

*Service*  
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**Service**



# Service Manual

**TABLE OF CONTENTS**

	Chapter
<b>Technical Specification &amp; Service Tips.....</b>	<b>1</b>
<b>Safety Instructions.....</b>	<b>2</b>
<b>Instruction for Use.....</b>	<b>3</b>
<b>Mechanical Instructions.....</b>	<b>4</b>
<b>Troubleshooting .....</b>	<b>5</b>
<b>Overall Block Diagram.....</b>	<b>6</b>
<b>Overall Wiring Diagram.....</b>	<b>7</b>
<b>Electrical Diagram.....</b>	<b>8</b>
<b>Component Layout.....</b>	<b>9</b>
<b>Service Part List.....</b>	<b>10</b>
<b>Revision List.....</b>	<b>11</b>

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3141 785 32562

# 1.0 TECHNICAL SPECIFICATION

## General

Dimensions (W x H x D): 204 x 168 x 33 mm  
 Weight: 1.9kg  
 Power supply: DC 12V 2.2A  
 Power consumption: 20W  
 Operating temp. & RH: 0 - 50 degC / 30 – 90% RH  
 Laser wavelength: 650nm  
 Video system: NTSC / PAL / AUTO

Dynamic range: >/=80dB  
 Signal/Noise ratio: >/=85dB  
 Frequency response: 20Hz-20kHz +/-1dB  
 Channel Separation 1kHz: >/=85dB  
 Channel Balance 1kHz: 1dB

Audio out (analog audio) Output level: 2V +/- 10%  
 Load impedance: 10Kohm  
 Video out Output level: 1Vp – p +/- 20%  
 Load impedance: 75ohm

Playback disc type: DVD, Picture-CD, SVCD, Video CD, MP3-CD, CD-R/CD-RW, WMA-CD, DVD-R, DVD-RW, DVD+R, DVD+RW

Video Playback Format: DVD / VCD / JPEG / DivX

Audio Playback Format: CD/MP3, MP3-DVD, WMA

Disc Diameter: 12cm

## Pixel specification on 2<sup>nd</sup> screen

1 bright-dot & max. 3 dark-dots

## Current consumption

DC-IN SUPPLY (9V)	
Battery Charging Current	1.2A typical
BATT. SUPPLY (7.2V)	
Power Off	0A
Playback with TFT on	<1.2A typical
Playback without TFT on	<600mA
Battery time (playback)	>2.5 hours

## Headphone out (headphone output load 2x16 ohm)

Maximum output power: >10mW  
 Frequency response: 20Hz – 20kHz  
 SNR (A-wght): 80dB typical  
 THD (0.2-20kHz): <1%  
 Left-Right Channel: 32dB  
 Separation:  
 Left-Right Channel: 1dB  
 Balance:

## Supported disc type

Video Playback Formats:



Audio Playback Formats:



## 1.0 TECHNICAL SPECIFICATION

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### Factory Service Mode (FSM)

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#### **Procedure to check the software version of your portable DVD Player**

1. Press [SETUP] to enter the setup Menu
2. Press [RETURN] and then press "1" -> "2" -> "3" by remote control
3. The display will show the software version as the date of which the software was built on the bottom of the screen.

#### **Procedure to upgrade the software of your portable DVD Portable**

*For the best performance of your DVD Portable. Check [www.philips.com/support](http://www.philips.com/support) for latest software upgrades available.*

1. Download the latest software from the Philips support site
2. Unzip the files and then burn it into a CD-ROM to make a disc for upgrade
3. Power on the Portable DVD Player with AC/DC adaptor
4. Play CD-ROM for firmware upgrade

***Warning: Do not unplug the AC adaptor during firmware upgrade to prevent flash corrupt of the set!!***

5. Once upgrade is completed, the player is reset automatically
6. Open the DVD door to remove the disc

## 2.0 SAFETY INSTRUCTIONS

### **GB** WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

### **F** ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

### **D** WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

### ESD



### **NL** WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

### **I** AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

### **GB**

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

### **NL**

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

### **F**

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

### **D**

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

### **I**

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."



### **GB** Warning !

Invisible laser radiation when open. Avoid direct exposure to beam.

### **S** Varning !

Osynlig laserstrålning när apparaten är öppnad och spärrar är urkopplad. Betrakta ej strålen.

### **SF** Varoitus !

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

### **DK** Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

## 2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

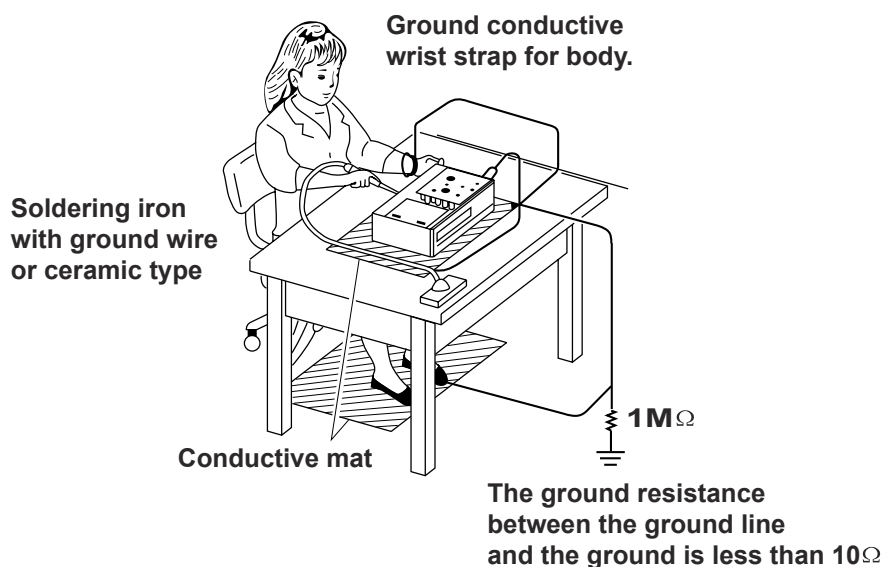
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

### PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



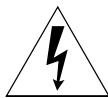
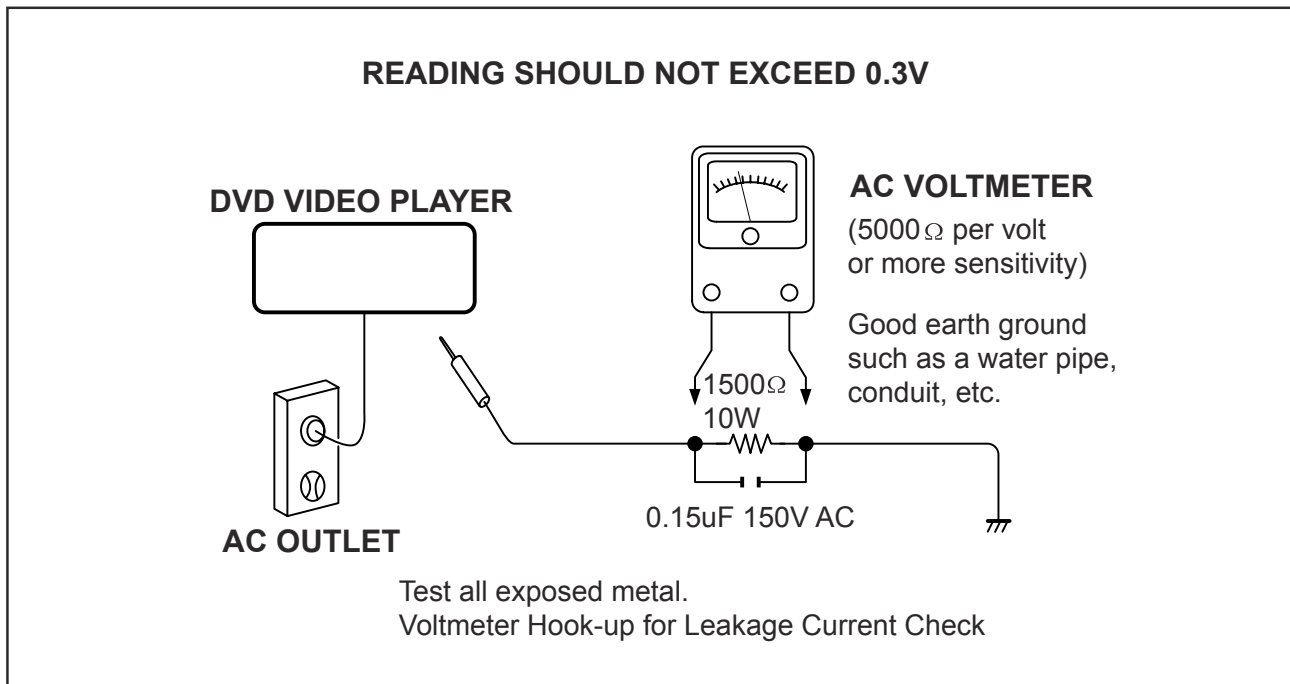
## SAFTY NOTICE

