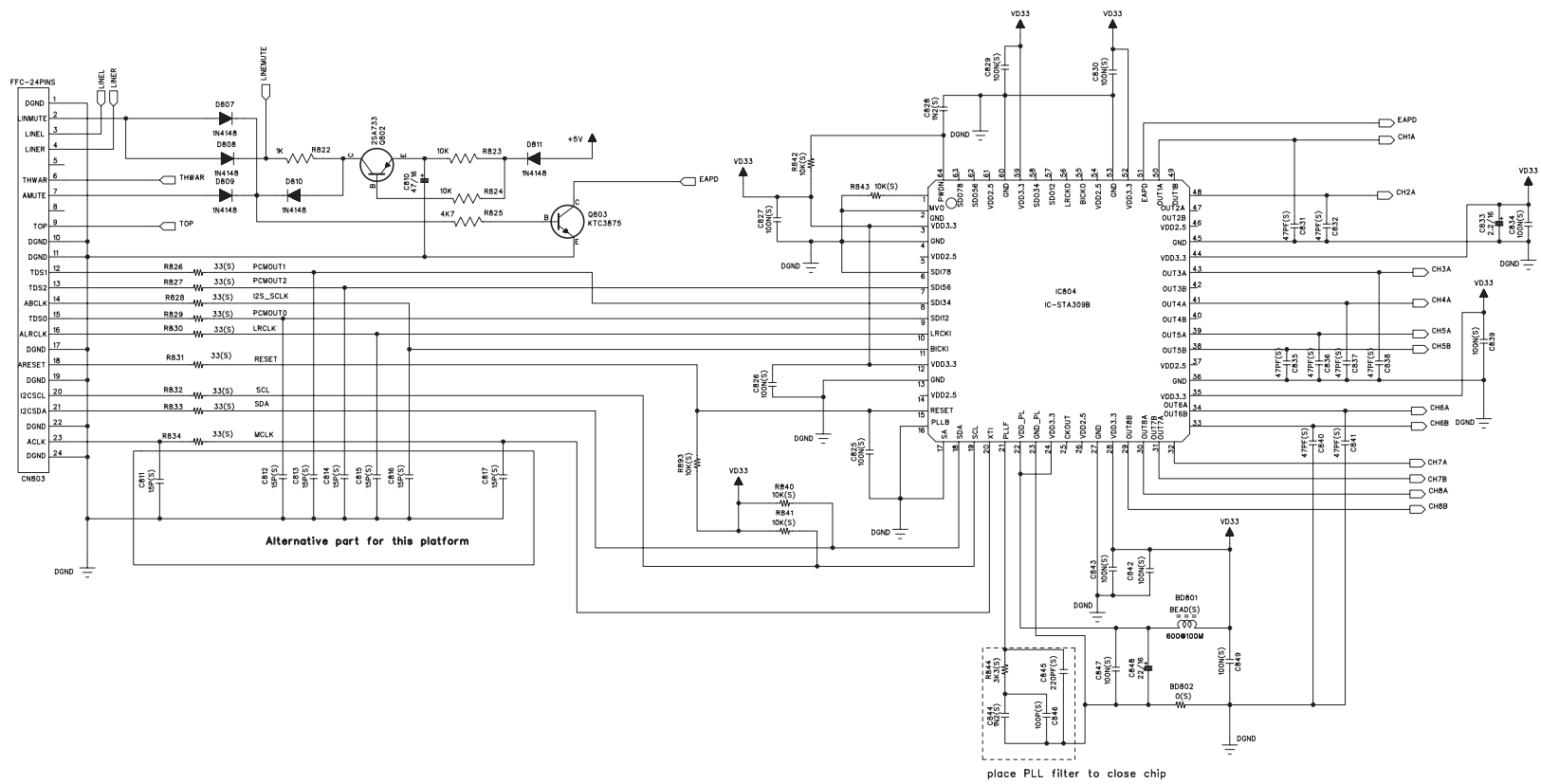
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## INTERNAL IC DIAGRAM - STA309A

