DVD Home Theater System

HTS3181/55&HTS3181X/78

Service
Service
Service

Service Manual

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Chapter

Published by RY0929 Service Audio Printed in The Netherlands Subject to modification

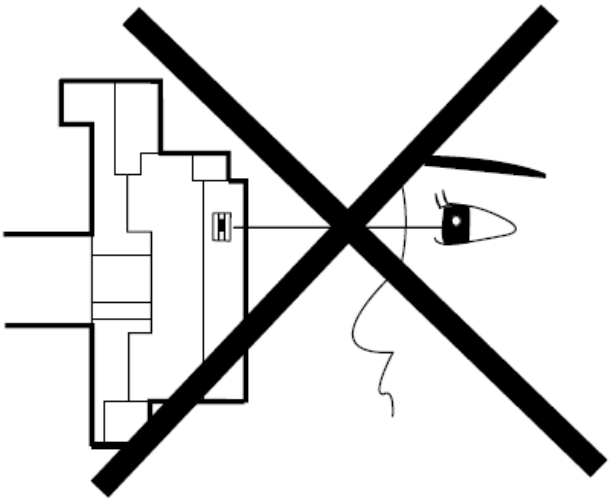
GB 3139 785 35050

Version 1.0

PHILIPS

LASER BEAM SAFETY PRECAUTIONS

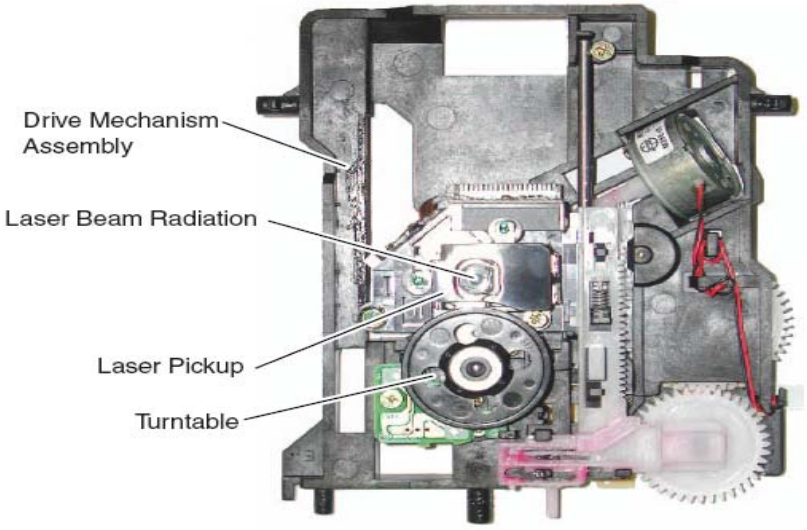
This DVD player uses a pickup that emits a laser beam**.**



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

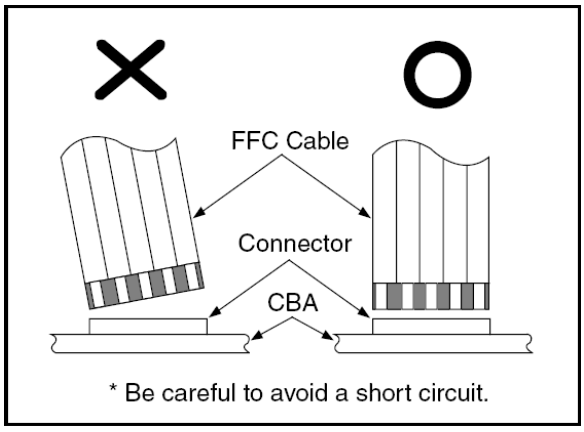
STARE INTO BEAM.

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)

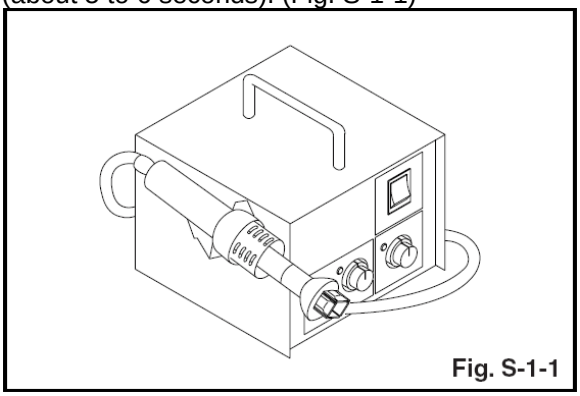


Fig. S-1-1

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.

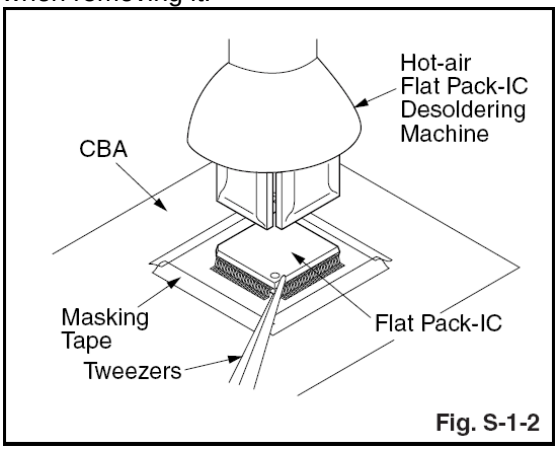


Fig. S-1-2

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)

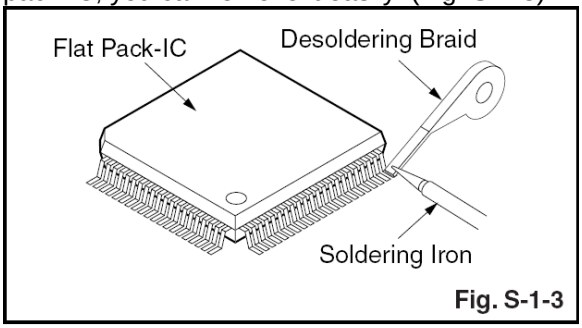


Fig. S-1-3

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)

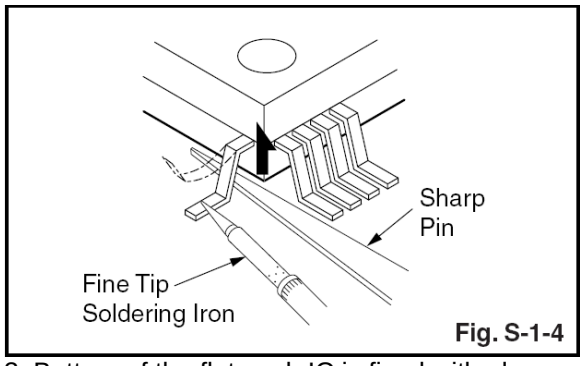


Fig. S-1-4

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.

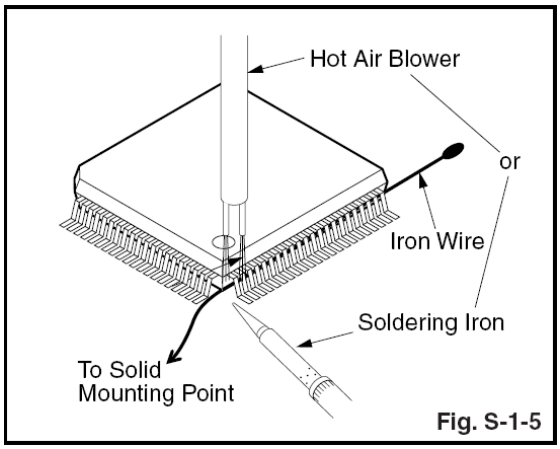


Fig. S-1-5

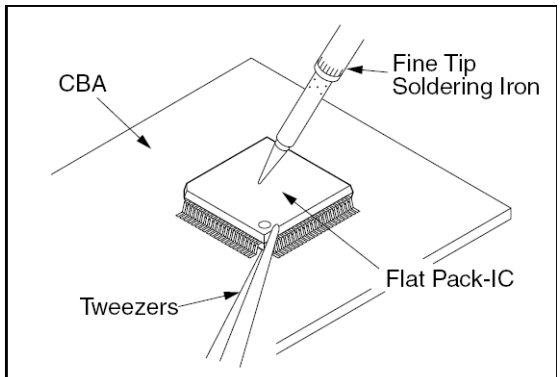


Fig. S-1-6

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.

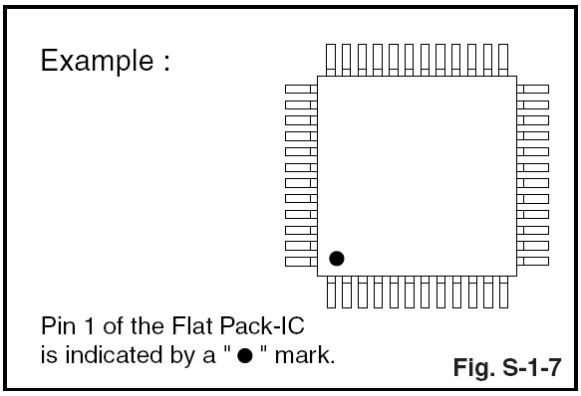


Fig. S-1-7

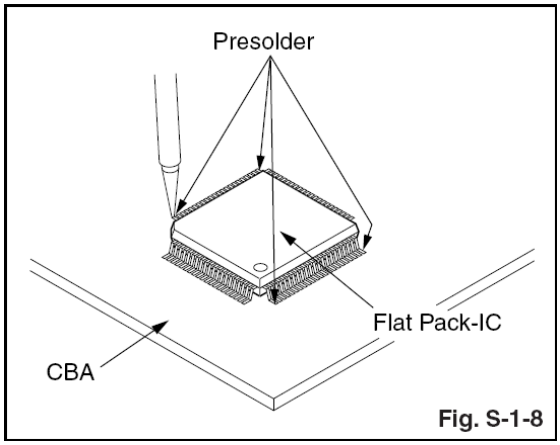


Fig. S-1-8

Instructions for Handling

Semiconductors

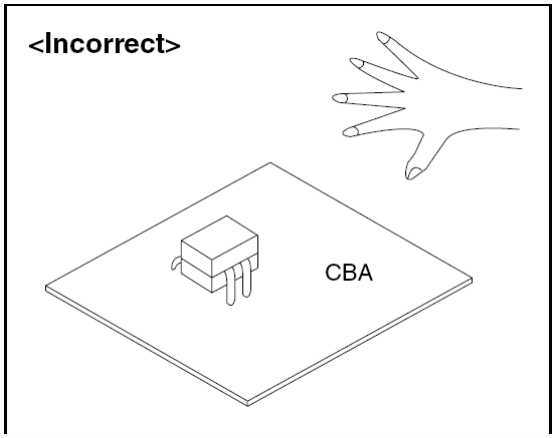
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

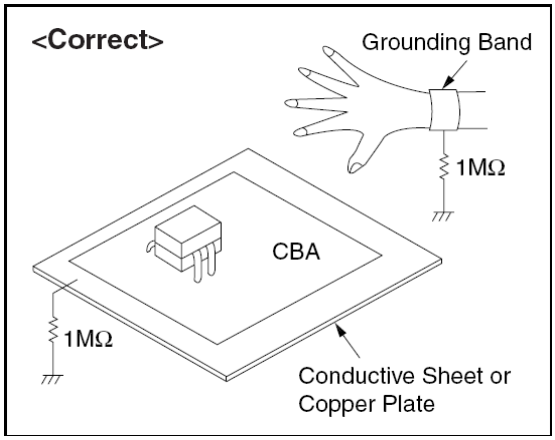
1. Ground for Human Body

Be sure to wear a grounding band (1 M∧) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 M∧) 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.



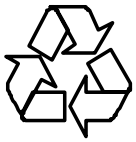


Safety and important notice

Warning

- Risk of overheating! Never install the Home Theater System in a confi ned 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 fl ames 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-fi lled 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.

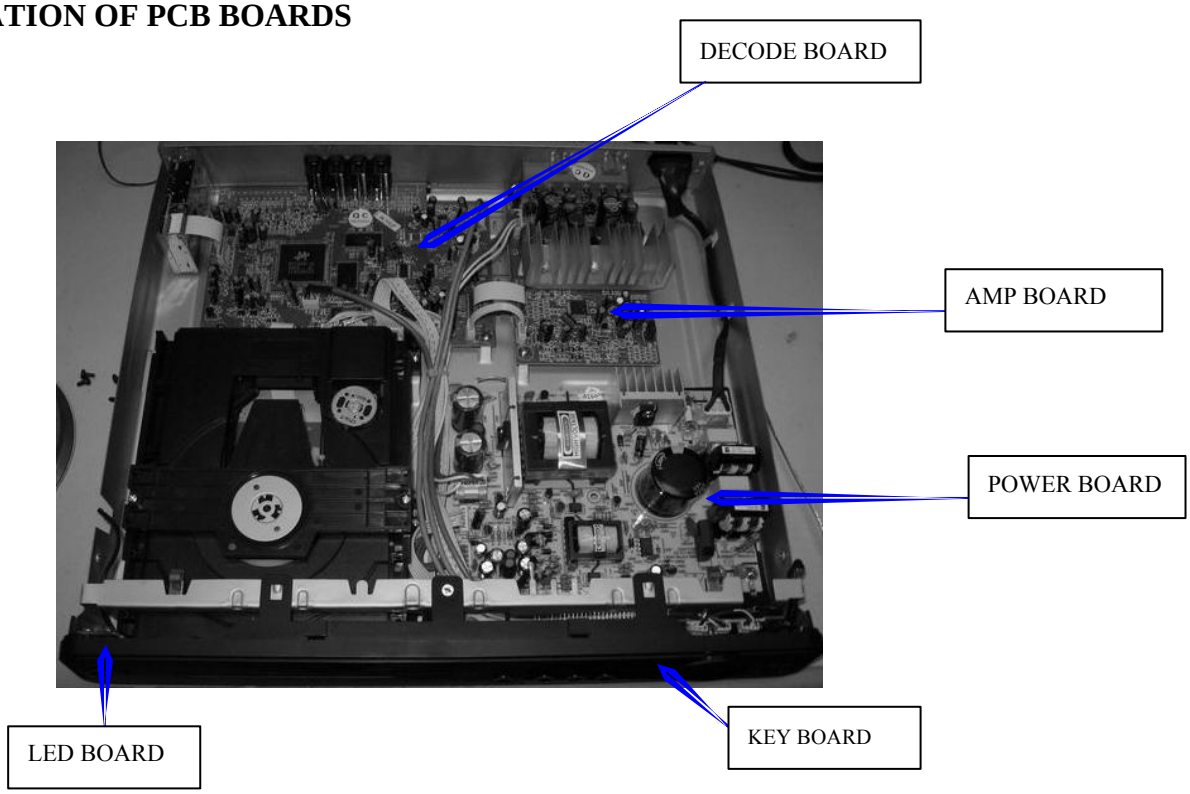
Copyright notice

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 defi nition 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 defi nition’ 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 / Features	HTS3181 /55	HTS3181X /78
Output Power-300W	X	X
Voltage(110V-240V)	X	X

SERVICE SCNARIO MATRIX:

Type/Versions / Board in used	HTS3181 /55	HTS3181X /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

Standby-On
—Turns on the player or switches to standby mode

Disc Tray

Open/Close
—Opens or closes the disc compartment.

Display Panel

USB
—Connects a USB supported device

Play/Pause
—starts or pauses playback

Stop
—Stops playback

VOLUME
—Increases or decreases volume.

MIC
—Connects a microphone

SOURCE
—Selects a media to play or listen to audio from the connected device.

Back Panel

MAINS~(AC Power cord)
—Connect to a standard AC outlet

AUDIO IN
—Connect the audio cables(not supplied) to the AUDIO IN_AUX1 jacks

VIDEO OUT
—Connect the component video cable(not supplied) to the Y Pb Pr jacks

SPEAKERS
—Connect the Speakers to the matching jacks

VIDEO
—Connect a composite video cable to the video jack

ANTENNA
—Connect the FM antenna to the FM 75Ω jack

SPECIFICATIONS

AMPLIFIER

Total output power .... 300 W RMS(30%THD)
Frequency Response ....…....……….180Hz – 18kHz / ±3 dB
Signal-to-Noise Ratio ....>- 60 dB (A-weighted)
Input Sensitivity
- AUX1………..500 mV
- AUX2………….....… .... 500 mV

RADIO

Tuning Range ....FM 87.5-108 MHz
....(100kHz)
....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 / ±3 dB
Stereo Separation .... FM 26 dB (1 kHz)
Stereo Threshold ....FM 23.5 dB

DISC

Laser Type ....…...Semiconductor
Disc Diametre ....12cm / 8cm
Video Decoding ....MPEG-1 / MPEG-2 /DivX
.... / 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......………………….........…………...110 - 240 V~50-60Hz
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

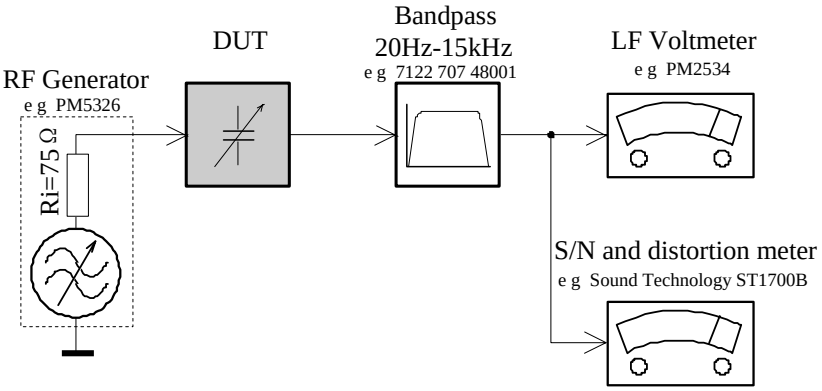
Impedance ....8 ohm
Speaker drivers .... 165mm (6.5”) woofer
Frequency response ....45Hz – 150 Hz
Dimensions ....122.6x 30 9.5 x 369 (mm)
....(w x h x d)
Weight 3.54kg

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

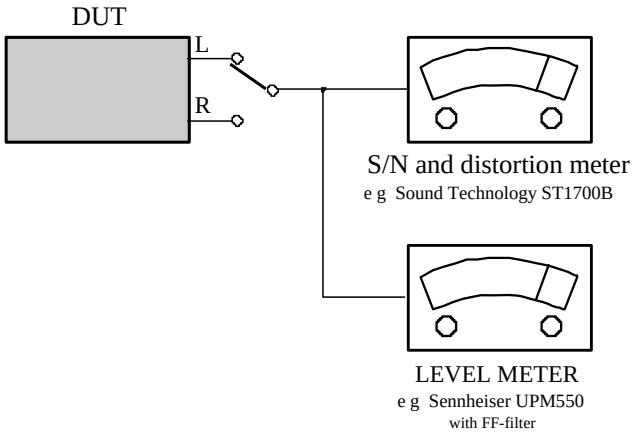
Tuner FM



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

CD

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



System , Region Code , etc. Setting Produre

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

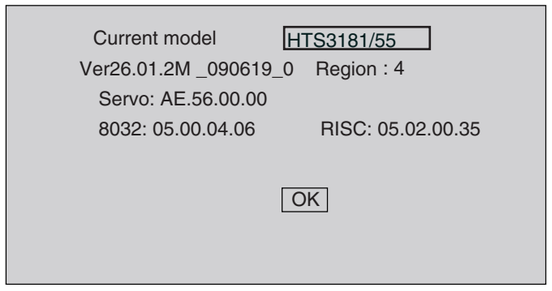
2)Region Code Change

a) In open model, press”9” “9“ “9“ “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

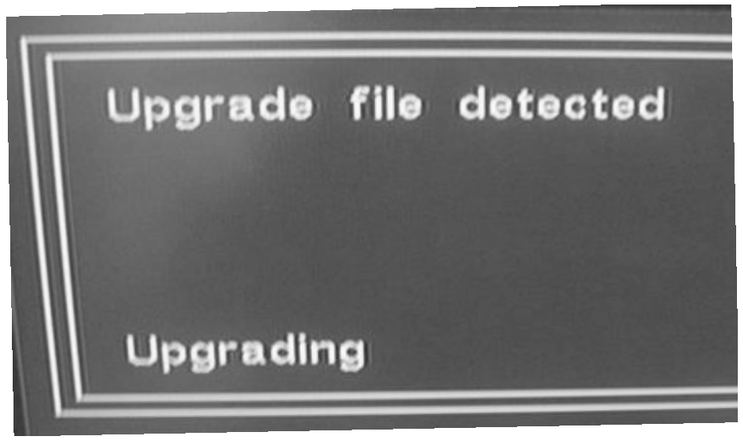
a) Press “SETUP“ button on R/C,TV will show setup menu
b) Select the menu using the▼ and ► on RC
c) Go preference page select “Version Info“.
TV will show the version on screen.