### SAFTY PRECAUTIONS

#### LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having  $5000\Omega$  per volt or more sensitivity. Connect a  $1500\Omega$  10W resistor, paralleled by a  $0.15\mu\text{F}$  150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the  $1500\Omega$  resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

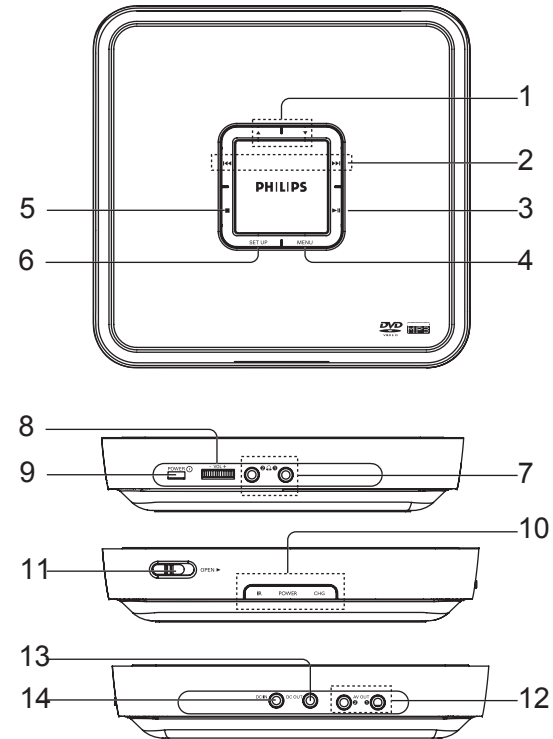


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### 3.0 INSTRUCTIONS FOR USE

- |   |  |
|---|--|
| ① ▲, ▼<br>Up / down cursor.                                   | ⑧ - VOL +<br>Volume control.                                       |
| ② ⏮ / ⏭<br>Skip to the previous/next chapter, track or title. | ⑨ <b>POWER</b><br>Switch the power on/off.                         |
| ③ ▶⏪<br>Start or interrupt playback.                          | ⑩ <b>POWER/IR/CHR</b><br>Power /remote sensor /charging indicator. |
| ④ <b>MENU</b><br>Enter or exit the disc contents menu.        | ⑪ <b>OPEN</b><br>Open the disc door to insert or remove disc.      |
| ⑤ ■<br>Stop playback or erase a program.                      | ⑫ <b>AVOUT</b><br>Audio/Video output.                              |
| ⑥ <b>SETUP</b><br>Enter or exit the system menu.              | ⑬ <b>DC OUT</b><br>DC output.                                      |
| ⑦ <b>PHONES 1 &amp; 2</b><br>Headphone jacks.                 | ⑭ <b>DC IN</b><br>Power supply socket.                             |

### MAIN UNIT CONTROL




### CAUTION

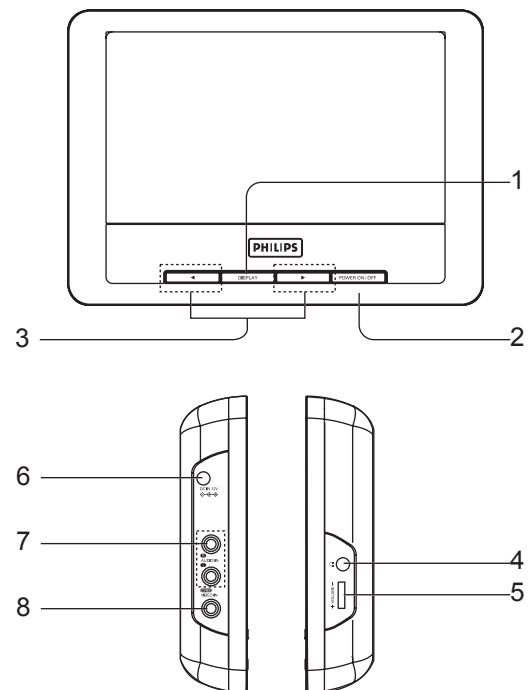
Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.

### 3.0 INSTRUCTIONS FOR USE

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- ① **DISPLAY**  
Adjust the display value of the system.
- ② **POWER ON/OFF**  
Switch the player on / off.
- ③ ◀ ▶  
left / right cursor.
- ④  Headphone jack.
- ⑤ - VOL +  
Volume control.
- ⑥ **DC IN 12V**  
Power supply socket.
- ⑦ **AV IN**  
Audio/video input.
- ⑧ **VIDEO IN**  
Video input.

### DISPLAY CONTROLS



### CAUTION

Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.



## 4.0 MECHANICAL INSTRUCTIONS

### PET711

1. Back View as Fig.1  
Remove screws and broken connections to remove the top.



Fig.1

2. Broken connections to remove the loading ass'y as Fig.2.



Fig.2

3. Remove screws to remove the main PCB as Fig.3.



Fig.3

4. Divided the top into the door and function button discreteness and the middle cabinet discreteness, remove screws to remove the function PCB from the door and function button discreteness as Fig.4.

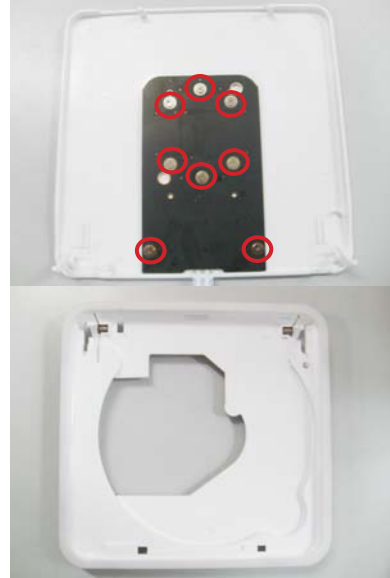


Fig.4

## 4.0 MECHNICAL INSTRUCTIONS

### PAC133

1. Back View as Fig.1  
Remove screws to remove base



Fig.1

2. Broken connection of speaker and main PCB  
and function PCB and LCD as Fig.2

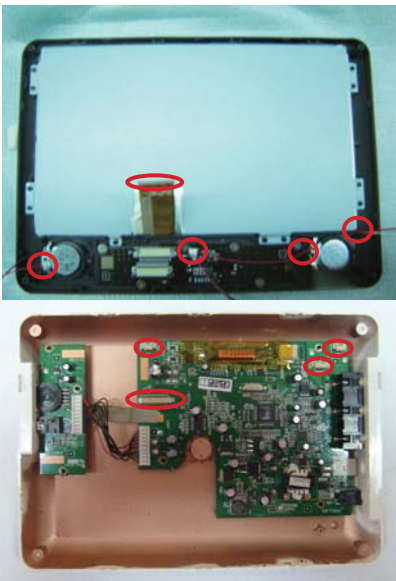


Fig.2

3. Remove main PCB as Fig.3  
Remove screws to remove main PCB.

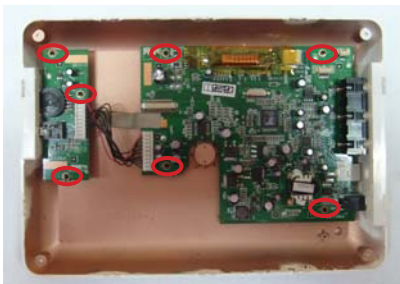


Fig.3

4. Remove speakers and remove screws  
to remove TFT board shield and function  
PCB and TFT LCD as Fig.4

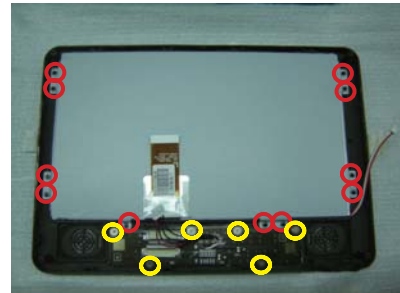


Fig.4

## 5.0 TROUBLESHOOTING & SERVICE TIPS

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### Procedure to change regioncode

1. Power on player and open DVD Door.
2. Press <Set Up> at Remote Control. In <Set Up Menu> select <Preferences>.
3. For PET712 - Press successively 2 1 2 2 2 5.◀.▼.
4. Display will show <Region Code 2> for Europe:
5. Press key to input preference region code (see below table).
6. Switch off and re-switch on the product.
7. Verify Region code change done.