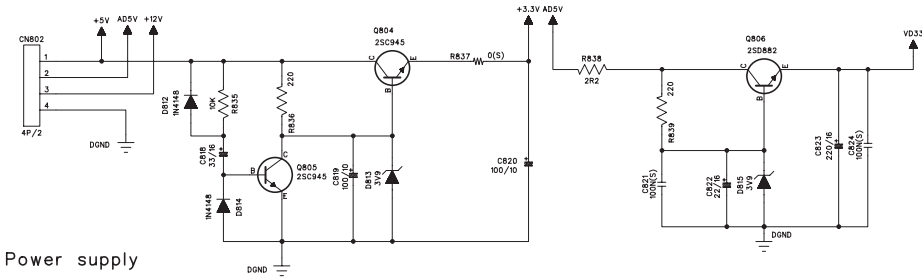




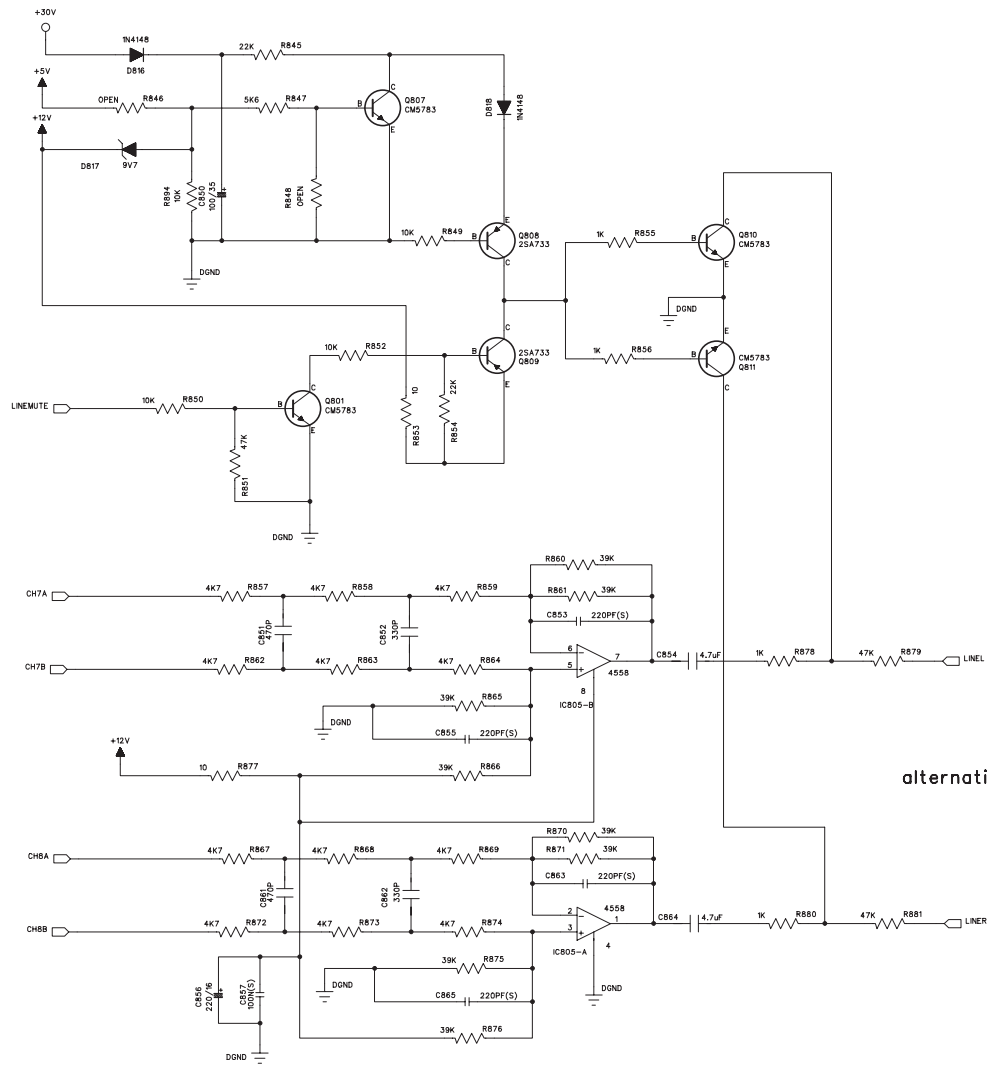


Alternative part for this platform

place PLL filter to close chip

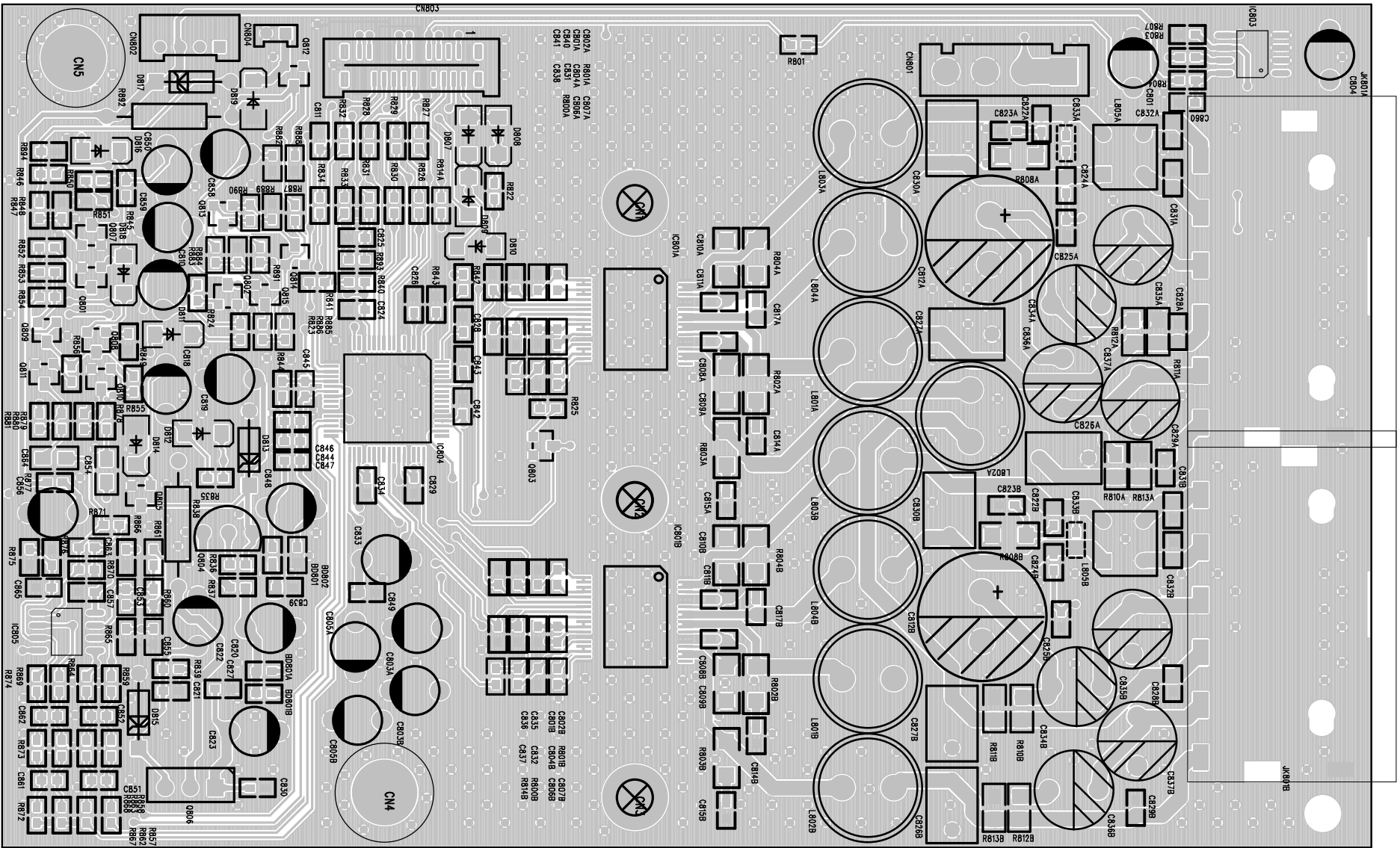


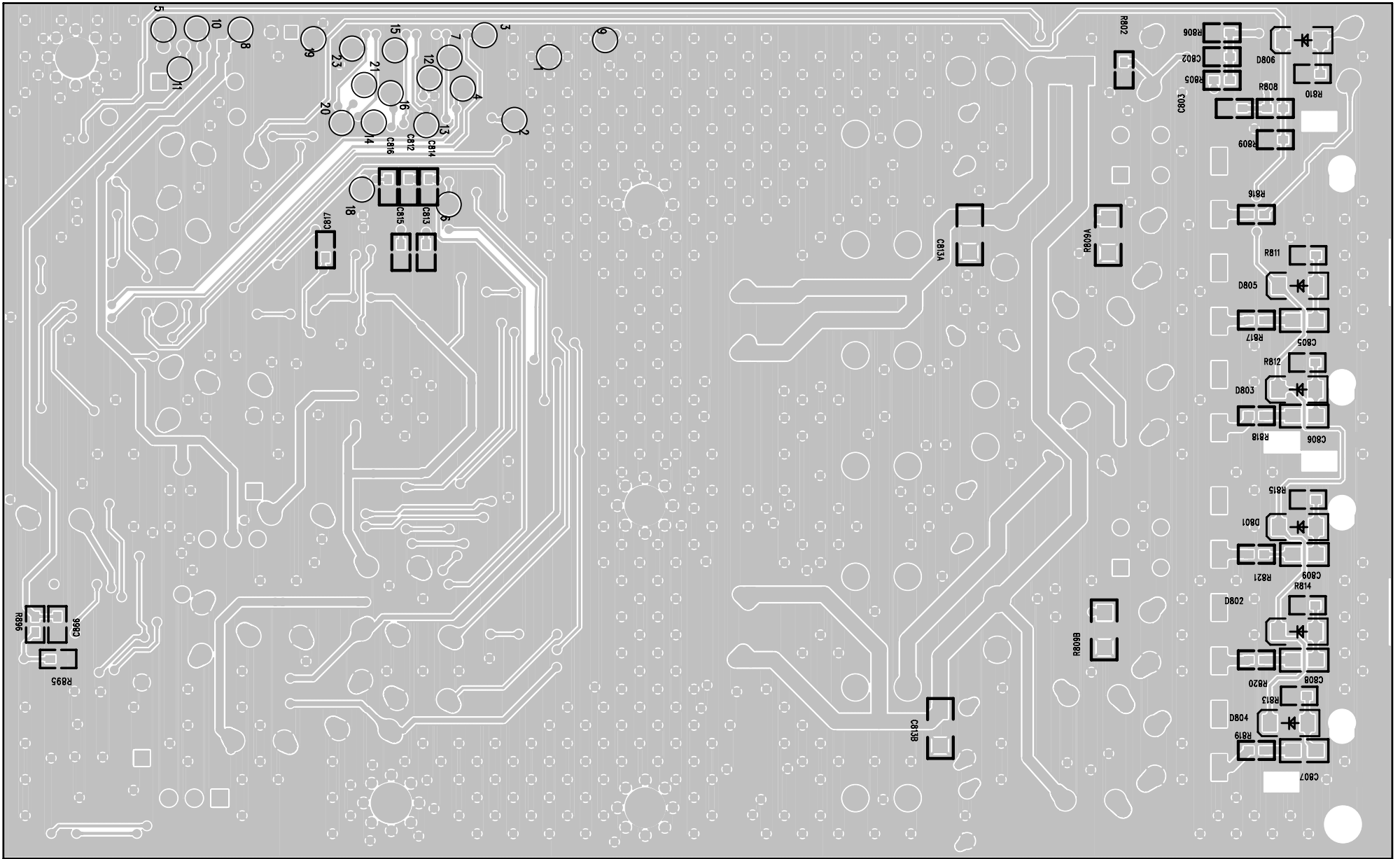
Power supply



alternative part for this platform





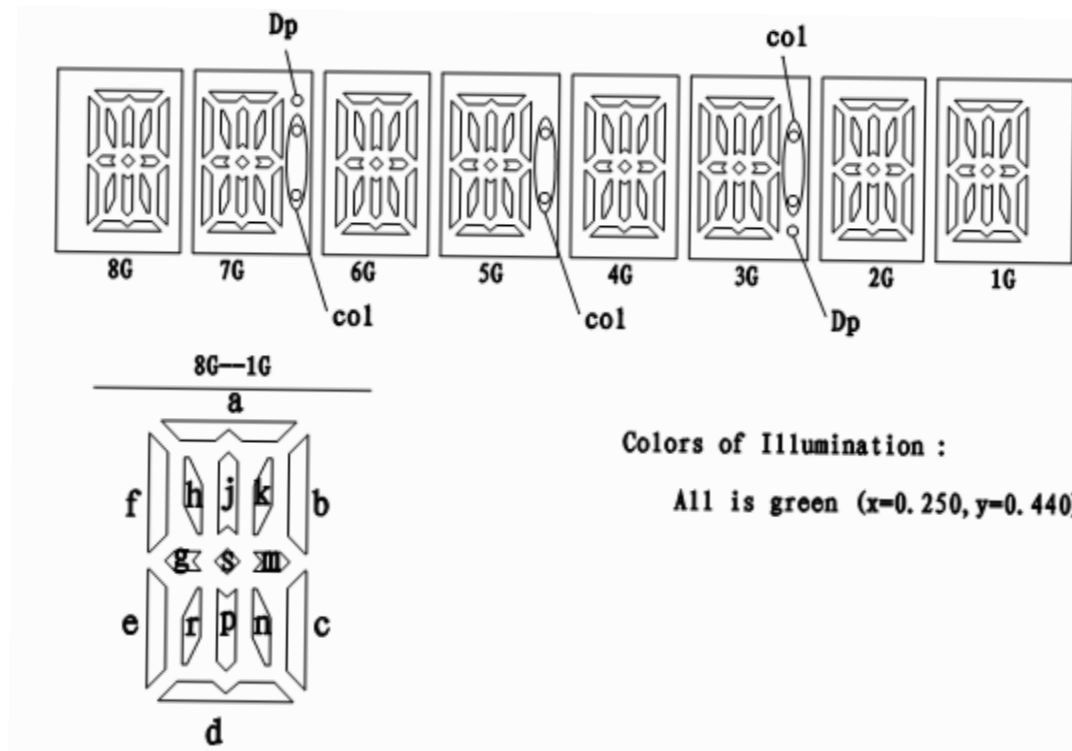


# LED & KEY BOARD

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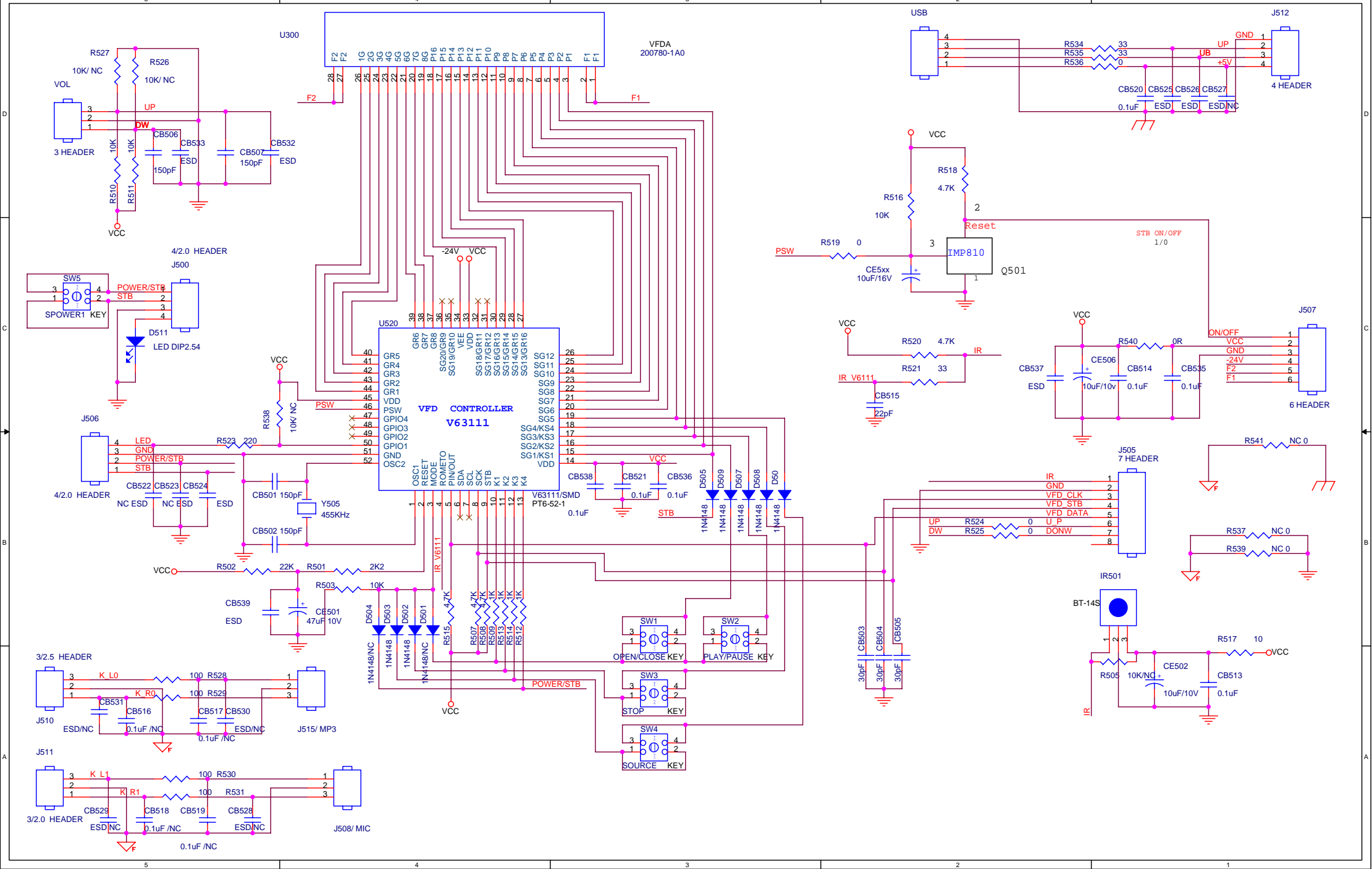
FTD Display Pin Assignment.....7-1  
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## FTD DISPLAY PIN ASSIGNMENT

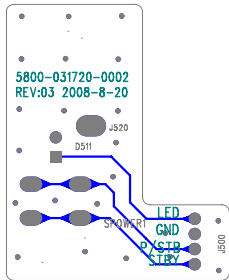


Colors of Illumination :  
 All is green (x=0.250,y=0.440).

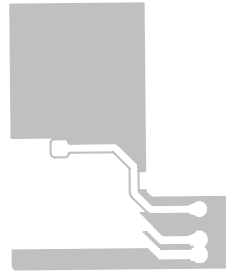
	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a
P2	j, p	j, p	j, p	j, p	j, p	j, p	j, p	j, p
P3	h	h	h	h	h	h	h	h
P4	k	k	k	k	k	k	k	k
P5	b	b	b	b	b	b	b	b
P6	f	f	f	f	f	f	f	f
P7	m	m	m	m	m	m	m	m
P8	g	g	g	g	g	g	g	g
P9	c	c	c	c	c	c	c	c
P10	e	e	e	e	e	e	e	e
P11	r	r	r	r	r	r	r	r
P12	n	n	n	n	n	n	n	n
P13	d	d	d	d	d	d	d	d
P14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



