

Service Service Service



Service Manual

TABLE OF CONTENTS

	Chapter
Technical Specification.....	1
Safety Instructions.....	2
Instruction for Use.....	3
Mechanical Instructions.....	4
Troubleshooting & Service tips.....	5
Overall block diagram.....	6
Overall wiring diagram.....	7
Electrical diagram.....	8
Component layout.....	9
Service part list.....	10
Revision list.....	11

©Copyright 2005 Philips Consumer Electronics B.V. Eindhoven, The Netherlands
All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted, in any form or by any means, electronics,
mechanical, photocopying, or otherwise without the prior permission of Philips

3141 785 30444

1.0 TECHNICAL SPECIFICATION

General

Dimensions (WxLxH) :	19.3 x 16.1 x 3.0 cm 7.72 x 6.44 x 1.2 inches
Weight :	0.824 kg / 1.81 lb
Power supply :	DC 9V 2.2A
Power consumption :	≤ 20W
Operating temp. range :	0 - 50°C (32 ~ 122°F)
Laser wavelength:	650nm
Video system :	/17 versions: NTSC non /17 versions: NTSC / PAL / AUTO
Frequency response :	20Hz ~ 20KHz ± 1dB
Signal/noise ratio	≥85dB
Audio distortion + noise	≤ 80(1KHz)
Channel separation:	≥85dB
Dynamic range	≥80dB
Output	
Audio out (analog audio)	Output level: 2V ± 10%
Load impedance:	10KΩ
Video out Output level:	1Vp - p ± 20%
Load impedance:	75Ω

Current consumption

DC-IN SUPPLY (9.0V)	
Battery Charging Current	1.2A typ.
BATT. SUPPLY (7.2V)	
Power Off	0A
Playback with TFT on	<1.2A typ.
Playback without TFT on	<600mA
Battery playtime	>2.5hrs

Headphone out (headphone output load 2x16 ohm)

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

Supported disc type

DVD video discs:



Video CD:



Audio CD :



In addition, this unit can play DVD+R & DVD+RW and CD-R & CD-RW that contains audio titles or MP3 or JPEG files.

You cannot play disc other than the above listed.
(CVD, CD-ROM, CD-Extra, CD-G and CD-I discs cannot be played on this DVD player)

Software upgrades

For the best performance of your DVD Portable. Check **www.philips.com/support** for latest software upgrades available.

To check the software version of your DVD Portable.

1. Press the SETUP key to enter the setup menu.
2. Press RETURN and then press 1, 2 and 3 on the 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. E.g. 050303

Procedure on how to upgrade the software of the DVD Portable

1. Download the latest software from the Philips support site.
2. Unzipped the files and then burn it onto a CD ROM then playback the CD ROM on the DVD Portable.

Pixel specification

≤ 3 (max. 0 bright dots and 3 dark dots)

2.0 SAFETY INSTRUCTIONS



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.



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.



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



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.



AVVERTIMENTO

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



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".



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



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



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



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."



Warning !

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



Varning !

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



Varoitus !

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



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.

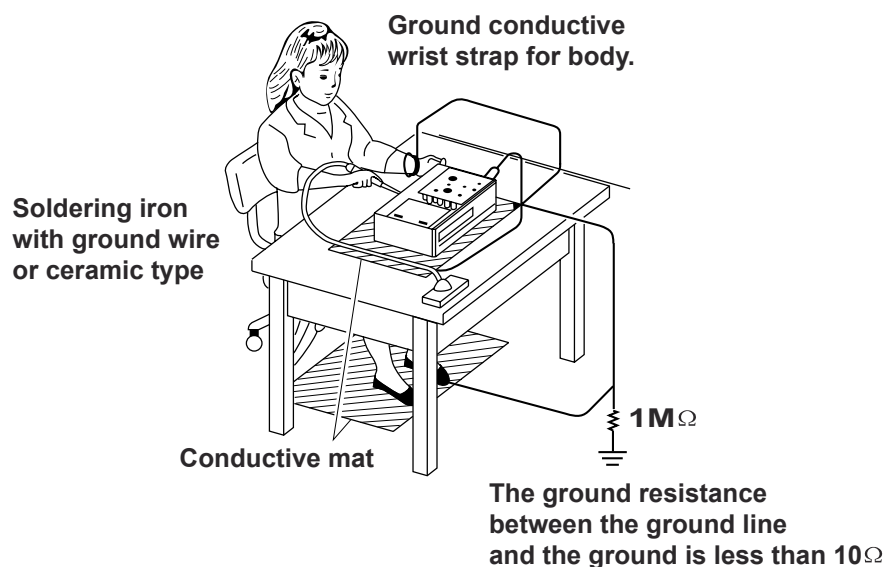
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

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.

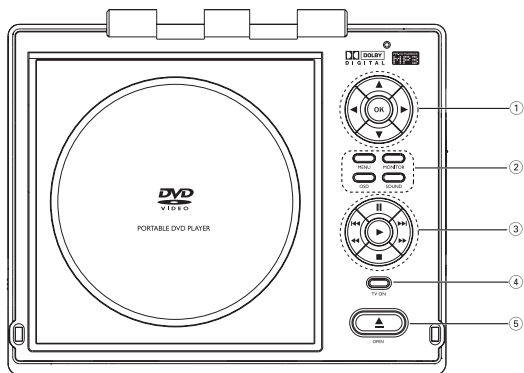


3.0 INSTRUCTION FOR USE

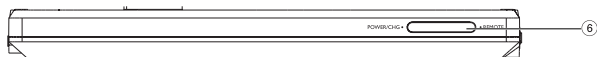
- ① ▲, ▼, ◀, ▶
Up / down / left / right cursor
OK
Confirms selection
- ② **MENU**
Displays MENU page
MONITOR
Selects display mode
OSD
On Screen Display on / off
SOUND
Virtual surround sound on / off
- ③ **II**
Pauses playback
▶
Starts / resumes playback
■
Press twice to stop playback
◀◀ / ▶▶
For previous (◀◀) or next (▶▶)
chapters, tracks or titles
◀◀ / ▶▶
Search backward (◀◀) or search
forward (▶▶)
- ④ **TV ON**
TV on indicator
- ⑤ ▲ **OPEN**
Opens disc door to insert or
remove disc
- ⑥ **POWER/CHG**
Power and charging indicator
REMOTE
Remote sensor
- ⑦ **ON . POWER . OFF**
Switches the player on / off
- ⑧ **VOLUME** ▴
Volume control
- ⑨ **PHONES 1 & 2**
Headphones jack
- ⑩ **AUDIO OUT**
Audio output jack
- ⑪ **VIDEO OUT**
Video output jack
- ⑫ **COAXIAL**
Digital audio output jack (coaxial)
- ⑬ **DC IN 9V**
Power supply socket