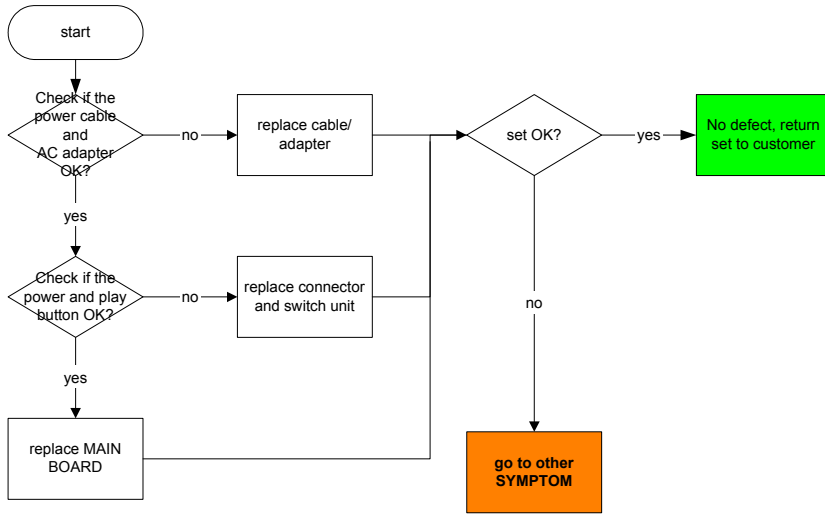
Region Code	Region
1	USA
2	EUROPE
3	ASIA PACIFIC
4	AUSTRALIA, NEW ZEALAND, LATAM
5	RUSSIA, INDIA
6	CHINA

### REMARKS:

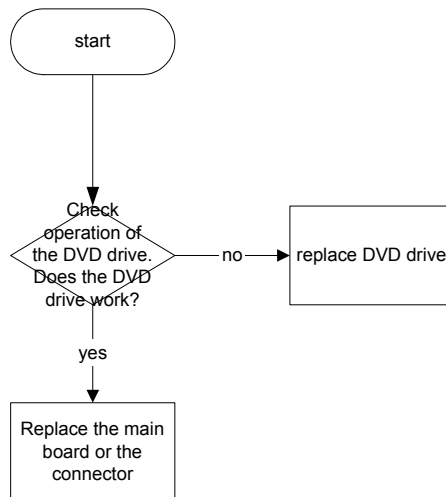
1. Password is CONFIDENTIAL.
2. Region code is printed on product type plate. Due to DVD legislation region codes different to assigned region may not be released.