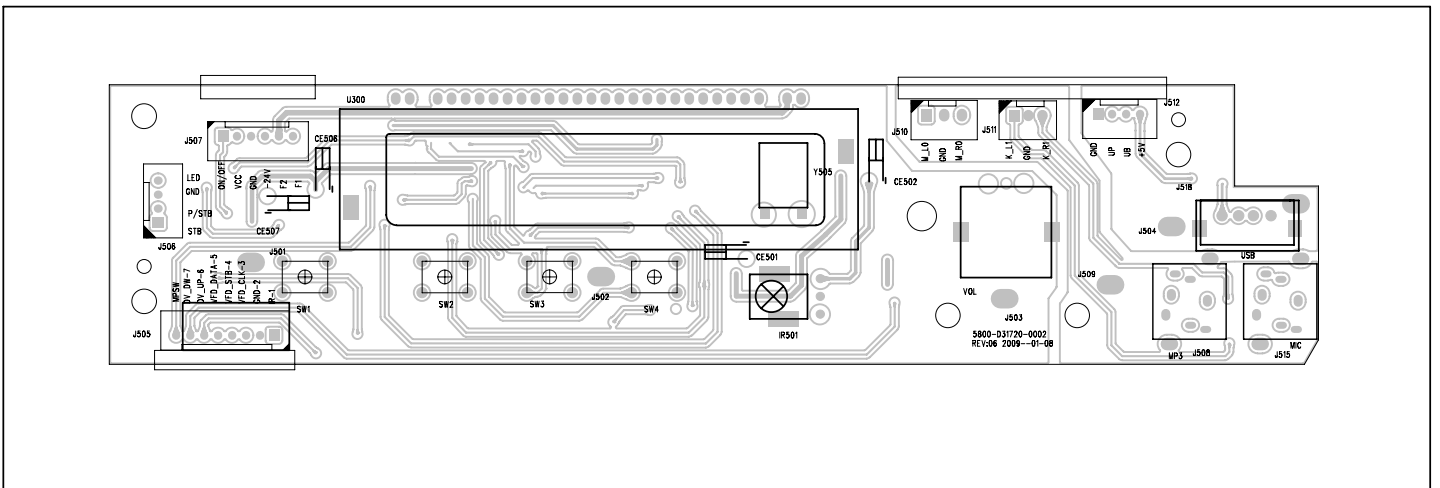
### LED BOARD TOP VIEW



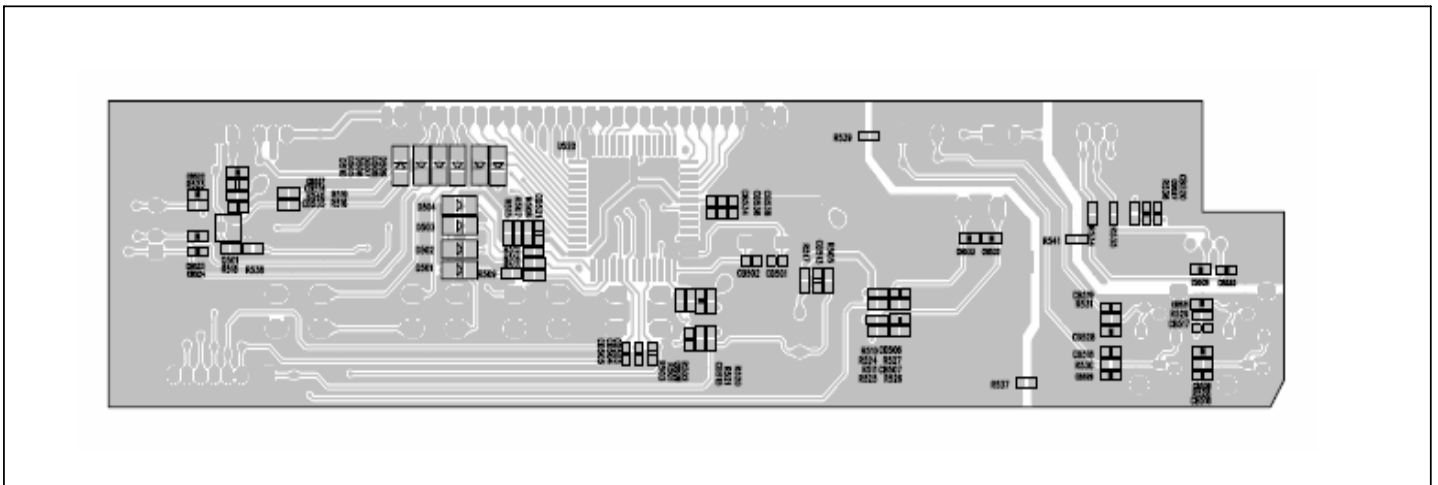
### LED BOARD BOTTOM VIEW



### KEY BOARD TOP VIEW



### KEY BOARD BOTTOM VIEW

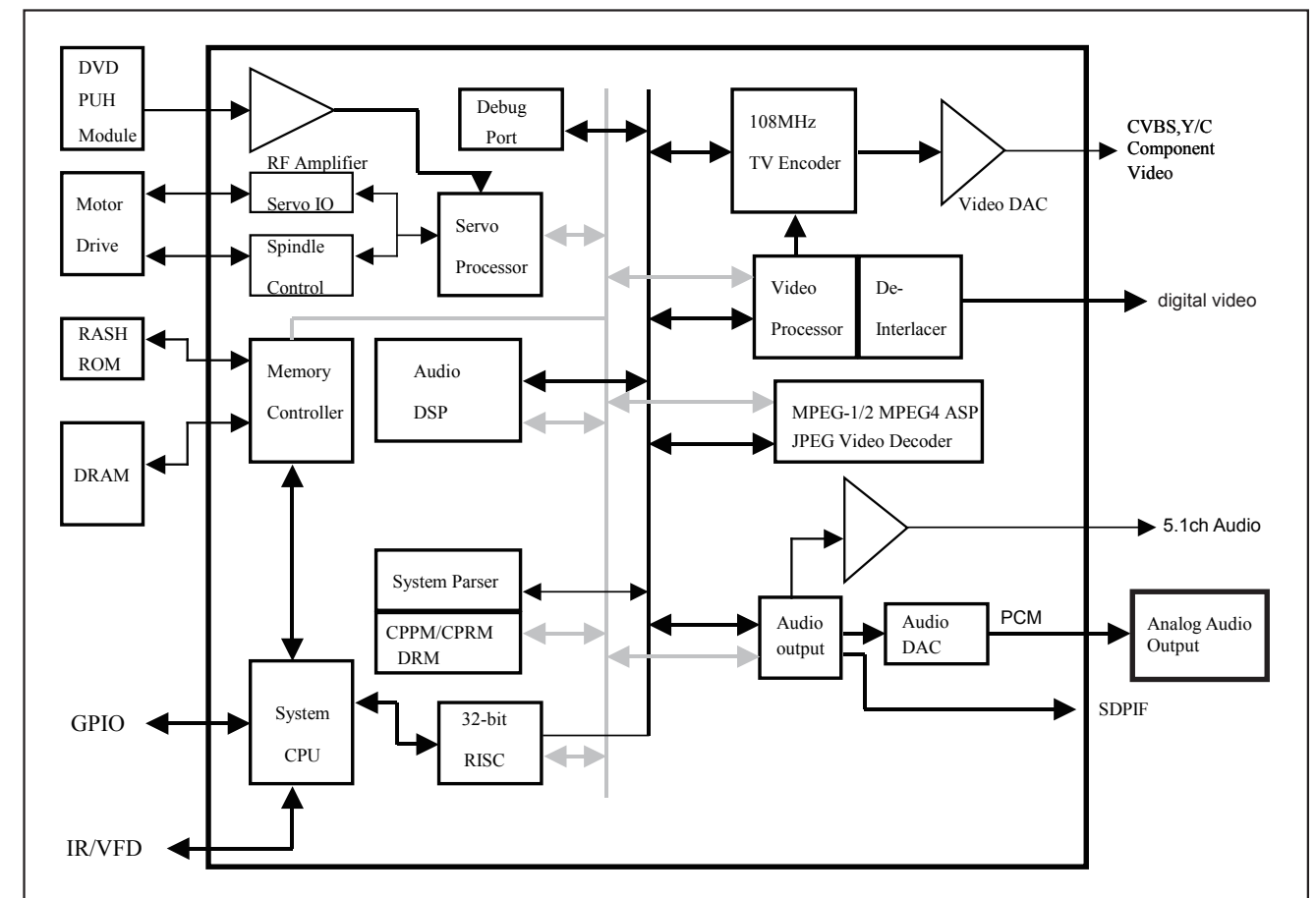


# DECODE BOARD

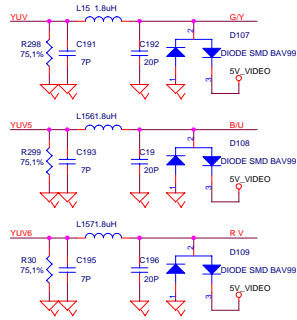
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## INTERNAL IC DIAGRAM - MT1389HD

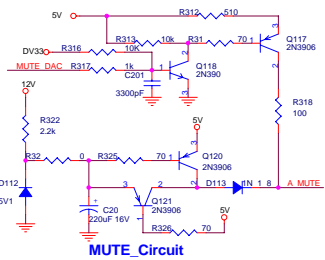
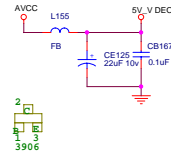
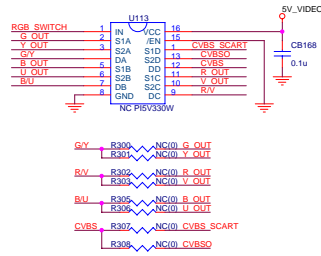
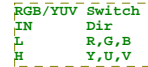


- [2] YUV[3,6] >> YUV[3,6]
- [2] MUTE\_DAC >> MUTE\_DAC
- [2] FS0 >> FS0
- [2] FS1 >> FS1
- [2] RGB\_SWITCH >> RGB\_SWITCH
- [5] SCART\_L >> SCART\_L
- [5] SCART\_R >> SCART\_R
- [5] A\_MUTE >> A\_MUTE
- [1,2,5] AVCC << AVCC
- [1,5,6] 12V << 12V
- [1,2,3,5,6] DV33 << DV33
- [1,2] 5V << 5V
- [5] SCART\_L\_IN << SCART\_L\_IN
- [5] SCART\_R\_IN << SCART\_R\_IN

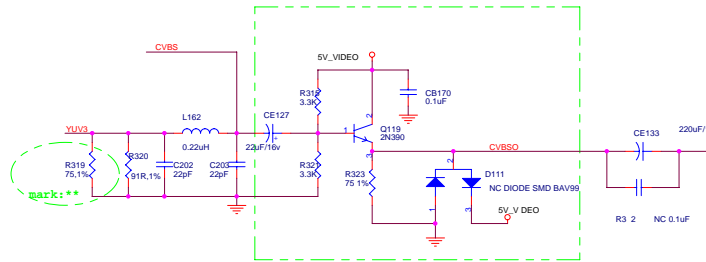


Low Impedance Mode

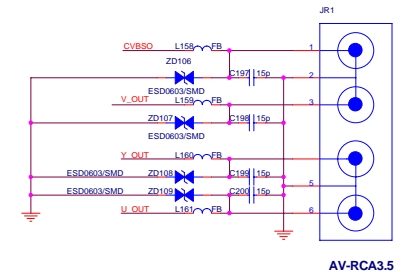
RGB\_SWITCH: 0--->RGB,  
1--->CVBS/YUV



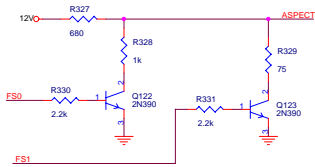
MUTE\_Circuit



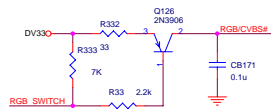
Only when both signal CVBSO & SCART CVBS need output, then the parts mark \*\*\* will need to be added.



AV-RCA3.5

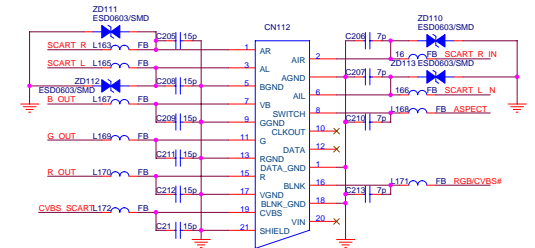


ASPECT



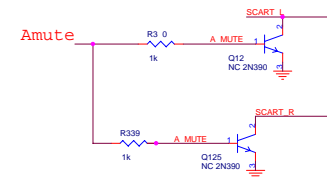
SCART CONTROL

FS0	FS1	WFL383
F131558	F131557	WFL383
0	0	4 3 / 008
0	1	
1	0	16 9
1	1	S18 / AUX IN / M03 IN / SCART IN / PK IN



SCART CONNECTOR

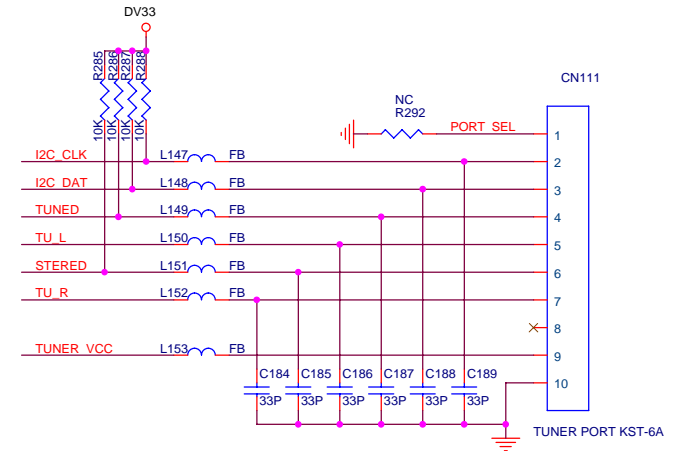
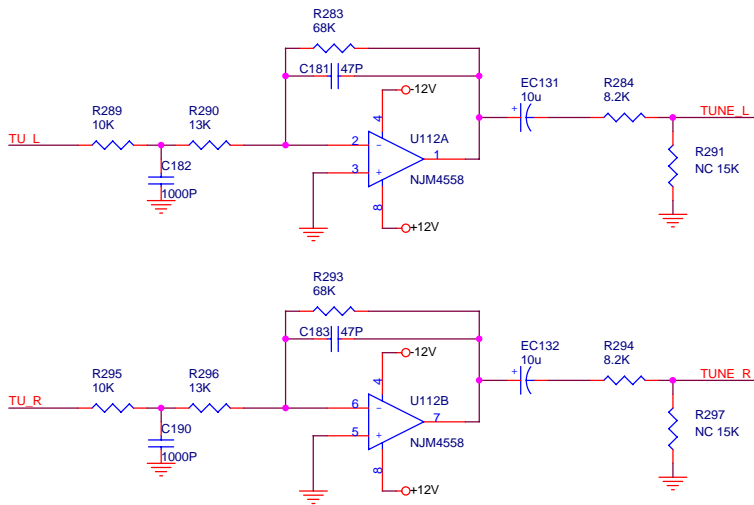
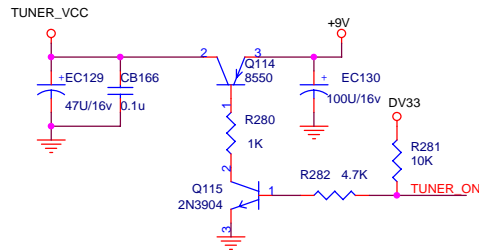
RGB\_SWITCH#: 1-3V RGB, 0-0.4V CVBS



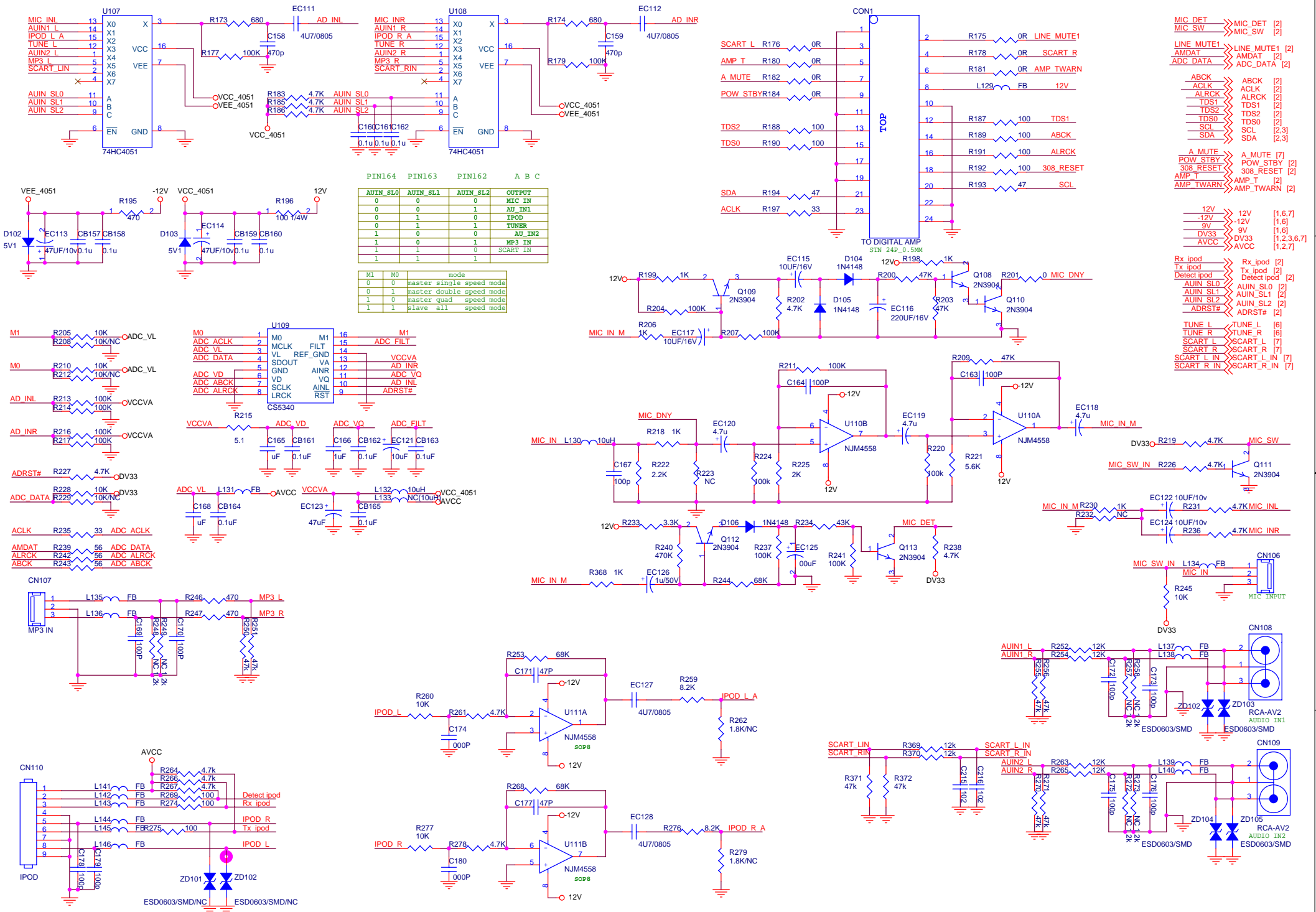
[2] TUNER\_ON >> TUNER\_ON  
 [2] TUNED >> TUNED  
 [2] STERED >> STERED  
 [2] I2C\_CLK >> I2C\_CLK  
 [2] I2C\_DAT >> I2C\_DAT