CAUTION

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



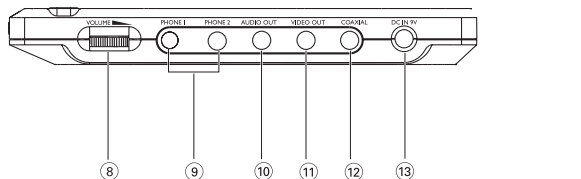
Main unit controls



Front of player



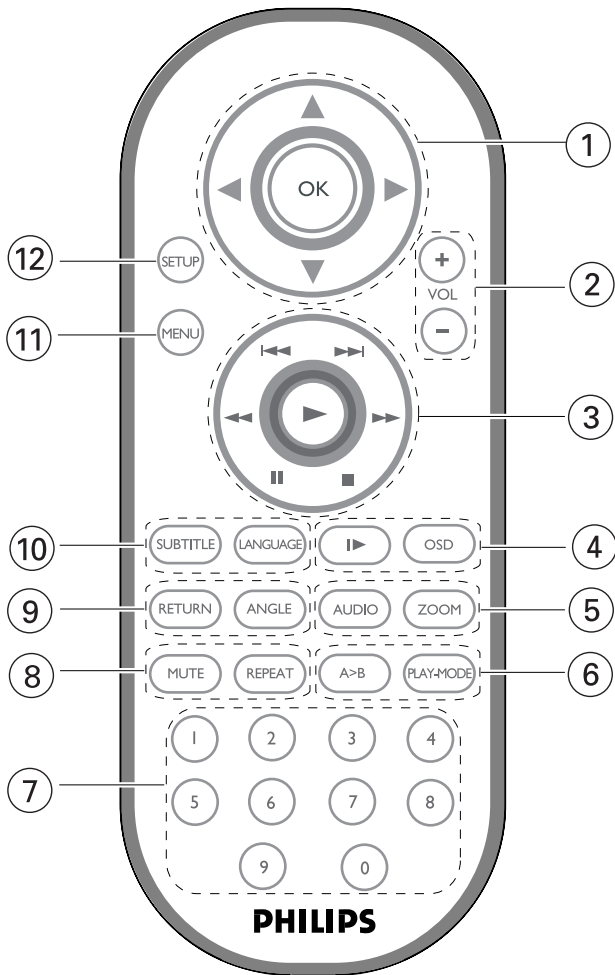
Left of player



Right of player

Remote Control

- ① ▲, ▼, ◀, ▶
Up / down / left / right cursor
OK
Confirms selection
- ② **VOL+ / -**
Volume control
- ③ ◀◀ / ▶▶
For previous (◀◀) or next (▶▶) chapters, tracks or titles
II
Pauses playback
▶
Starts / resumes playback
■
Press twice to stop playback
◀◀ / ▶▶
Search backward (◀◀) or search forward (▶▶)
- ④ **OSD**
On Screen Display on / off
▶
Slow motion
- ⑤ **AUDIO**
Audio language selector
ZOOM
Enlarges video image
- ⑥ **A > B**
To repeat or loop a sequence in a title
PLAY-MODE
Selects play order options
- ⑦ **0 - 9**
Numeric keypad
- ⑧ **MUTE**
Muting player volume
REPEAT
Repeats chapter / title / disc
- ⑨ **RETURN**
For VCD menu page
ANGLE
Selects DVD camera angle
- ⑩ **SUBTITLE**
Subtitle language selector
LANGUAGE
Language selector
- ⑪ **MENU**
Displays MENU page
- ⑫ **SETUP**
Enters SETUP menu



4.0 MECHANICAL INSTRUCTIONS

1. Back View as Fig.1

Remove 13 screws to disassemble the base as Fig.2



Fig.1



Fig.2

13 screws

2. Soldered short pattern for laser diode as Fig.3



Fig.3

soldered

3. Remove DVD driver and main board as Fig.4,5

Disconnect DVD driver and main board

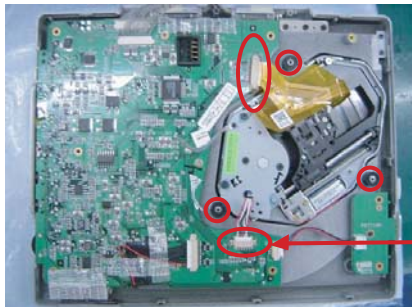


Fig.4

Disconnect

Remove DVD driver and main board

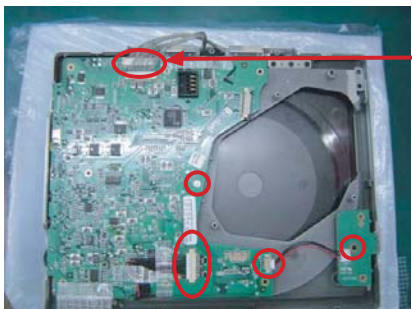


Fig.5

Disconnect

4. Remove key board and other parts as Fig.6

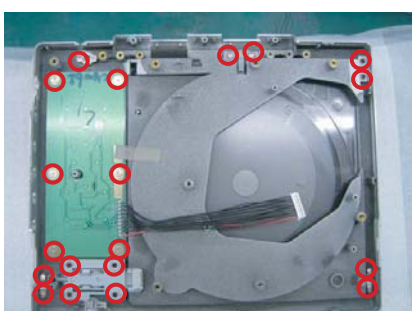


Fig.6

5. Remove top cover as Fig.7,8

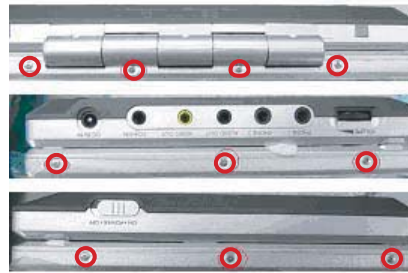


Fig.7

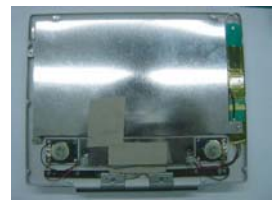


Fig.8

6. Remove IF board shield as Fig.9

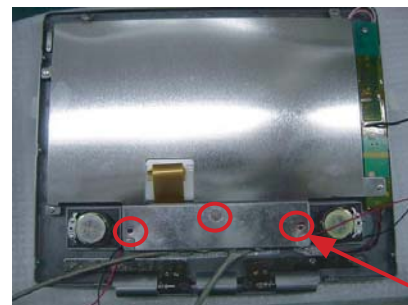


Fig.9

3 screws

7. Remove IF board as Fig.10

Disconnect IF board as Fig.10

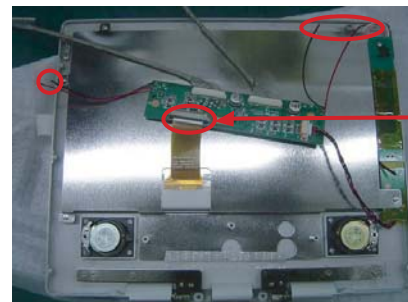


Fig.10

disconnect

8. Remove 5 screws to disassemble LCD shield as Fig.11

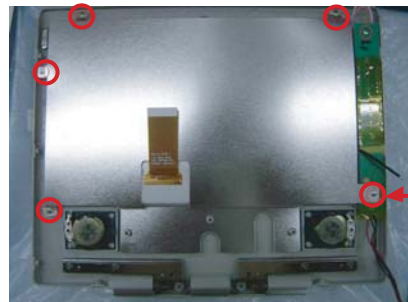


Fig.11

5 screws

9. Remove LCD and HV board as Fig.12



Fig.12

5.0 TROUBLESHOOTING & SERVICE TIPS

5.1 Procedure to change region code

1. Power on player and open DVD Door.
2. Press <Set Up> at Remote Control. In <Set Up Menu> select <Preferences> and press <OK>.
3. For PET710 – Press successively 2 5 2 3 1 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:

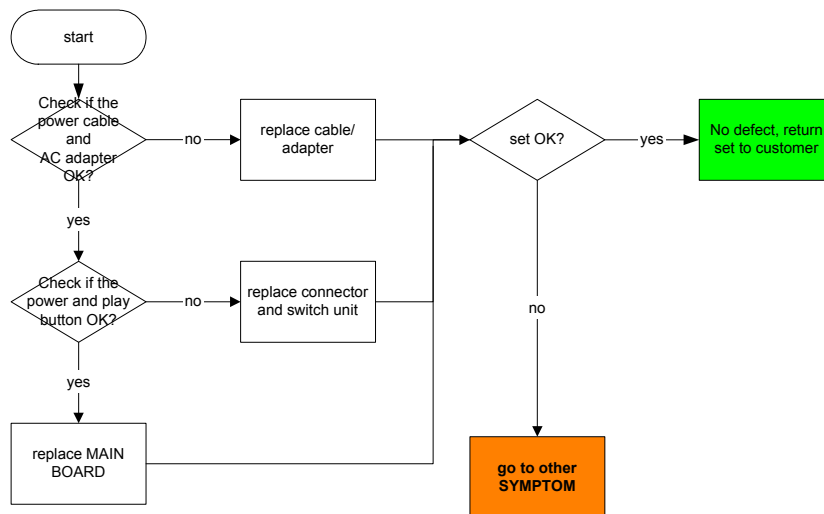
1. Password is CONFIDENTIAL.