## 5.0 TROUBLESHOOTING & SERVICE TIPS

### SYMPTOM: NO POWER, NO GREEN LED

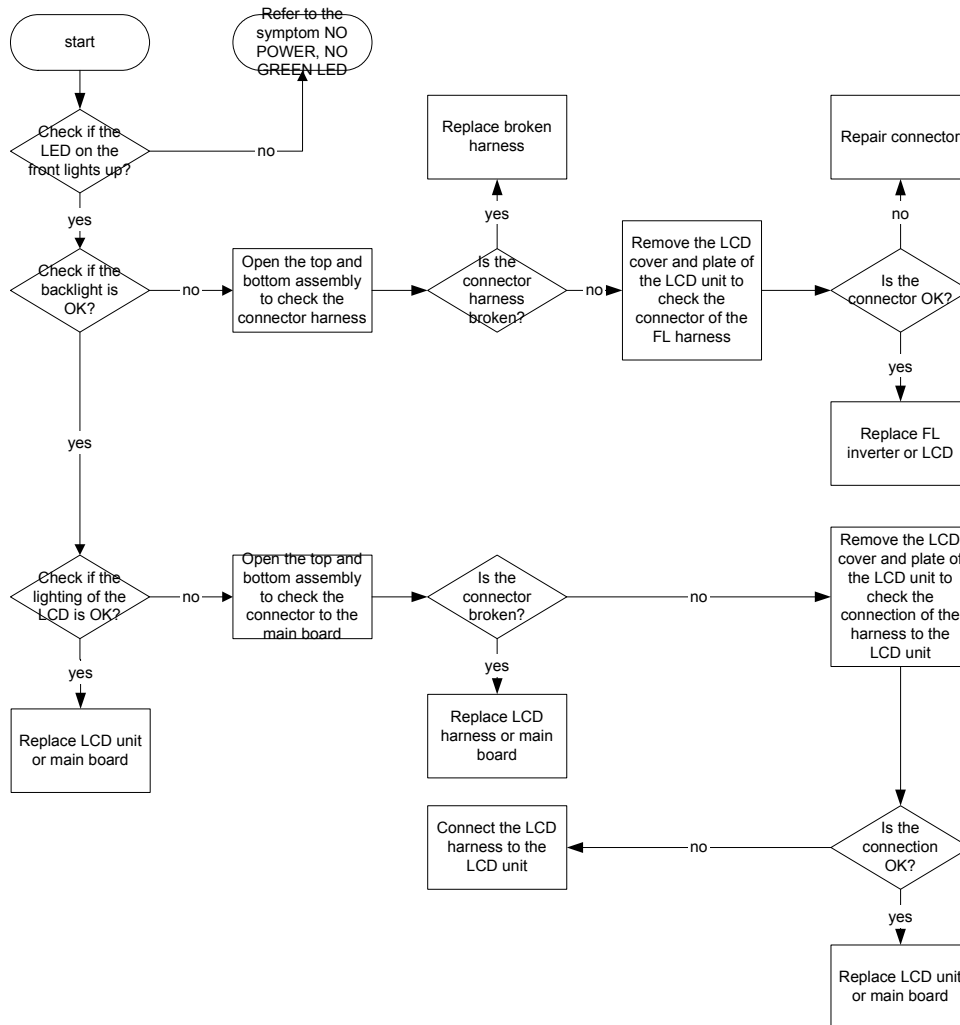


### SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL OUTPUT

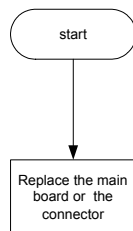


## 5.0 TROUBLESHOOTING & SERVICE TIPS

### SYMPTOM: THE INITIAL SCREEN IS NOT DISPLAYED ON THE LCD

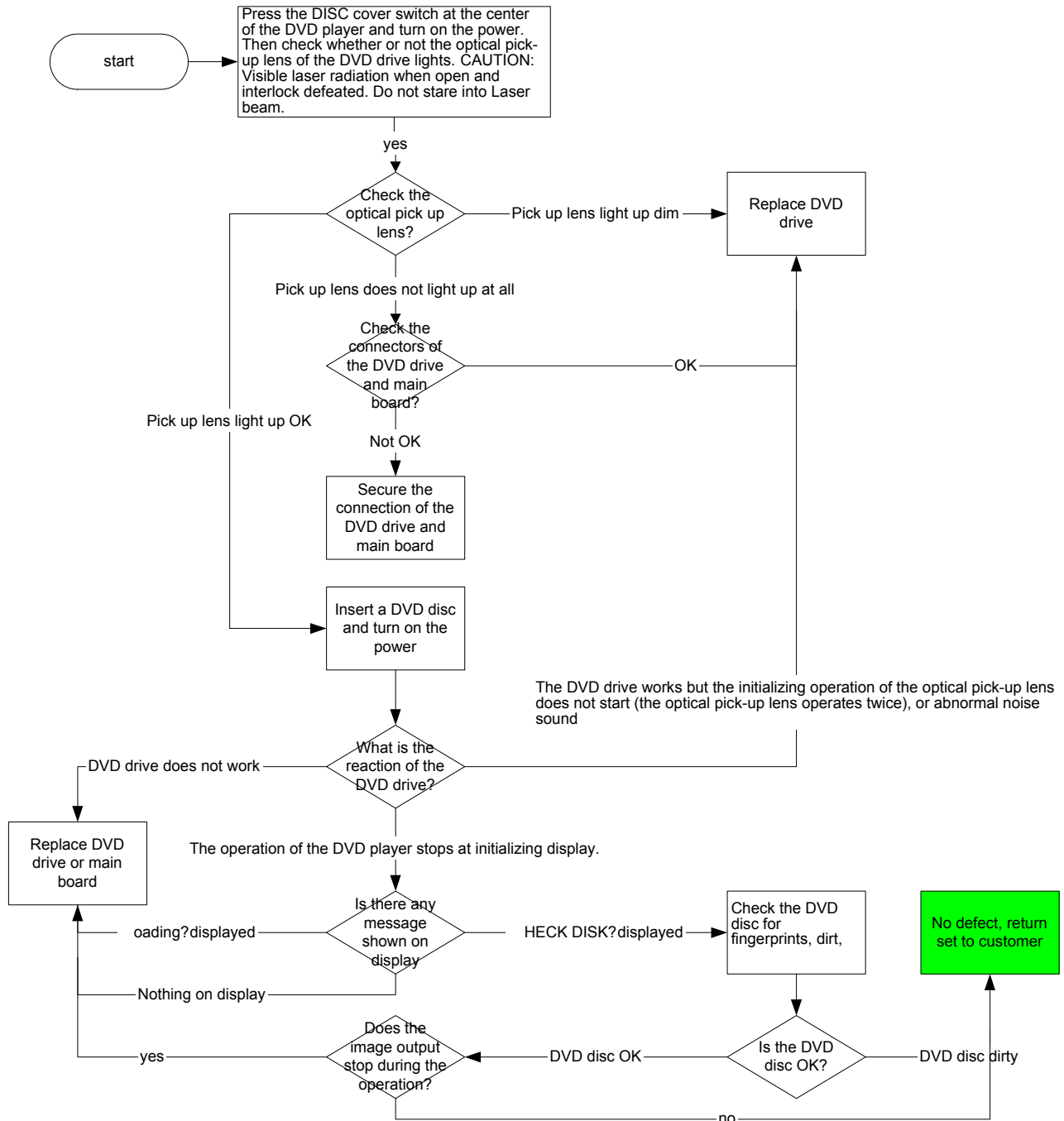


### SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL INPUT



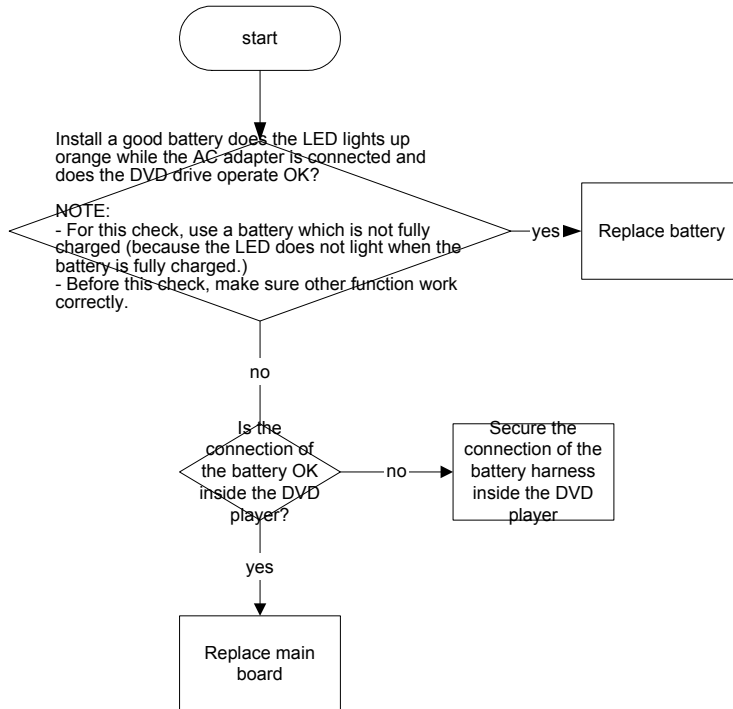