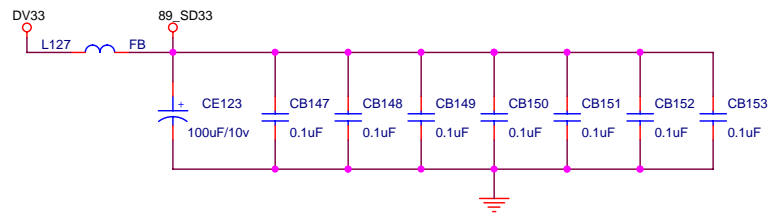
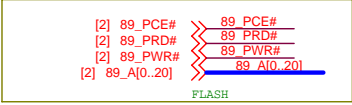
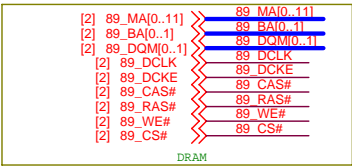
TUNE\_L >> TUNE\_L [5]  
 TUNE\_R >> TUNE\_R [5]

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

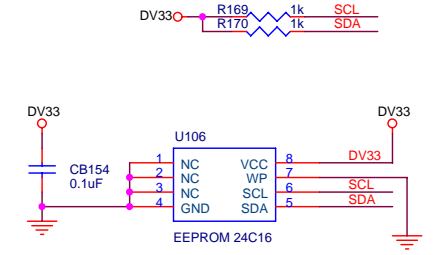
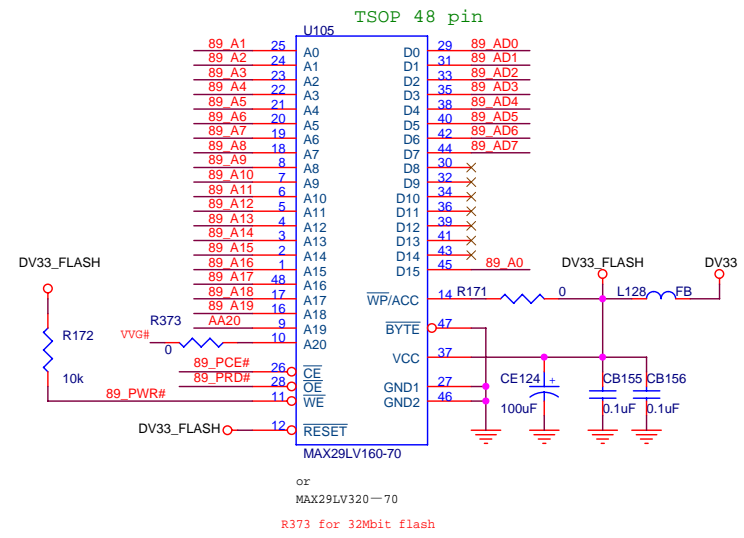
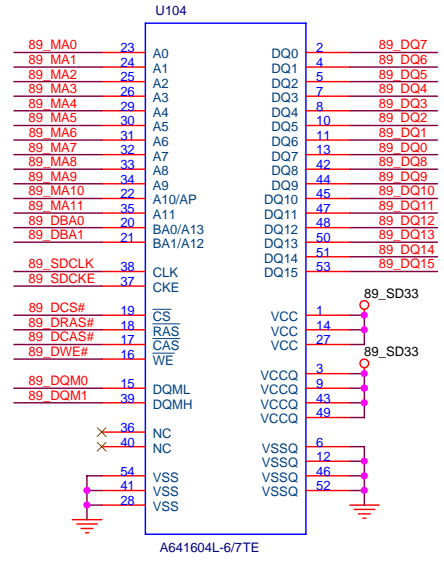
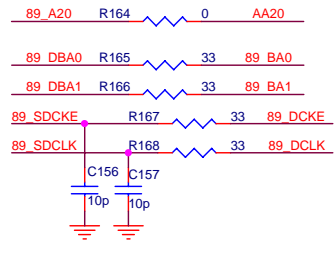
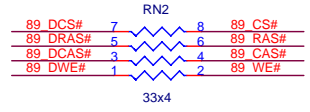


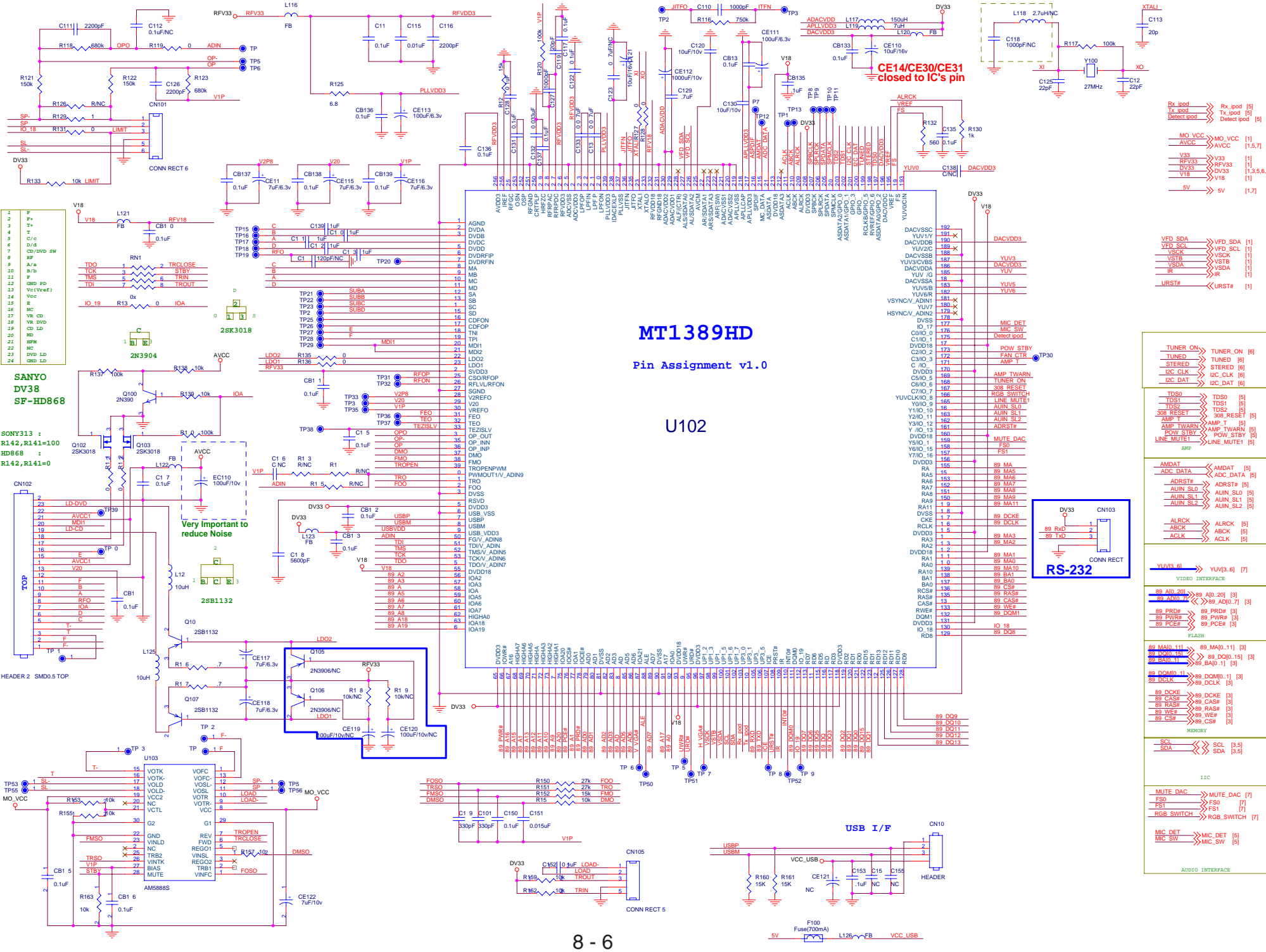






DV33 >>> DV33 [1,2,5,6,7]



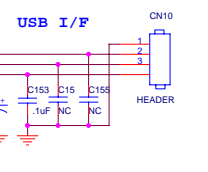
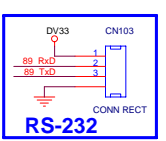


### MT1389HD Pin Assignment v1.0

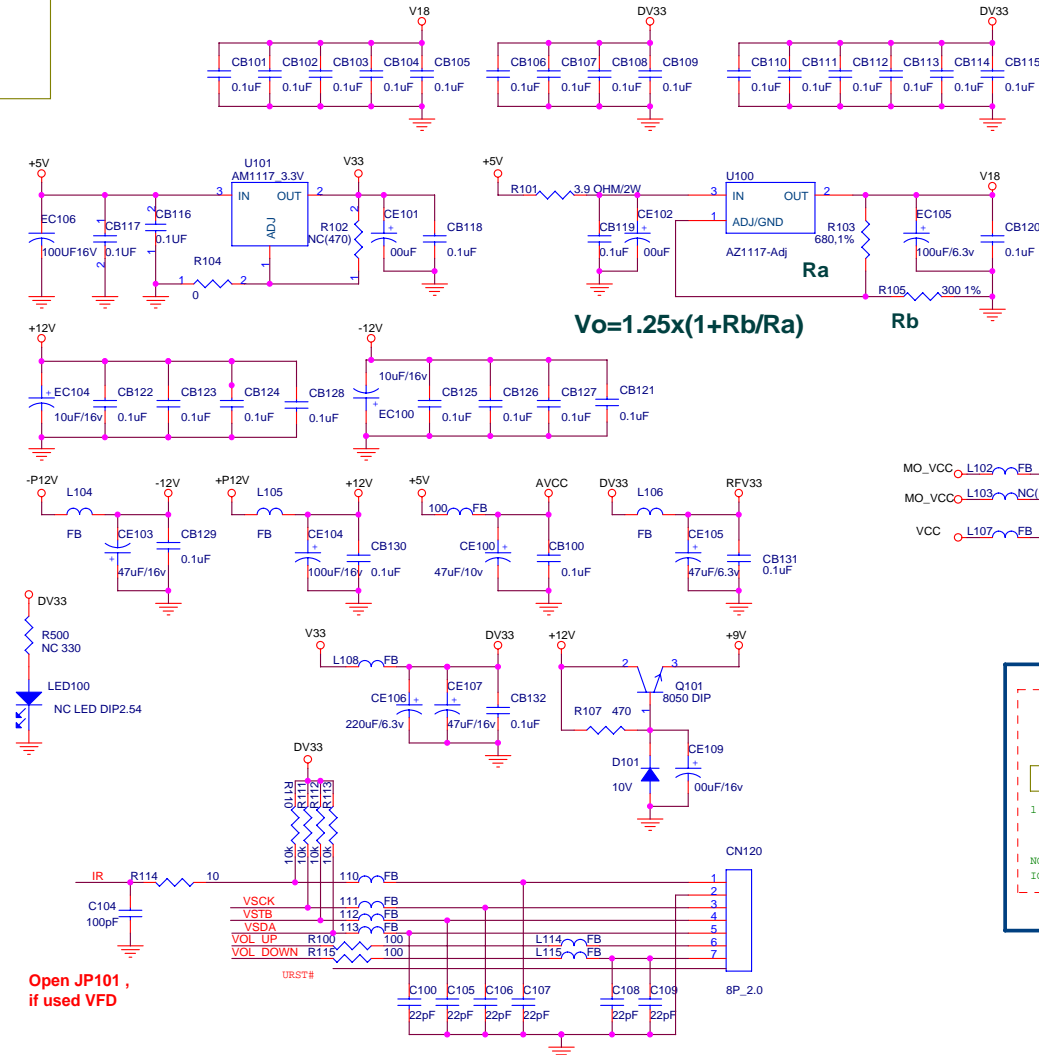
### U102

AVDD3	25	AGND	1
AVDD2	26	DVDA	2
AVDD1	27	DVDB	3
AVDD0	28	DVDC	4
AVDD	29	DVDD	5
AVDD	30	DVDRIP	6
AVDD	31	DVDRFIN	7
AVDD	32	SA	8
AVDD	33	SB	9
AVDD	34	SC	10
AVDD	35	SD	11
AVDD	36	SDP	12
AVDD	37	SDP	13
AVDD	38	SDP	14
AVDD	39	SDP	15
AVDD	40	SDP	16
AVDD	41	SDP	17
AVDD	42	SDP	18
AVDD	43	SDP	19
AVDD	44	SDP	20
AVDD	45	SDP	21
AVDD	46	SDP	22
AVDD	47	SDP	23
AVDD	48	SDP	24
AVDD	49	SDP	25
AVDD	50	SDP	26
AVDD	51	SDP	27
AVDD	52	SDP	28
AVDD	53	SDP	29
AVDD	54	SDP	30
AVDD	55	SDP	31
AVDD	56	SDP	32
AVDD	57	SDP	33
AVDD	58	SDP	34
AVDD	59	SDP	35
AVDD	60	SDP	36
AVDD	61	SDP	37
AVDD	62	SDP	38
AVDD	63	SDP	39
AVDD	64	SDP	40
AVDD	65	SDP	41
AVDD	66	SDP	42
AVDD	67	SDP	43
AVDD	68	SDP	44
AVDD	69	SDP	45
AVDD	70	SDP	46
AVDD	71	SDP	47
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AVDD	73	SDP	49
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AVDD	75	SDP	51
AVDD	76	SDP	52
AVDD	77	SDP	53
AVDD	78	SDP	54
AVDD	79	SDP	55
AVDD	80	SDP	56
AVDD	81	SDP	57
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AVDD	83	SDP	59
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AVDD	101	SDP	77
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AVDD	106	SDP	82
AVDD	107	SDP	83
AVDD	108	SDP	84
AVDD	109	SDP	85
AVDD	110	SDP	86
AVDD	111	SDP	87
AVDD	112	SDP	88
AVDD	113	SDP	89
AVDD	114	SDP	90
AVDD	115	SDP	91
AVDD	116	SDP	92
AVDD	117	SDP	93
AVDD	118	SDP	94
AVDD	119	SDP	95
AVDD	120	SDP	96
AVDD	121	SDP	97
AVDD	122	SDP	98
AVDD	123	SDP	99
AVDD	124	SDP	100