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

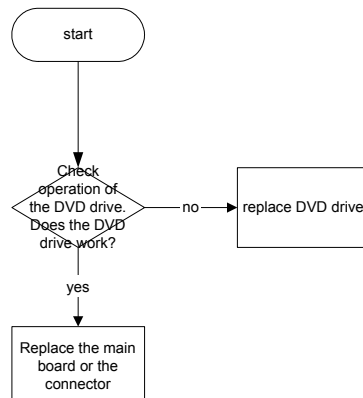
TROUBLESHOOTING PET710

SYMPTOM: NO POWER, NO GREEN LED



TROUBLESHOOTING PET710

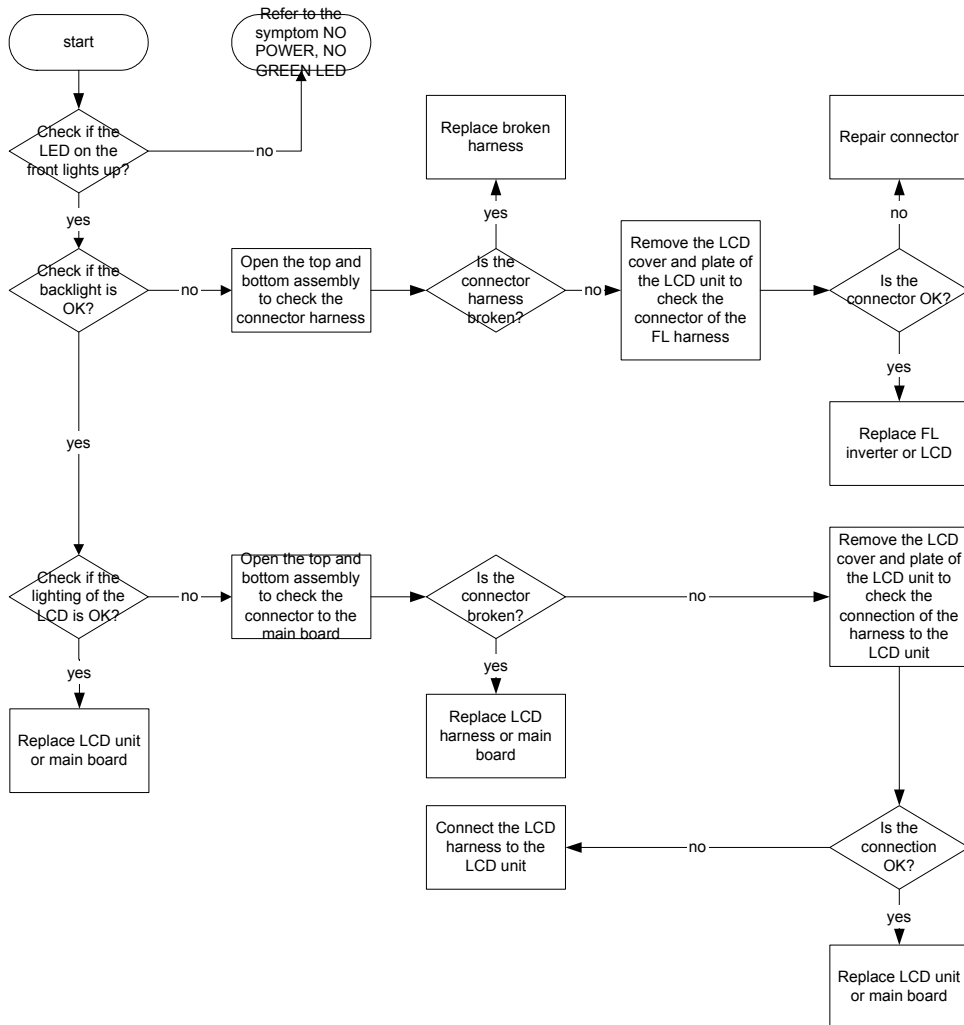
SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL OUTPUT



5.0 TROUBLESHOOTING & SERVICE TIPS

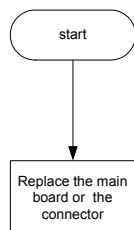
TROUBLESHOOTING PET710

SYMPTOM: THE INITIAL SCREEN IS NOT DISPLAYED ON THE LCD



TROUBLESHOOTING PET710

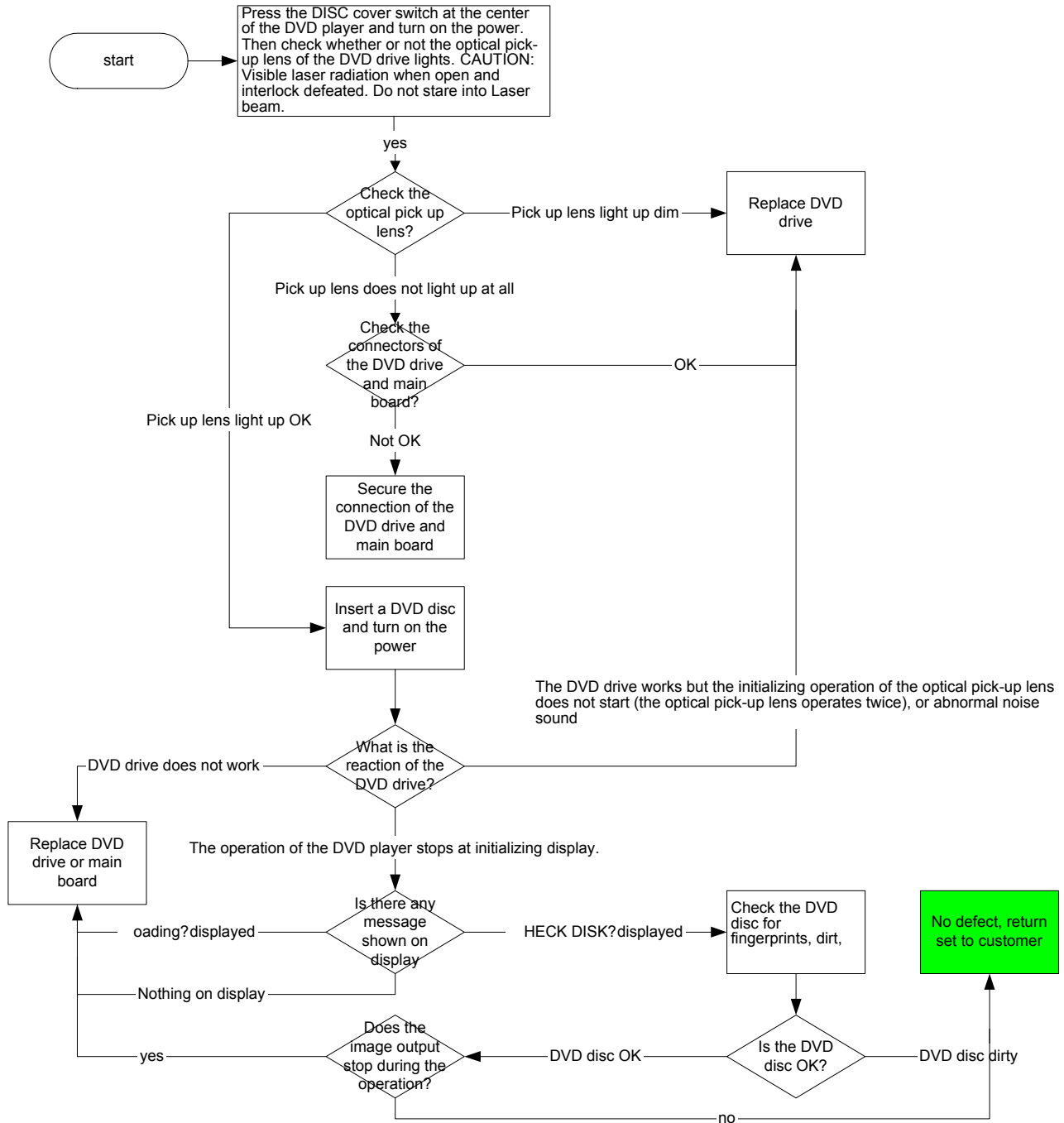
SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL INPUT