## 5.0 TROUBLESHOOTING & SERVICE TIPS

### SYMPTOM: THE DVD DRIVE DOES NOT WORK

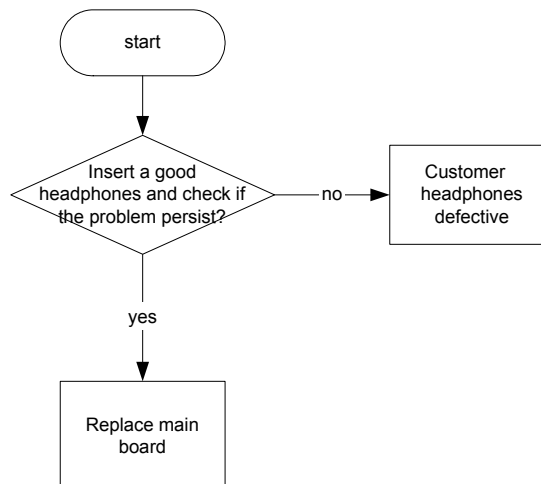


## 5.0 TROUBLESHOOTING & SERVICE TIPS

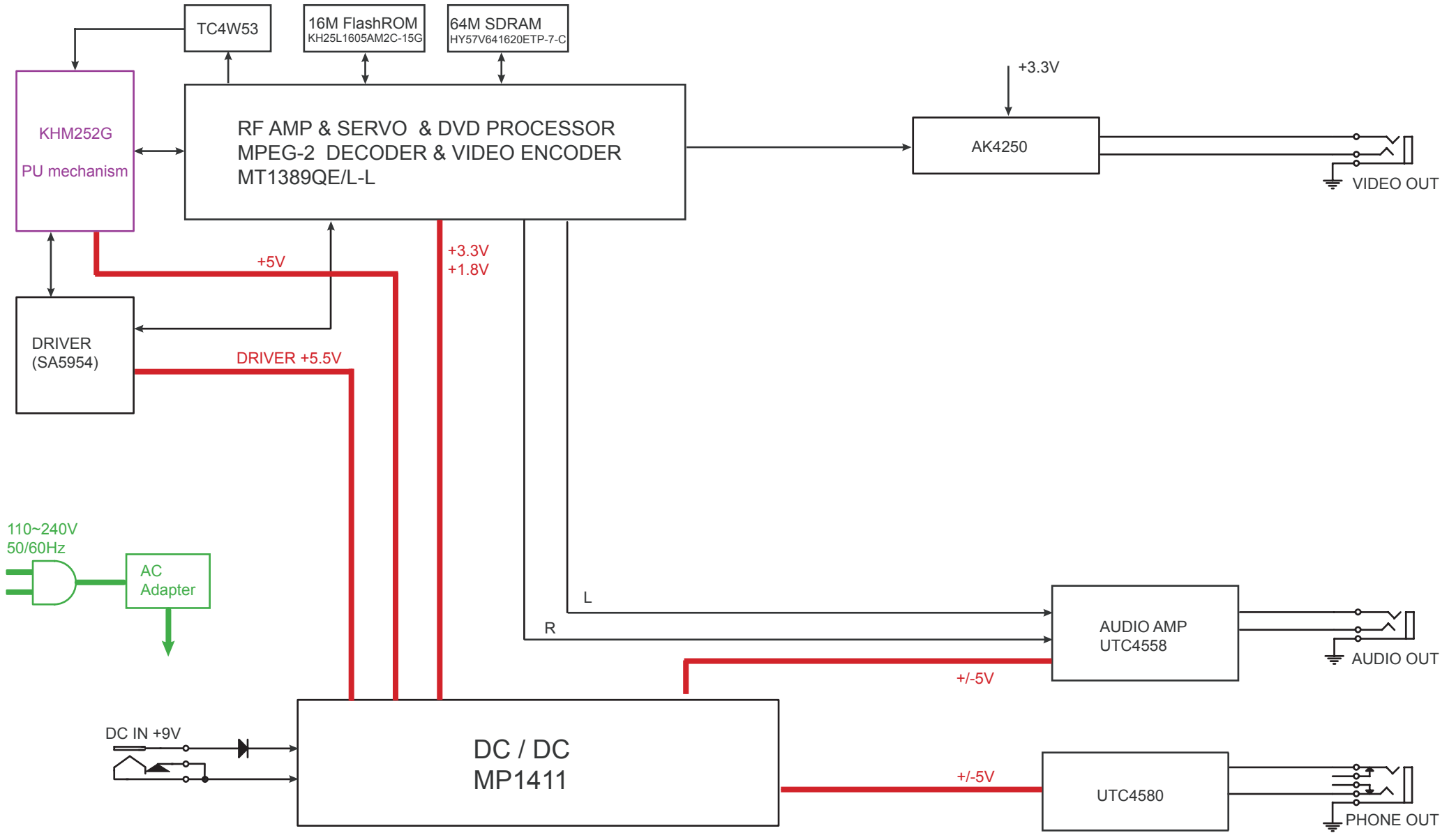
### SYMPTOM: THE DVD DRIVE DOES NOT OPERATE WITH BATTERY



### SYMPTOM: NO SOUND COMES FROM THE HEADPHONES

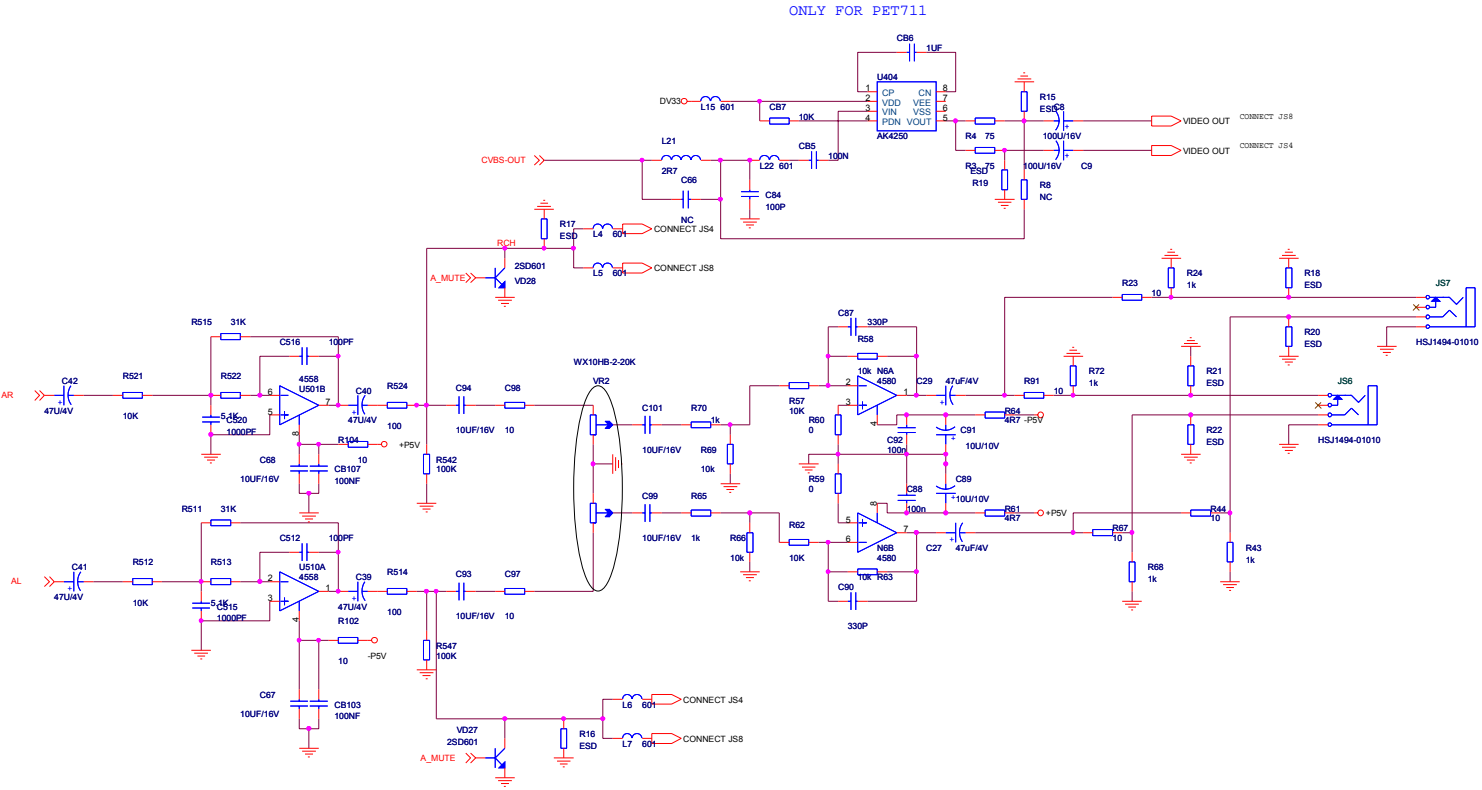


# 6.0 OVERALL BLOCK DIAGRAM

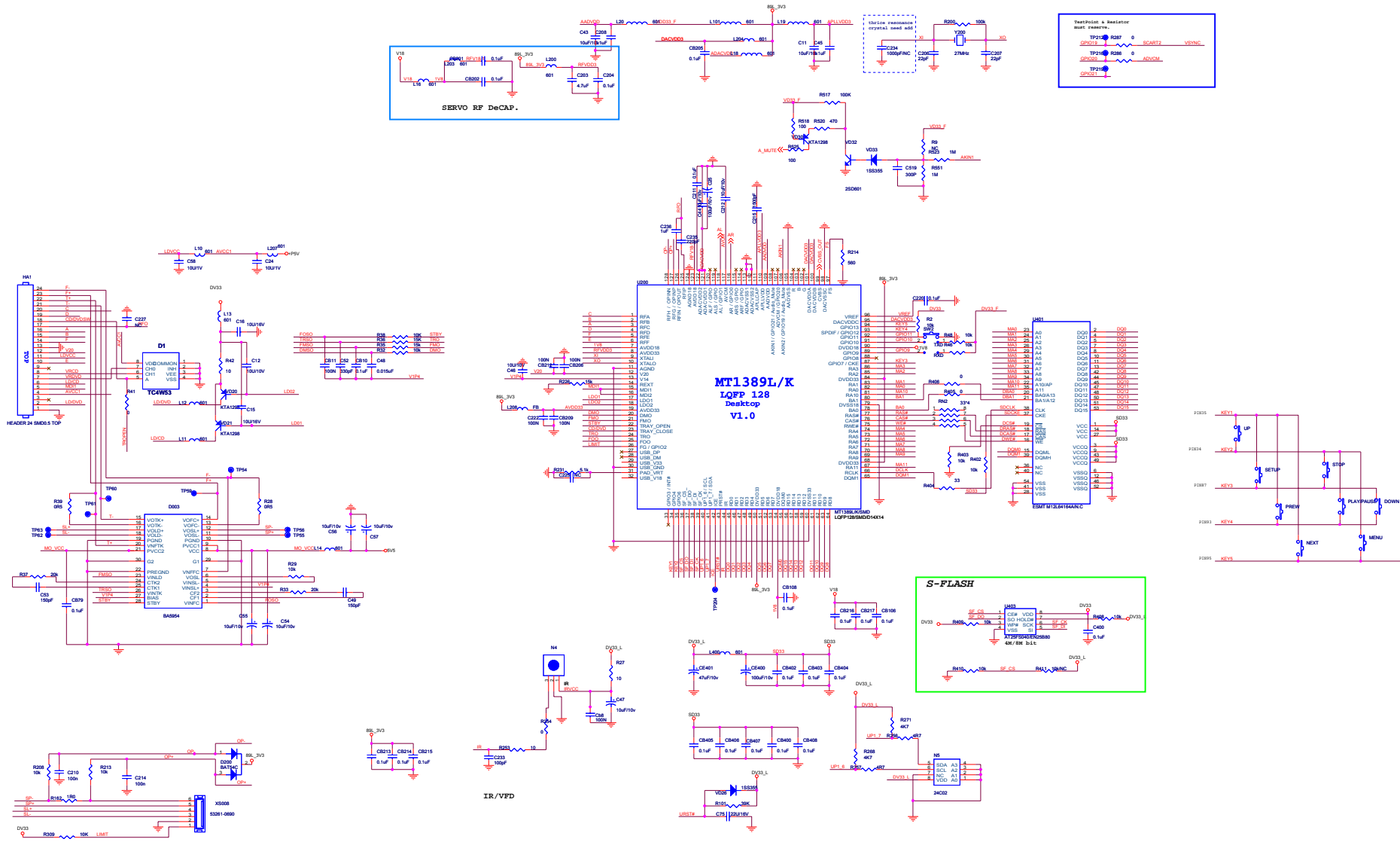