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

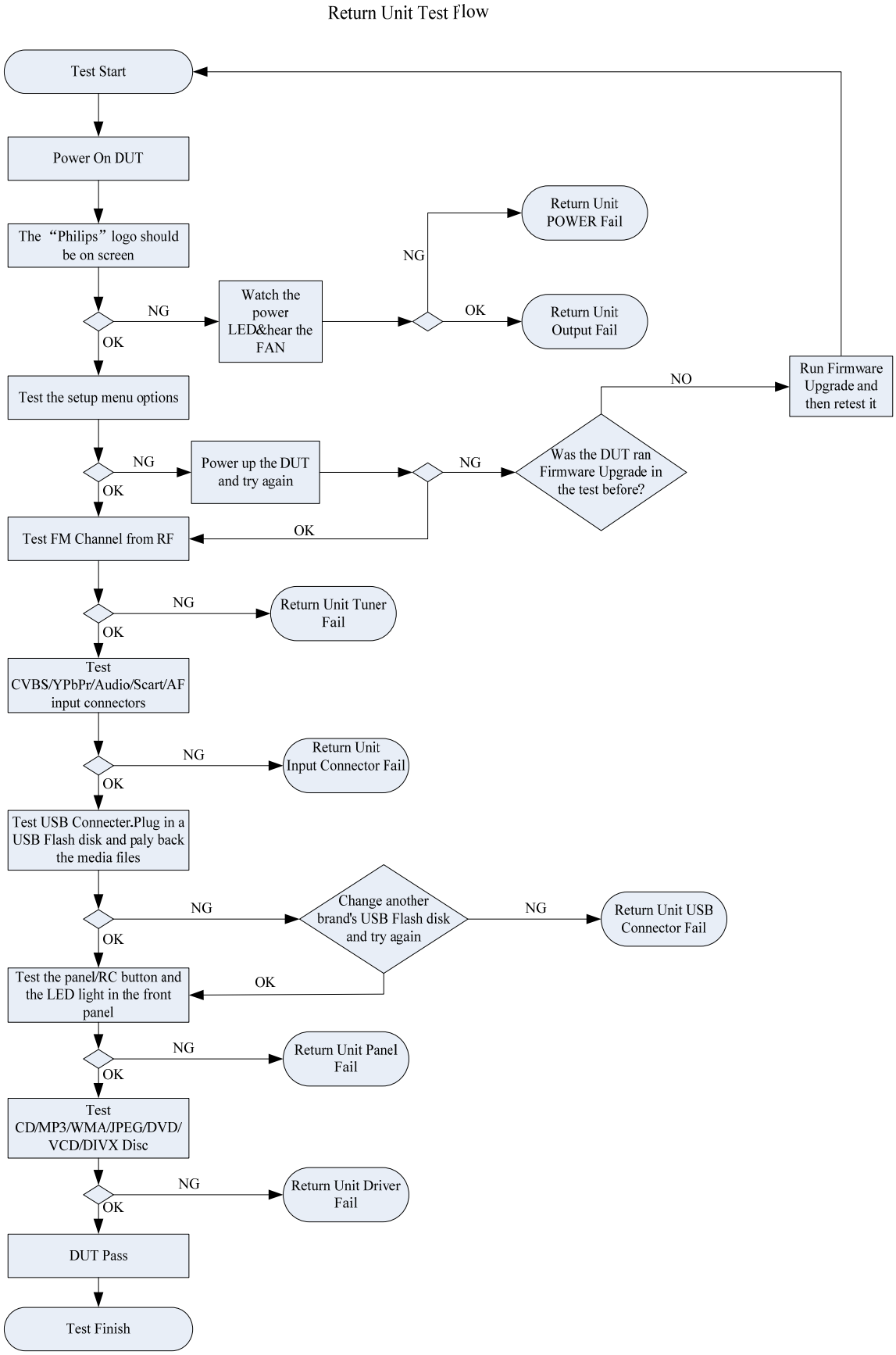
a) Copy “sofeware files” into a CD-R or USB flash drive.
b) Insert the CD-R disc or USB flash drive.
c) Press DISC or USB, the system will identify the update file autometically.
d) VFD will show “Updating“ until update is complete.
* the system will switch off to standby automatically after update is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



CAUTION!

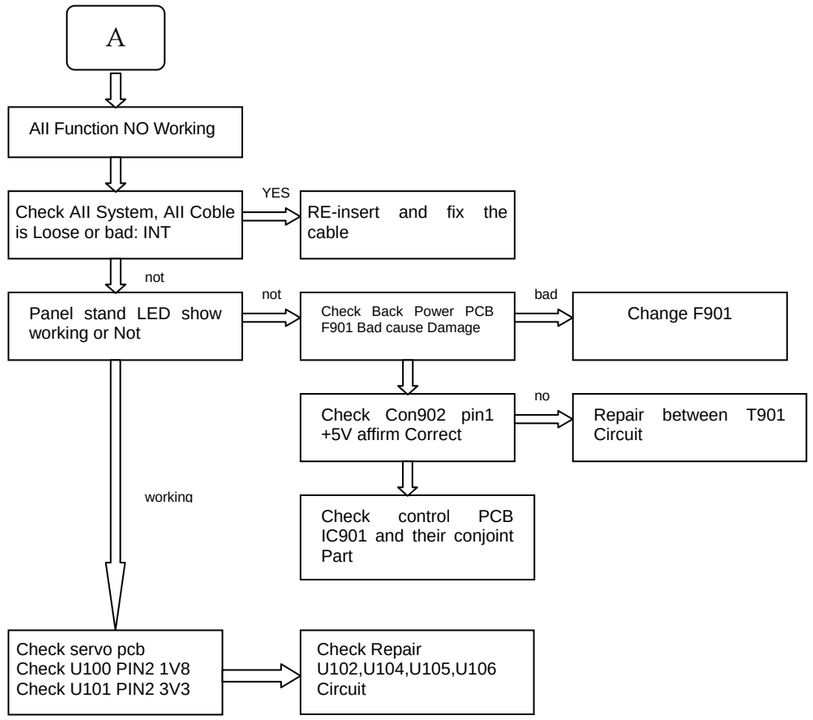
This information is confidential and may not be distributed.Only a qualified service person should reprogram the Region Code.

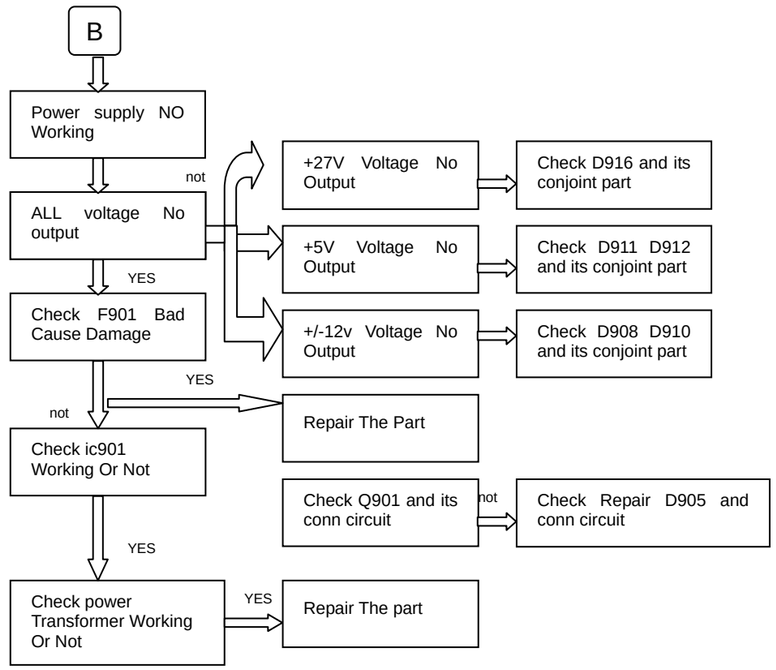
Flow chart on how to filter between working &defective sets

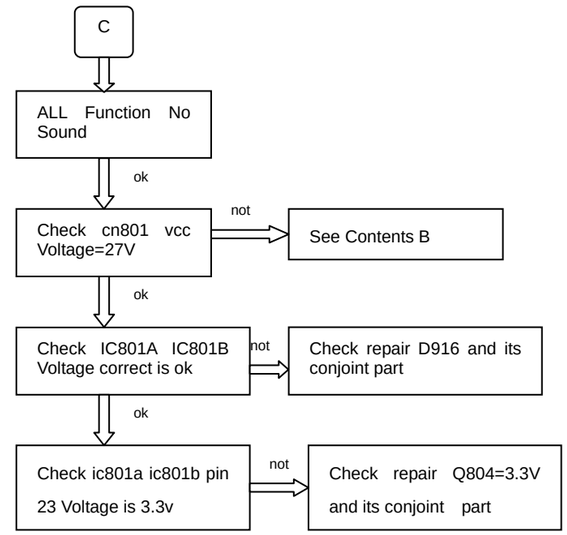


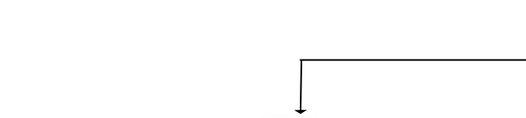
MAIN UNIT REPAIR CHART

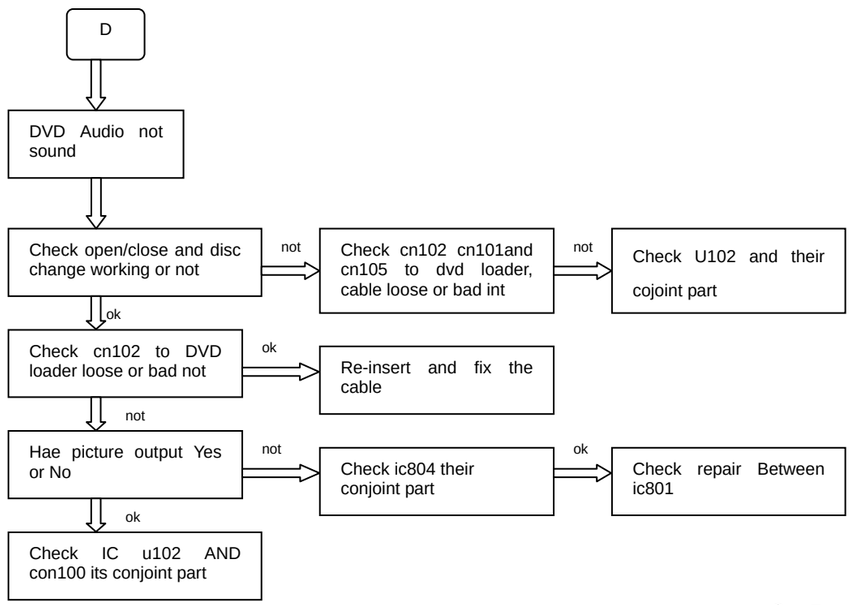
- A — AII Function NO Working
- B — Power supply NO working
- C — ALL Function NO Sound
- D — DVD Audio NO Sound
- E — Aux/TV in NO Sound
- F — Tuner NO Sound

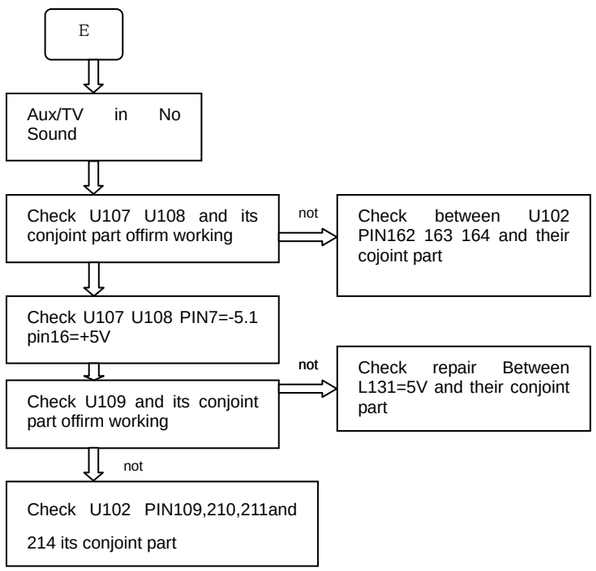


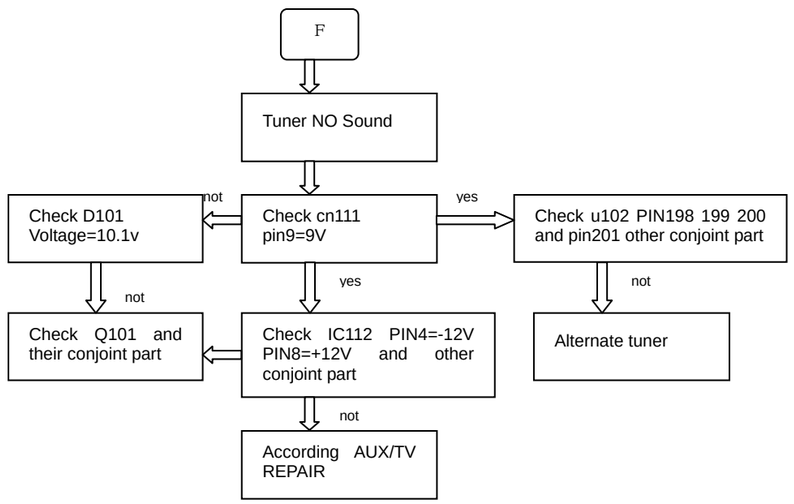








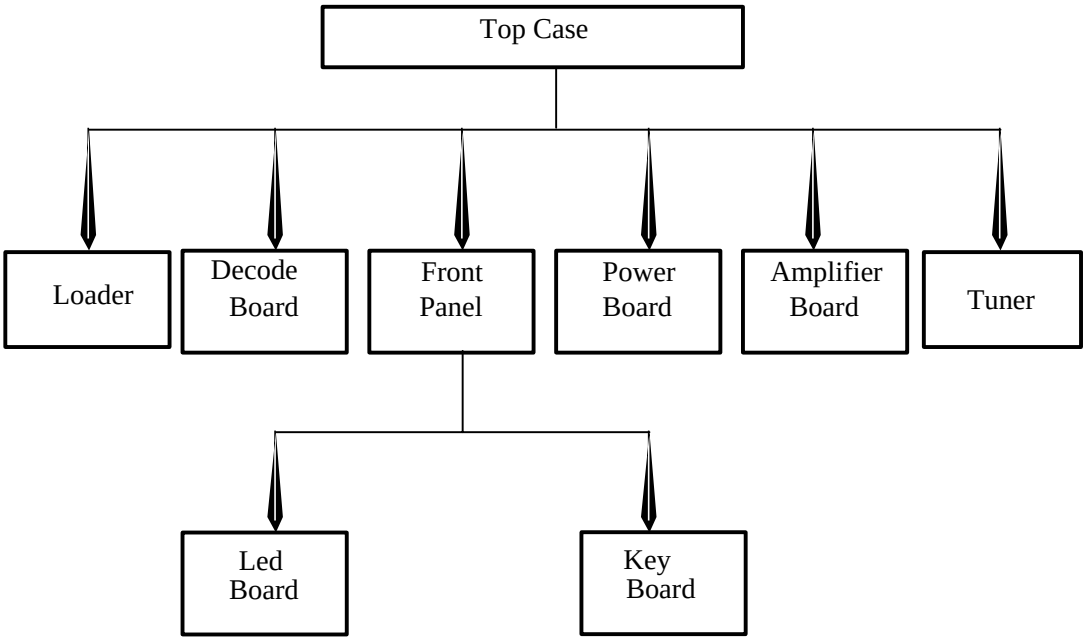




DISASSEMBLY INSTRUCTIONS

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.

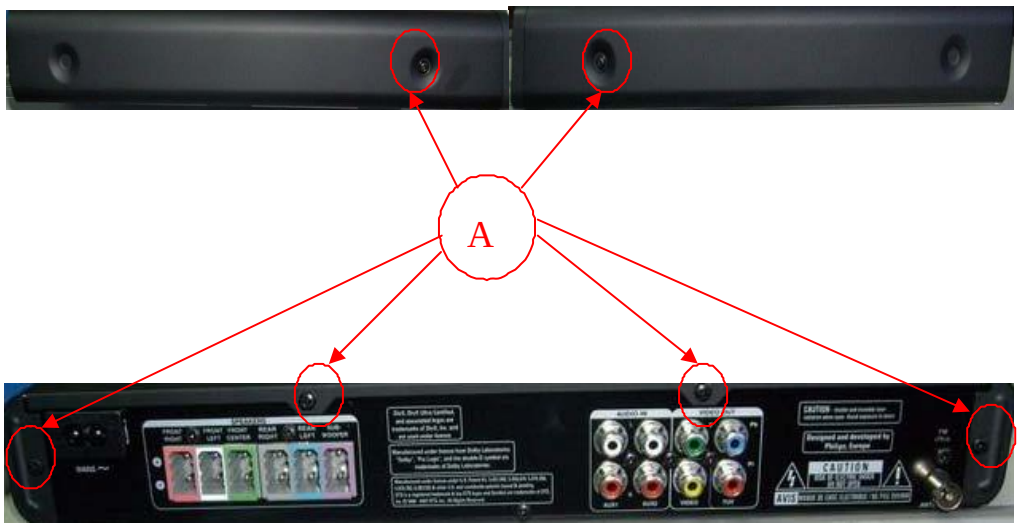


Figure 2-1.

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.