5.0 TROUBLESHOOTING & SERVICE TIPS

TROUBLESHOOTING PET710

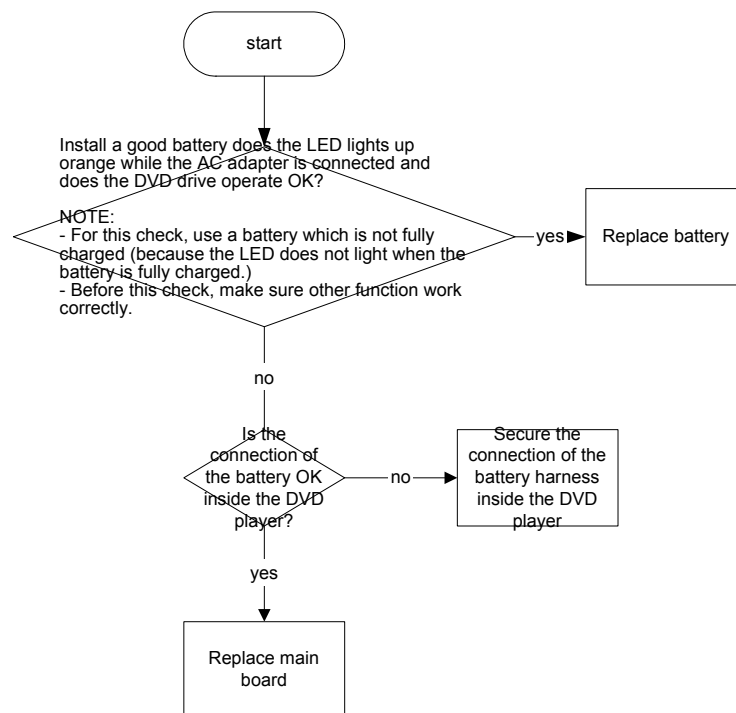
SYMPTOM: THE DVD DRIVE DOES NOT WORK



5.0 TROUBLESHOOTING & SERVICE TIPS

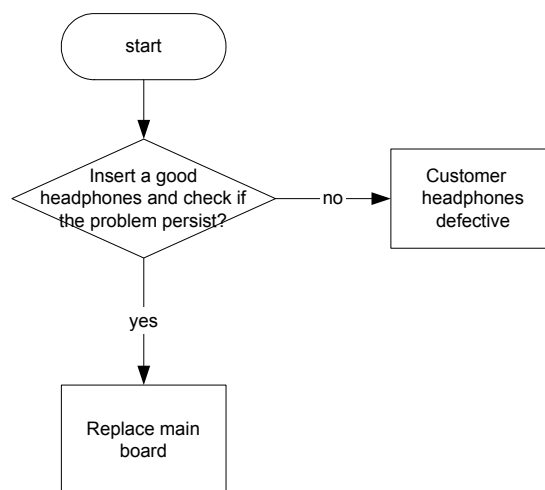