Rx_pos	>>>	Rx_pos	[5]
Detect_pos	>>>	Detect_pos	[5]
MO_VCC	>>>	MO_VCC	[1]
AVCC	>>>	AVCC	[1,5,7]
V33	>>>	V33	[1]
RFV33	>>>	RFV33	[1]
DV33	>>>	DV33	[1,3,5,6,7]
V18	>>>	V18	[1]
V17	>>>	V17	[1,7]
VFD_SDA	>>>	VFD_SDA	[1]
VFD_SCL	>>>	VFD_SCL	[1]
V50K	>>>	V50K	[1]
V50A	>>>	V50A	[1]
V50B	>>>	V50B	[1]
IR	>>>	IR	[1]
URST#	>>>	URST#	[1]
TUNER_ON	>>>	TUNER_ON	[6]
TUNED	>>>	TUNED	[6]
STEREO	>>>	STEREO	[6]
I2C_CLK	>>>	I2C_CLK	[6]
I2C_DAT	>>>	I2C_DAT	[6]
TD50	>>>	TD50	[6]
TD51	>>>	TD51	[6]
TD52	>>>	TD52	[6]
308_RESET	>>>	308_RESET	[6]
AMP_T	>>>	AMP_T	[6]
AMP_TWARN	>>>	AMP_TWARN	[6]
AMP_T	>>>	AMP_T	[6]
LINE_MUTE1	>>>	LINE_MUTE1	[6]
AMDAT	>>>	AMDAT	[5]
ADC_DATA	>>>	ADC_DATA	[5]
ADRS#	>>>	ADRS#	[5]
ALIN_SLO	>>>	ALIN_SLO	[5]
ALIN_SL1	>>>	ALIN_SL1	[5]
ALIN_SL2	>>>	ALIN_SL2	[5]
ALRCK	>>>	ALRCK	[5]
ABCK	>>>	ABCK	[5]
ACLK	>>>	ACLK	[5]
YUV3.6	>>>	YUV3.6	[7]
VIDEO_INTERFACE	>>>	VIDEO_INTERFACE	[7]
89_AIO_20	>>>	89_AIO_20	[3]
89_AIO0	>>>	89_AIO0-1	[3]
89_DQ0_11	>>>	89_DQ0_11	[3]
89_ECLK	>>>	89_ECLK	[3]
89_DCKE	>>>	89_DCKE	[3]
89_CAS#	>>>	89_CAS#	[3]
89_RAS#	>>>	89_RAS#	[3]
89_WE#	>>>	89_WE#	[3]
89_CS#	>>>	89_CS#	[3]
MEMORY	>>>	MEMORY	[3]
89_DQ0	>>>	89_DQ0	[3]
89_DQ10	>>>	89_DQ10	[3]
89_DQ11	>>>	89_DQ11	[3]
89_DQ12	>>>	89_DQ12	[3]
89_DQ13	>>>	89_DQ13	[3]
SCL	>>>	SCL	[3,5]
SDA	>>>	SDA	[3,5]
MUTE_DAC	>>>	MUTE_DAC	[7]
F50	>>>	F50	[7]
F51	>>>	F51	[7]
RGB_SWITCH	>>>	RGB_SWITCH	[7]
MIC_DET	>>>	MIC_DET	[5]
MIC_SW	>>>	MIC_SW	[5]
AUDIO_INTERFACE	>>>	AUDIO_INTERFACE	[5]

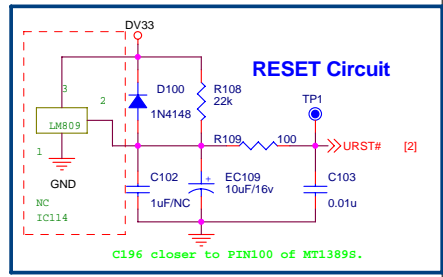
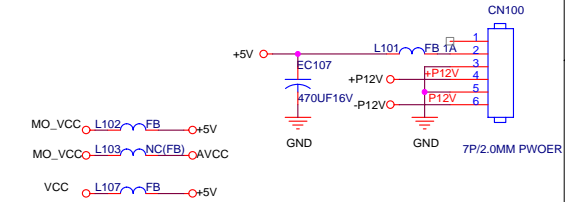


NAME	TYPE	DEVICE
VCC/+5V	Digital 5V	SUPPLY
DV33	Digital 3.3V	MT1389HD
RFV33	Servo 3.3V	MT1389HD
AV33	Laser Diode 3.3V	
V18	Digital 1.8V	MT1389HD
SD33	Digital 3.3V	SDRAM
+12V	Audio +12V	OP AMP.
-12V	Audio -12V	OP AMP.
AVDD5	Audio 5V	Audio DAC
DVDD3	Audio 3.3V	Audio DAC
MCU_3V3	Nxp Mcu 3.3V	MCU

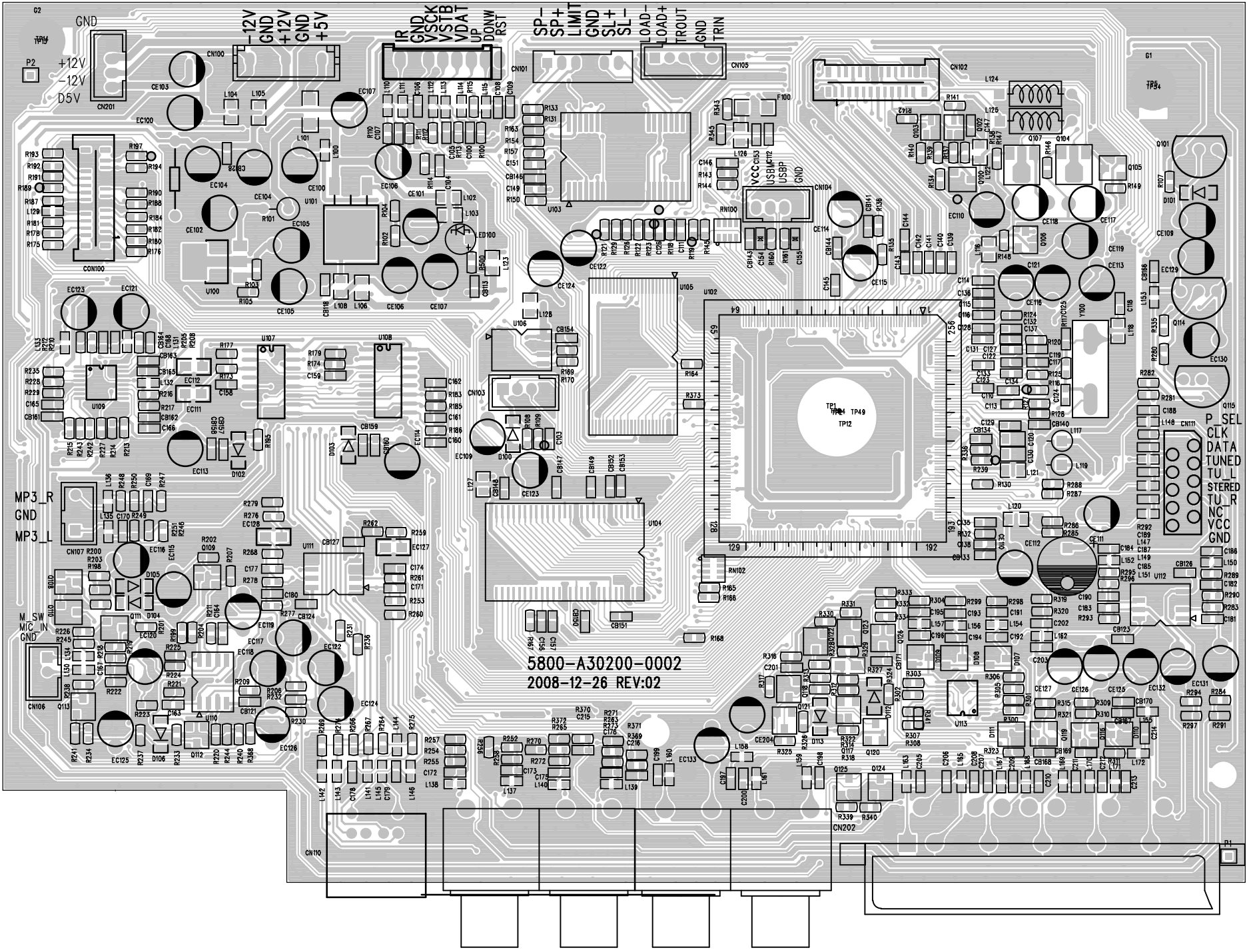


- URST# >>> URST# [2]
- V33 >>> V33
- RFV33 >>> RFV33 [2]
- DV33 >>> DV33 [2,3,5,6,7]
- V18 >>> V18 [2]
- AVCC >>> AVCC [2,5,7]
- +12V >>> +12V [5,6,7]
- 12V >>> -12V [5,6]
- +9V >>> +9V [6]
- +5V >>> +5V [2,7]
- MO\_VCC >>> MO\_VCC [2]
- VSCK >>> VSCK [2]
- VSTB >>> VSTB [2]
- VSDA >>> VSDA [2]
- IR >>> IR [2]
- VFD\_SDA >>> VFD\_SDA [2]
- VFD\_SCL >>> VFD\_SCL [2]