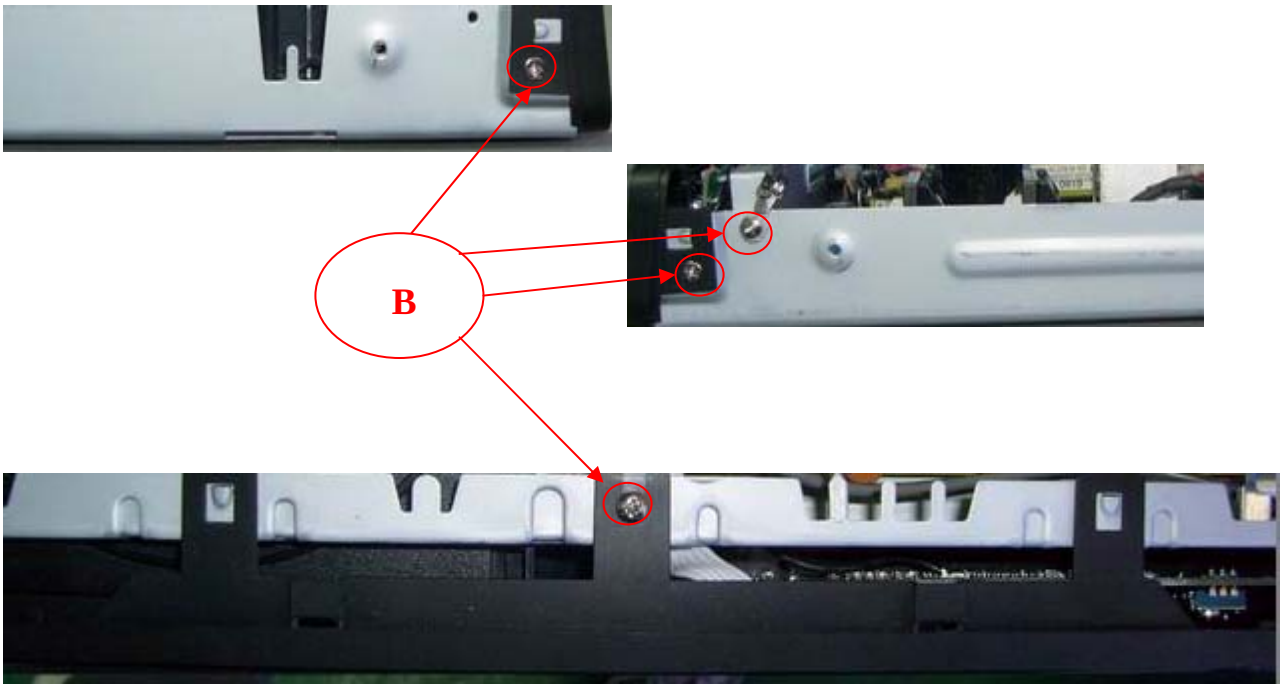


Figure 3-1

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

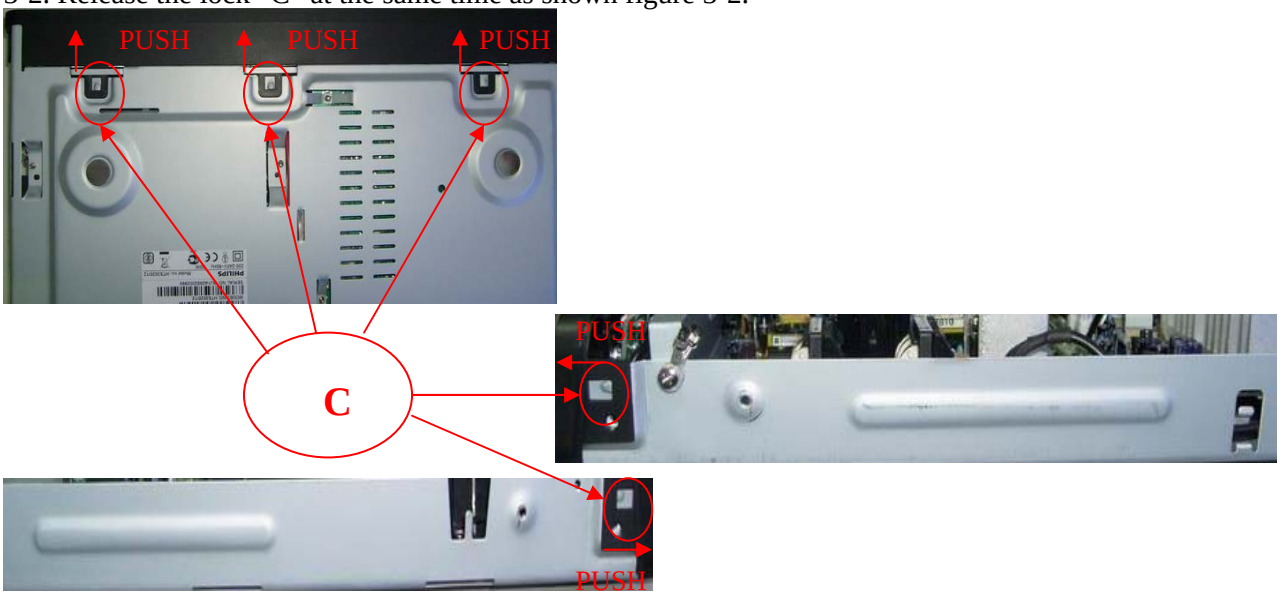


Figure 3-2

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

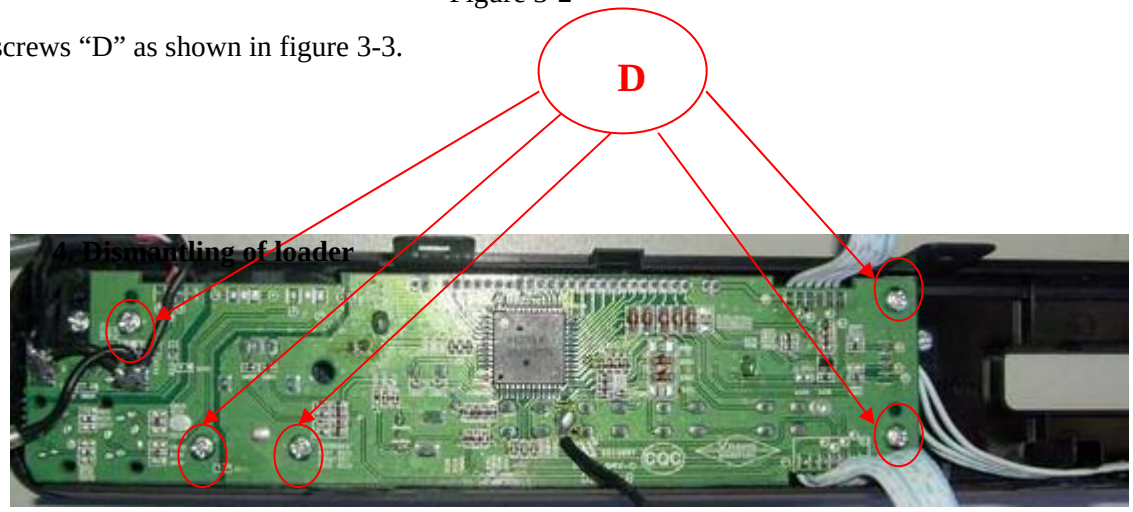


Figure 3- 3

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

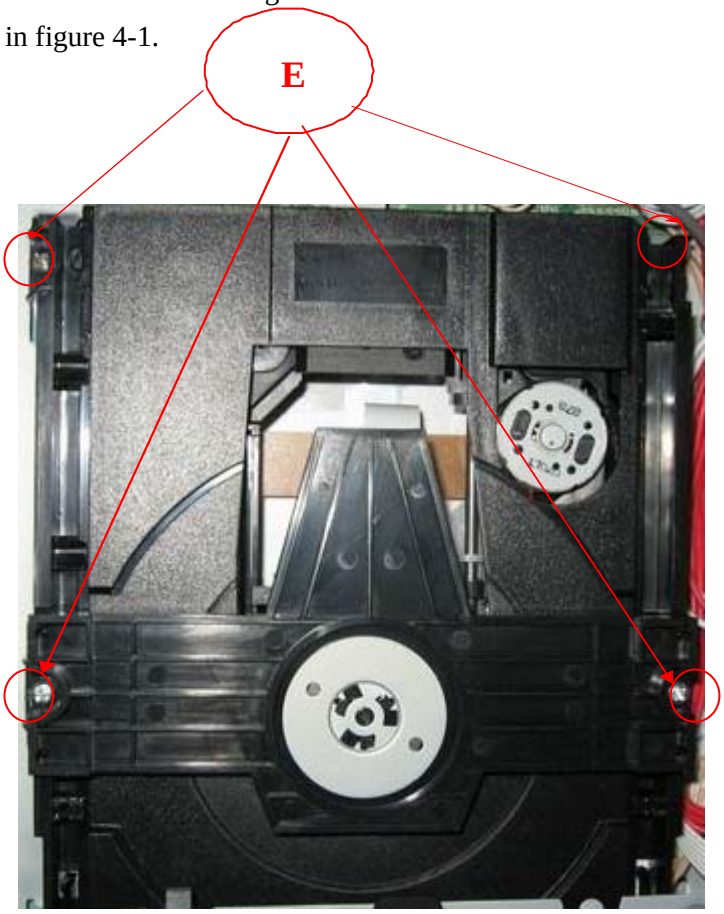


Figure 4-1

5. Dismantling of decode board

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

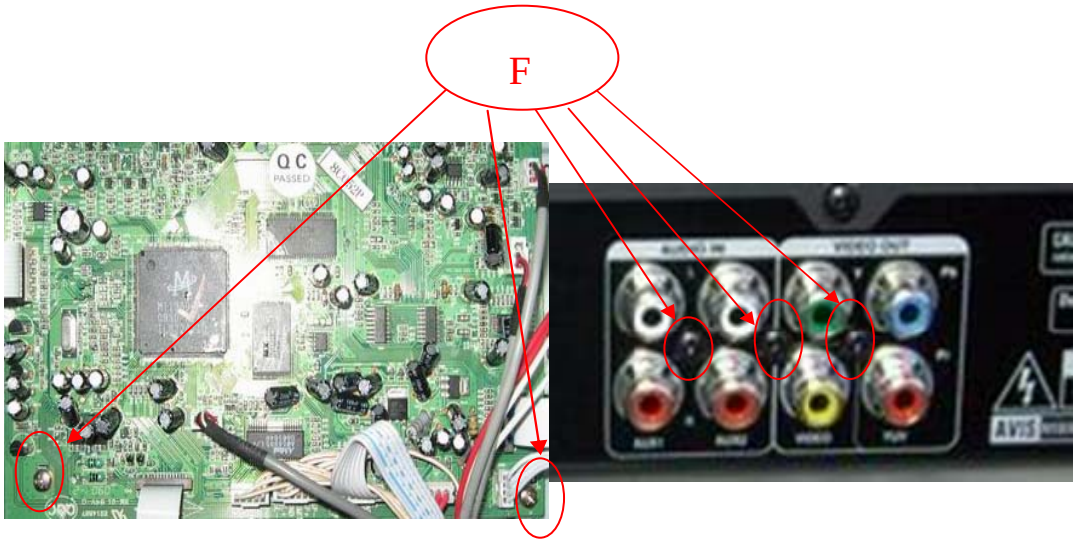


Figure 5-1

6. Dismantling of power board

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

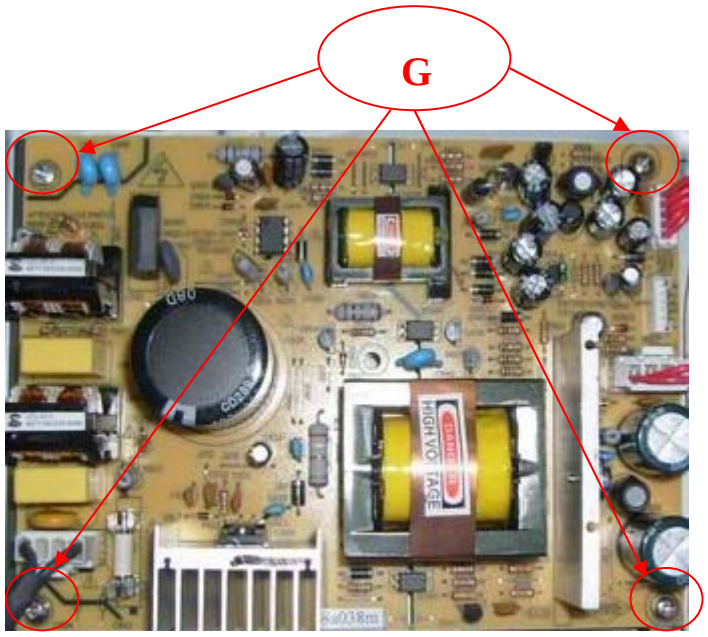


Figure 6-1

7. Dismantling of amplifier board

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

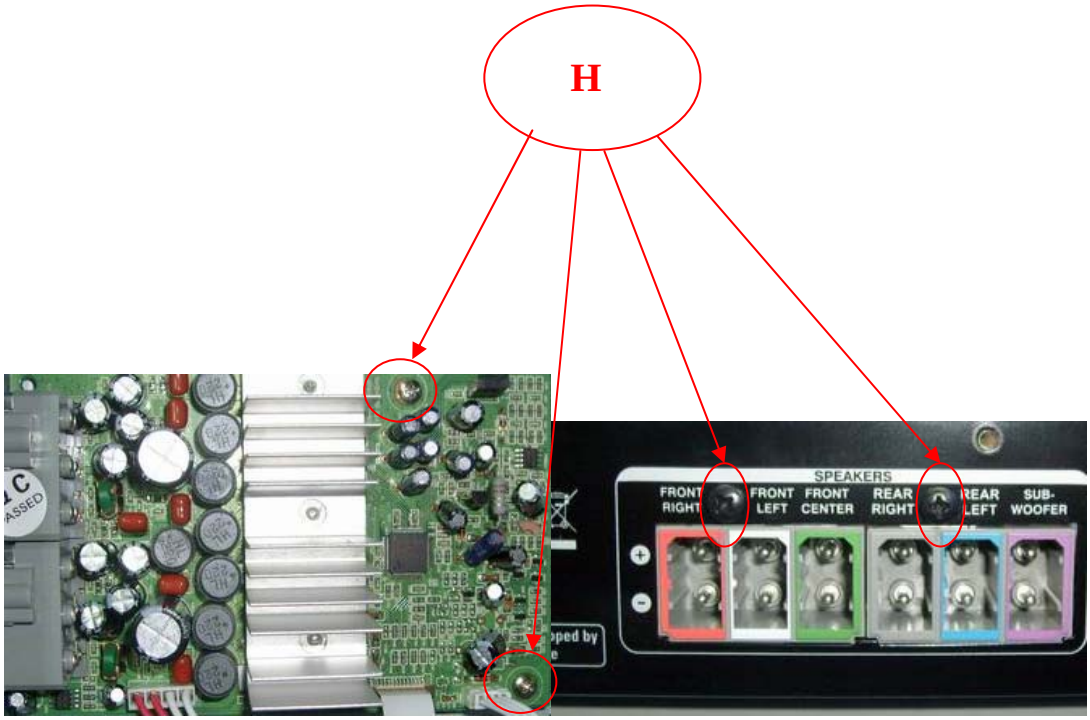


Figure 7-1.

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.

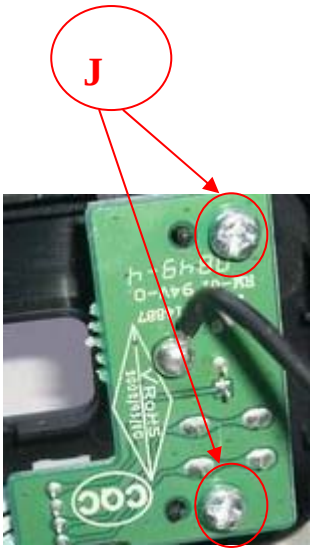
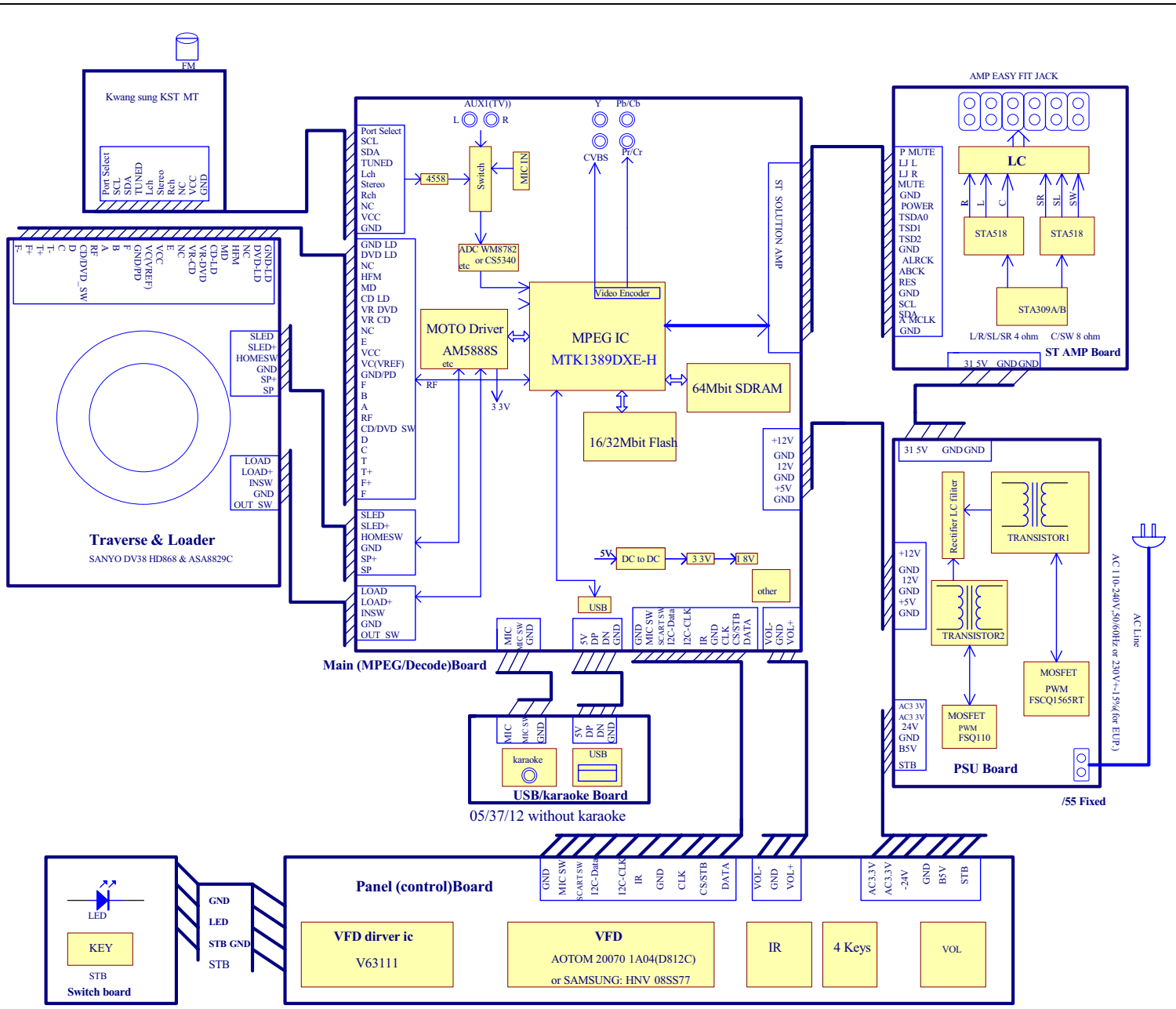


Figure 9-1.


FM
Kwang sung KST MT
Port Select
SCL
SDA
TUNED
Lch
Stereo
Rch
NC
VCC
GND
Traverse & Loader
SANYO DV38 HD868 & ASA8829C
SLED
SLED+
HOMESW
GND
SP+
SP
LOAD
LOAD+
INSW
GND
OUT_SW
GND_LD
DVD_LD
NC
HFM
MD
CD_LD
VR_DVD
VR_CD
NC
E
VCC
VC(VREF)
GND/PD
F
B
A
RF
CD/DVD_SW
D
C
T
T+
F+
F-
Main (MPEG/Decode)Board
AUX1(TV))
L
R
Y
Pb/Cb
CVBS
Pr/Cr
4558
Switch
MIC IN
ADC WM8782
or CS5340
etc
Video Encoder
MOTO Driver
AM5888S
etc
MPEG IC
MTK1389DXE-H
64Mbit SDRAM
16/32Mbit Flash
RF
3.3V
ST SOLUTION AMP
5V
DC to DC
3.3V
1.8V
other
USB
MIC
MIC SW
GND
5V
DP
DN
GND
SCART SW
I2C-Data
I2C-CLK
IR
CS/STB
DATA
VOL-
VOL+
+12V
12V
+5V
USB/karaoke Board
karaoke
05/37/12 without karaoke
AMP EASY FIT JACK
P MUTE
LJ L
LJ R
MUTE
POWER
TSDA0
TSD1
TSD2
ALRCK
ABCK
RES
SCL
SDA
MCLK
LC
STA518
STA309A/B
L/R/SL/SR 4 ohm
C/SW 8 ohm
ST AMP Board
31.5V
PSU Board
Rectifier LC filter
TRANSISTOR1
TRANSISTOR2
MOSFET
PWM
FSCQ1565RT
MOSFET
PWM
FSQ110
AC3.3V
24V
B5V
STB
AC Line
AC 110-240V/50/60Hz or 230V+-15%(for EUP)
/55 Fixed
Panel (control)Board
LED
KEY
Switch board
VFD dirver ic
V63111
VFD
AOTOM 20070 1A04(D812C)
or SAMSUNG: HNV 08SS77
IR
4 Keys
VOL