TROUBLESHOOTING PET710

SYMPTOM: THE DVD DRIVE DOES NOT OPERATE WITH BATTERY

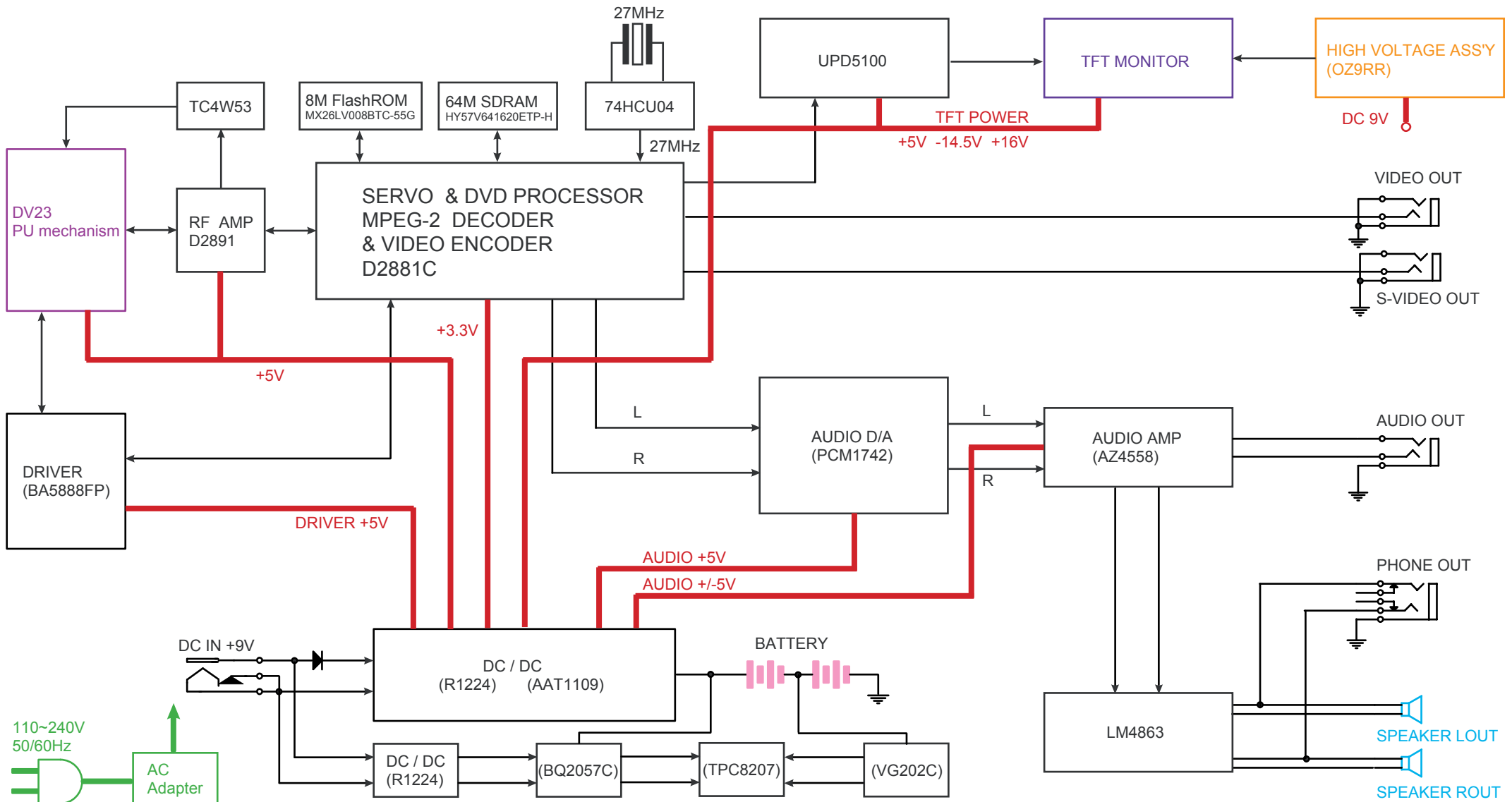


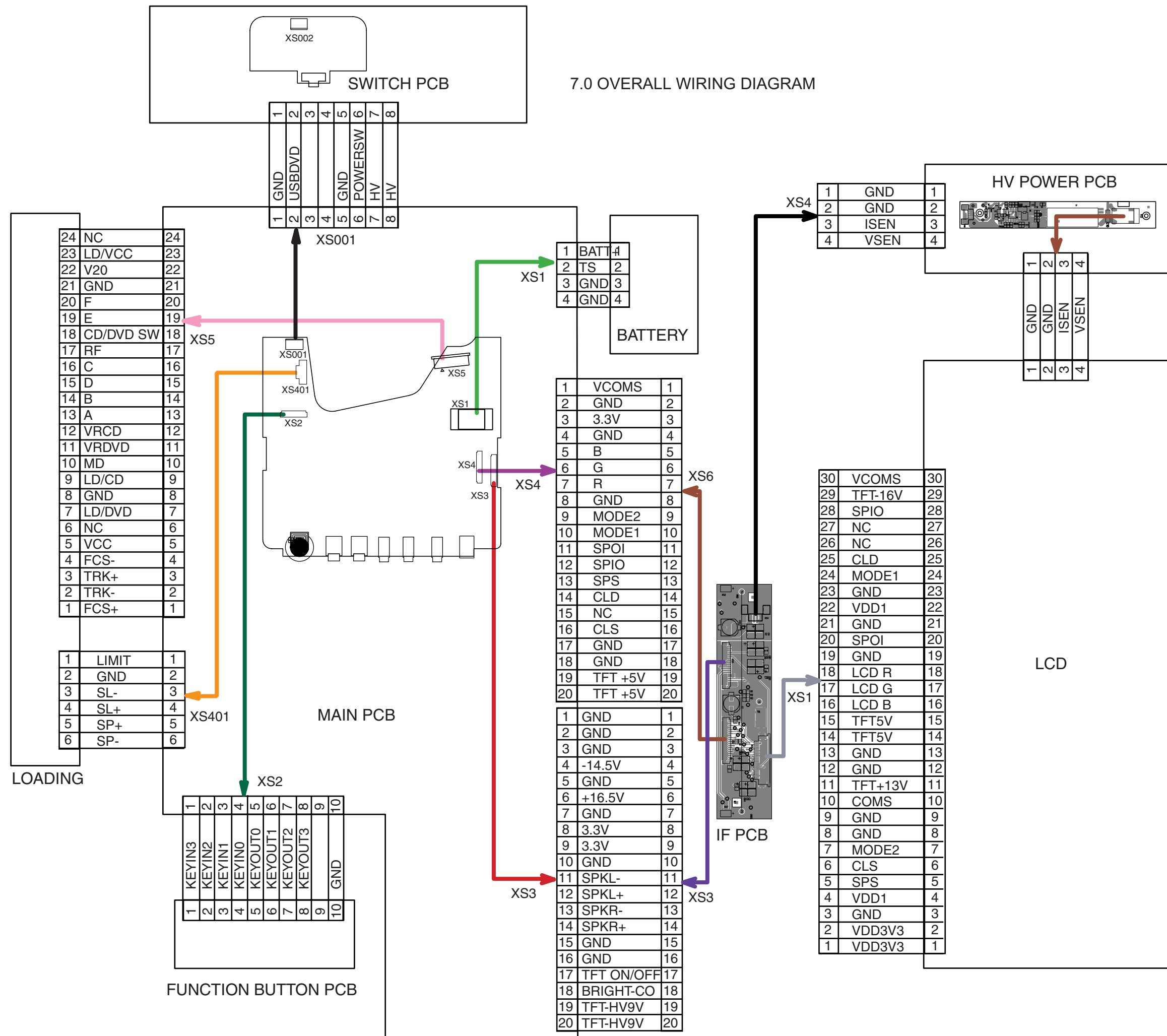
TROUBLESHOOTING PET710

SYMPTOM: NO SOUND COMES FROM THE HEADPHONES