# 8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (AUDIO)

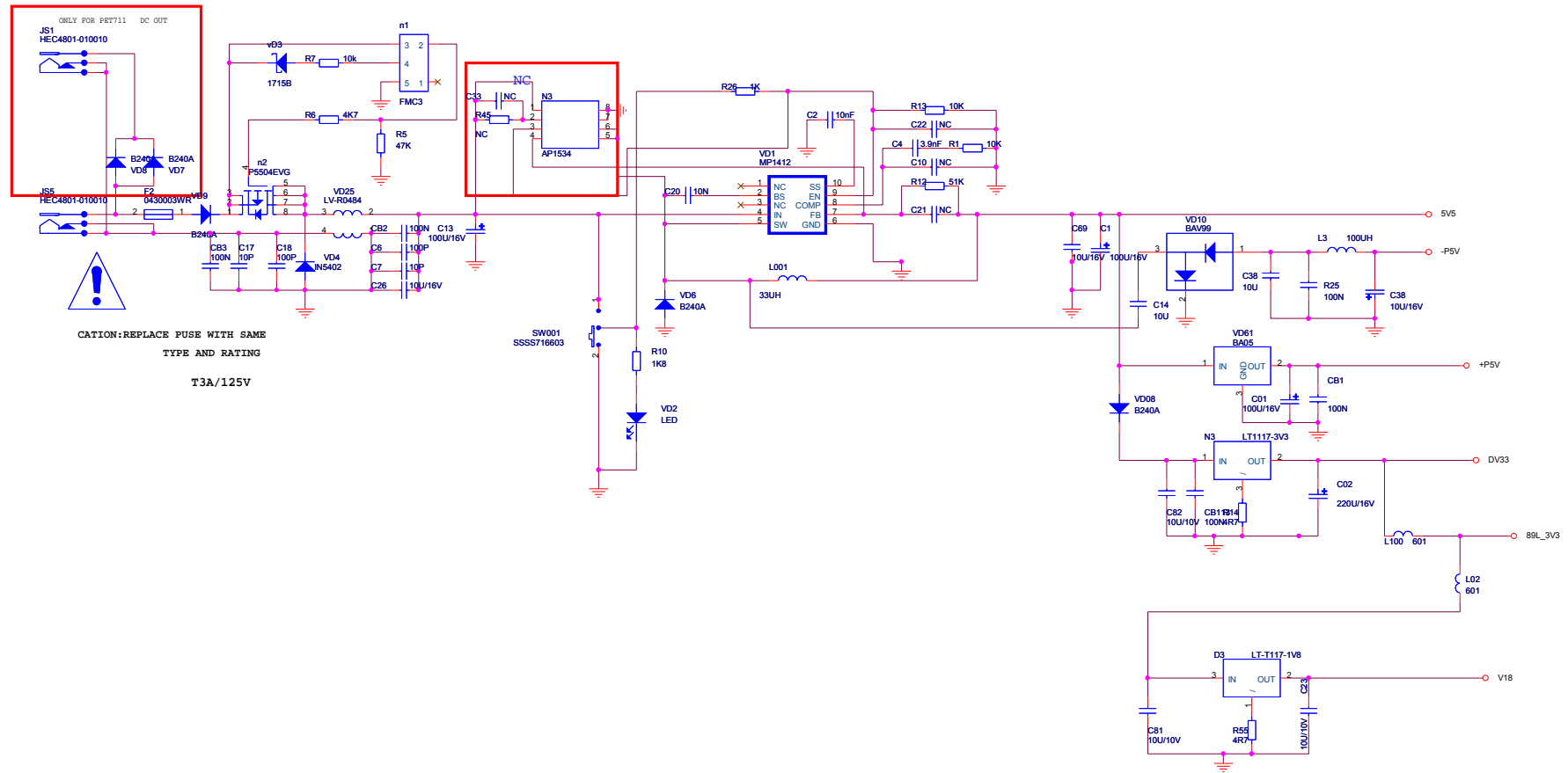


# 8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (MT1389L/K)

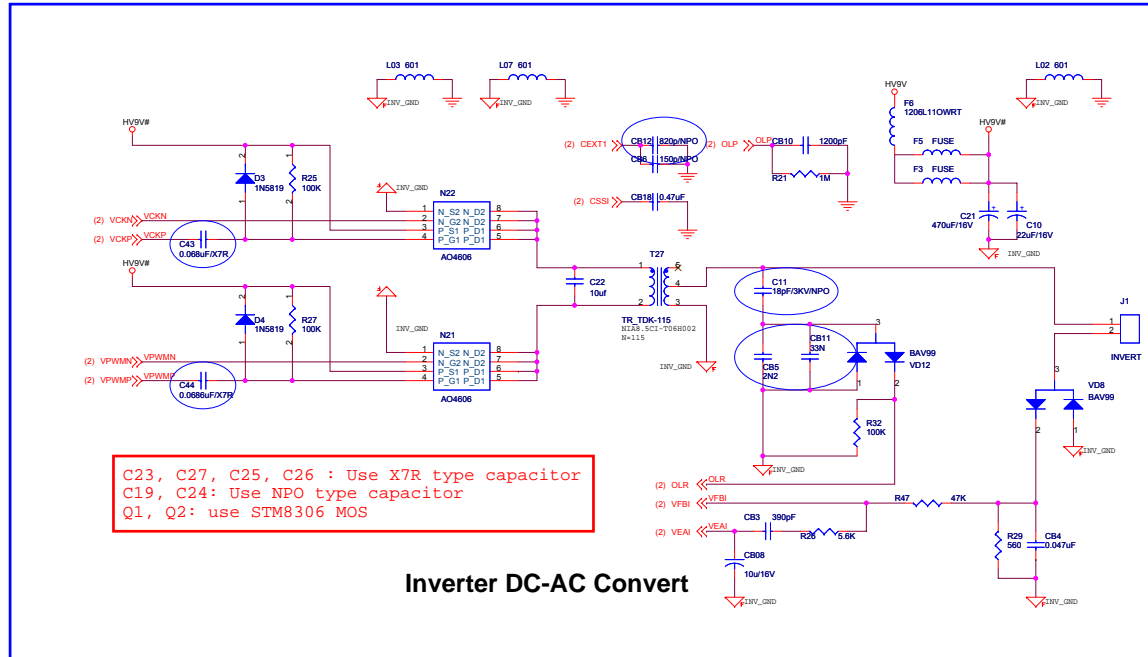
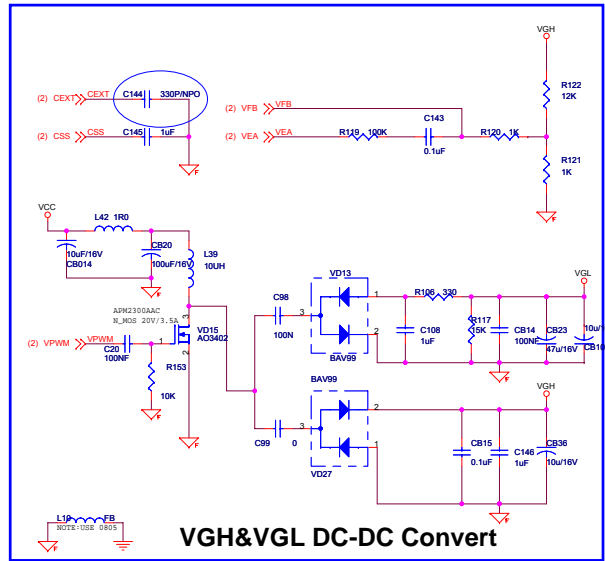


Chip Decap.

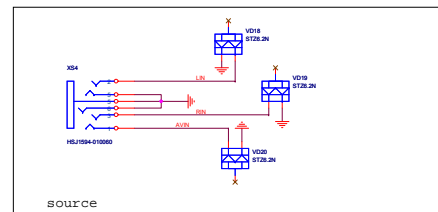
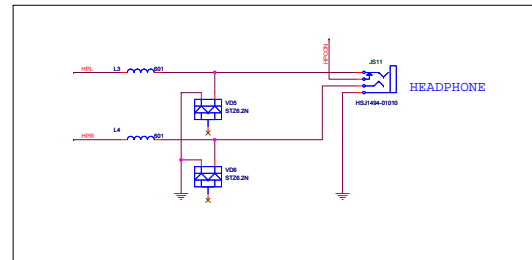
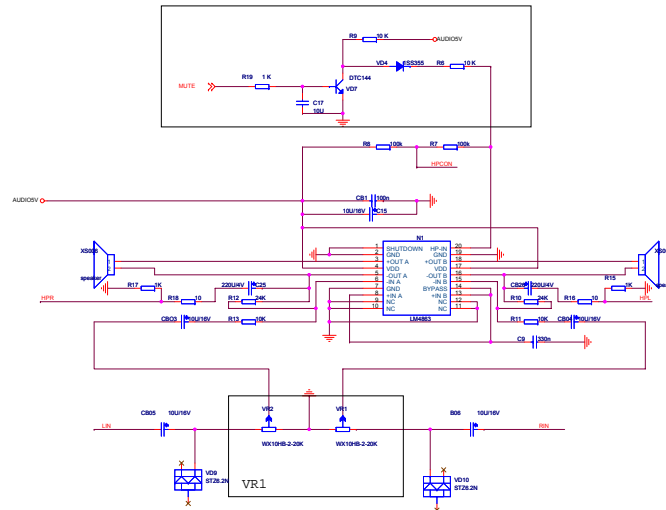
# 8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (POWER)