AMPLIFIER BOARD

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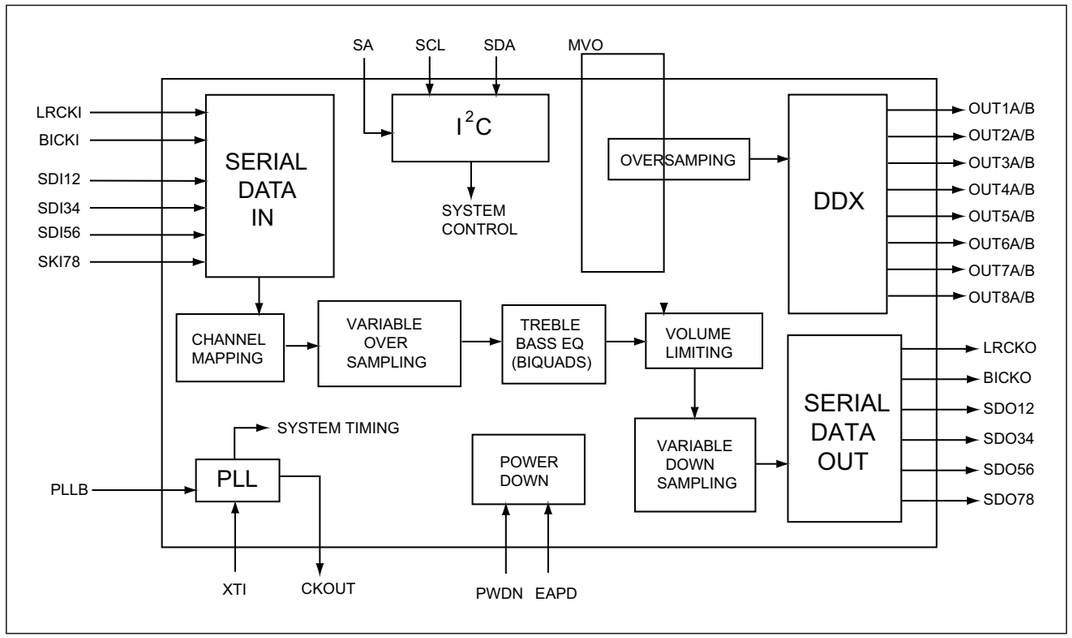
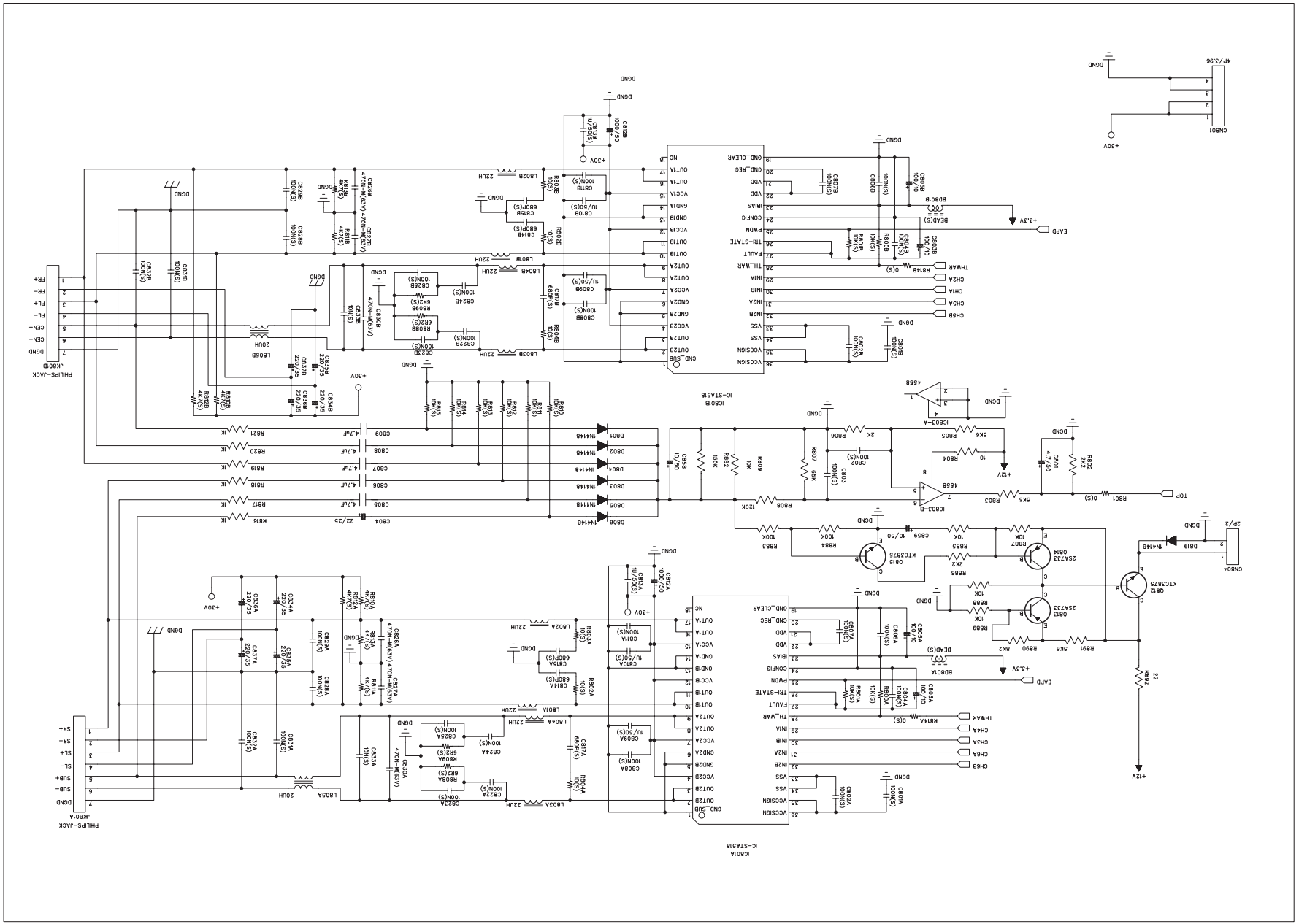
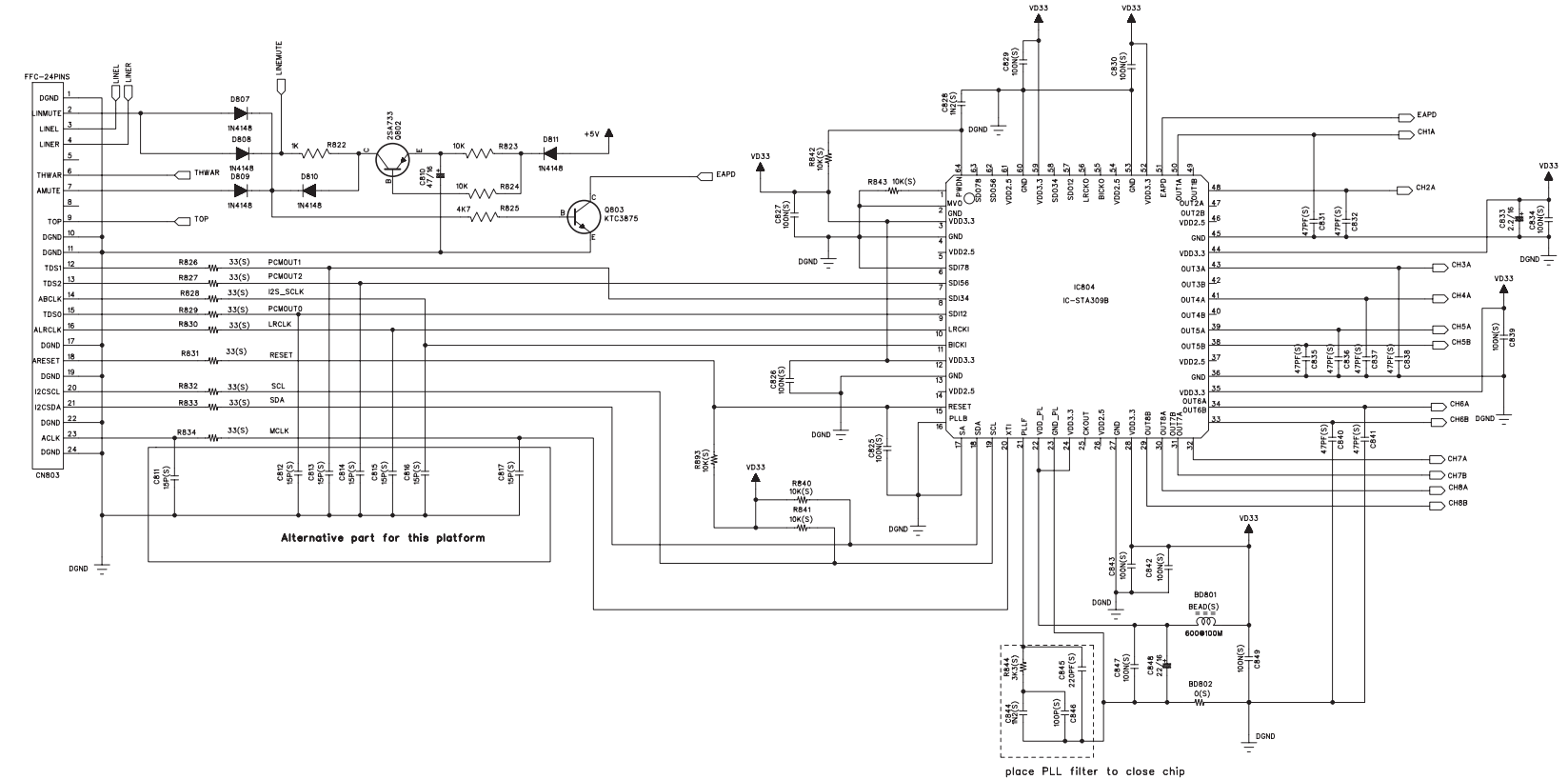
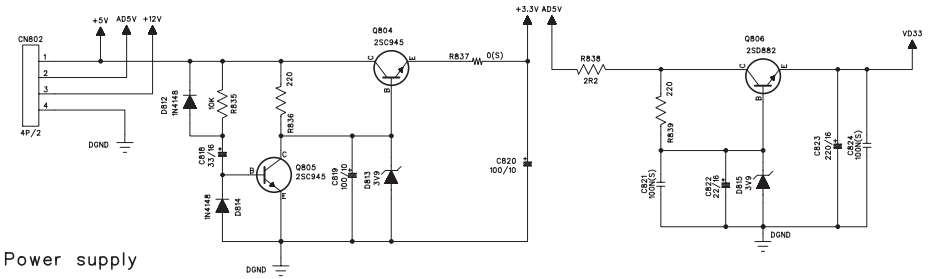
INTERNAL IC DIAGRAM - STA309A



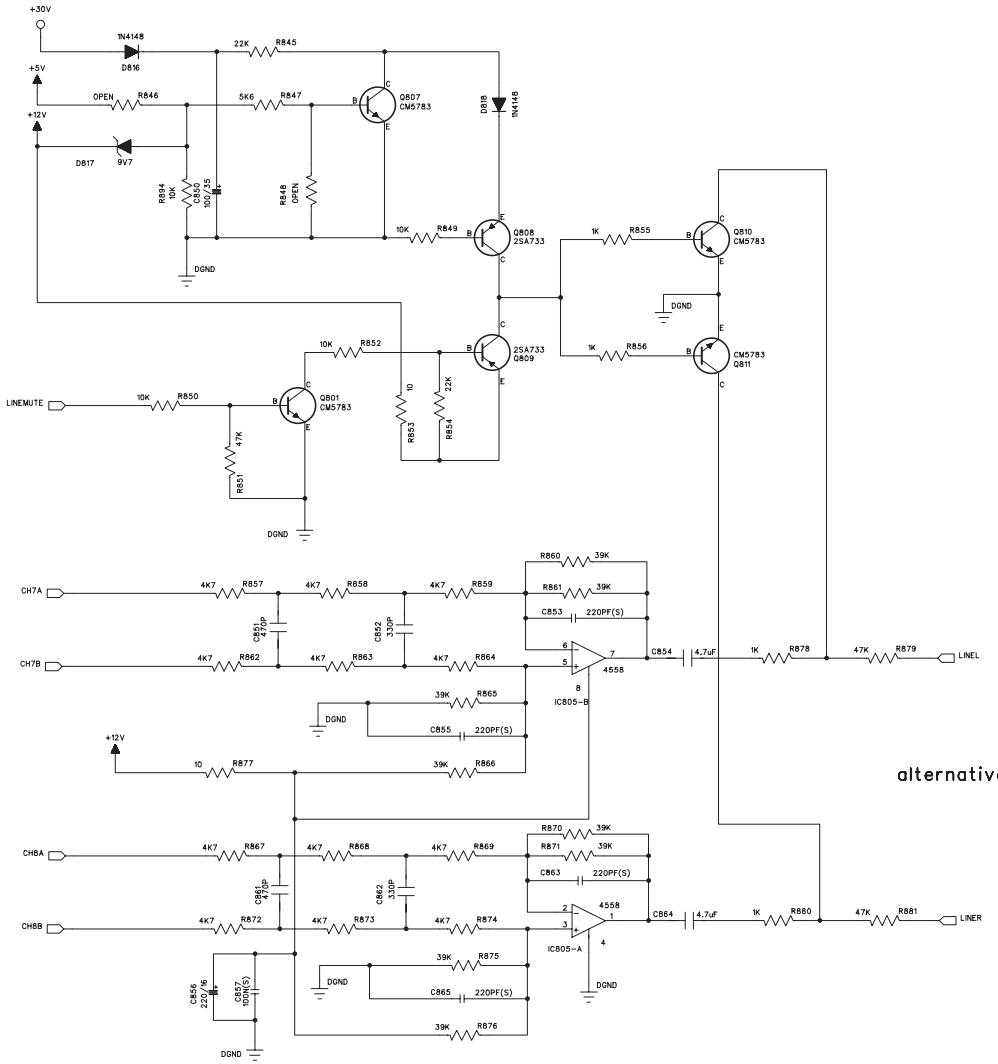
6 - 1



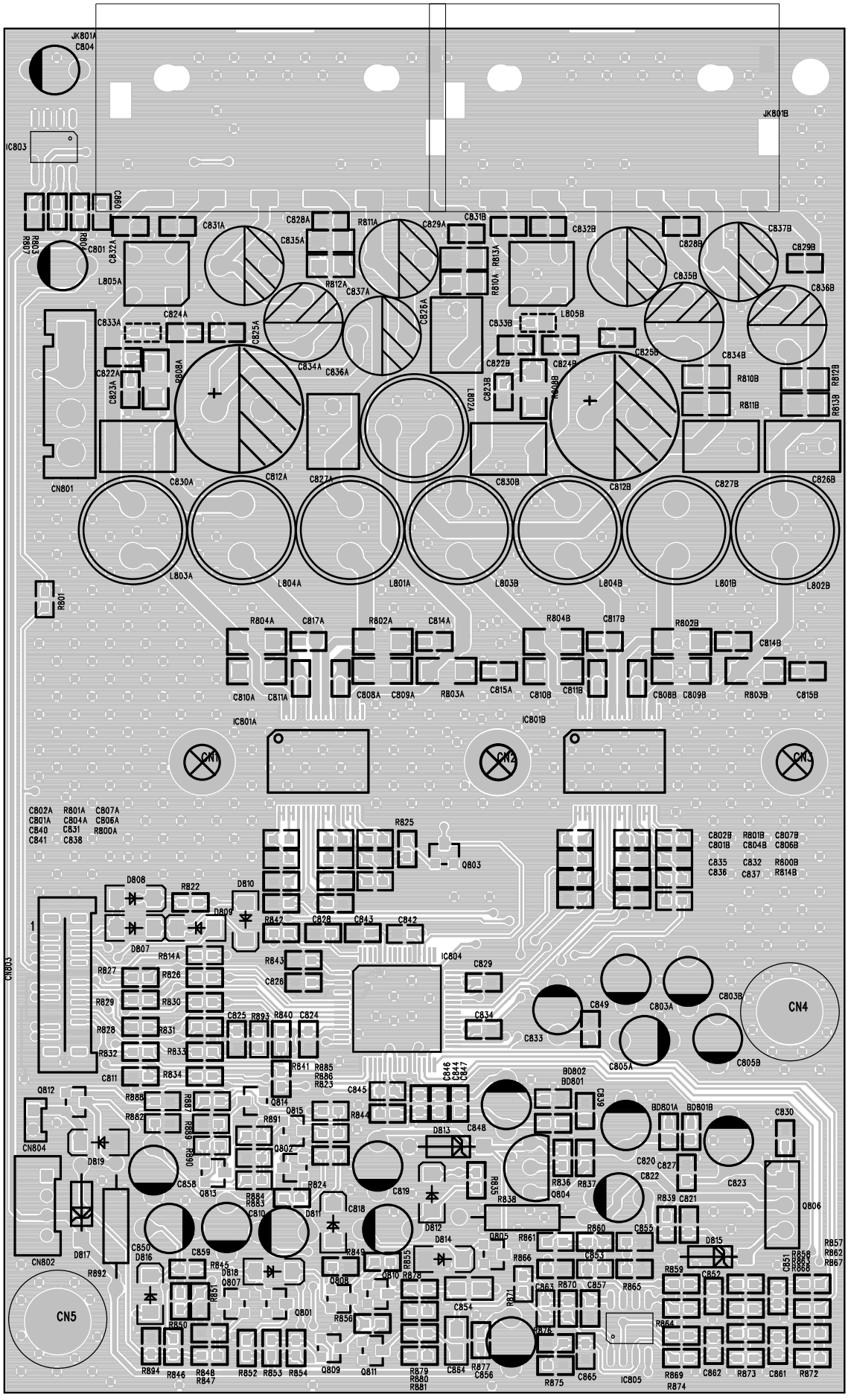




Power supply



alternative part for this platform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C804
JK801B
IC803
C831A
C828A
R811A
C829A
C831B
C832B
C828B
C837B
C829B
C835A
R813A
R810A
C835B
C836B
R812A
C837A
C826A
C824A
C833A
C825A
L805A
C833B
L805B
C825B
C834B
C822A
C834A
C836A
C822B
C824B
C823A
C823B
L802A
R810B
R812B
R811B
R813B
C830A
C812A
C827A
C830B
C812B
C827B
C826B
CN801
L803A
L804A
L801A
L803B
L804B
L801B
L802B
R801
R804A
C817A
R802A
C814A
R804B
C817B
R802B
C814B
C810A
C811A
C808A
C809A
R803A
C815A
C810B
C811B
C808B
C809B
R803B
C815B
IC801A
IC801B
CN1
CN2
CN3
C802A
C801A
C840
C841
R801A
C804A
C831
C838
C807A
C806A
R800A
R825
Q803
C802B
C801B
C835
C836
R801B
C804B
C832
C837
C807B
C806B
R800B
R814B
D808
R822
D810
D809
R842
C828
C843
C842
D807
R814A
R827
R826
R843
IC804
C829
R829
R830
C826
C825
R893
R840
C824
C834
C849
C803A
C803B
CN4
R828
R831
C833
R832
R833
C805A
C805B
C811
R834
R841
R885
R886
R823
C846
C844
C847
BD802
BD801
C839
Q812
R888
R887
Q814
Q815
C845
R844
BD801A
BD801B
C830
R862
R889
R891
D813
C848
CN804
D819
Q802
C820
C827
C822
C823
C858
Q813
R824
C819
R836
R837
R835
R838
Q804
R839
C821
Q806
R884
R883
C810
D811
IC818
D812
R860
C855
R857
R862
R867
C850
D816
C859
D814
Q805
R861
D815
CN802
D817
R866
C853
R858
R863
R868
R892
R845
R849
R855
R859
C852
C851
D818
Q807
Q808
Q810
R878
C863
R870
C857
R865
R871
C854
CN5
R851
R850
Q801
R856
R876
R864
R894
R846
R848
R847
R852
R853
R854
Q809
Q811
R879
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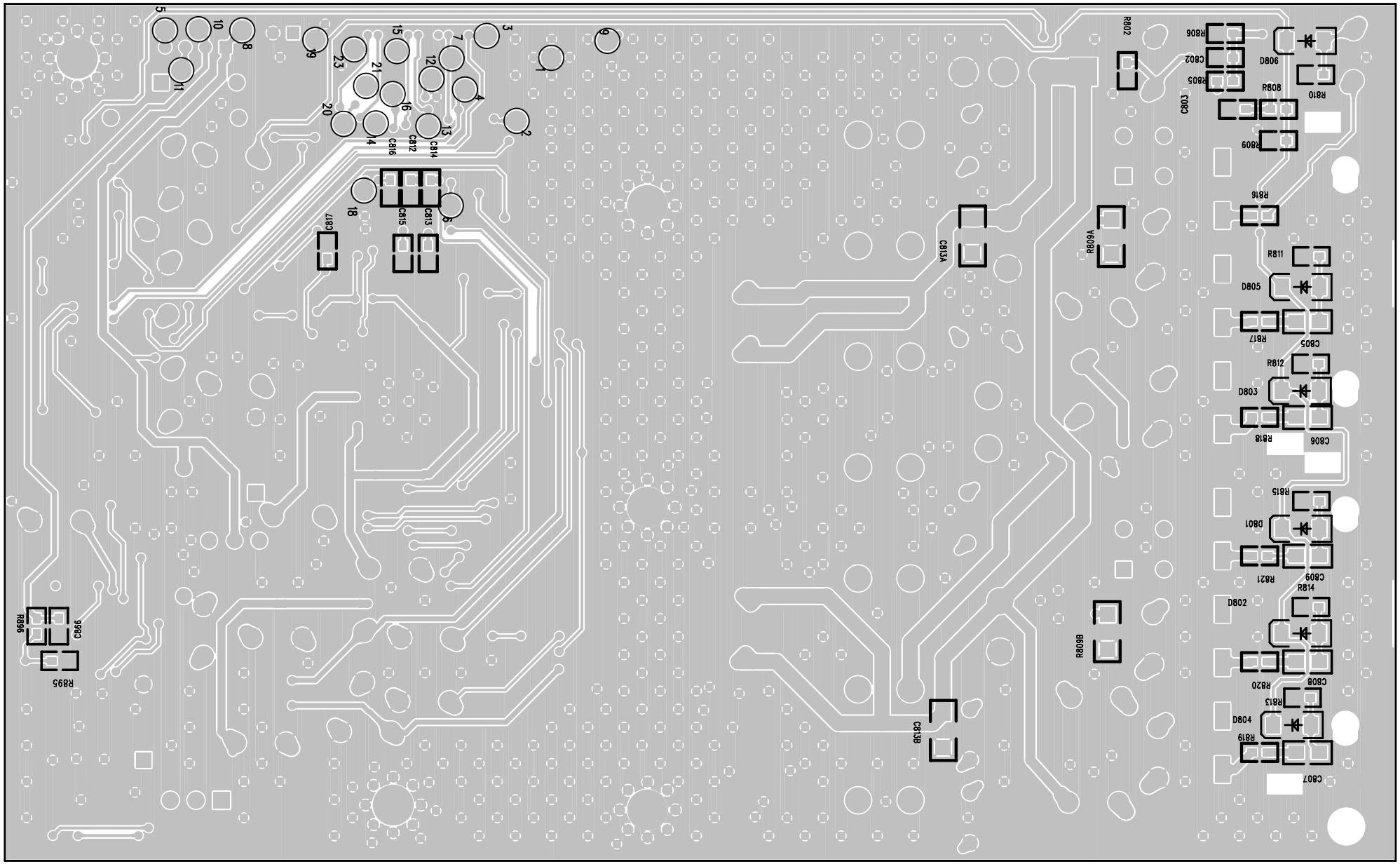
IC805
R869
R874
C862
R873
C861
R872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R806
C802
R805
C803
D808
R808
R810
R809
R816
R811
D805
R817
C805
R812
D803
R818
C806
R815
D801
R821
C809
R814
D802
C808
R820
R813
D804
R819
C807
C813A
R809A
R809B
C813B
C816
C812
C814
C815
C813
C817
R866
C866
R895