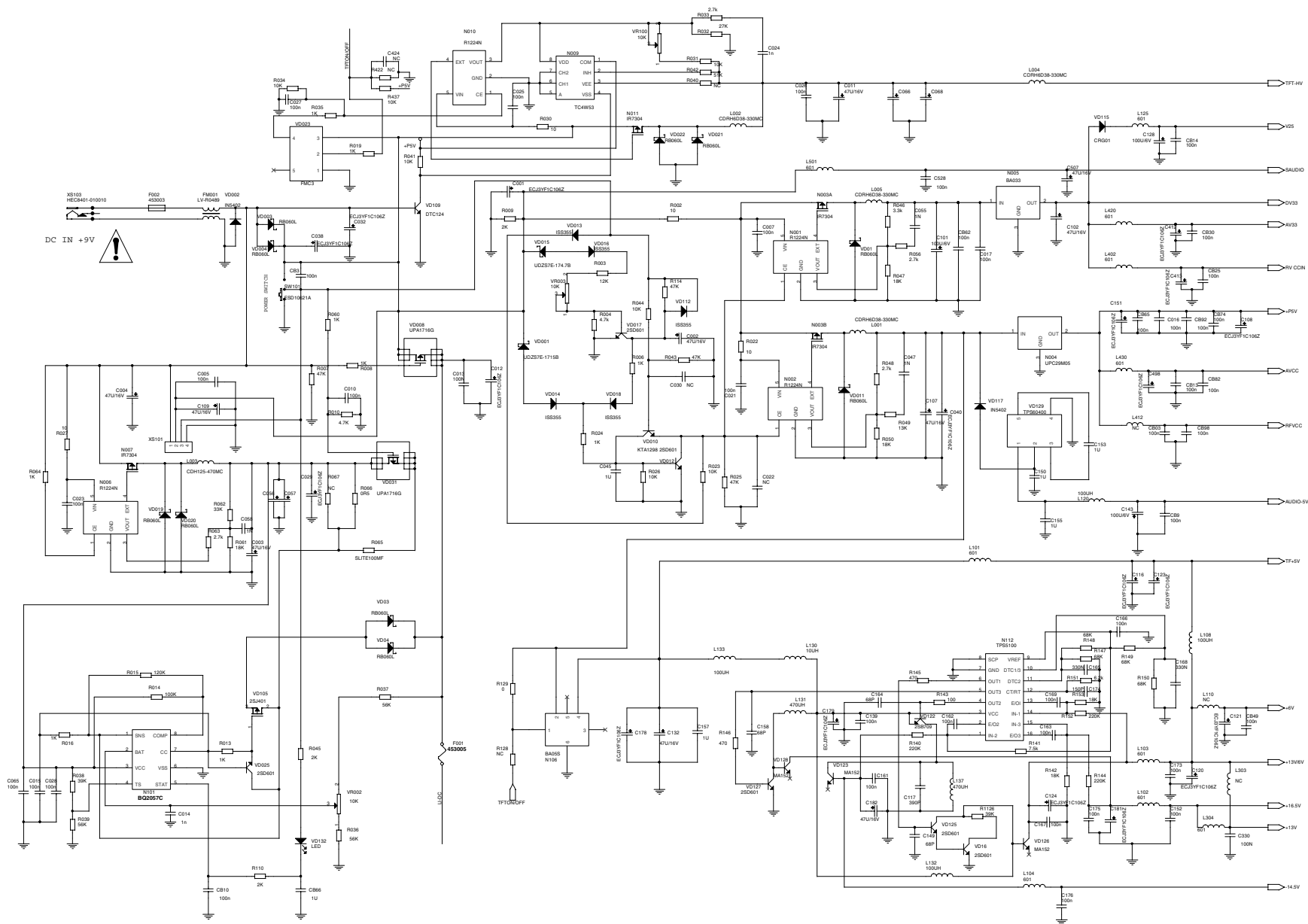


6.0_OVERALL_BLOCK_DIAGRAM

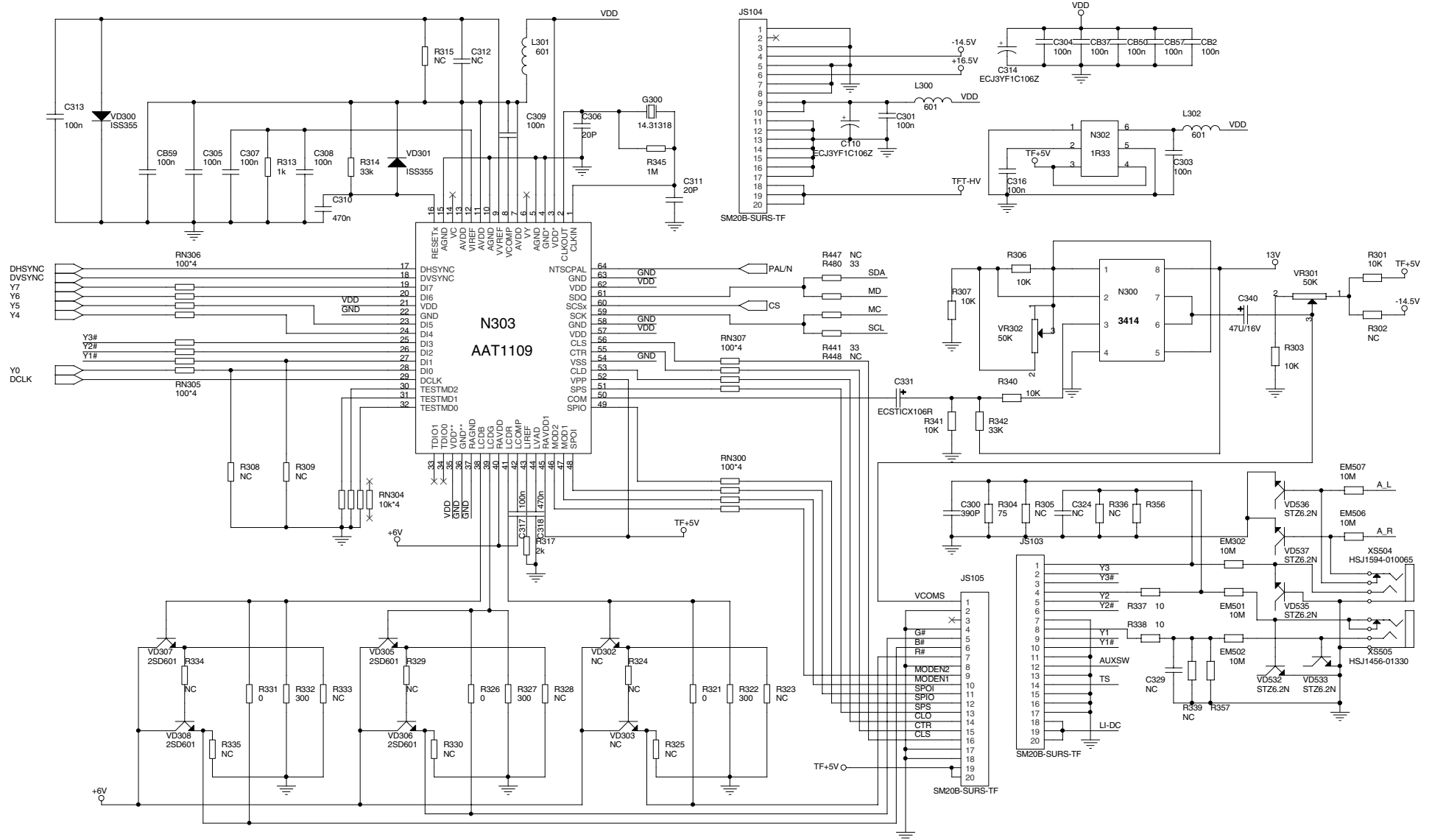




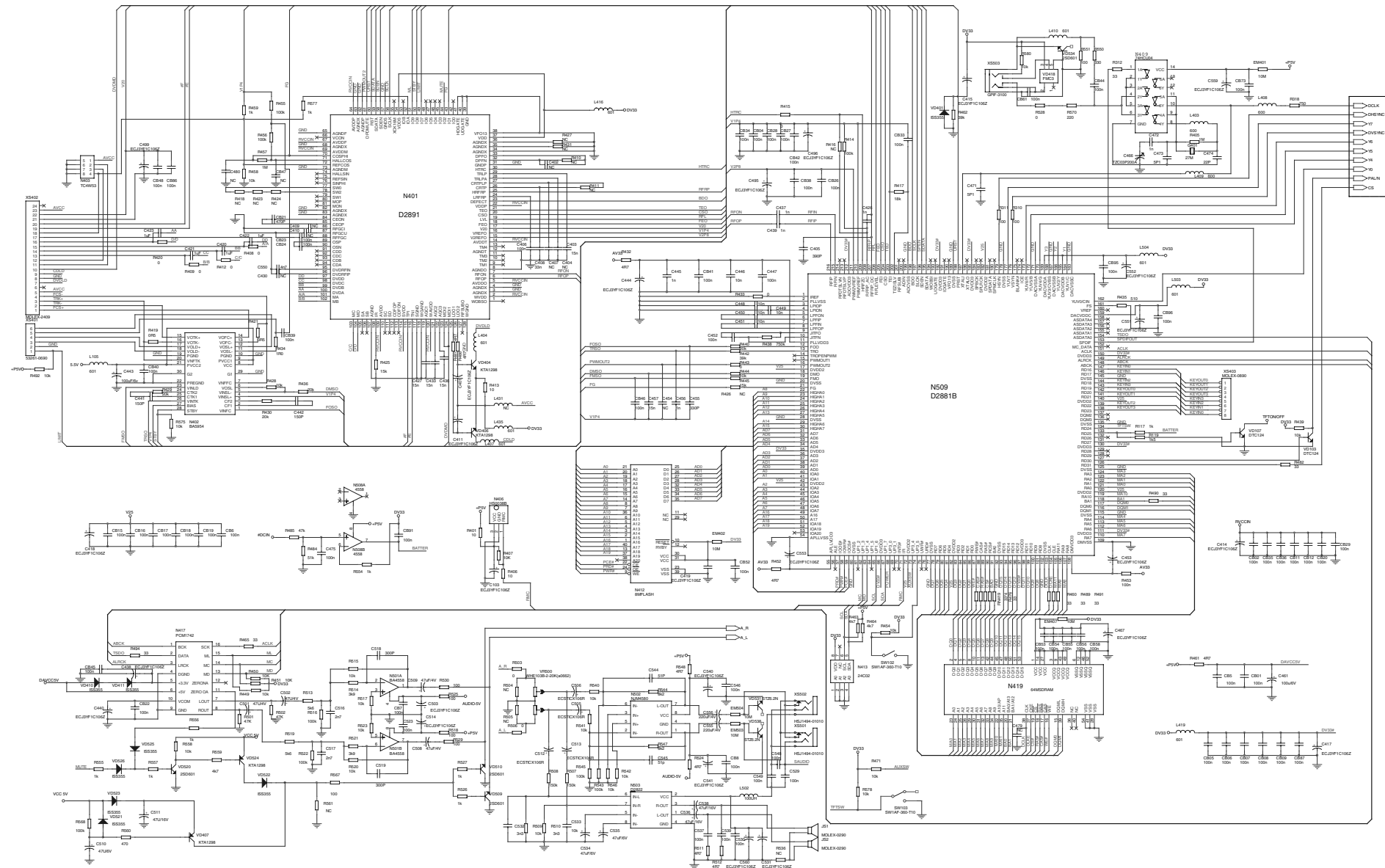
8.0 ELECTRICAL DIAGRAM - MAIN BOARD CIRCUIT DIAGRAM (POWER CIRCUIT DIAGRAM)