# 8.0 ELECTRICAL DIAGRAM PAC133 MAIN BOARD CIRCUIT DIAGRAM (DC/AC)

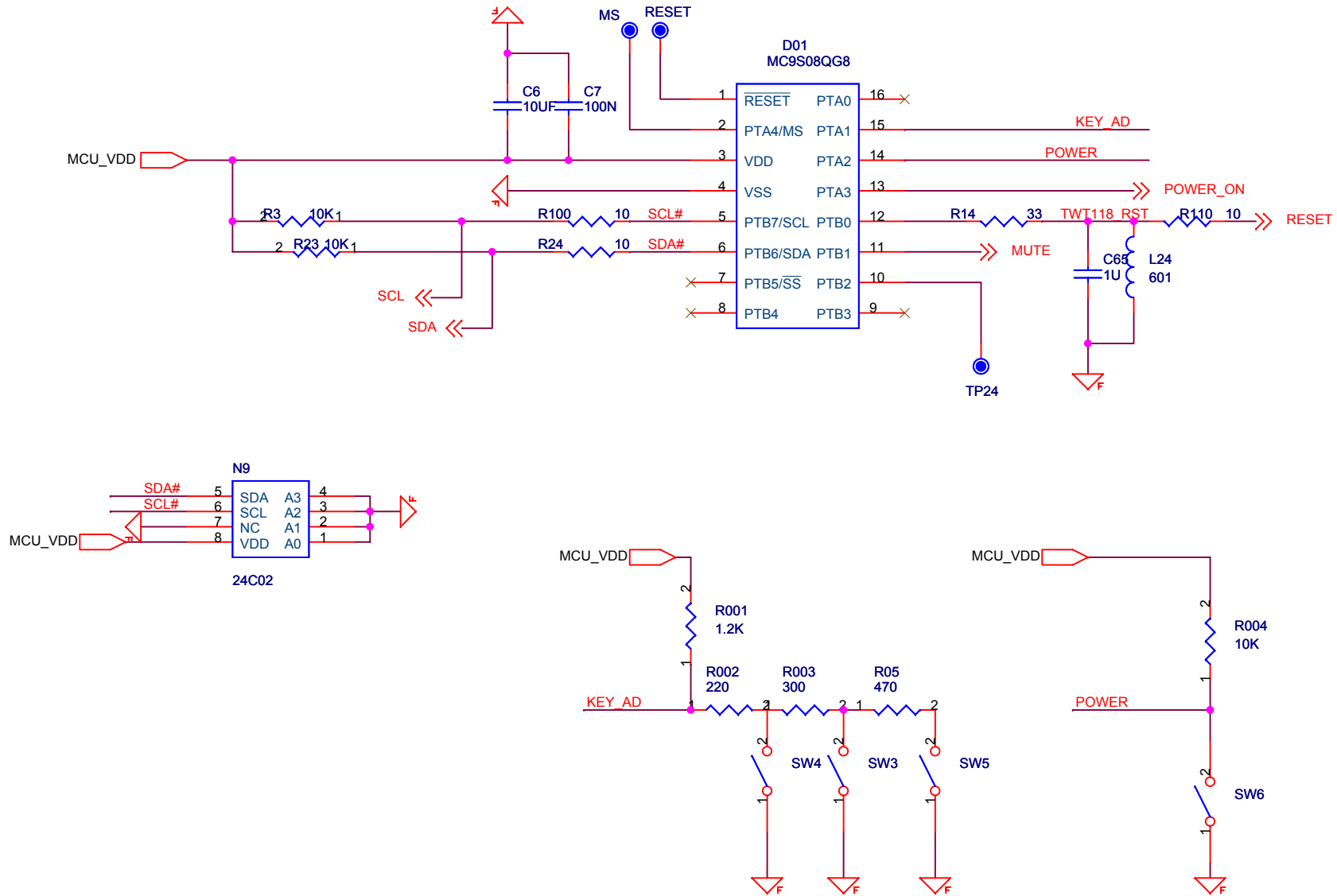


# 8.0 ELECTRICAL DIAGRAM PAC133 MAIN BOARD CIRCUIT DIAGRAM (LM4863)

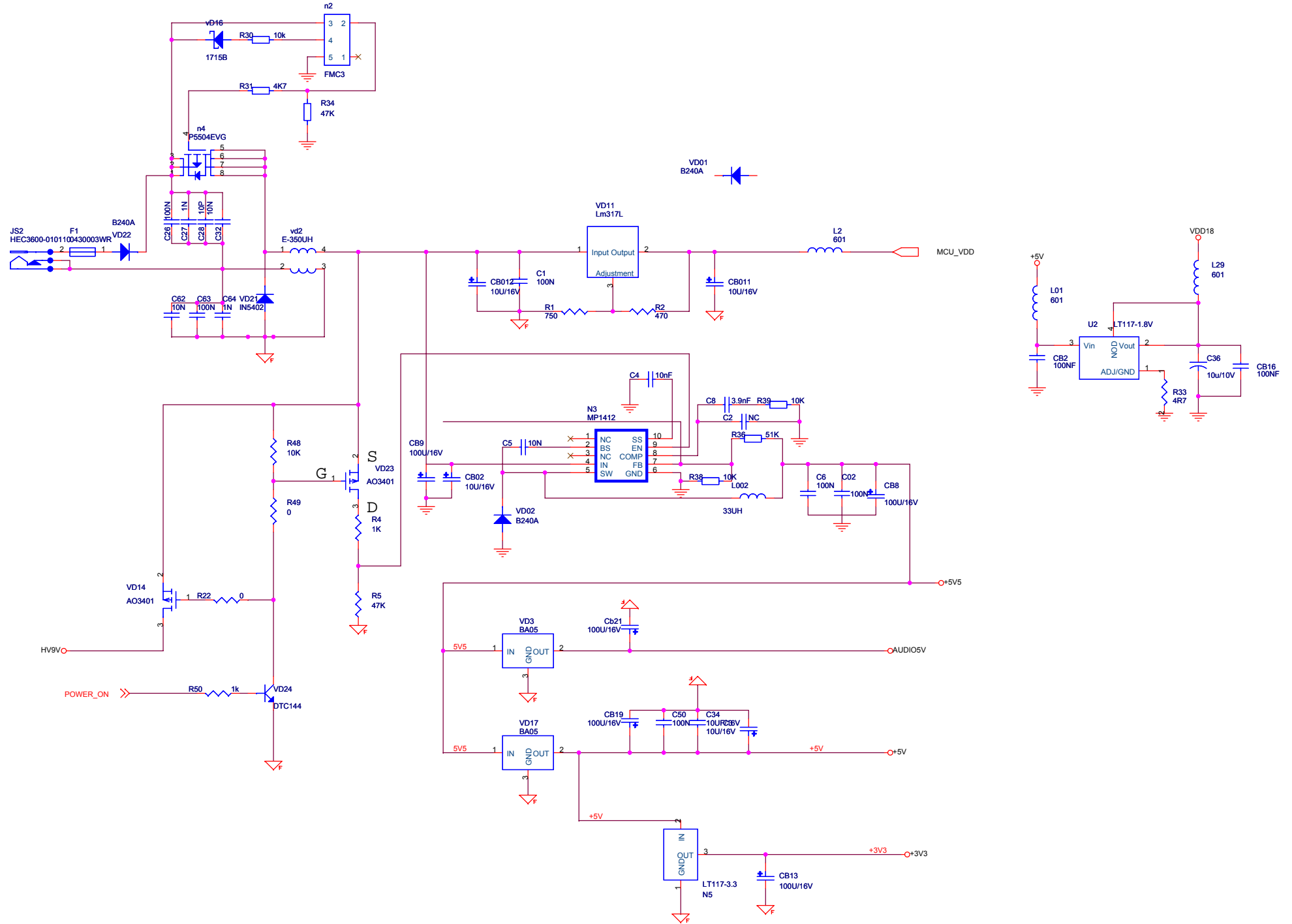


# 8.0 ELECTRICAL DIAGRAM

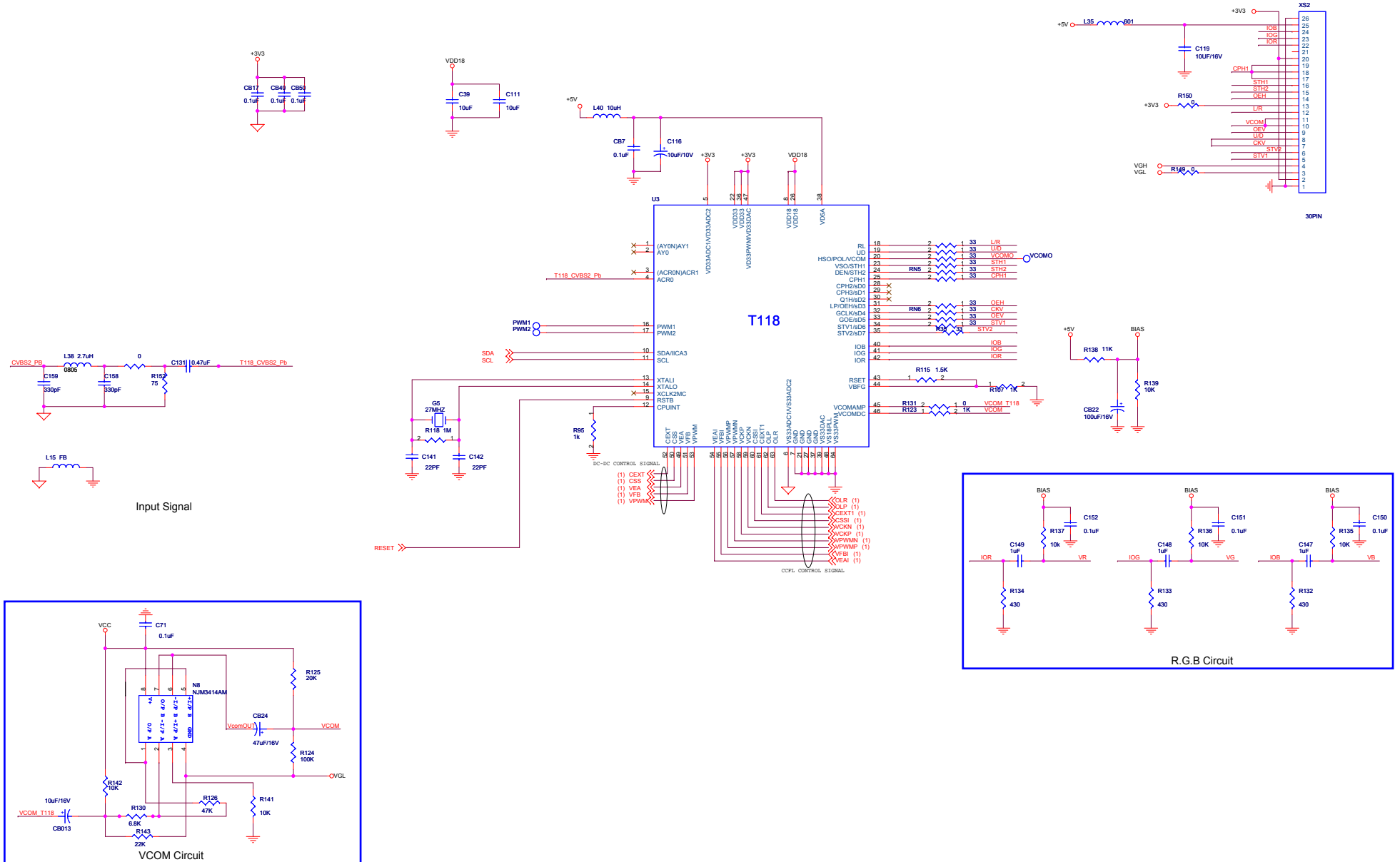
## PAC133 MAIN BOARD CIRCUIT DIAGRAM (MCU&KEY)