LED & KEY BOARD

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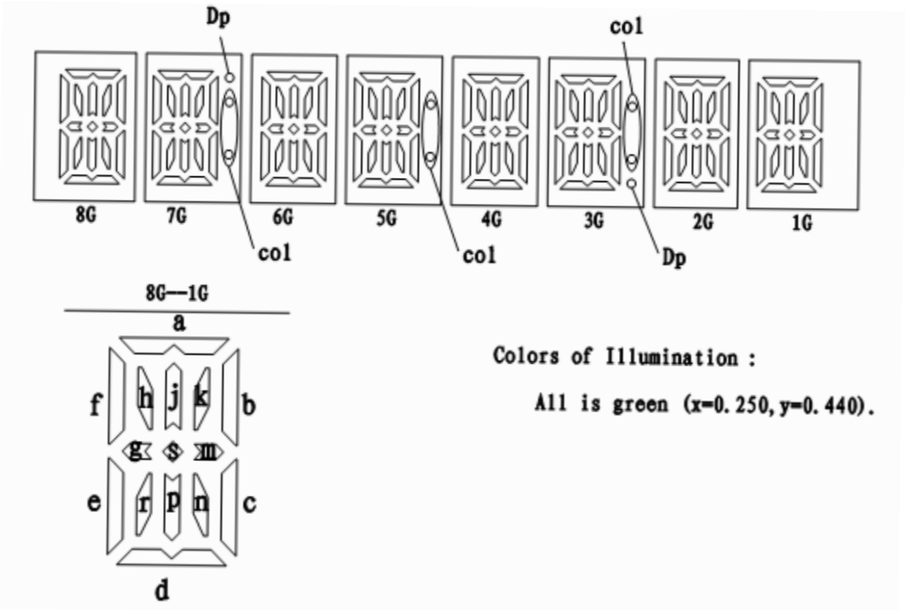
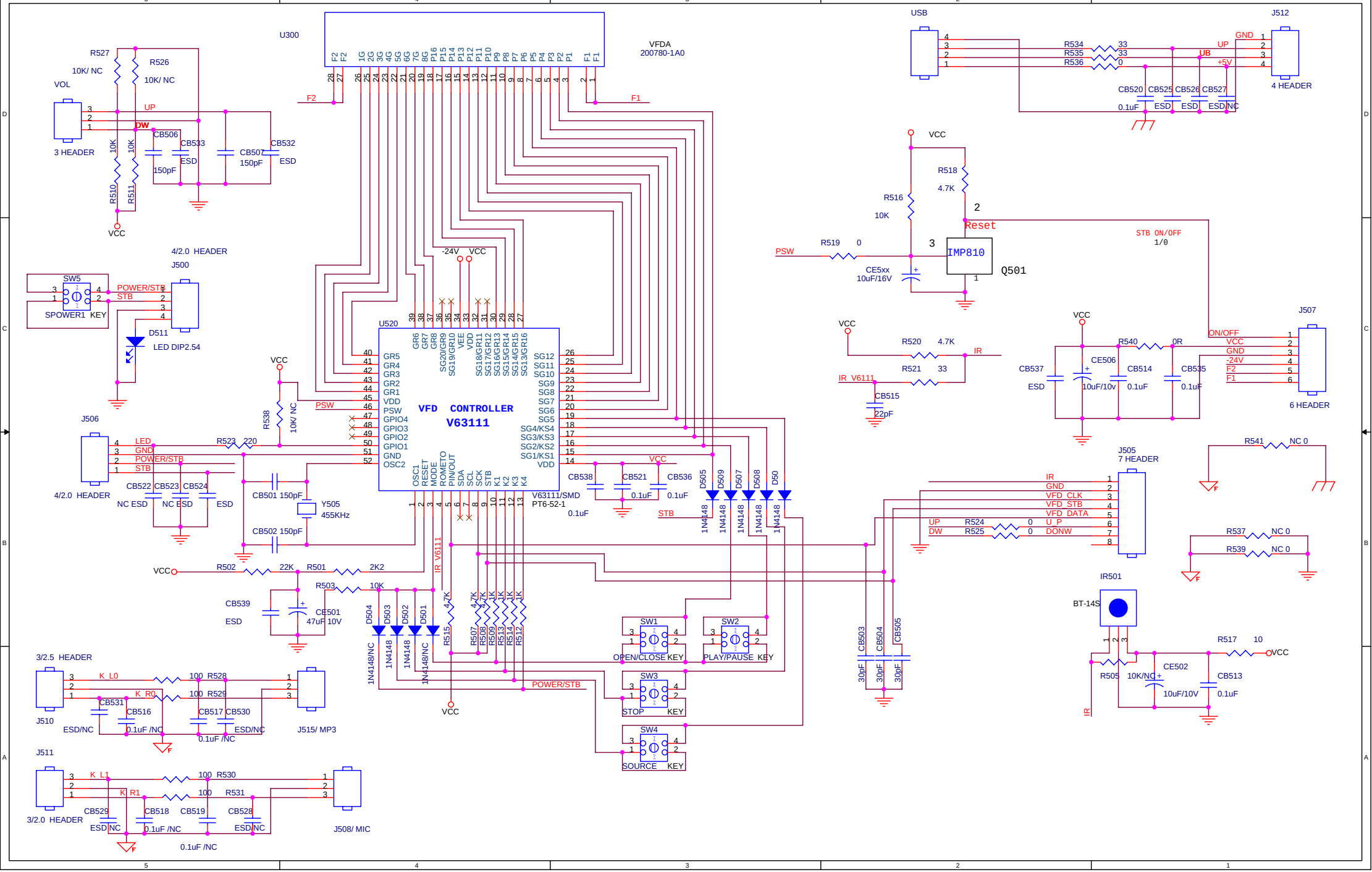
FTD DISPLAY PIN ASSIGNMENT



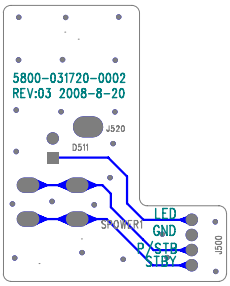
Colors of Illumination :

All is green (x=0.250, y=0.440).

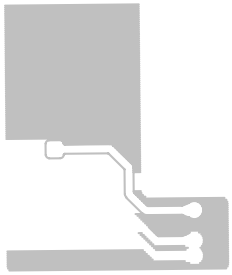
	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a
P2	j,p	j,p	j,p	j,p	j,p	j,p	j,p	j,p
P3	h	h	h	h	h	h	h	h
P4	k	k	k	k	k	k	k	k
P5	b	b	b	b	b	b	b	b
P6	f	f	f	f	f	f	f	f
P7	m	m	m	m	m	m	m	m
P8	g	g	g	g	g	g	g	g
P9	c	c	c	c	c	c	c	c
P10	e	e	e	e	e	e	e	e
P11	r	r	r	r	r	r	r	r
P12	n	n	n	n	n	n	n	n
P13	d	d	d	d	d	d	d	d
P14		Dp		col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


U300
VFDA
200780-1A0
VOL
R527
10K/ NC
R526
10K/ NC
3 HEADER
UP
DW
CB506
CB533
150pF
ESD
CB507
150pF
CB532
ESD
R510
R511
10K
VCC
4/2.0 HEADER
J500
SW5
SPOWER1 KEY
POWER/STB
STB
D511
LED DIP2.54
U520
VFD CONTROLLER
V63111
V63111/SMD
PT6-52-1
-24V
VCC
PSW
R538
10K/ NC
J506
LED
GND
POWER/STB
STB
R523 220
4/2.0 HEADER
CB522 CB523 CB524
NC ESD NC ESD ESD
CB501 150pF
CB502 150pF
Y505
455KHz
R502 22K
R501 2K2
R503 10K
CB539
ESD
CE501
47uF 10V
IR_V6111
D504 D503 D502 D501
1N4148/NC 1N4148 1N4148 1N4148/NC
R515 4.7K
R507 4.7K
R508 1K
R509 1K
R513 1K
R514 1K
R512 1K
POWER/STB
SW1
OPEN/CLOSE KEY
SW2
PLAY/PAUSE KEY
SW3
STOP KEY
SW4
SOURCE KEY
CB538
CB521 0.1uF
CB536 0.1uF
0.1uF
STB
D505 D509 D507 D508 D50
1N4148
CB503 CB504 CB505
30pF
3/2.5 HEADER
J510
K L0
K R0
100 R528
100 R529
CB531
CB516
0.1uF /NC
CB517 CB530
ESD/NC
J515/ MP3
J511
3/2.0 HEADER
K L1
K R1
100 R530
100 R531
CB529
CB518
CB519
CB528
ESD/NC
0.1uF /NC
J508/ MIC
USB
J512
4 HEADER
R534 33
R535 33
R536 0
GND
UP
UB
+5V
CB520 CB525 CB526 CB527
0.1uF ESD ESD ESD/NC
VCC
R518 4.7K
R516 10K
Reset
IMP810
Q501
PSW
R519 0
CE5xx
10uF/16V
STB ON/OFF
1/0
R520 4.7K
IR
R521 33
IR_V6111
CB515
22pF
J507
6 HEADER
ON/OFF
VCC
GND
-24V
F2
F1
CB537
ESD
CE506
10uF/10v
CB514
0.1uF
R540 0R
CB535
0.1uF
J505
7 HEADER
IR
GND
VFD_CLK
VFD_STB
VFD_DATA
U_P
DONW
UP R524 0
DW R525 0
R541 NC 0
R537 NC 0
R539 NC 0
IR501
BT-14S
R505
10K/NC
CE502
10uF/10V
R517 10
CB513
0.1uF
IR

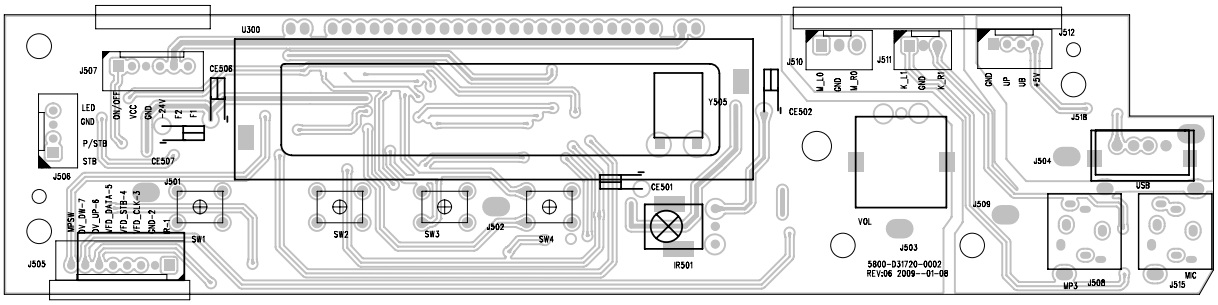
LED BOARD TOP VIEW



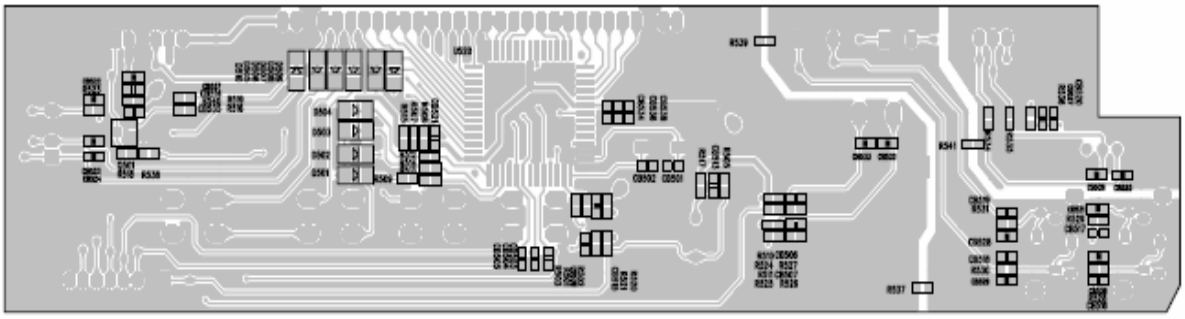
LED BOARD BOTTOM VIEW



KEY BOARD TOP VIEW



KEY BOARD BOTTOM VIEW



DECODE BOARD

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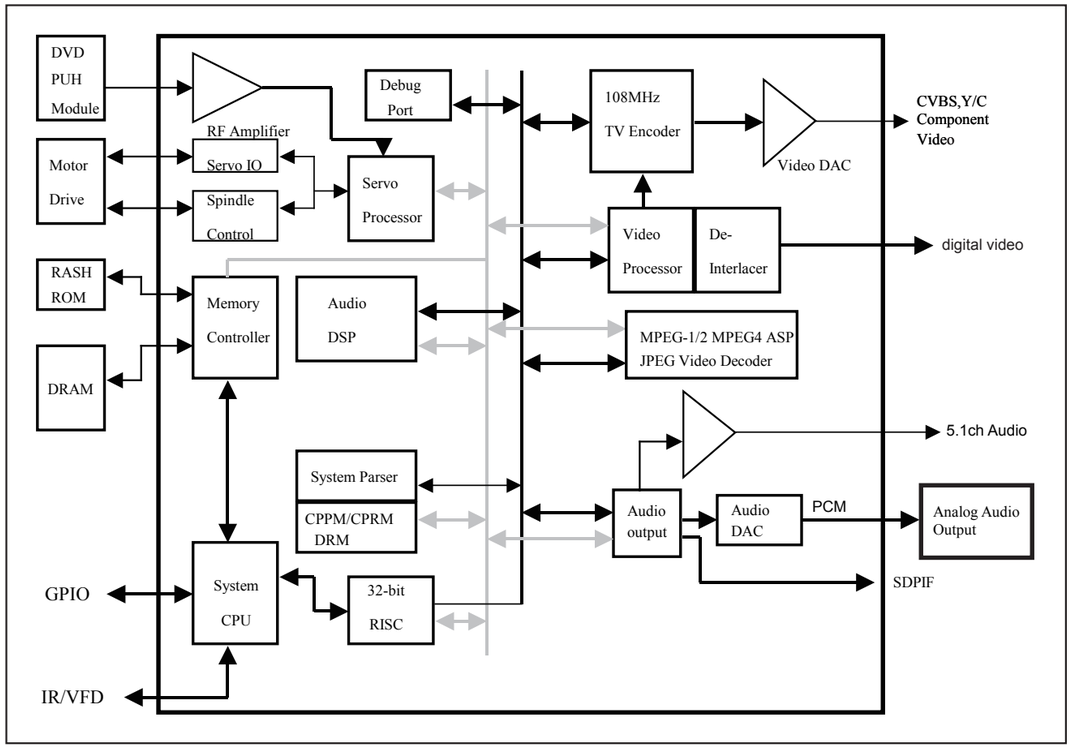
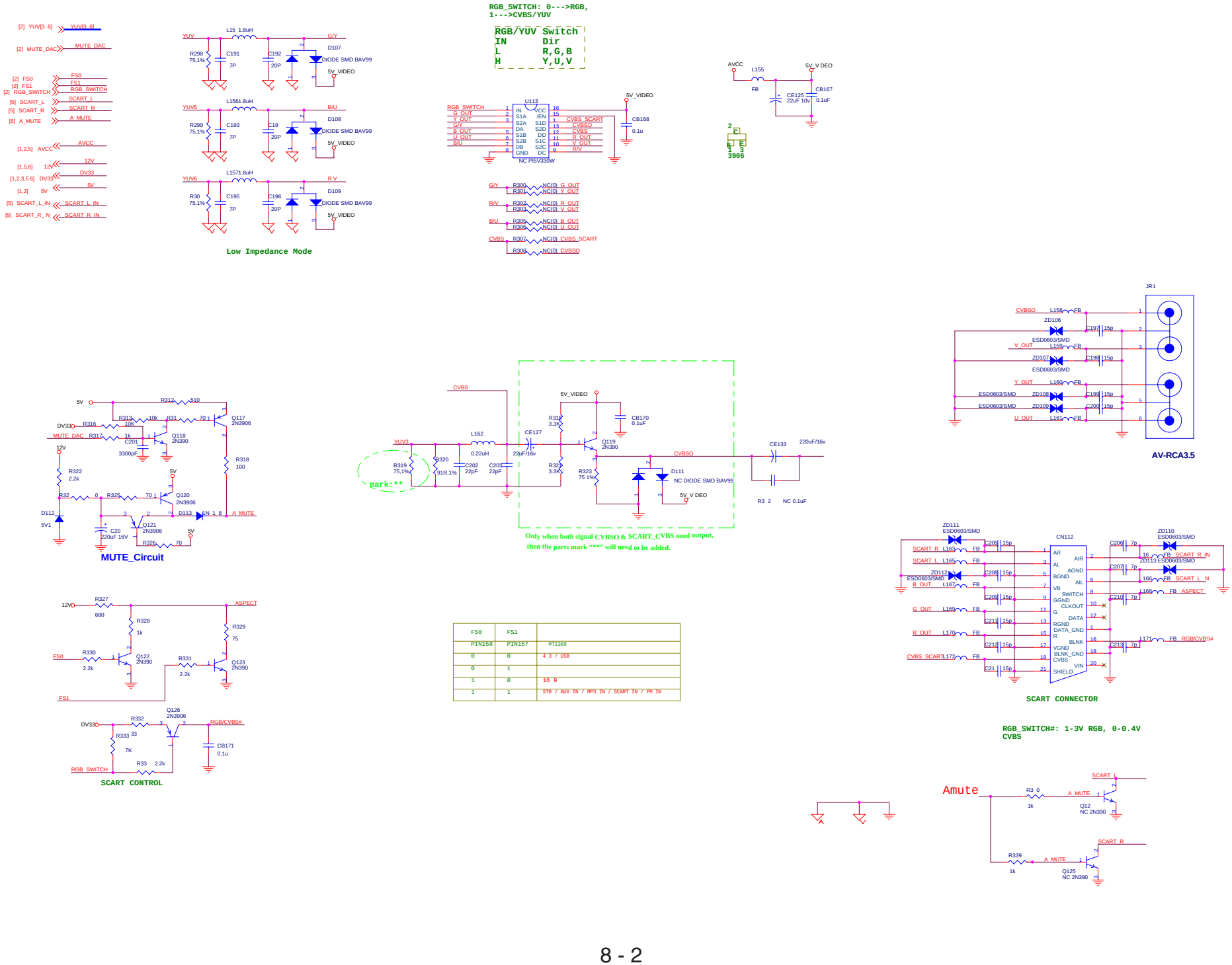
INTERNAL IC DIAGRAM - MT1389HD

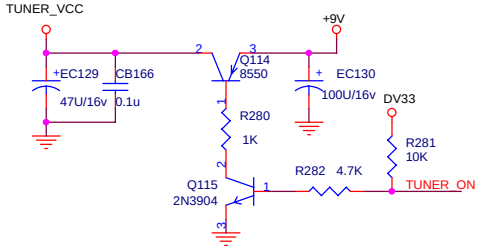


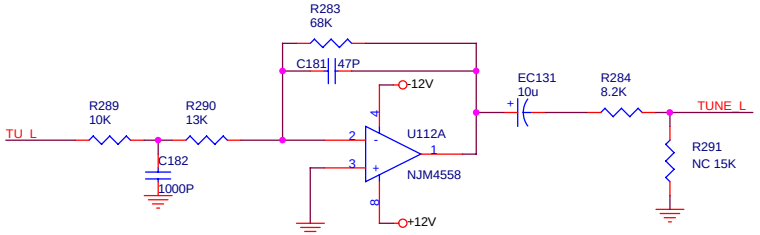

RGB_SWITCH: 0--->RGB,
1--->CVBS/YUV
RGB/YUV Switch
IN Dir
L R,G,B
H Y,U,V
Low Impedance Mode
MUTE_Circuit
SCART CONTROL
SCART CONNECTOR
RGB_SWITCH#: 1-3V RGB, 0-0.4V
CVBS
AV-RCA3.5
Amute
Only when both signal CVBSO & SCART_CVBS need output,
then the parts mark "**" will need to be added.
mark:**
NC PI5V330W
NC DIODE SMD BAV99
ESD0603/SMD
MT1389
4 3 / USB
16 9
STB / AUX IN / MP3 IN / SCART IN / FM IN

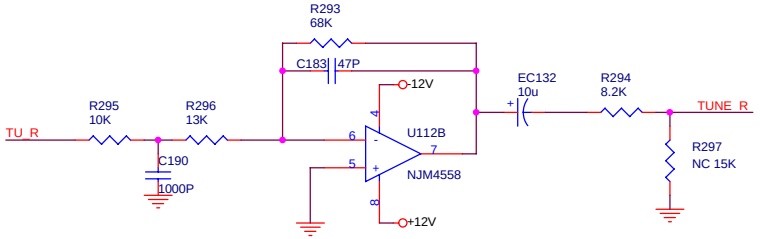
[2] TUNER_ON → TUNER_ON
[2] TUNED → TUNED
[2] STERED → STERED
[2] I2C_CLK → I2C_CLK
[2] I2C_DAT → I2C_DAT

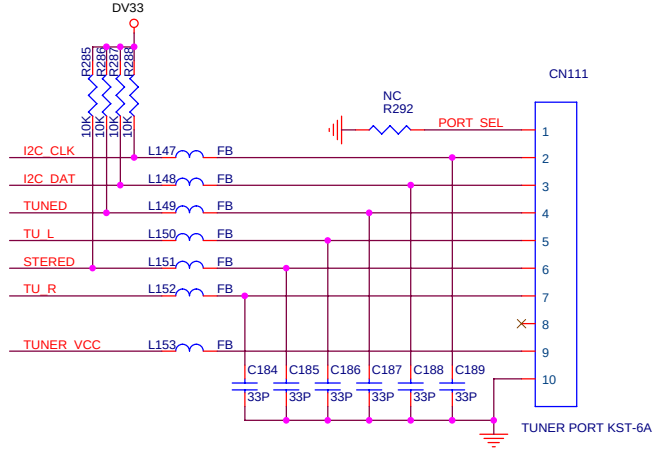
TUNE_L → TUNE_L [5]
TUNE_R → TUNE_R [5]