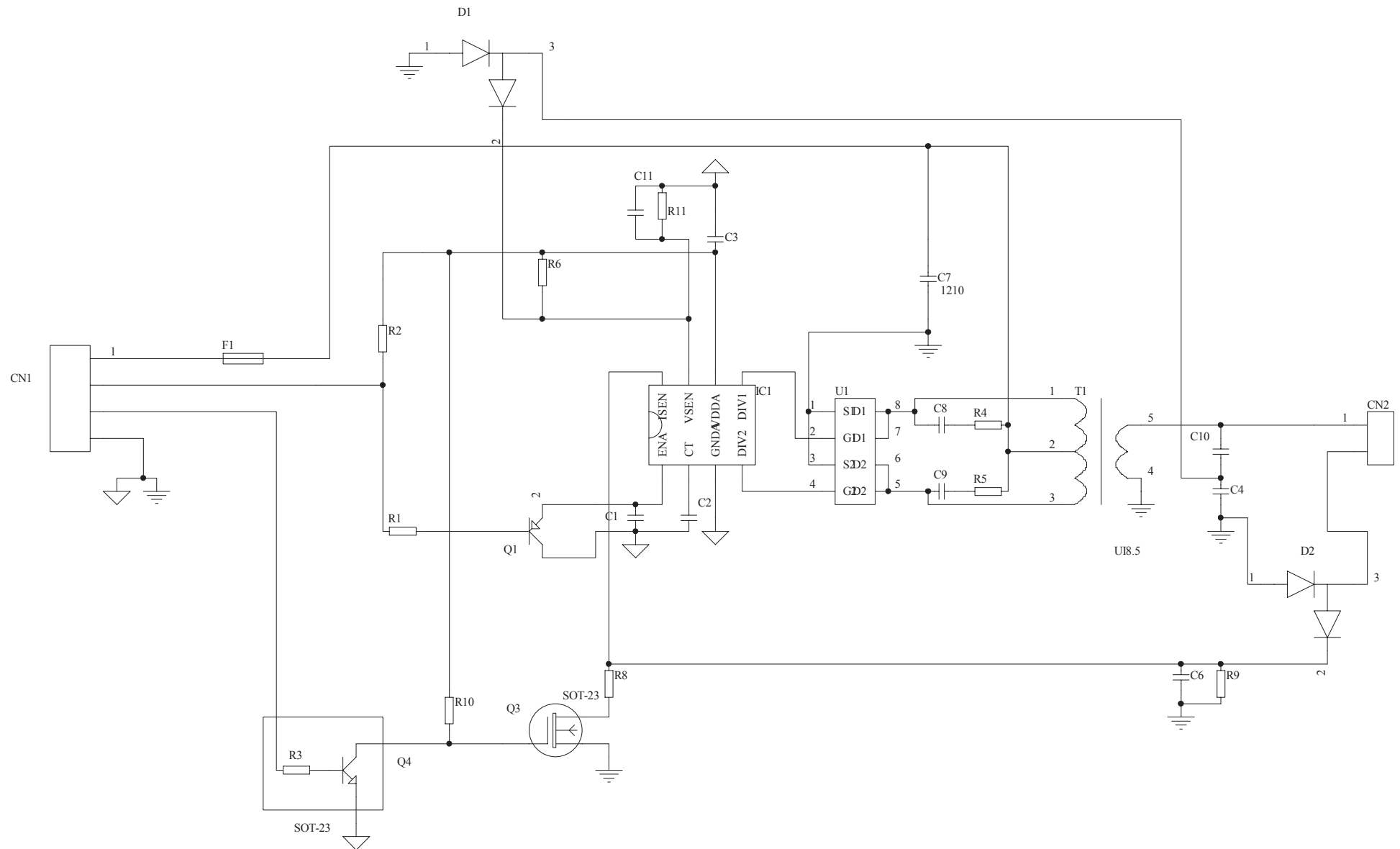
8.0 ELECTRICAL DIAGRAM - MAIN BOARD CIRCUIT DIAGRAM (TFT CIRCUIT DIAGRAM)