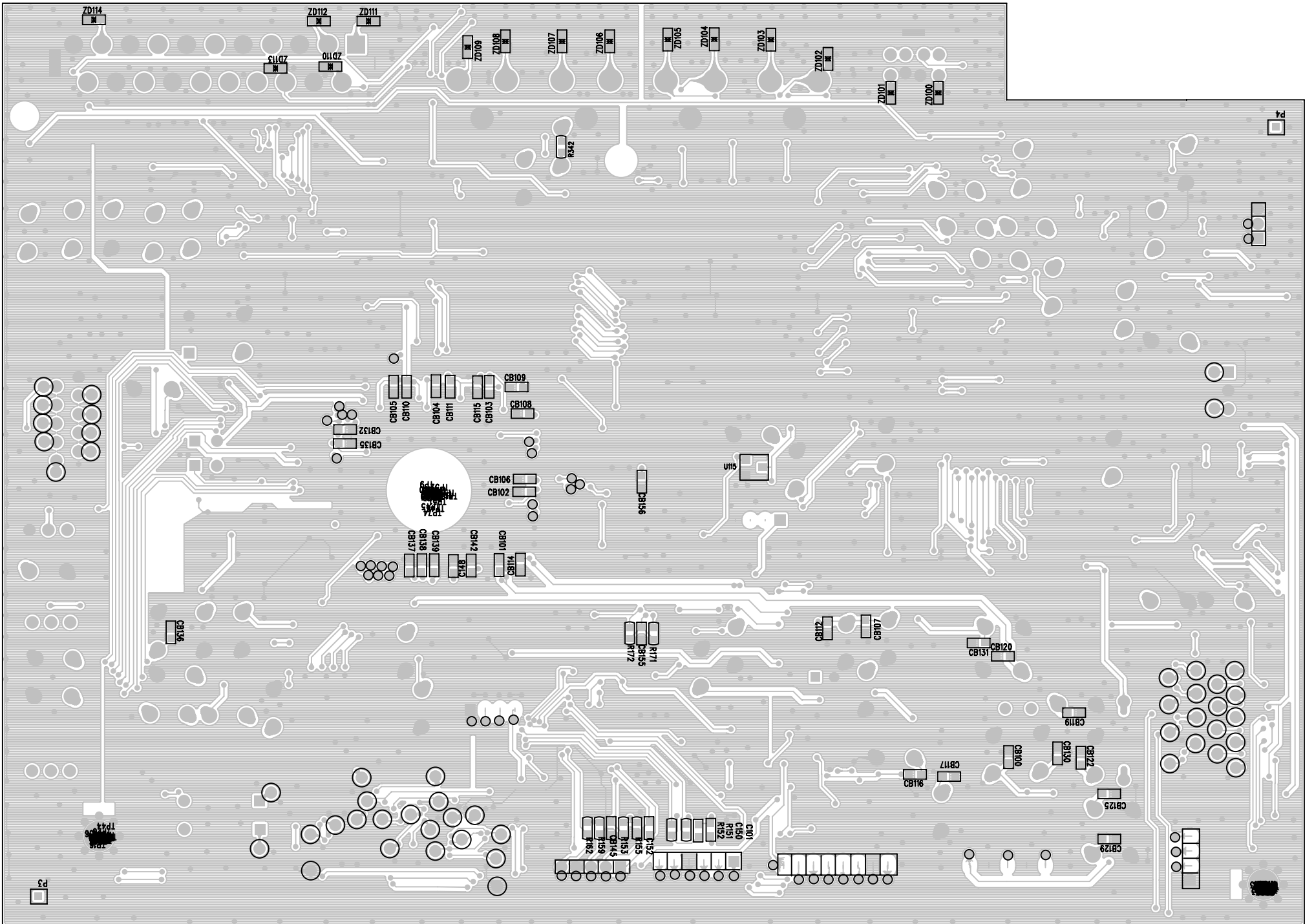
$$V_o = 1.25 \times (1 + R_b / R_a)$$



Open JP101, if used VFD



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

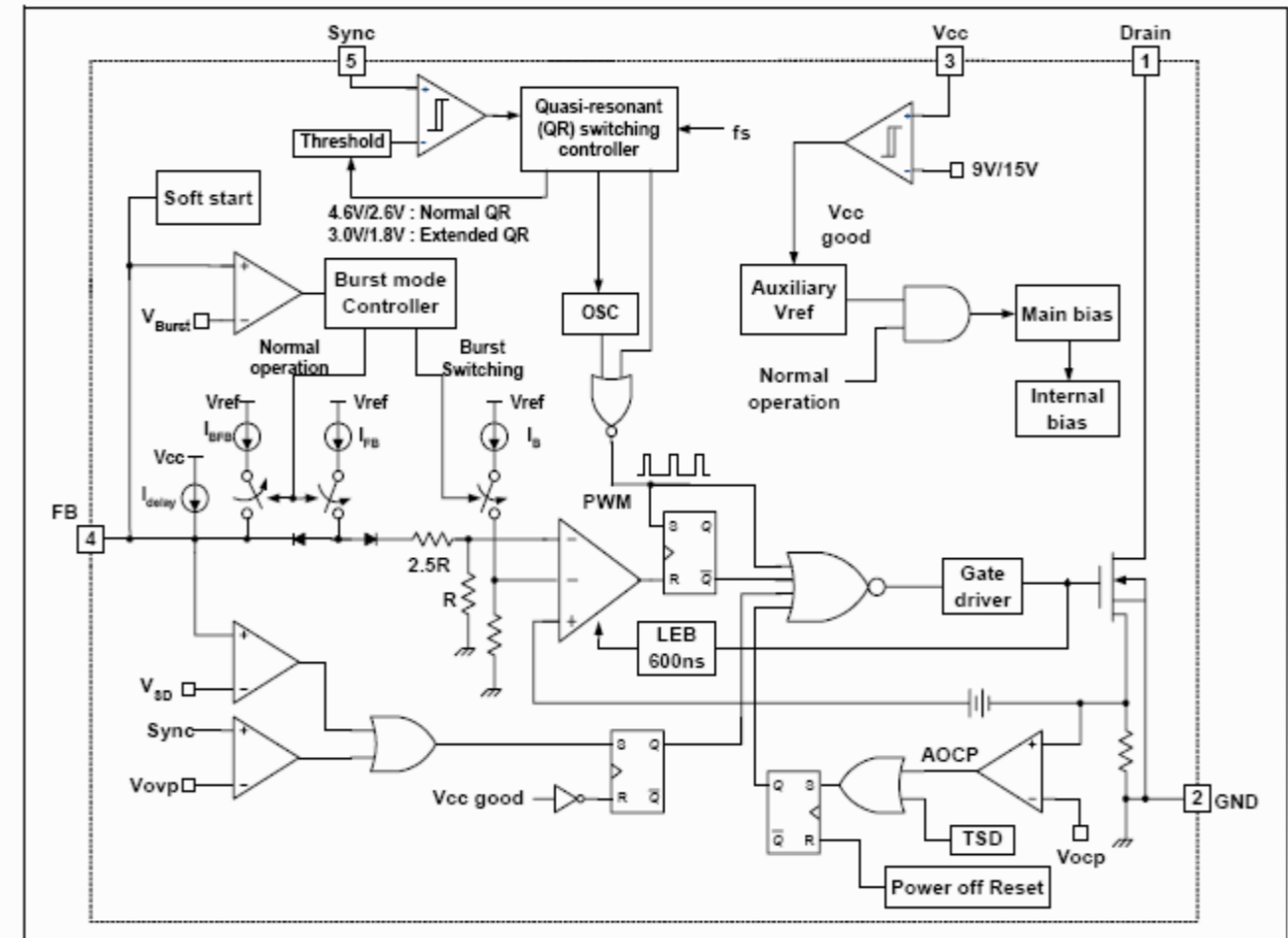


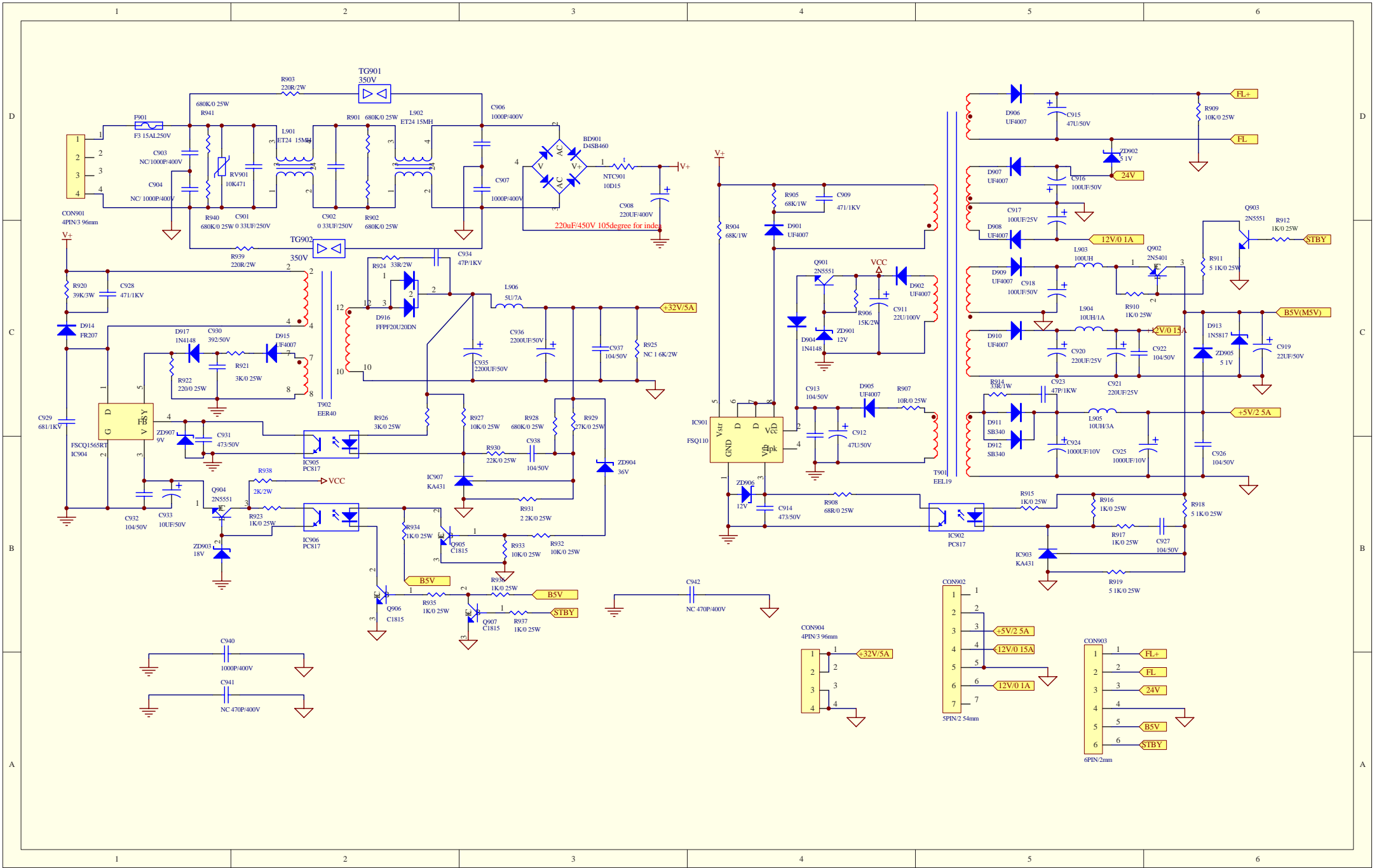
# POWER BOARD

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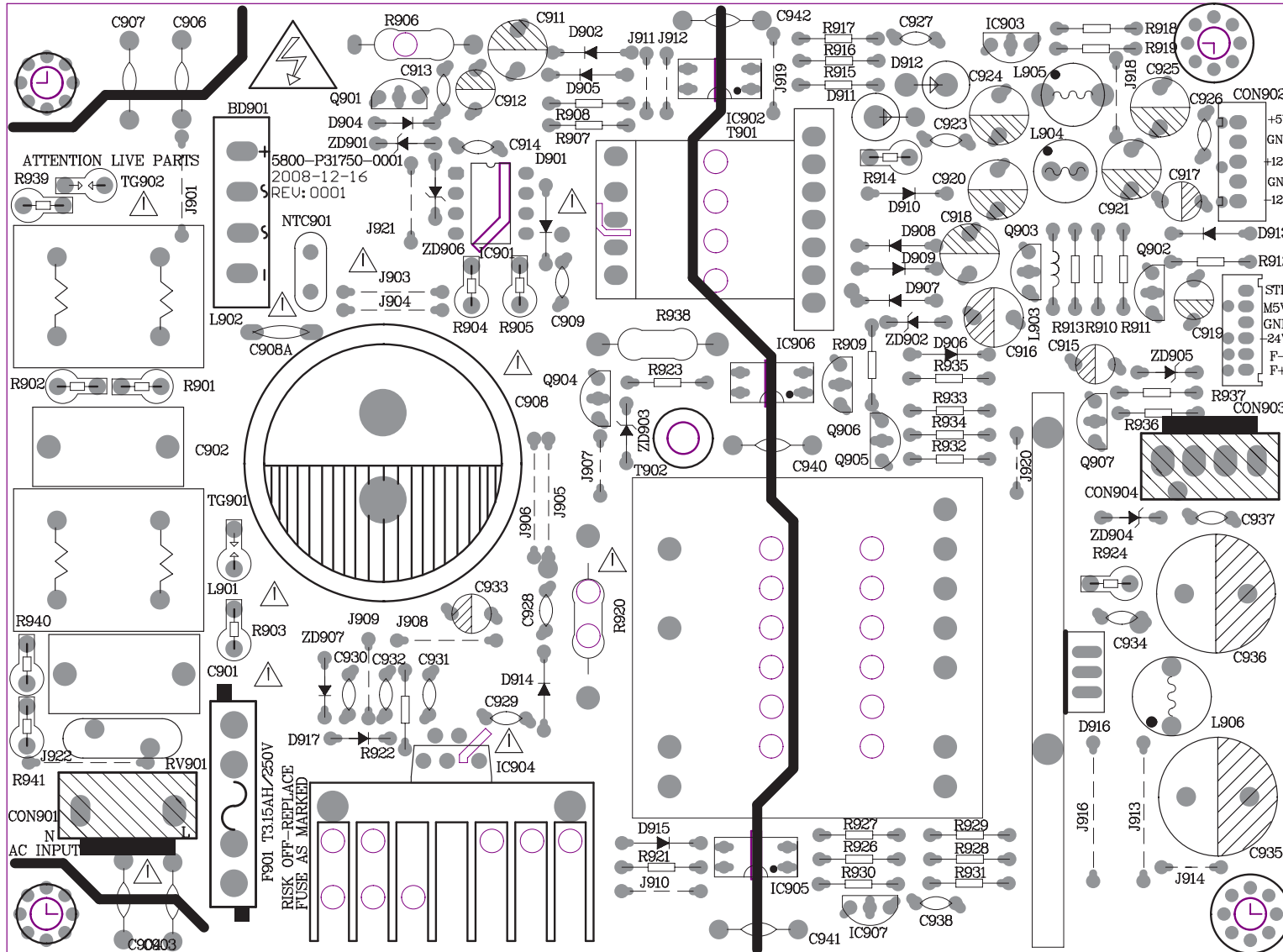
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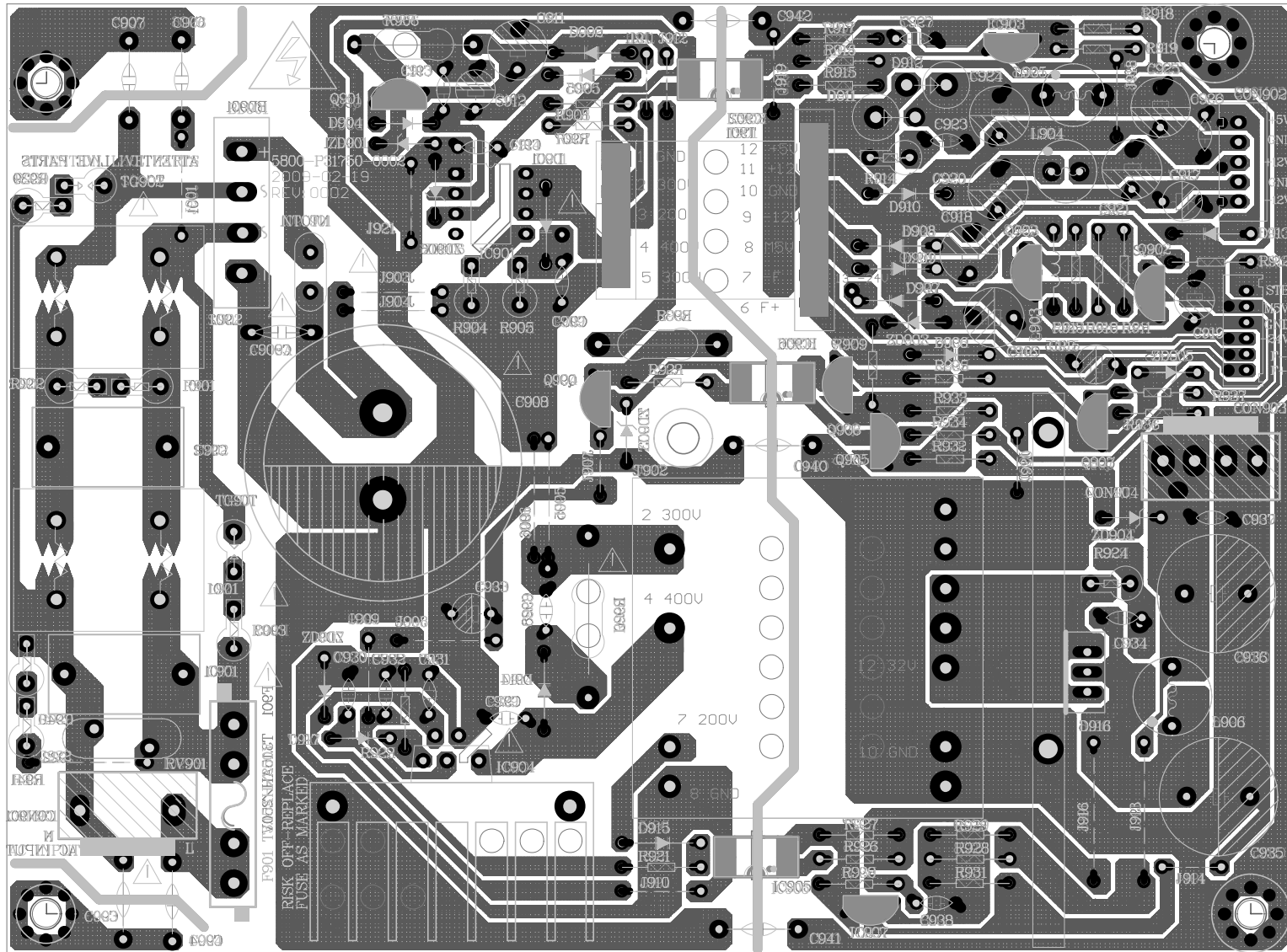
## INTERNAL IC DIAGRAM - FSC1565RT