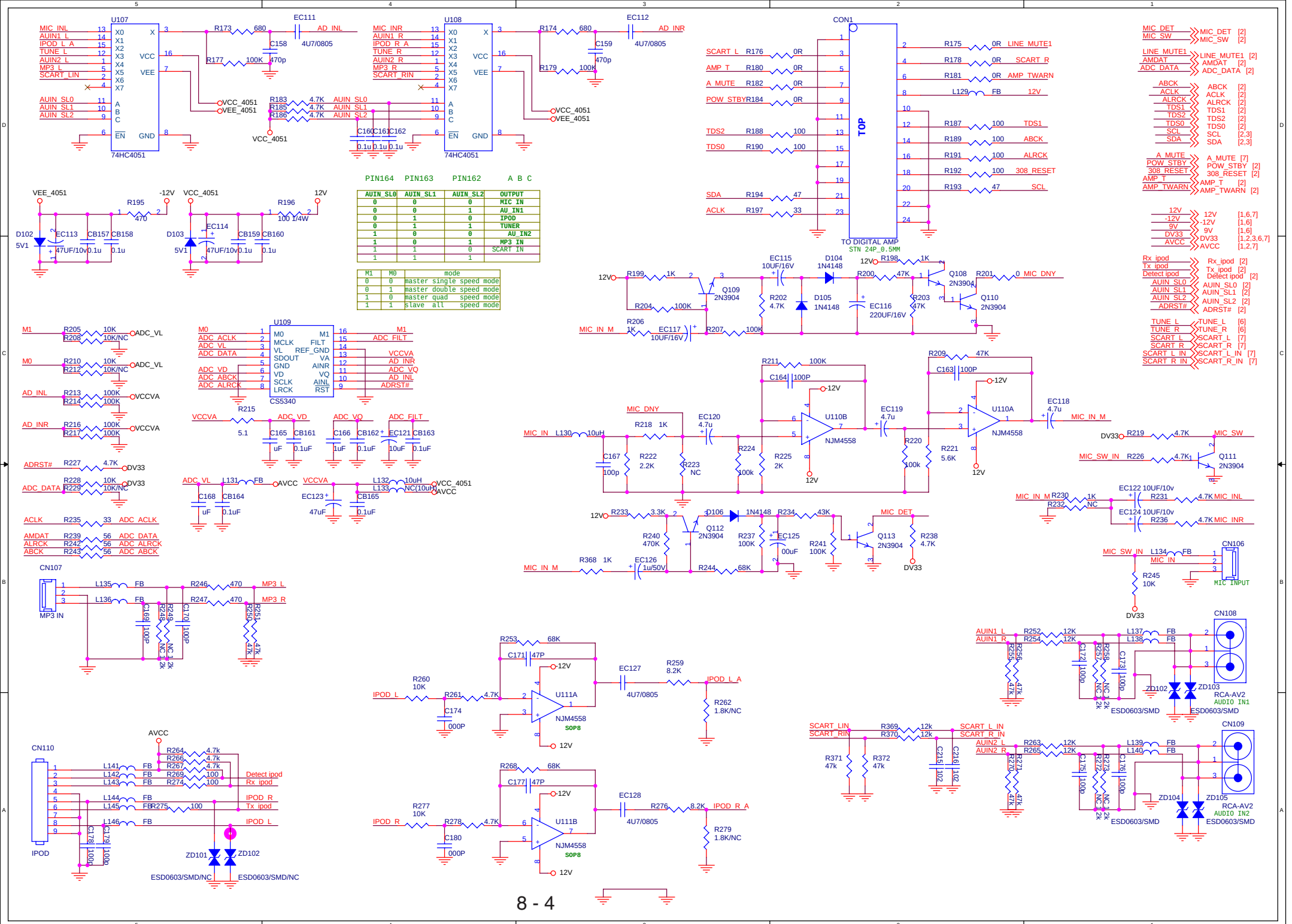
+9V → +9V [1]
DV33 → DV33 [1,2,3,5,7]
+12V → +12V [1,5,7]
-12V → -12V [1,5]



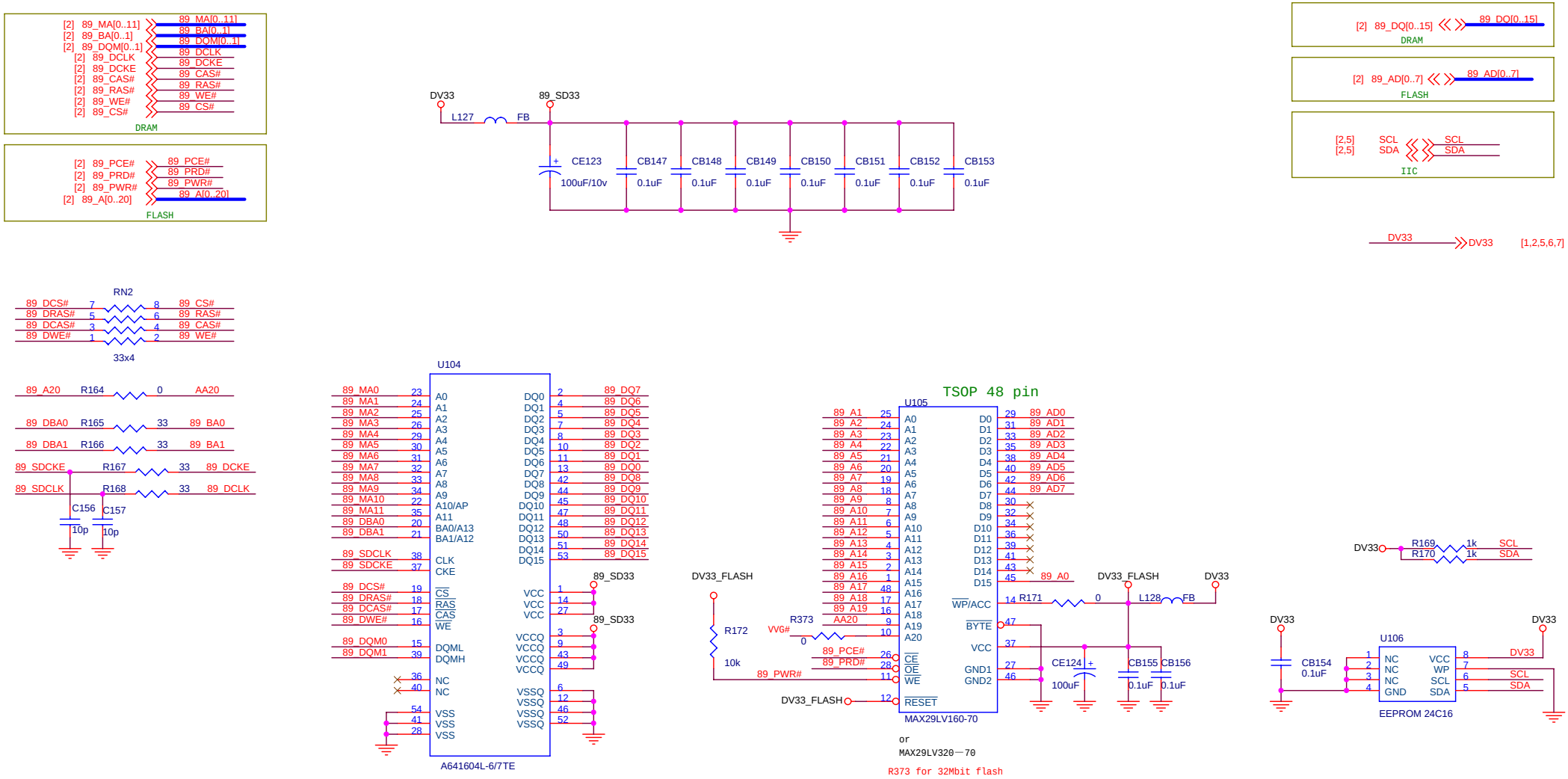


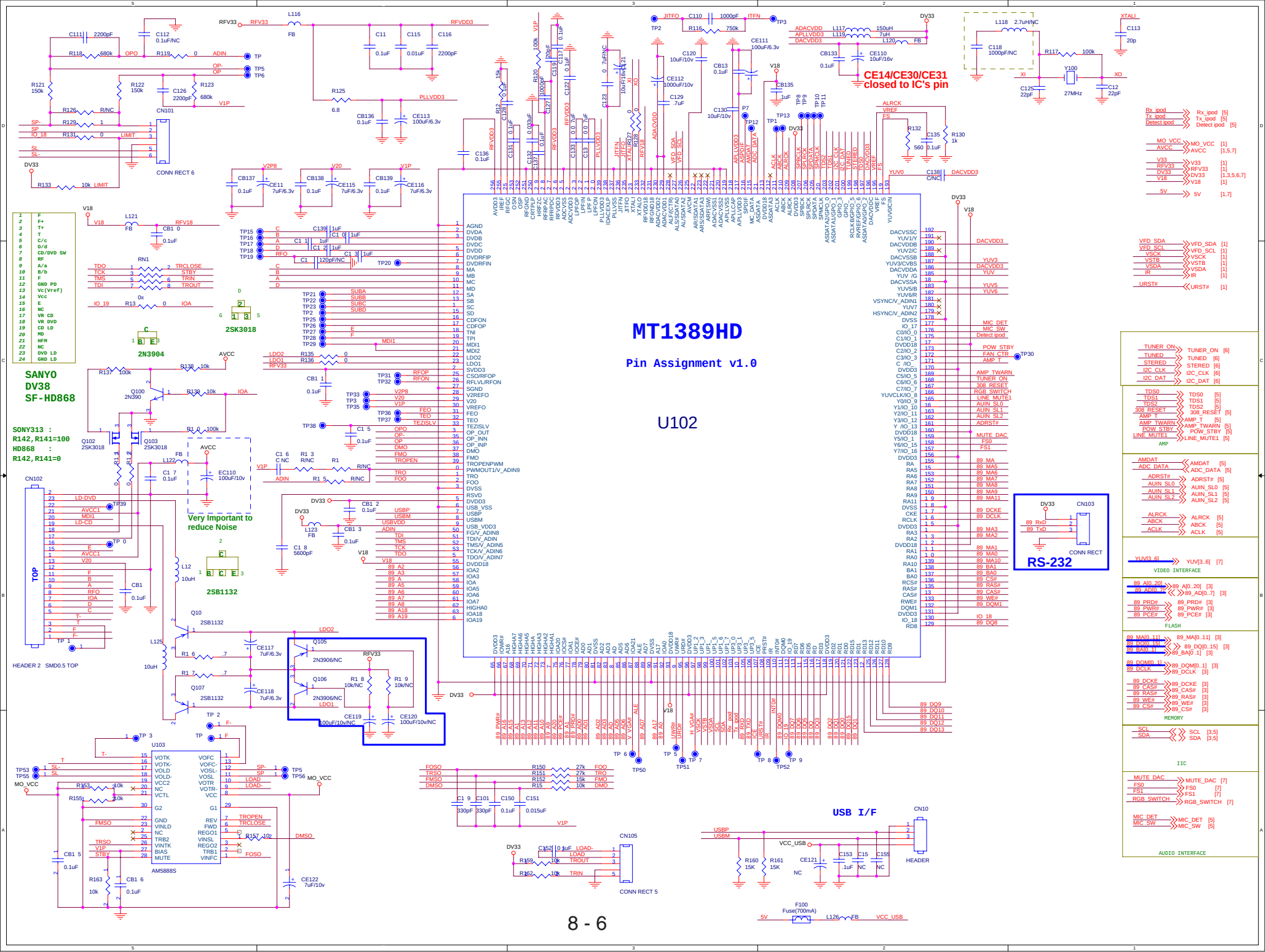




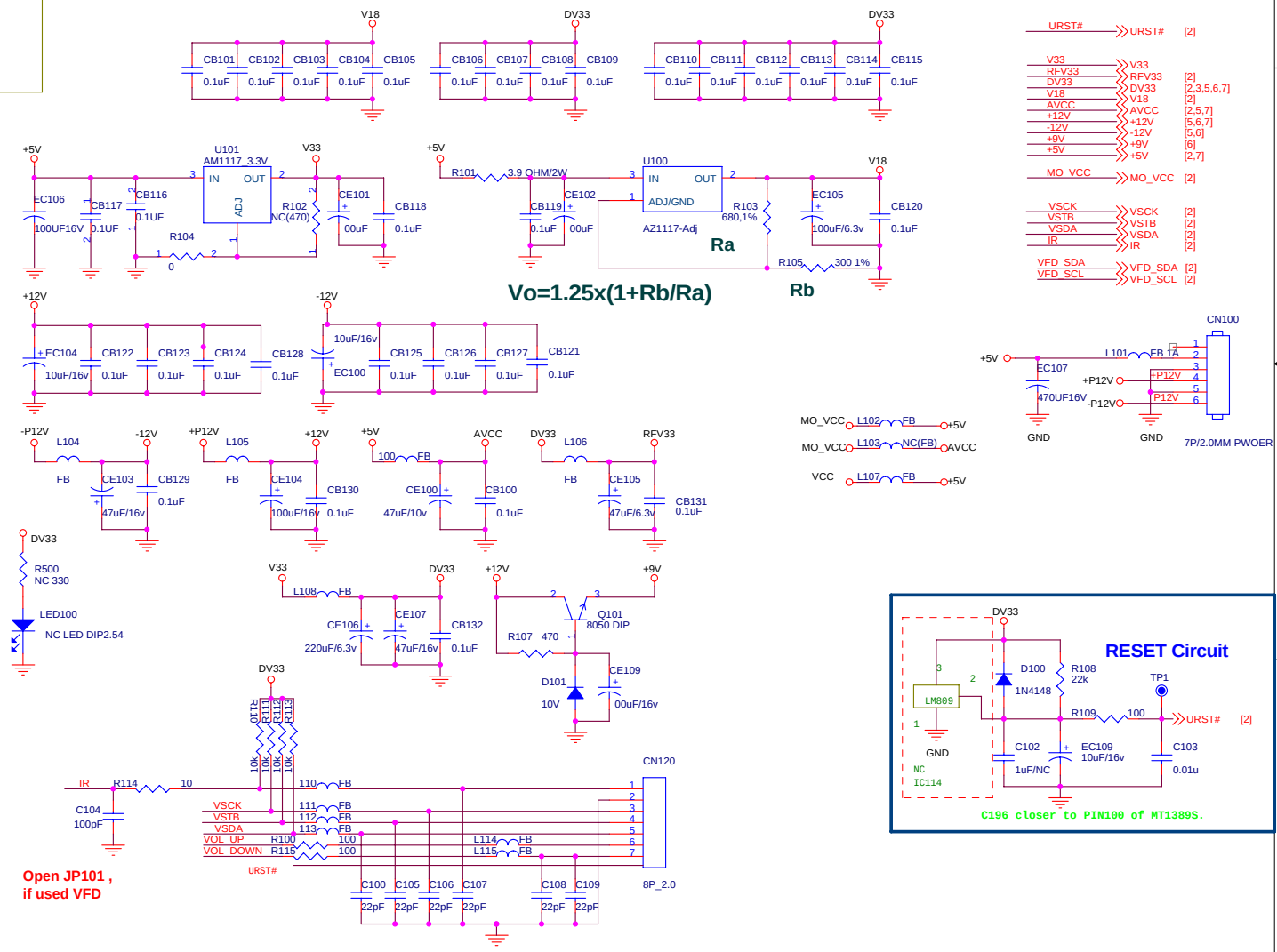

U107
74HC4051
U108
74HC4051
EC111
EC112
CON1
TOP
TO DIGITAL AMP
STN 24P_0.5MM
PIN164 PIN163 PIN162 A B C
AUIN_SL0 AUIN_SL1 AUIN_SL2 OUTPUT
0 0 0 MIC IN
0 0 1 AU_IN1
0 1 0 IPOD
0 1 1 TUNER
1 0 0 AU_IN2
1 0 1 MP3 IN
1 1 0 SCART IN
1 1 1
M1 M0 mode
0 0 master single speed mode
0 1 master double speed mode
1 0 master quad speed mode
1 1 slave all speed mode
U109
CS5340
U110A
U110B
NJM4558
U111A
U111B
NJM4558
SOP8
CN107
MP3 IN
CN108
CN109
CN110
IPOD
ZD101
ZD102
ZD103
ZD104
ZD105
ESD0603/SMD
ESD0603/SMD/NC
RCA-AV2
AUDIO IN1
AUDIO IN2
MIC INPUT