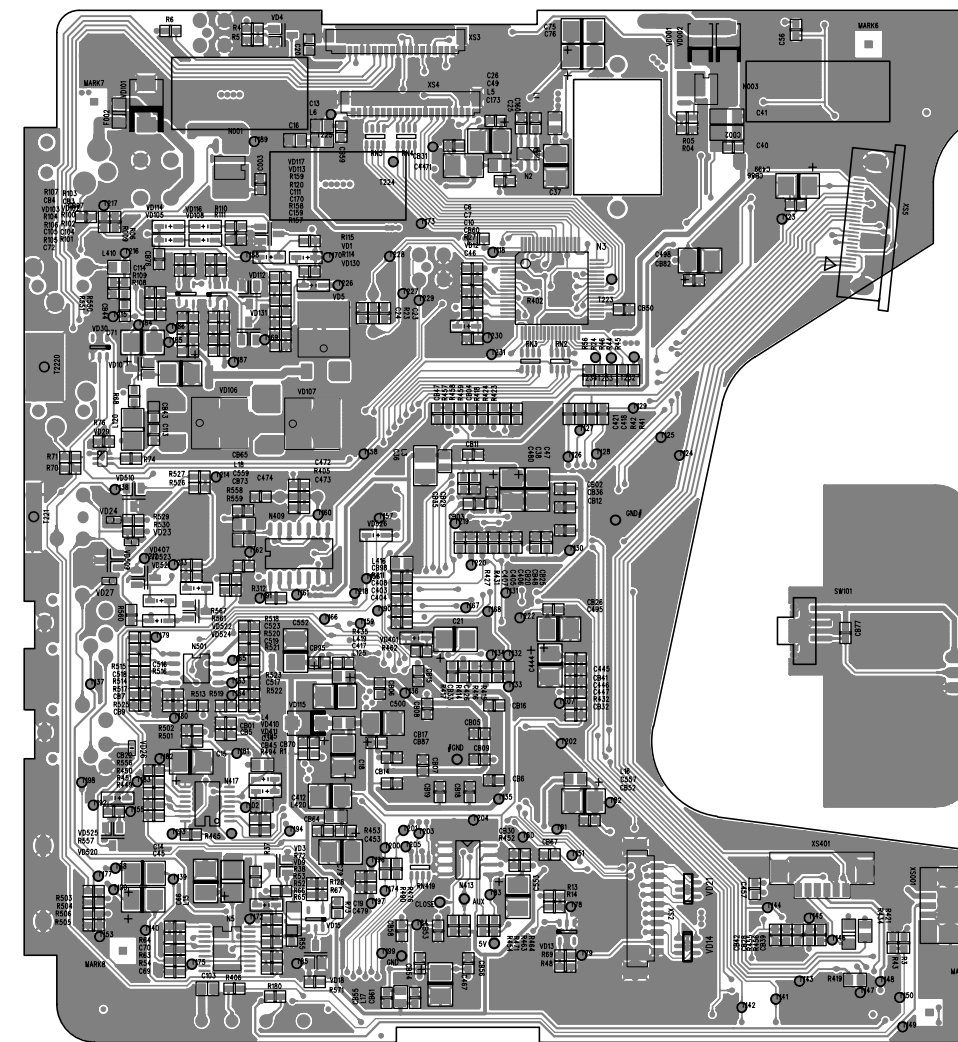
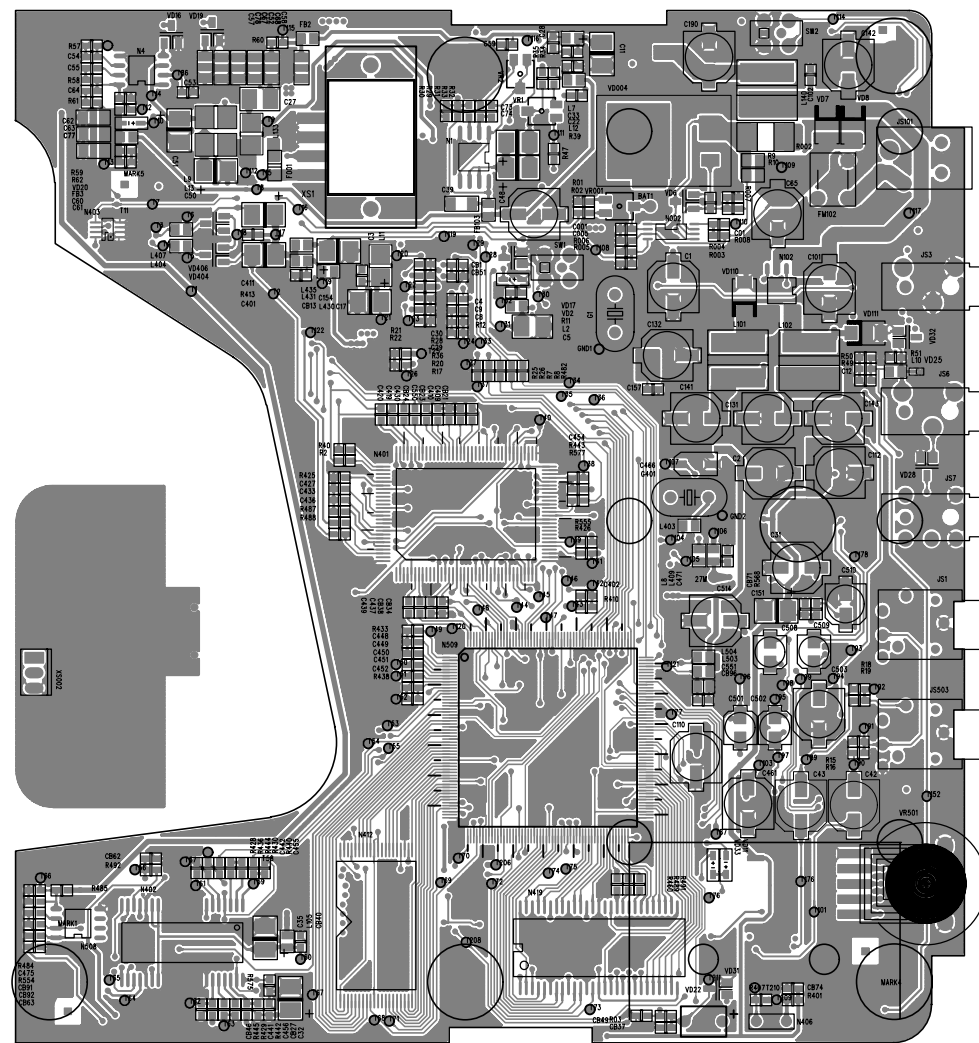


8.0 ELECTRICAL DIAGRAM - MAIN BOARD CIRCUIT DIAGRAM (MPEG & SERVO CIRCUIT DIAGRAM)



8.0 ELECTRICAL DIAGRAM - HIGH VOLTAGE BOARD CIRCUIT DIAGRAM





9.0 COMPONENT LAYOUT PET710M MAIN PCB BOARD DIAGRAM

10.0 SERVICE PART LIST

Service 12NC	Model #	Description	Location Code	Photos
994000003401	PET710	RB-LI52 LITHIUM BATTERY	BATTERY	
994000003945	PET710	RC810 REMOTE	RC	
994000001904	PET710	VIDEO WIRE	VCBALE	
994000001903	PET710	AUDIO WIRE	ACBALE	
994000001899	PET710/37	ADPV18A AC POWER ADAPTER	ACADAPTOR	
994000001898	PET710/00	ADPV18A AC POWER ADAPTER	ACADAPTOR	
994000003524	PET710/05	ADPV18A AC POWER ADAPTER	ACADAPTOR	
994000002231	PET710/55	ADPV18A AC POWER ADAPTER	ACADAPTOR	
994000002232	PET710/75	ADPV18A AC POWER ADAPTER	ACADAPTOR	
994000003785	PET710/94	ADAV18A AC POWER ADAPTER	ACADAPTOR	
994000001902	PET710	CAR CIGARETTE ADAPTER	CARADAPTOR	
994000001906	PET710	TRAVEL BAG (AY4233)	BAG	

10.0 SERVICE PART LIST

994000002149	PET710	PET710M MAIN PCB ASS'Y	100	
994000002151	PET710	PET710T IF PCB ASS'Y	110	
994000002152	PET710	PET710H HV PCB ASS'Y	120	
994000002153	PET710	PET710 FUNCTION PCB ASS'Y	130	
994000002241	PET710	20 PIN HARNESS (LE105)	142	
994000002242	PET710	20 PIN HARNESS (LE140)	144	
994000004203	PET710	LB070W02-S TFT LCD	200	
994000002228	PET710	DV23 LOADING ASS'Y	210	
994000002157	PET710	SPEAKER	220	

10.0 SERVICE PART LIST

994000002233	PET710	TOP COVER	300	
994000002238	PET710	DISPLAY FRAME	310	
994000002236	PET710	MIDDLE CABINET	320	
996500039029	PET710	METAL BUSHES (USED ON MIDDLE CABINET)	321	
994000002237	PET710	BOTTOM CABINET	330	
994000002235	PET710	BASE COVER	331	
994000002991	PET710	CONTROL KEY PAD	350	
994000002239	PET710	DOOR ASSY	360	
994000002338	PET710	DOOR SPRING	410	

11.0 REVISION LIST

Version 1.0 (3141 785 30440)
Initial release PET710/00/05/37/75

Version 1.1 (3141 785 30441)

Chapter 10:

Service parts list adapted with new parts and revised 12NC as listed below

- Added photo on speaker (994000002157)
- Deleted door adorn (994000002889)
- Added the new part control key pad (994000002991)

Version 1.2 (3141 785 30442)

Chapter 10:

- Added the new part AC adaptor for PET710/94 (994000003785)

Version 1.3 (3141 785 30443)

Chapter 10:

- Added the new part metal bushes (996500039029)

Version 1.4 (3141 785 30444)

Chapter 10:

- Added the location code of spare parts