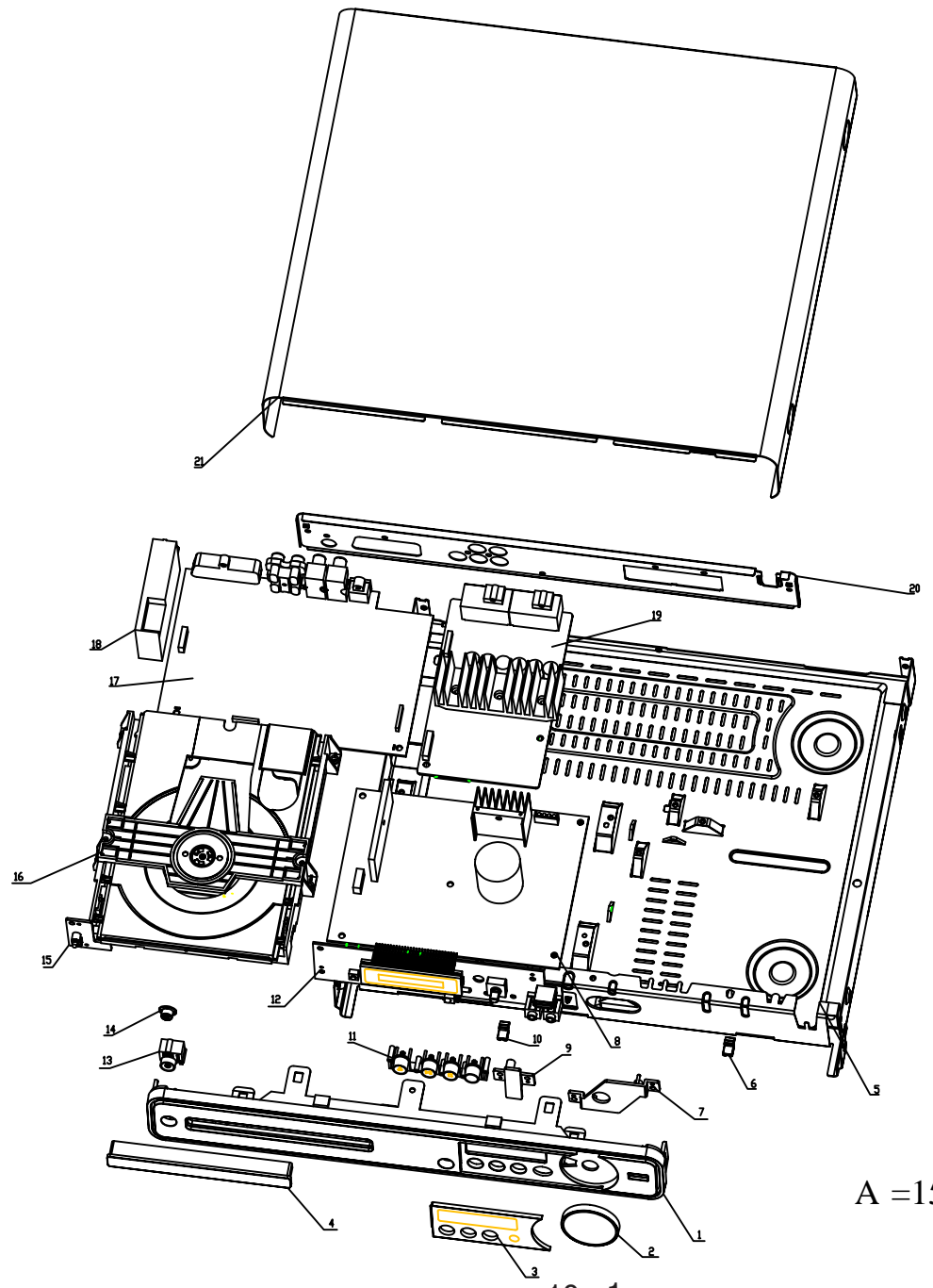












A = 15+12

10 - 1

**MECHANICAL PART LIST(FOR HTS3180/12)**

LOC.	Alt	12NC	Safety	Description	LOC.	Alt	12NC	Safety	Description
23		996510021751	⚠	AC LINE CORD 1500MM VDE PLUG 2	<b>DECODE BOARD</b>				
A		996510029248		KEY BOARD & LED BOARD	D100		996510022228		SNRD. LS4148 150mA/100V (3.5 X
ABA		996510029251		MY01-HTS3180/12(HI)AMPLIFIER B	D101		996510022208		ZENER DIODE 10V 1/2W SMD
C2		996510021729		FILM FLAT CABLE 10 PIN PITCH=1	D102		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
C11		996510021725		HOUSING 05(2.5) + HOUSING 05(2	D103		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
C12	#	996510021699		FILM FLAT CABLE 24 PIN PITCH=0	D107		996510028154		SMD SWITCHING DIODE BAV99 (TAP
C12	#	996510029108		FILM FLAT CABLE 24 PIN PITCH=0	D108		996510028154		SMD SWITCHING DIODE BAV99 (TAP
CARTON		996510029252		GIFT BOX 264X380X302MM(HTS3180	D109		996510028154		SMD SWITCHING DIODE BAV99 (TAP
DBA		996510029249		MY01-HTS3180/12(HI) DECODE BOA	D111		996510028154		SMD SWITCHING DIODE BAV99 (TAP
FM		996510021718		AM/FM TUNER MODEL10.7MHZ KST-M	D112		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
FP		996510021743		FR. PANEL-ABS/80301/FOILED HL-3	D113		996510022228		SNRD. LS4148 150mA/100V (3.5 X
FPA		996510029266		FRONT PANEL ASSY	L100		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
LSA		996510022159		LOADER SUPPOREER ASM	L101		996510022164		SMD FERRITE BEAD(3.2 X 1.6mm)Z
PBA	#	996510029253		POWER BUTTON ASSY	L102		996510022216		SMD FERRITE BEAD (2 X 1.25mm)
PBA	#	996510029254		MY01-HTS3180/12(HI)POWER BOARD	L104		996510022216		SMD FERRITE BEAD (2 X 1.25mm)
RC		996510021705		REMOTE CONTROL 41 KEYS FOR HTS	L105		996510022216		SMD FERRITE BEAD (2 X 1.25mm)
SS		996510029258		CUBE SPEAKER&SUBWOOFER WITH P	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)
<b>LOADER ASSY</b>					L111		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
C3		996510021714		HOUSING 06+ HOUSING 06+190MM F	L112		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
OPU		996510022224		DVD PLAY HEAD OPTICAL PICK-UP	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 COIL 150UH+/-10%(TAPE
					L119		996510022207		PEAKING COIL 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 COIL 10uH /-10%
					L125		996500040252		PEAKING COIL 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)
					L131		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
					L132		996510022178		SMD CHIP COIL 10UH +/-10% (1.6
					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)
D502		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L147		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D503		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L148		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D505		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L149		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D506		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L150		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D507		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L151		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D508		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L152		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D509		996510022228		SNRD. LS4148 150mA/100V (3.5 X	L153		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
D511		996500040273		LED 3.1mm RED LONG LEAD	L154		996510022206		SMD CHIP COIL 1.8UH +/-10%(1.6
IR501		996510022211		INFRARED RECEIVER MODULE 36KHZ	L155		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
PCB	#	996510028156	⚠	MD P. C. BOARD 40.00X175.00mm	L156		996510022206		SMD CHIP COIL 1.8UH +/-10%(1.6
PCB	#	996510028179	⚠	MO P. C. BOARD 28.00X35.00mm	L157		996510022206		SMD CHIP COIL 1.8UH +/-10%(1.6
Q501		996510022195		I. CI IMP810SEUR-T IMP (RESET I	L158		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
SPOWER1		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS	L162		996510022204		SMD CHIP COIL 0.22UH +/-10%(1.
SW1		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS	L163		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
SW2		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS	L165		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
SW3		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS	L167		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
SW4		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS	L168		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
U300		996510022232		VACUUM FLUORESCENT DISPLAY 200	L169		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
U520		996510022218		SMD IC V63111LF HILED(1/8-TO 1	L170		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
USB		996510029128		USB SOCKET VERTICAL WHITE 12.6	L171		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
VOL		996510022264		ROTARY VOLUMEL RESISTOR 0.5MA	L172		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
Y505		996510022238		CERAMIC RESONATOR 455KHZ TW455	PCB		996510028181	⚠	MA P. C. BOARD 124.00X175.00mm

LOC.	Alt	12NC	Safety	Description	LOC.	Alt	12NC	Safety	Description
DECODE BOARD					AMPLIFIER BOARD				
Q100		996500041187		TRANSISTOR SST3904/MMBT3904/PM	IC803		996510022236		I. C. TJM4558CD SGS (WIDE BANDW
Q101		996510022225		TRANSISTOR 8050 PNP TO-92 TAPE	IC804		996510022237		SMD IC STA309A ST TQFP-64
Q102		996510022171		TRANSISTOR 2SK3018 (30V	IC805		996510022236		I. C. TJM4558CD SGS (WIDE BANDW
Q103		996510022171		TRANSISTOR 2SK3018 (30V	JK801A		996510022215		RCA JACKX3 H-HYPE PITCH=15MM(R
Q104		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE	JK801B		996510022251		RCA JACKX3 H-HYPE PITCH=15MM(R
Q107		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE	L801A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q114		996510028168		TRANSISTOR ST8550C PNP TO-92 T	L801B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q115		996510022202		TRANSISTOR 2N3904 PNP TO-92 TA	L802A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q117		996500041188		TRANSISTOR SST3906/MMBT3906/PM	L802B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q118		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L803A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q119		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L803B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q120		996500041188		TRANSISTOR SST3906/MMBT3906/PM	L804A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q121		996500041188		TRANSISTOR SST3906/MMBT3906/PM	L804B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
Q122		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L805A		996510022217		CHOKE COIL 20UH+-10% PITCH=4.0
Q123		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L805B		996510022217		CHOKE COIL 20UH+-10% PITCH=4.0
Q124		996500041187		TRANSISTOR SST3904/MMBT3904/PM	PCB		996510028175	⚠	MJ P. C. BOARD 85.00X138.00mm
Q125		996500041187		TRANSISTOR SST3904/MMBT3904/PM	Q801		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
Q126		996500041188		TRANSISTOR SST3906/MMBT3906/PM	Q802		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
U100		996510022212		I. C. CX117-ADJ SILICON CORD (R	Q803		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U101		996510022245		SMD IC APL1085 ANPEC TO-252	Q804		996510022182		TRANSISTOR 2SC945 PNP SILICON
U102		996510022327		SMD I. C MT1389HD/DXE MEDIATEK	Q805		996510022243		SMD TRANSISTOR 2SC945LT1 NPN S
U103		996510016158		I. C. AM5888S HSOP28	Q806		996510022254		TRANSISTOR 2SD882 PNP SILICON
U104		996510022162		SMD IC A641604L-6TE AOTOM TSOP	Q807		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U105		996510022325		I. C. MX29LV160DBTI-70G MXIC TS	Q808		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
U106		996510022169		I. C. AT24C16N-10SA-2.7C ATMEL	Q809		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
U107		996510022265		SMD I. C HEF4051B PHILIPS SO-1	Q810		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U108		996510022265		SMD I. C HEF4051B PHILIPS SO-1	Q811		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U109		996510022191		I. C CS5340 CIRRUS LOGIC (101DB	R838		996510029143		ETAL OXIDE FILM RESIS 2.2 OHM
U112		996510022236		I. C. TJM4558CD SGS (WIDE BANDW					
Y100		996510022332		SMD CRYSTAL 27.000000MHZ MS3HA					
ZD102		996510022242		SMD ESD PROTECTION MVS0603E09	POWER BOARD				
ZD103		996510022242		SMD ESD PROTECTION MVS0603E09	BD901		996510022174		BRIDGE RECTIFER DIODE RS406 4A
ZD104		996510022242		SMD ESD PROTECTION MVS0603E09	C901		996510028221	⚠	M. P. F. C 0.33UF +/-10%
ZD105		996510022242		SMD ESD PROTECTION MVS0603E09	C902		996510028221	⚠	M. P. F. C 0.33UF +/-10%
ZD107		996510022242		SMD ESD PROTECTION MVS0603E09	C906		996500040565	⚠	SCC. 0.001UF AC250V 400V /-20%
ZD110		996510022242		SMD ESD PROTECTION MVS0603E09	C907		996500040565	⚠	SCC. 0.001UF AC250V 400V /-20%
ZD111		996510022242		SMD ESD PROTECTION MVS0603E09	C908		996510022198		ELECTROLYTIC CAPACITOR 220UF 4
ZD112		996510022242		SMD ESD PROTECTION MVS0603E09	C909		996510004875		CAPACITOR 470PF 1KV +/-10%
ZD113		996510022242		SMD ESD PROTECTION MVS0603E09	C911		996510022221		EC. 22uF 100V +/-20%
ZD114		996510022242		SMD ESD PROTECTION MVS0603E09	C923		996510004875		CAPACITOR 470PF 1KV +/-10%
					C928		996510004875		CAPACITOR 470PF 1KV +/-10%
					C929		996510004875		CAPACITOR 470PF 1KV +/-10%
					C934		996510004875		CAPACITOR 470PF 1KV +/-10%
					C940		996500040565	⚠	SCC. 0.001UF AC250V 400V /-20%
BD801		996510022216		SMD FERRITE BEAD (2 X 1.25mm)	D901		996510022246		HIGH SPEED RECTIFIER DIODE UF4
BD801A		996510022216		SMD FERRITE BEAD (2 X 1.25mm)	D902		996510022246		HIGH SPEED RECTIFIER DIODE UF4
BD801B		996510022216		SMD FERRITE BEAD (2 X 1.25mm)	D904		996500040218		NRD. 1N4148 150mA/100V
C13		996510021716		PIN 04 (3.96)+HOUSING 04 (3.96)	D905		996510022246		HIGH SPEED RECTIFIER DIODE UF4
C801		996500040181		EC. 4.7uF 50V-100V /-20%	D906		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D801		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D907		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D802		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D908		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D803		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D909		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D804		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D910		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D805		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D911		996510022176		SCHOTTKY BARRIER RECTIFIER SB3
D806		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D912		996510022176		SCHOTTKY BARRIER RECTIFIER SB3
D807		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D913		996510022241		NORMAL RECTIFIER DIODE 1N5817
D808		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D914		996510028171		SWITCHING DIODE FR207 DO-15 (T
D809		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D915		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D810		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D916		996510016190		NORMAL RECTIFIER DIODE FFPF20U
D811		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D917		996500040218		NRD. 1N4148 150mA/100V
D812		996510022228		SNRD. LS4148 150mA/100V (3.5 X	F901		996500040615	⚠	FUSE T3.15A 250V 5X20MM
D813		996500040220		ZENER DIODE 3V9 1/2W /-5%	IC901		996510022249		I. C. FSQ110 FAIRCHILD (FAIRCHIL
D814		996510022228		SNRD. LS4148 150mA/100V (3.5 X	IC902		996500040601	⚠	I. C. PC817C (PHOTOCOUPLER)
D815		996500040220		ZENER DIODE 3V9 1/2W /-5%	IC903		996510006016		I. C. KA431Z FAIRCHILD
D816		996510022228		SNRD. LS4148 150mA/100V (3.5 X	IC904		996510028169		I. C. FSCQ1565RT FAIRCHILD (POWE
D817		996500040573		ZENER DIODE 10V 1/2W	IC905		996500040601	⚠	I. C. PC817C (PHOTOCOUPLER)
D818		996510022228		SNRD. LS4148 150mA/100V (3.5 X	IC906		996500040601	⚠	I. C. PC817C (PHOTOCOUPLER)
IC801A		996510022229		SMD IC STA518 ST(40V 3.5A QUAD	IC907		996510006016		I. C. KA431Z FAIRCHILD
IC801B		996510022229		SMD IC STA518 ST(40V 3.5A QUAD					