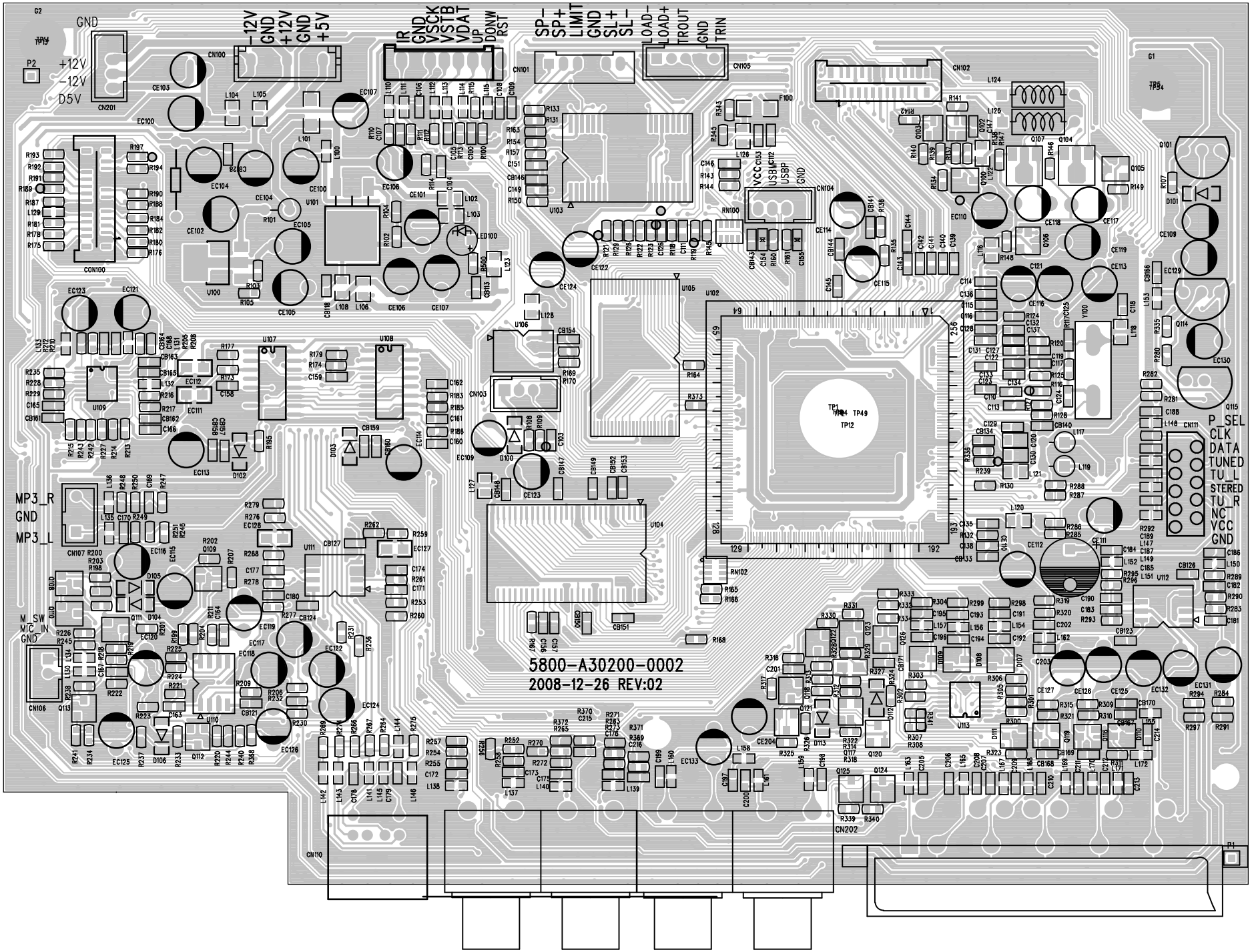
8 - 4

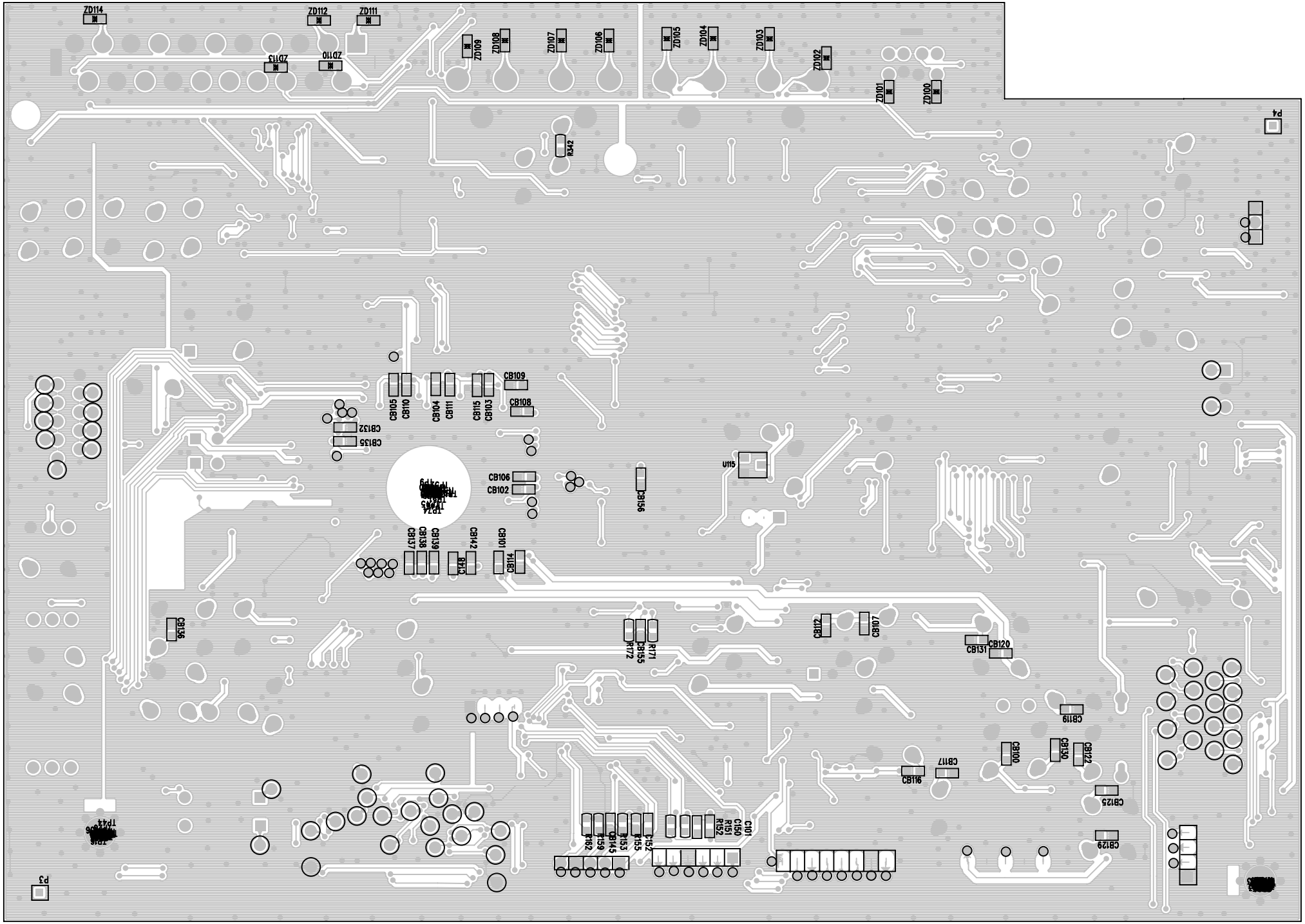

[2] 89_MA[0..11]
[2] 89_BA[0..1]
[2] 89_DQM[0..1]
[2] 89_DCLK
[2] 89_DCKE
[2] 89_CAS#
[2] 89_RAS#
[2] 89_WE#
[2] 89_CS#
89_MA[0..11]
89_BA[0..1]
89_DQM[0..1]
89_DCLK
89_DCKE
89_CAS#
89_RAS#
89_WE#
89_CS#
DRAM
[2] 89_PCE#
[2] 89_PRD#
[2] 89_PWR#
[2] 89_A[0..20]
89_PCE#
89_PRD#
89_PWR#
89_A[0..20]
FLASH
DV33
L127
FB
89_SD33
CE123
100uF/10v
CB147
CB148
CB149
CB150
CB151
CB152
CB153
0.1uF
[2] 89_DQ[0..15]
89_DQ[0..15]
DRAM
[2] 89_AD[0..7]
89_AD[0..7]
FLASH
[2,5] SCL
[2,5] SDA
SCL
SDA
IIC
DV33
DV33
[1,2,5,6,7]
RN2
89_DCS#
89_DRAS#
89_DCAS#
89_DWE#
89_CS#
89_RAS#
89_CAS#
89_WE#
33x4
89_A20
R164
0
AA20
89_DBA0
R165
33
89_BA0
89_DBA1
R166
33
89_BA1
89_SDCKE
R167
33
89_DCKE
89_SDCLK
R168
33
89_DCLK
C156
10p
C157
10p
U104
89_MA0
89_MA1
89_MA2
89_MA3
89_MA4
89_MA5
89_MA6
89_MA7
89_MA8
89_MA9
89_MA10
89_MA11
89_DBA0
89_DBA1
89_SDCLK
89_SDCKE
89_DCS#
89_DRAS#
89_DCAS#
89_DWE#
89_DQM0
89_DQM1
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10/AP
A11
BA0/A13
BA1/A12
CLK
CKE
CS
RAS
CAS
WE
DQML
DQMH
NC
NC
VSS
VSS
VSS
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
89_DQ7
89_DQ6
89_DQ5
89_DQ4
89_DQ3
89_DQ2
89_DQ1
89_DQ0
89_DQ8
89_DQ9
89_DQ10
89_DQ11
89_DQ12
89_DQ13
89_DQ14
89_DQ15
VCC
VCC
VCC
VCCQ
VCCQ
VCCQ
VCCQ
VSSQ
VSSQ
VSSQ
VSSQ
89_SD33
89_SD33
A641604L-6/7TE
TSOP 48 pin
U105
89_A1
89_A2
89_A3
89_A4
89_A5
89_A6
89_A7
89_A8
89_A9
89_A10
89_A11
89_A12
89_A13
89_A14
89_A15
89_A16
89_A17
89_A18
89_A19
AA20
89_PCE#
89_PRD#
89_PWR#
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
CE
OE
WE
RESET
WP/ACC
BYTE
VCC
GND1
GND2
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
89_AD0
89_AD1
89_AD2
89_AD3
89_AD4
89_AD5
89_AD6
89_AD7
89_A0
DV33_FLASH
DV33
R171
0
L128
FB
R172
10k
R373
VVG#
0
89_PWR#
DV33_FLASH
CE124
100uF
CB155
CB156
0.1uF
0.1uF
MAX29LV160-70
or
MAX29LV320—70
R373 for 32Mbit flash
DV33
R169
R170
1k
1k
SCL
SDA
DV33
DV33
CB154
0.1uF
U106
NC
NC
NC
GND
VCC
WP
SCL
SDA
DV33
SCL
SDA
EEPROM 24C16


MT1389HD
Pin Assignment v1.0
U102
CE14/CE30/CE31
closed to IC's pin
SANYO
DV38
SF-HD868
SONY313 :
R142,R141=100
HD868 :
R142,R141=0
2N3904
2SK3018
2SB1132
Very Important to
reduce Noise
RS-232
USB I/F
CONN RECT 6
CONN RECT 5
HEADER 2 SMD0.5 TOP
AM5888S
TOP
8 - 6

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



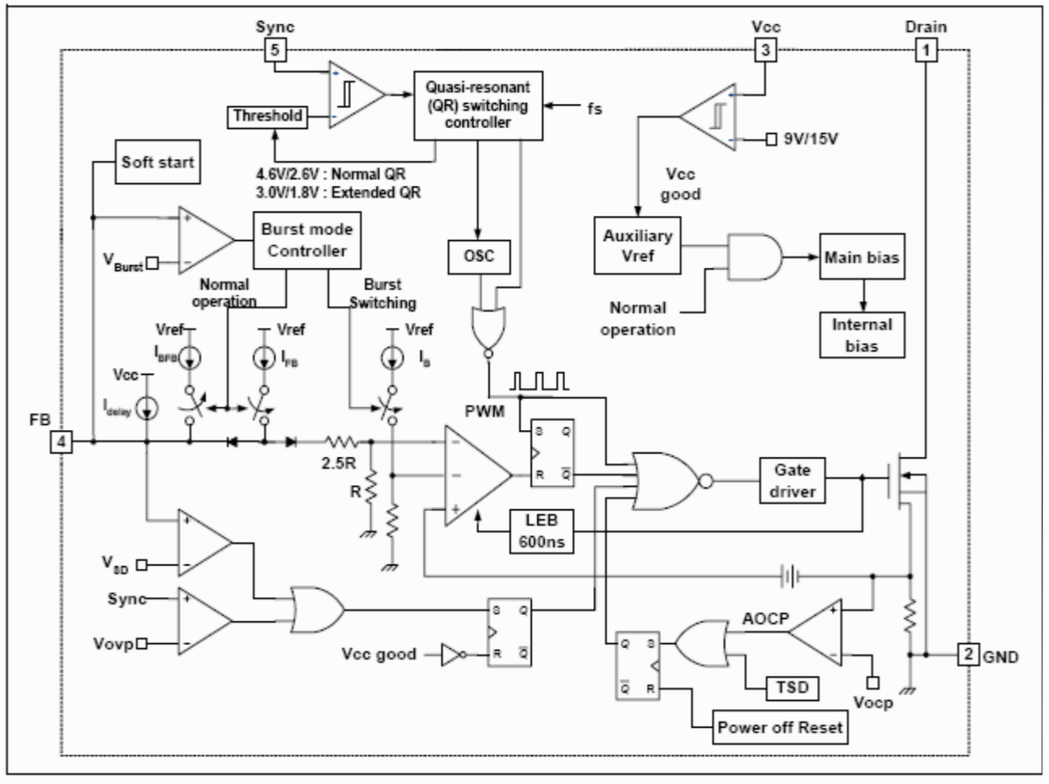

GND
+12V
-12V
D5V
-12V
GND
+12V
GND
+5V
IR
GND
VSCK
VSTB
VDAT
UP
DONW
RST
SP-
SP+
LIMIT
GND
SL+
SL-
LOAD-
LOAD+
TROUT
GND
TRIN
VCC
USBM
USBP
GND
P_SEL
CLK
DATA
TUNED
TU_L
STERED
TU_R
NC
VCC
GND
MP3_R
GND
MP3_L
M_SW
MIC_IN
GND
5800-A30200-0002
2008-12-26 REV:02

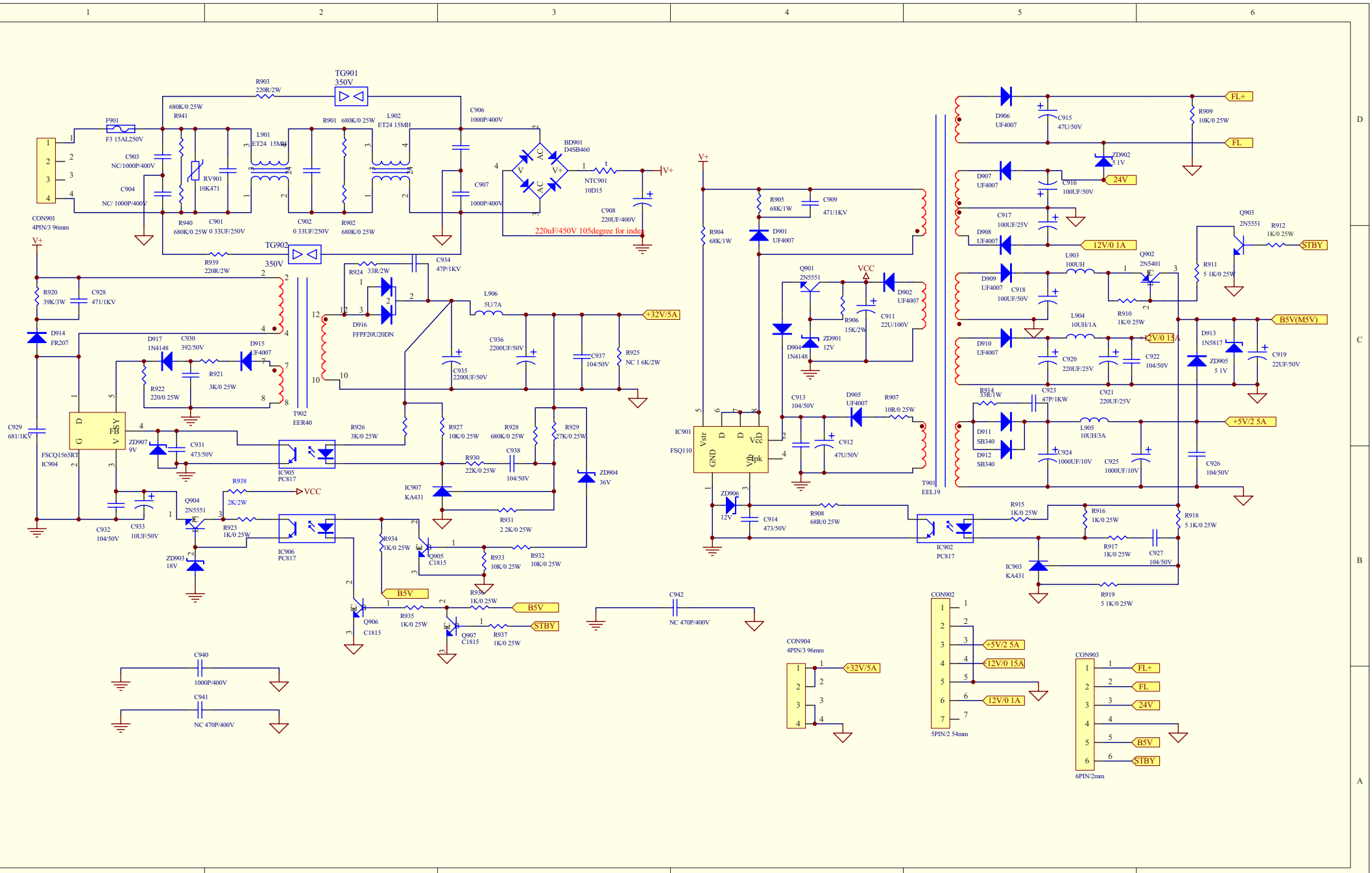

ZD114
ZD112
ZD111
ZD113
ZD110
ZD109
ZD108
ZD107
ZD106
ZD105
ZD104
ZD103
ZD102
ZD101
ZD100
P4
R342
CB109
CB108
CB105
CB110
CB104
CB111
CB115
CB103
CB132
CB135
CB106
CB102
CB156
U115
CB137
CB138
CB139
CB142
CB113
CB101
CB114
CB136
R172
R171
CB155
CB121
CB107
CB131
CB120
CB119
CB130
CB122
CB117
CB116
CB100
CB125
CB129
C101
C150
R151
R152
R159
R162
CB143
R153
R155
C152
P3