# 8.0 ELECTRICAL DIAGRAM PAC133 MAIN BOARD CIRCUIT DIAGRAM (POWER)



# 8.0 ELECTRICAL DIAGRAM PAC133 MAIN BOARD CIRCUIT DIAGRAM (T118)



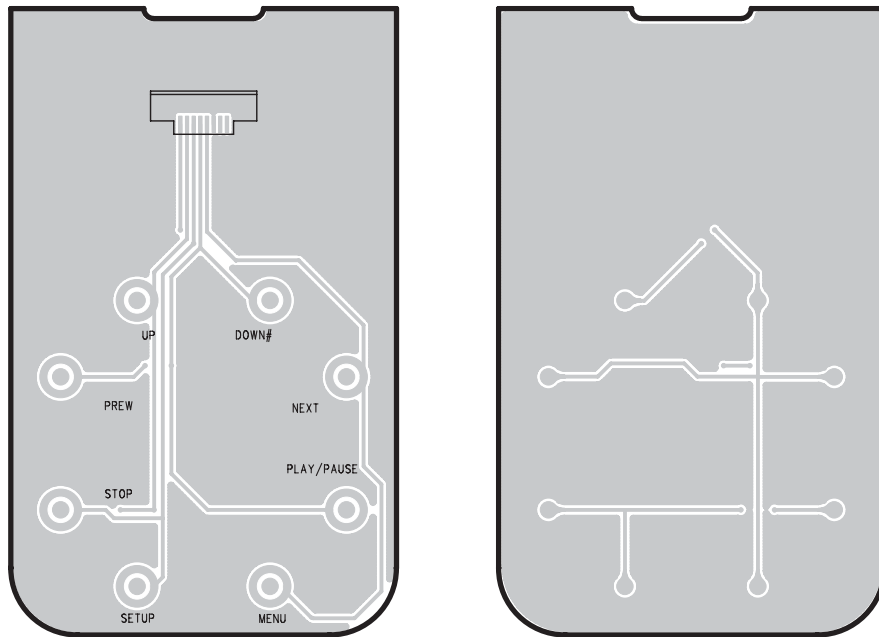




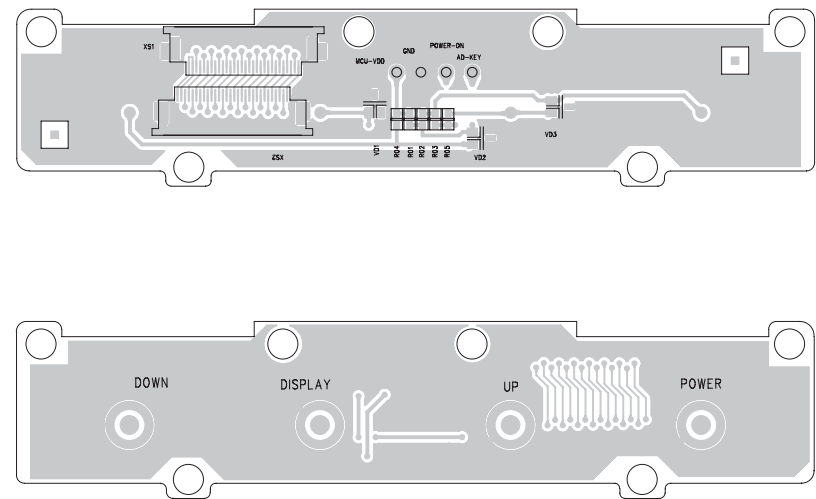


## 9.0 COMPONENT LAYOUT

### PET711K FUNCTION BOARD DIAGRAM




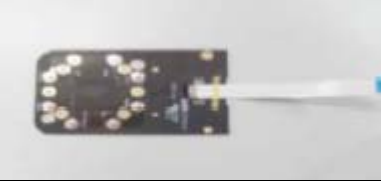
### PAC133K FUNCTION BOARD DIAGRAM



## 10.0 SERVICE PART LIST

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### Electrical Part List:

No.	CTN	Service 12NC	Service Description	Photo	Pos. No.
1	PET712/05 PET712/12	996510014377	PET712M MAIN PCBA /98		100
2	PET712/05 PET712/12	996510010518	PET711K FUNCTION PCBA		110

## 10.0 SERVICE PART LIST

### Mechanical Part List:

No.	CTN	Service 12NC	Service Description	Photo	Pos. No.
3	PET712/05 PET712/12	996510010520	DVD LOADER		210
4	PET712/05 PET712/12	996510020229	FFC SML2CD-24X114		220
5	PET712/05 PET712/12	996510010521	DOOR & FUNCTION BUTTON DISCRETENESS		300
6	PET712/05 PET712/12	996510010522	MIDDLE CABINET DISCRETENESS		310
7	PET712/05 PET712/12	996510010537	BASE COVER DISCRETENESS		320
8	PET712/05 PET712/12	996510010526	MAIN PCBA SHIELD COVER		330
9	PET712/05 PET712/12	996510010524	DOOR SPRING A		400
10	PET712/05 PET712/12	996510010525	DOOR SPRING B		410
11	PET712/05 PET712/12	996510019833	POWER KNOB		420
12	PET712/05 PET712/12	996510019834	POWER KNOB CUSHION		430

## 10.0 SERVICE PART LIST

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### 2<sup>ND</sup> SCREEN Part List:

No.	CTN	Service 12NC	Service Description	Photo	Pos. No.
13	PET712/05 PET712/12	996510010539	PAC133M MAIN PCBA	 A green printed circuit board (PCBA) with various electronic components, including a microcontroller, capacitors, and connectors, mounted on it.	500
14	PET712/05 PET712/12	996510014379	PAC133K FUNCITON PCBA	 A smaller green PCBA with several components, including a microcontroller and capacitors, and a ribbon cable attached to one side.	510
15	PET712/05 PET712/12	996510010540	LB070W02-TMJ2 TFT LCD	 A rectangular TFT LCD screen with a black bezel and a white border, showing a dark screen.	520
16	PET712/05 PET712/12	994000002157	SPEAKER	 A small, circular speaker component with a white mesh grille, mounted on a green PCB.	530
17	PET712/05 PET712/12	996510010541	PAC133 DISPLAY FRAME	 A black plastic display frame with a white screen area in the center and a Philips logo at the bottom.	540
18	PET712/05 PET712/12	996510010542	PAC133 BASE COVER	 A white plastic base cover with a Philips logo and some text on the left side, and a small circular hole in the center.	550

## 10.0 SERVICE PART LIST

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### Accessories Part List:

No.	CTN	Service 12NC	Service Description	Photo	Pos. No.
19	PET712/05	996510014580	ADPV26B AC/DC ADAPTER /05		ACAPT
	PET712/12	996510014579	ADPV26B AC/DC ADAPTER /12		
20	PET712/05 PET712/12	996510001125	AV OUT CABLE		AVCABLE
21	PET712/05 PET712/12	996510010528	CAR ADAPTER AY4196		CARAPT
22	PET712/05 PET712/12	996510010527	RC-AY5513 REMOTE		RC
23	PET712/05 PET712/12	996510010535	POWER CABLE		PCABLE
24	PET712/05 PET712/12	996510014380	TRAVEL BAG SET		BAG

## 11.0 REVISION LIST

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Version 1.0 (3141 785 32560)

- Initial release PET712/05, PET712/12

Version 1.1 (3141 785 32561)

- Update chapter 10 - add 12NC for open knob

Version 1.2 (3141 785 32562)

- Update chapter 10 – change FFC 12NC from 996510014378 to 996510020229