LOC.	Alt	12NC	Safety	Description
POWER BOARD				
L901		996510022256	⚠	AC LINE FILTER 20MHX2 LCL-20-2
L902		996510022256	⚠	AC LINE FILTER 20MHX2 LCL-20-2
L903		996500040253		PEAKING COIL 100uH /-10%
L904		996510022165		CHOKE COIL 10UH+/-10%7.5MMX9.5
L905		996510022163		CHOKE COIL5UH+/-15% 9MMX21MM P
L906		996510022186		CHOKE 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 0
RV901		996510028228		VARISTOR 470V +/-10% FNR-10K47
T901		996510022226	⚠	SWITCHING TRANSFORMER BK-35-L0
T902		996510028187	⚠	SWITCHING TRANSFORMER BCK-60-L
TG901		996510028163		GAS DISCHAR GE TUBE DSP-301N-C
TG902		996510028163		GAS DISCHAR GE 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%

**MECHANICAL PART LIST (FOR HTS3180/51)**

LOC.	Alt	12NC	Safety	Description
23		996510021751	☒	AC LINE CORD 1500MM VDE PLUG 2
A		996510029243		KEY BOARD & LED BOARD
ABA		996510029242		MY01-HTS3180/51 (HI) AMPLIFIER B
C1		996510021699		FILM FLAT CABLE 24 PIN PITCH=0
C2		996510021729		FILM FLAT CABLE 10 PIN PITCH=1
C3		996510021712		HOUSING 05+ HOUSING 05+230MM M
C11		996510021725		HOUSING 05(2.5) + HOUSING 05(2
C12		996510021697		FILM FLAT CABLE 24 PIN PITCH=0
CARTON		996510029125		GIFT BOX 564X380X302MM (HTS3181
DBA		996510029247		MY01-HTS3180/51 (HI) DECODE BOA
FM		996510021718		AM/FM TUNER MODEL10.7MHZ KST-M
FP		996510022355		FR. PANEL-ABS/80301/FOILED HL-3
FPA		996510029265		FRONT PANEL ASSY
LSA		996510022159		LOADER SUPPOREER ASM
PBA #		996510029245		MY01-HTS3180/51 (HI) POWER BOARD
PBA #		996510029246		POWER BUTTON ASSY
RC		996510022188		REMOTE CONTROL 41 KEYS FOR HTS
SS		996510029258		CUBE SPEAKER&SUBWOOFER WITH P
<b>LOADER ASSY</b>				
C3		996510021714		HOUSING 06+ HOUSING 06+190MM F
OPU		996510022224		DVD PLAY HEAD OPTICAL PICK-UP
<b>SPEAKER ASSY</b>				
SC		996510029255		SPEAKER BOX-CENTER
SML		996510029259		SPEAKER BOX-MAIN-LEFT
SMR		996510029262		SPEAKER BOX-MAIN-RIGHT
SSL		996510029257		SPEAKER BOX-SURROUND-LEFT
SSR		996510029256		SPEAKER BOX-SURROUND-RIGHT
SUB		996510029261		SPEAKER BOX-SUBWOOFER
<b>KEY+LED BOARD</b>				
C5		996510021738		90 DEGREE PIN 04+90 DEGREE PIN
C6		996510022267		90 DEGREE PIN 03+HOUSING 03+42
C7		996510021736		90 DEGREE PIN 04+HOUSING 04+40
C8		996510021728		90 DEGREE PIN 07+ HOUSING 07+2
C10		996510021724		90 DEGREE PIN 06+ HOUSING 06+1
CB503		996510028165		SMD CERAMIC CHIP CAPACITOR
CB504		996510028165		SMD CERAMIC CHIP CAPACITOR
CB505		996510028165		SMD CERAMIC CHIP CAPACITOR
CB515		996510029244		SCCC. 22PF 50V +/-5% (1.6x0.8mm
CB524		996510028186		SMD ESD PROTECTION 0603ESDA-05
CB525		996510028186		SMD ESD PROTECTION 0603ESDA-05
CB526		996510028186		SMD ESD PROTECTION 0603ESDA-05
CB532		996510028186		SMD ESD PROTECTION 0603ESDA-05
CB533		996510028186		SMD ESD PROTECTION 0603ESDA-05
CB537		996510028186		SMD ESD PROTECTION 0603ESDA-05
CB539		996510028186		SMD ESD PROTECTION 0603ESDA-05
D502		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D503		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D505		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D506		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D507		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D508		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D509		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D511		996500040273		LED 3.1mm RED LONG LEAD
IR501		996510022211		INFRARED RECEIVER MODULE 36KHZ
PCB #		996510028156	☒	MD P. C. BOARD 40. 00X175. 00mm
PCB #		996510028179	☒	MO P. C. BOARD 28. 00X35. 00mm
Q501		996510022195		I. CI IMP810SEUR-T IMP (RESET I
SPOWER:		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS
SW1		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS
SW2		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS
SW3		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS
SW4		996510022201		TSVT. H = 5mm KPT-1105A 4 PINS

LOC.	Alt	12NC	Safety	Description
<b>KEY+LED BOARD</b>				
U300		996510022232		VACUUM FLUORESCENT DISPLAY 200
U520		996510022218		SMD IC V63111LF HILED(1/8-T0 1
USB		996510029128		USB SOCKET VERTICAL WHITE 12.6
VOL		996510022264		ROTARY VOLUMEL RESISTOR 0.5MA
Y505		996510022238		CERAMIC RESONATOR 455KHz TW455
<b>DECODE BOARD</b>				
D100		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D101		996510022208		ZENER DIODE 10V 1/2W SMD
D102		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
D103		996510022184		ZENER DIODE 5V1 1/2W SMD PACKA
D104		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D105		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D106		996510022228		SNRD. LS4148 150mA/100V (3.5 X
D107		996510028154		SMD SWITCHING DIODE BAV99 (TAP
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 COIL 150UH+/-10%(TAPE
L119		996510022207		PEAKING COIL 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 COIL 10uH +/-10%
L125		996500040252		PEAKING COIL 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.	12NC	Safety	Description	LOC.	Alt.	12NC	Safety	Description
<b>DECODE BOARD</b>					<b>AMPLIFIER BOARD</b>				
L157		996510022206		SMD CHIP COIL 1.8UH +/-10%(1.6	D815		996500040220		ZENER DIODE 3V9 1/2W /-5%
L158		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)	D816		996510022228		SNRD. LS4148 150mA/100V (3.5 X
L159		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)	D817		996500040573		ZENER DIODE 10V 1/2W
L160		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)	D818		996510022228		SNRD. LS4148 150mA/100V (3.5 X
L161		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)	IC801		996510022229		SMD IC STA518 ST(40V 3.5A QUAD
L162		996510022204		SMD CHIP COIL 0.22UH +/-10%(1.	IC801		996510022229		SMD IC STA518 ST(40V 3.5A QUAD
PCB		996510028181	▲	MA P. C. BOARD 124.00X175.00mm	IC803		996510022236		I. C. TJM4558CD SGS (WIDE BANDW
Q100		996500041187		TRANSISTOR SST3904/MMBT3904/PM	IC804		996510022237		SMD IC STA309A ST TQFP-64
Q101		996510022225		TRANSISTOR 8050 PNP TO-92 TAPE	JK801		996510022215		RCA JACKX3 H-HYPE PITCH=15MM(R
Q102		996510022171		TRANSISTOR 2SK3018 (30V	JK801		996510022251		RCA JACKX3 H-HYPE PITCH=15MM(R
Q103		996510022171		TRANSISTOR 2SK3018 (30V	L801A		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q104		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE	L801B		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q107		996510022231		TRANSISTOR 2SB1132 SMD PACKAGE	L802A		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q108		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L802B		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q109		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L803A		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q110		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L803B		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q111		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L804A		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q112		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L804B		996510022161		CHOKO COIL 22UH+-15% 10.5MM X1
Q113		996500041187		TRANSISTOR SST3904/MMBT3904/PM	L805A		996510022217		CHOKO COIL 20UH+-10% PITCH=4.0
Q114		996510028168		TRANSISTOR ST8550C PNP TO-92 T	L805B		996510022217		CHOKO COIL 20UH+-10% PITCH=4.0
Q115		996510022202		TRANSISTOR 2N3904 PNP TO-92 TA	PCB		996510028175	▲	MJ P. C. BOARD 85.00X138.00mm
Q117		996500041188		TRANSISTOR SST3906/MMBT3906/PM	Q801		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
Q118		996500041187		TRANSISTOR SST3904/MMBT3904/PM	Q802		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
Q119		996500041187		TRANSISTOR SST3904/MMBT3904/PM	Q803		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
Q120		996500041188		TRANSISTOR SST3906/MMBT3906/PM	Q804		996510022182		TRANSISTOR 2SC945 PNP SILICON
Q121		996500041188		TRANSISTOR SST3906/MMBT3906/PM	Q805		996510022243		SMD TRANSISTOR 2SC945LT1 NPN S
U100		996510022212		I. C. CX117-ADJ SILICON CORD (R	Q806		996510022254		TRANSISTOR 2SD882 PNP SILICON
U101		996510022245		SMD IC APL1085 ANPEC TO-252	Q807		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U102		996510022327		SMD I. C. MT1389HD/DXE MEDIATEK	Q808		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
U103		996510016158		I. C. AM5888S HSOP28	Q809		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
U104		996510022162		SMD IC A641604L-6TE AOTOM TSOP	Q810		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U105		996510022325		I. C. MX29LV160DBTI-70G MXIC TS	Q811		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
U106		996510022169		I. C. AT24C16N-10SA-2.7C ATMEL	<b>POWER BOARD</b>				
U107		996510022265		SMD I. C. HEF4051B PHILIPS SO-1	BD901		996510022174		BRIDGE RECTIFER DIODE RS406 4A
U108		996510022265		SMD I. C. HEF4051B PHILIPS SO-1	C901		996510028221	▲	M. P. F. C. 0.33UF +/-10%
U109		996510022191		I. C. CS5340 CIRRUS LOGIC (101DB	C902		996510028221	▲	M. P. F. C. 0.33UF +/-10%
U110		996510022236		I. C. TJM4558CD SGS (WIDE BANDW	C906		996500040565	▲	SCC. 0.001UF AC250V 400V /-20%
U112		996510022236		I. C. TJM4558CD SGS (WIDE BANDW	C907		996500040565	▲	SCC. 0.001UF AC250V 400V /-20%
Y100		996510022332		SMD CRYSTAL 27.000000MHZ MS3HA	C908		996510022198		ELECTROLYTIC CAPACITOR 220UF 4
ZD102		996510028186		SMD ESD PROTECTION 0603ESDA-05	C909		996510004875		CAPACITOR 470PF 1KV +/-10%
ZD103		996510028186		SMD ESD PROTECTION 0603ESDA-05	C911		996510022221		EC. 22uF 100V +/-20%
ZD104		996510028186		SMD ESD PROTECTION 0603ESDA-05	C923		996510004875		CAPACITOR 470PF 1KV +/-10%
ZD105		996510028186		SMD ESD PROTECTION 0603ESDA-05	C928		996510004875		CAPACITOR 470PF 1KV +/-10%
ZD106		996510028186		SMD ESD PROTECTION 0603ESDA-05	C929		996510004875		CAPACITOR 470PF 1KV +/-10%
ZD107		996510028186		SMD ESD PROTECTION 0603ESDA-05	C934		996510004875		CAPACITOR 470PF 1KV +/-10%
ZD108		996510028186		SMD ESD PROTECTION 0603ESDA-05	C935		996510028167		ELECTROLYTIC CAPACITOR 2200uF
ZD109		996510028186		SMD ESD PROTECTION 0603ESDA-05	C936		996510028167		ELECTROLYTIC CAPACITOR 2200uF
<b>AMPLIFIER BOARD</b>					C940		996500040565	▲	SCC. 0.001UF AC250V 400V /-20%
BD801		996510022216		SMD FERRITE BEAD (2 X 1.25mm)	D901		996510022246		HIGH SPEED RECTIFIER DIODE UF4
BD801A		996510022216		SMD FERRITE BEAD (2 X 1.25mm)	D902		996510022246		HIGH SPEED RECTIFIER DIODE UF4
BD801B		996510022216		SMD FERRITE BEAD (2 X 1.25mm)	D904		996500040218		NRD. 1N4148 150mA/100V
C13		996510021716		PIN 04(3.96)+HOUSING 04(3.96)	D905		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D801		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D906		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D802		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D907		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D803		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D908		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D804		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D909		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D805		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D910		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D806		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D911		996510022176		SCHOTTKY BARRIER RECTIFIER SB3
D807		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D912		996510022176		SCHOTTKY BARRIER RECTIFIER SB3
D808		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D913		996510022241		NORMAL RECTIFIER DIODE 1N5817
D809		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D914		996510028171		SWITCHING DIODE FR207 DO-15 (T
D810		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D915		996510022246		HIGH SPEED RECTIFIER DIODE UF4
D811		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D916		996510016190		NORMAL RECTIFIER DIODE FFPF20U
D812		996510022228		SNRD. LS4148 150mA/100V (3.5 X	D917		996500040218		NRD. 1N4148 150mA/100V
D813		996500040220		ZENER DIODE 3V9 1/2W /-5%	F901		996500040615	▲	FUSE T3.15A 250V 5X20MM
D814		996510022228		SNRD. LS4148 150mA/100V (3.5 X	IC901		996510022249		I. C. FSQ110 FAIRCHILD (FAIRCHIL




LOC.	Alt.	12NC	Safety	Description
POWER BOARD				
IC902	996500040601		⚠	I. C. PC817C (PHOTOCOUPLER)
IC903	996510006016			I. C. KA431Z FAIRCHILD
IC904	996510028169			I. C. FSCQ1565RT FAIRCHILD (POWE
IC905	996500040601		⚠	I. C. PC817C (PHOTOCOUPLER)
IC906	996500040601		⚠	I. C. PC817C (PHOTOCOUPLER)
IC907	996510006016			I. C. KA431Z FAIRCHILD
L901	996510022256		⚠	AC LINE FILTER 20MHX2 LCL-20-2
L902	996510022256		⚠	AC LINE FILTER 20MHX2 LCL-20-2
L903	996500040253			PEAKING COIL 100uH /-10%
L904	996510022165			CHOKO COIL 10UH+/-10%7.5MMX9.5
L905	996510022163			CHOKO COIL5UH+/-15% 9MMX21MM P
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 0
RV901	996510028228			VARISTOR 470V +/-10% FNR-10K47
T901	996510022226		⚠	SWITCHING TRANSFORMER BK-35-L0
T902	996510028187		⚠	SWITCHING TRANSFORMER BCK-60-L
TG901	996510028163			GAS DISCHAR GE TUBE DSP-301N-C
TG902	996510028163			GAS DISCHAR GE 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%

# REVISION LIST

Version 1.0

\*Initial release

#=Alternative Codes

 =Safety Symbol