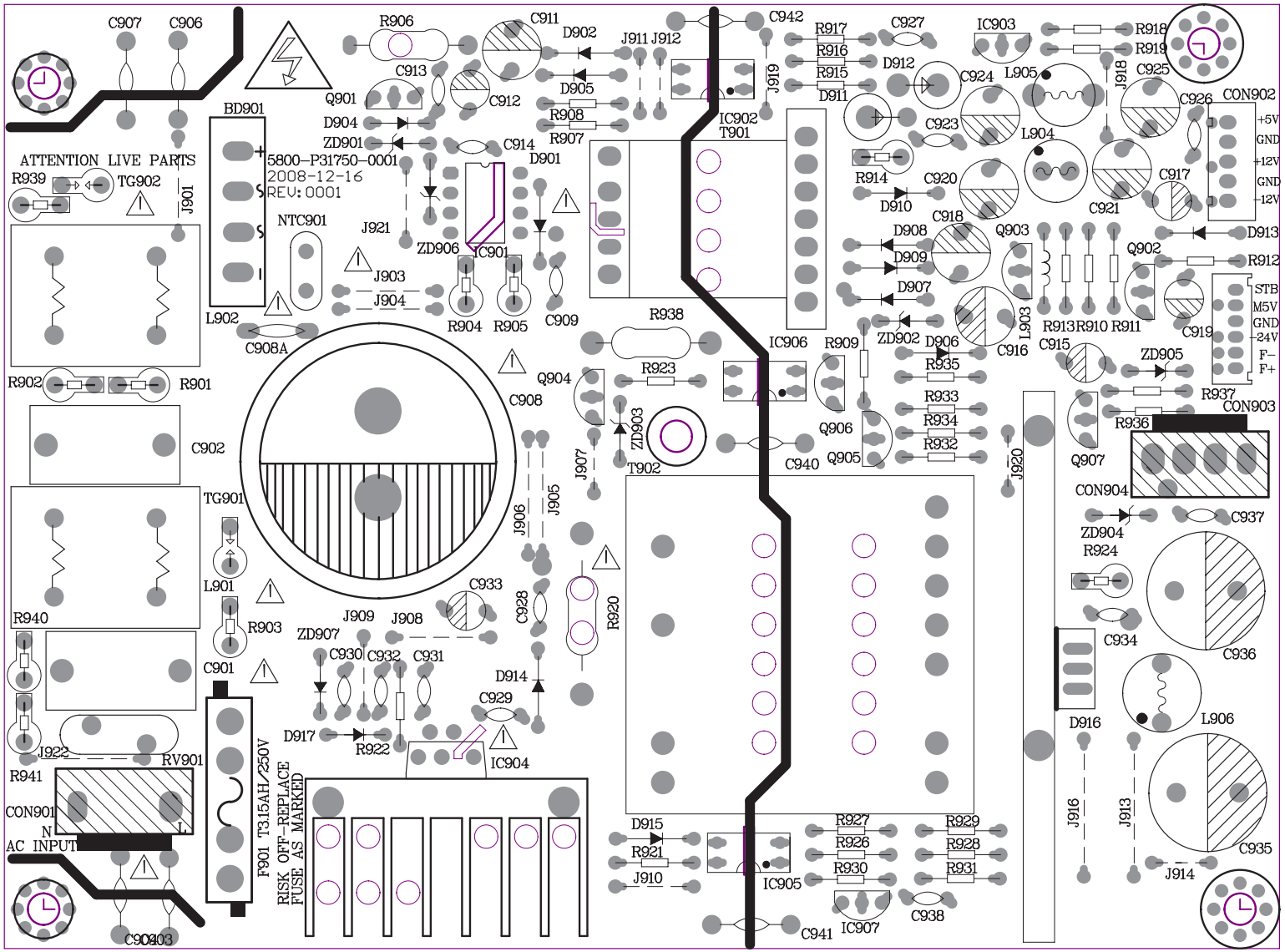
POWER BOARD

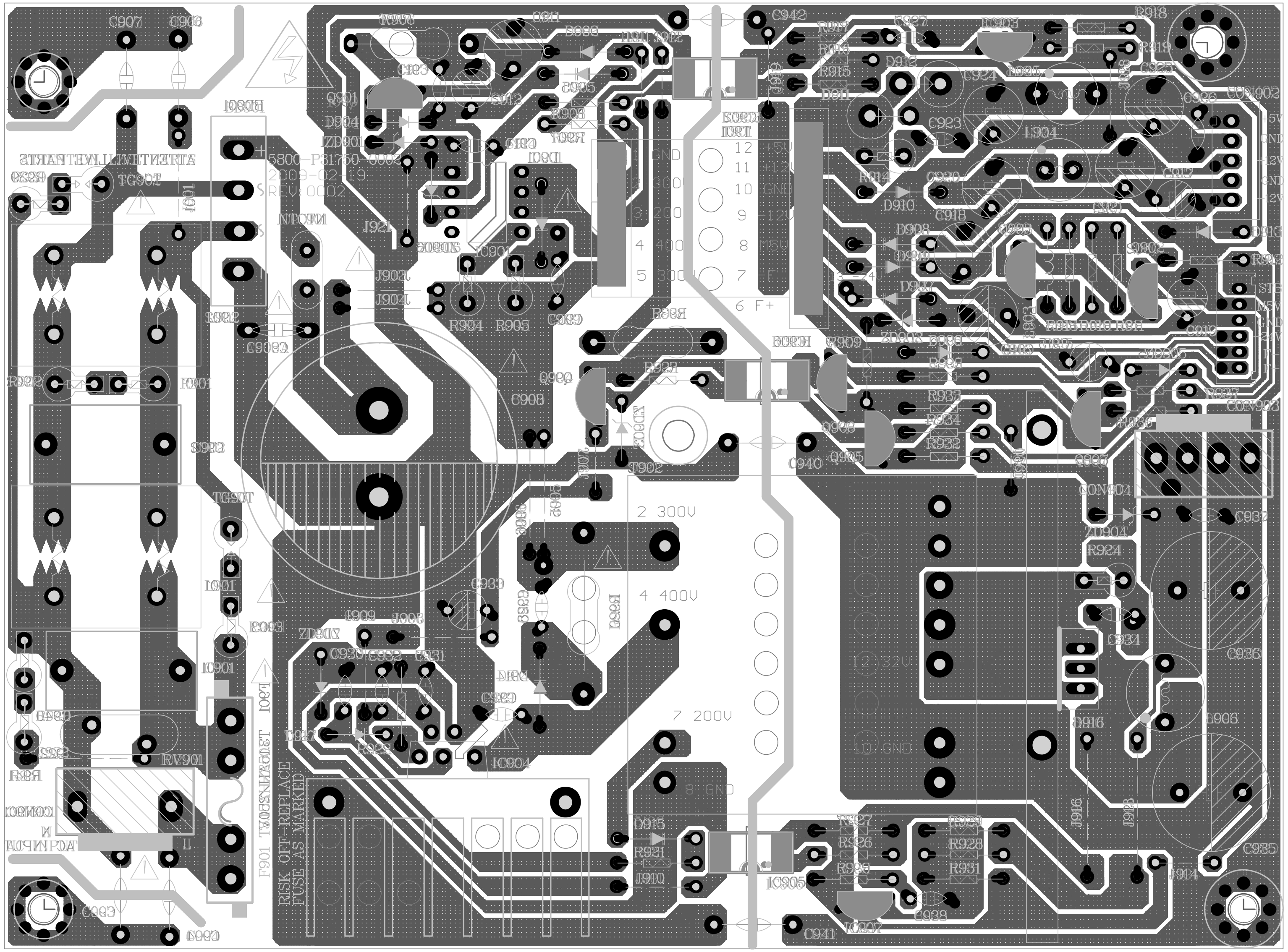
TABLE OF CONTENTS

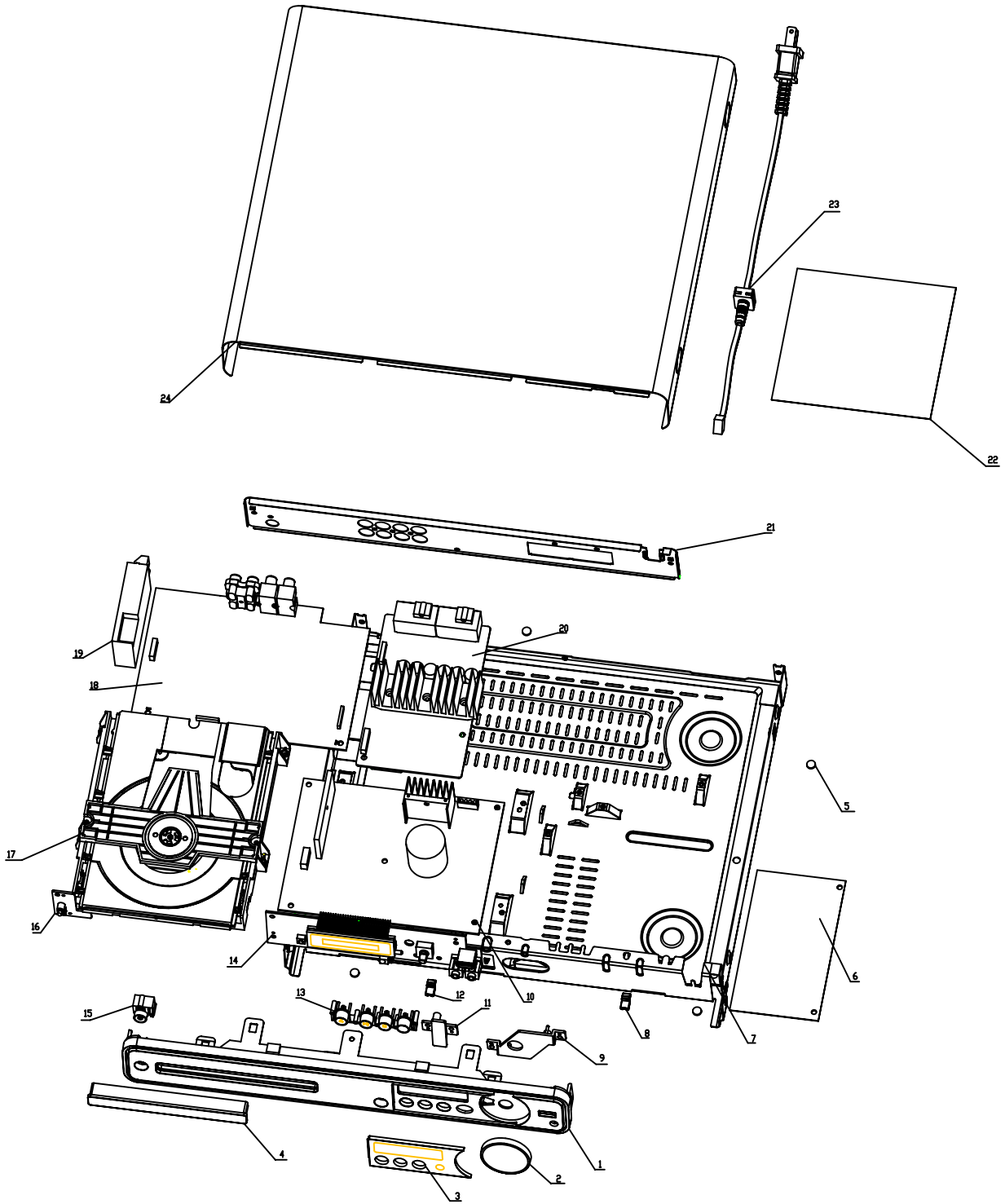
INTERNAL IC DIAGRAM - FSC1565RT




TG901
350V
R903
220R/2W
F901
F3 15AL250V
680K/0 25W
R941
L901
ET24 15MH
R901 680K/0 25W
L902
ET24 15MH
C906
1000P/400V
BD901
D4SB460
NTC901
10D15
C908
220UF/400V
220uF/450V 105degree for inde
CON901
4PIN/3 96mm
C903
NC/1000P/400V
C904
NC/ 1000P/400V
RV901
10K471
R940
680K/0 25W
C901
0 33UF/250V
C902
0 33UF/250V
R902
680K/0 25W
C907
1000P/400V
R939
220R/2W
TG902
350V
C934
47P/1KV
R924
33R/2W
D916
FFPF20U20DN
L906
5U/7A
+32V/5A
C935
2200UF/50V
C936
2200UF/50V
C937
104/50V
R925
NC 1 6K/2W
T902
EER40
R920
39K/3W
C928
471/1KV
D914
FR207
D917
1N4148
C930
392/50V
D915
UF4007
R921
3K/0 25W
R922
220/0 25W
C929
681/1KV
IC904
FSCQ1565RT
ZD907
9V
C931
473/50V
R926
3K/0 25W
R927
10K/0 25W
R928
680K/0 25W
R929
27K/0 25W
IC905
PC817
R930
22K/0 25W
C938
104/50V
ZD904
36V
IC907
KA431
R931
2 2K/0 25W
R938
2K/2W
VCC
Q904
2N5551
R923
1K/0 25W
C932
104/50V
C933
10UF/50V
ZD903
18V
IC906
PC817
R934
1K/0 25W
Q905
C1815
R933
10K/0 25W
R932
10K/0 25W
R936
1K/0 25W
B5V
Q906
C1815
R935
1K/0 25W
Q907
C1815
R937
1K/0 25W
STBY
C942
NC 470P/400V
C940
1000P/400V
C941
NC 470P/400V
V+
R904
68K/1W
R905
68K/1W
C909
471/1KV
D901
UF4007
Q901
2N5551
VCC
D902
UF4007
R906
15K/2W
C911
22U/100V
ZD901
12V
D904
1N4148
C913
104/50V
D905
UF4007
R907
10R/0 25W
C912
47U/50V
IC901
FSQ110
ZD906
12V
C914
473/50V
R908
68R/0 25W
T901
EEL19
IC902
PC817
R915
1K/0 25W
R916
1K/0 25W
R917
1K/0 25W
C927
104/50V
IC903
KA431
R919
5 1K/0 25W
R918
5 1K/0 25W
D906
UF4007
C915
47U/50V
FL+
R909
10K/0 25W
FL
ZD902
5 1V
24V
D907
UF4007
C916
100UF/50V
C917
100UF/25V
D908
UF4007
12V/0 1A
L903
100UH
Q902
2N5401
Q903
2N5551
R912
1K/0 25W
STBY
R911
5 1K/0 25W
D909
UF4007
C918
100UF/50V
L904
10UH/1A
R910
1K/0 25W
B5V(M5V)
12V/0 15A
D910
UF4007
C920
220UF/25V
C922
104/50V
D913
1N5817
ZD905
5 1V
C919
22UF/50V
R914
33R/1W
C923
47P/1KW
C921
220UF/25V
D911
SB340
D912
SB340
L905
10UH/3A
+5V/2 5A
C924
1000UF/10V
C925
1000UF/10V
C926
104/50V
CON904
4PIN/3 96mm
+32V/5A
CON902
5PIN/2 54mm
+5V/2 5A
12V/0 15A
12V/0 1A
CON903
6PIN/2mm
FL+
FL
24V
B5V
STBY


ATTENTION LIVE PARTS
5800-P31750-0001
2008-12-16
REV: 0001
F901 T3.15AH/250V
RISK OFF-REPLACE
FUSE AS MARKED
AC INPUT
N
L
+5V
GND
+12V
GND
-12V
STB
M5V
GND
-24V
F-
F+




24
23
22
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18
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16
14
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12
11
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5
4
3
2
1

MECHANICAL PART LIST(FOR HTS3181/55)

LOC.	Alt.	12NC	Safety	Description
1		996510022355		FR PANEL-ABS/80301/FOILED HL-3
2		996510028174		VOLUME BUTTON-ABS/BLACK 80007
3		996510028172		FRONT LENS-PMMA/BLACK80248
4		996510028166		CD DOOR-ABS/BLACK
5		996510021707		RUBBER FOOT
6		996510028162		NSULATED PLATE(BOTTOM)-BLACK
7		996510021709		BOTTOM CASE -SECC
8		996510028164		TOP CASE SUPPORT(CU)
9		996510028159		FUNCTION BOARD SUPPORT(RIGHT)
10		996510028184		MY01-HTS3181/55(HI)POWER BOARD
11		996510028161		FUNCTION BOARD SUPPORT(LEFT)
12		996510028164		TOP CASE SUPPORT(CU)
13		996510028155		FUNCTION BUTTON-ABS/BLACK
14		996510028158		MY01-HTS3181/55(HI) KEY BOARD
15		996510028188		POWER BUTTON-ABS/BLACK
16		996510028185		MY01-HTS3181/55(HI)LED BOARD
17		996510021696		LOADER &LOADER SUPPORT
18		996510028177		MY01-HTS3181/55(HI) DECODE BOA
19		996510021718		AM/FM TUNER MODEL10.7MHZ KST-M
20		996510028183		MY01-HTS3181/55(HI)AMPLIFIER B
21		996510028189		BACK PANEL-SECC(FIXED
22		996510021701		INSULATED PLATE(TOP)-BLACK PVC
23		996510028178	⚠	AC L NE CORD 1500MM BRAZ L UC
24		996510022324		TOP CASE-SPCC/BLACK 80301/NO D
C1		996510021699		FILM FLAT CABLE 24 PIN PITCH=0
C2		996510021729		FILM FLAT CABLE 10 PIN PITCH=1
C4		996510021712		HOUSING 05+ HOUS NG 05+230MM M
C7		996510028182		HOUSING 04+ HOUS NG 04+50MM FL
C11		996510021725		HOUSING 05(2.5) + HOUS NG 05(2
C12		996510021697		FILM FLAT CABLE 24 PIN PITCH=0
CVBS		996510021741		RCA TO RCA AV SIGNAL CABLE1515
FMC		996510021732		FM antenna
LAS		996510028176		LOADER SUPPOREER ASM
RC		996510022188		REMOTE CONTROL 41 KEYS FOR HTS

LOADER ASSY

C3		996510021714		HOUSING 06+ HOUS NG 06+190MM F
OPU		996510022224		DVD PLAY HEAD OPTICAL PICK-UP

SPEAKER ASSY

SSUB		996510028135		CUBE SPEAKER & SUBWOOFER WITH
SPKC		996510028139		CENTER SPEAKER BOX
SPKFL		996510028136		FRONT SPEAKER BOX-L
SPKFR		996510028141		FRONT SPEAKER BOX-R
SPKSL		996510028142		SURROUND SPEAKER BOX-L
SPKSR		996510028138		SURROUND SPEAKER BOX-R

LOC	Alt	12NC	Safety	Description
SPEAKER ASSY				
SPKSW		996510028137		SUB-WF SPEAKER BOX
KEY BOARD				
C5		996510021738		90 DEGREE P N 04+90 DEGREE P N
C6		996510022267		90 DEGREE P N 03+HOUS NG 03+42
C8		996510021728		90 DEGREE P N 07+ HOUSING 07+2
C9		996510021736		90 DEGREE P N 04+HOUS NG 04+40
C10		996510021724		90 DEGREE P N 06+ HOUSING 06+1
CB503		996510028165		SMD CERAMIC CHIP CAPACITOR
CB504		996510028165		SMD CERAMIC CHIP CAPACITOR
CB505		996510028165		SMD CERAMIC CHIP CAPACITOR
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
IR501		996510022211		INFRARED RECEIVER MODULE 36KHZ
PCB		996510028156		MD P.C.BOARD 40 00X175.00mm
Q501		996510022195		I.CI IMP810SEUR-T IMP (RESET I
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
U300		996510022232		VACUUM FLUORESCENT DISPLAY 200
U520		996510022218		SMD IC V63111LF H LED(1/8-TO 1
VOL		996510022264		ROTARY VOLUMEL RESISTOR 0.5MA
Y505		996510022238		CERAMIC RESONATOR 455KHz TW455

DECODE BOA

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

LOC.	Alt.	12NC.	Safety	Description
DECODE BOA				
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 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)

LOC	Alt	12NC	Safety	Description
DECODE BOA				
L154		996510022206		SMD CHIP CO L 1 8UH +/-10%(1 6
L155		996510022193		SMD FERRITE BEAD (1.6 X 0.8mm)
L156		996510022206		SMD CHIP CO L 1 8UH +/-10%(1 6
L157		996510022206		SMD CHIP CO L 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 CHIP CO L 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 C RRUS 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

LOC.	Alt.	12NC	Safety	Description
DECODE BOA				
ZD107		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD108		996510028186		SMD ESD PROTECTION 0603ESDA-05
ZD109		996510028186		SMD ESD PROTECTION 0603ESDA-05
AMPL FIER BOA				
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		PIN 04(3.96)+HOUSING 04(3.96)
CN803		996510019261		CONNECTOR:24PIN
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 (W DE BANDW
IC804		996510022237		SMD IC STA309A ST TQFP-64
L801A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L801B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L802A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L802B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L803A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L803B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L804A		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L804B		996510022161		CHOKE COIL 22UH+-15% 10.5MM X1
L805A		996510022217		CHOKE COIL 20UH+-10% PITCH=4.0
L805B		996510022217		CHOKE COIL 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

LOC	Alt	12NC	Safety	Description
AMPLIF ER BOA				
Q805		996510022243		SMD TRANSISTOR 2SC945LT1 NPN S
Q806		996510022254		TRANSISTOR 2SD882 PNP SILICON
Q807		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
Q808		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
Q809		996510022253		SMD TRANSISTOR 2SA733LTA NPN S
Q810		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
Q811		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
POWER BOARD				
BD901		996510022174		BRIDGE RECT FER DIODE RS406 4A
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%
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 RECT FIER DIODE UF4
D902		996510022246		HIGH SPEED RECT FIER DIODE UF4
D904		996500040218		NRD. 1N4148 150mA/100V
D905		996510022246		HIGH SPEED RECT FIER DIODE UF4
D906		996510022246		HIGH SPEED RECT FIER DIODE UF4
D907		996510022246		HIGH SPEED RECT FIER DIODE UF4
D908		996510022246		HIGH SPEED RECT FIER DIODE UF4
D909		996510022246		HIGH SPEED RECT FIER DIODE UF4
D910		996510022246		HIGH SPEED RECT FIER DIODE UF4
D911		996510022176		SCHOTTKY BARR ER RECT FIER SB3
D912		996510022176		SCHOTTKY BARR ER RECT FIER SB3
D913		996510022241		NORMAL RECTIF ER DIODE 1N5817
D914		996510028171		SWITCHING DIODE FR207 DO-15 (T
D915		996510022246		HIGH SPEED RECT FIER DIODE UF4
D916		996510016190		NORMAL RECTIF ER DIODE FFPF20U
D917		996500040218		NRD. 1N4148 150mA/100V
F901		996500040615	⚠	FUSE T3.15A 250V 5X20MM
IC901		996510022249		I.C. FSQ110 FAIRCHILD(FAIRCH L
IC902		996500040601	⚠	I.C. PC817C (PHOTOCOUPLER)
IC903		996510006016		I.C.KA431Z FAIRCH LD
IC904		996510028169		I.C. FSCQ1565RT FAIRCH LD(POWE
IC905		996500040601	⚠	I.C. PC817C (PHOTOCOUPLER)
IC906		996500040601	⚠	I.C. PC817C (PHOTOCOUPLER)
IC907		996510006016		I.C.KA431Z FAIRCH LD
L901		996510022256	⚠	AC LINE FILTER 20MHX2 LCL-20-2
L902		996510022256	⚠	AC LINE FILTER 20MHX2 LCL-20-2

LOC.	Alt.	12NC	Safety	Description
POWER BOARD				
L903		996500040253		PEAKING CO L 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 OX DE FILM RESISTOR39K O
RV901		996510016184		VARISTOR 10D471K 10%
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%

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
1		996510028247		FR PANEL-ABS/80301/FOL ED HL-3
2		996510028219		VOLUM BUTTON-ABS/BLACK
3		996510028225		FRONT LENS-PMMA/BLACK
4		996510028223		CD DOOR-ABS/BLACK
5		996510021707		RUBBER FOOT
6		996510028162		NSULATED PLATE(BOTTOM)-BLACK
7		996510028231		BOTTOM CASE-SECC(CKD)
8		996510028164		TOP CASE SUPPORT(CU)
9		996510028159		FUNCTION BOARD SUPPORT(RIGHT)
10		996510028237		MY01-HTS3181/78(HI)POWER BOARD
11		996510028161		FUNCTION BOARD SUPPORT(LEFT)
12		996510028164		TOP CASE SUPPORT(CU)
13		996510028227		FUNCTION BUTTON-ABS/BLACK
14		996510028241		MY01-HTS3181/78(HI) KEY BOARD
15		996510028232		POWER BUTTON-ABS/BLACK
16		996510028239		MY01-HTS3181/78(HI)LED BOARD
18		996510028236		MY01-HTS3181/78(HI) DECODE BOA
19		996510021718		AM/FM TUNER MODEL10.7MHZ KST-M
20		996510028233		MY01-HTS3181/78(HI)AMPLIF ER B
21		996510028246		BACK PANEL-SECC(FIXED)
22		996510021701		NSULATED PLATE(TOP)-BLACK PVC
23		996510028178	⚠	AC LINE CORD 1500MM BRAZIL UC
24		996510028235		TOP CASE-SPCC/BLACK
AFPPA		996510028222		SKD FOR PSU PCB ASSEMBLY
C1		996510021699		FILM FLAT CABLE 24 PIN PITCH=0
C2		996510021729		FILM FLAT CABLE 10 PIN PITCH=1
C4		996510021712		HOUSING 05+ HOUS NG 05+230MM M
C6		996510022267		90 DEGREE PIN 03+HOUSING 03+42
C7		996510028182		HOUSING 04+ HOUS NG 04+50MM FL
C8		996510021728		90 DEGREE PIN 07+ HOUSING 07+2
C9		996510021736		90 DEGREE PIN 04+HOUSING 04+40
C10		996510021724		90 DEGREE PIN 06+ HOUSING 06+1
C11		996510021725		HOUSING 05(2.5) + HOUS NG 05(2
C12		996510021697		FILM FLAT CABLE 24 PIN PITCH=0
CB		996510028242		CARTON BOX FOR PH L PS CKD(B)4
CB		996510028234		CARTON BOX FOR PH L PS CKD(A)5
CB		996510028224		CARTON BOX FOR PH L PS CKD(C)3
CB		996510028234		CARTON BOX FOR PH L PS CKD(A)5
CVBS		996510021741		RCA TO RCA AV SIGNAL CABLE1515
FMC		996510021732		FM antenna
SCS		996510028226		SKD FOR CONTROL & STANDBY P
SFAPA		996510028238		SKD FOR AMPLIFIER PCB ASSEMB
SFMPA		996510028243		SKD FOR MEPG PCB ASSEMBLY
RC		996510022188		REMOTE CONTROL 41 KEYS FOR HTS

LOADER ASSY

LSA		996510022159		LOADER SUPPOREER ASM
C3		996510021714		HOUSING 06+ HOUSING 06+190MM F
OPU		996510022224		DVD PLAY HEAD OPTICAL PICK-UP

LOC.	Alt.	12NC	Safety	Description

SPEAKER ASSY

SSUB		996510028135		CUBE SPEAKER & SUBWOOFER WITH
SPKC		996510028139		CENTER SPEAKER BOX
SPKFL		996510028136		FRONT SPEAKER BOX-L
SPKFR		996510028141		FRONT SPEAKER BOX-R
SPKSL		996510028142		SURROUND SPEAKER BOX-L
SPKSR		996510028138		SURROUND SPEAKER BOX-R
SPKSW		996510028137		SUB-WF SPEAKER BOX

KEY BOARD

CB503		996510028165		SMD CERAMIC CHIP CAPACITOR
CB504		996510028165		SMD CERAMIC CHIP CAPACITOR
CB505		996510028165		SMD CERAMIC CHIP CAPACITOR
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
R501		996510022211		INFRARED RECEIVER MODULE 36KHZ
J504		996510028229		ULTI TWIST WIRE 45MM BLACK UL
PCB		996510028156		MD P.C.BOARD 40 00X175.00mm
Q501		996510022195		I.CI IMP810SEUR-T IMP (RESET I
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
U300		996510022232		VACUUM FLUORESCENT DISPLAY 200
U520		996510022218		SMD IC V63111LF H LED(1/8-TO 1
VOL		996510022264		ROTARY VOLUMEL RESISTOR 0.5MA
Y505		996510022238		CERAMIC RESONATOR 455KHz TW455

DECODE BOA

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 SWITCH NG DIODE BAV99 (TAP

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
AMPLIF ER BOA				
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
AMPLIFIER BOA				
Q810		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
Q811		996510022235		SMD TRANSISTOR KTC3875LT1 NPN
POWER BOARD				
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		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 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 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%
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
＃=Altemative Codes
 =Safety Symbol