Service
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Service Manual

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3141 785 30954

Version 1.4

PHILIPS

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:	30W
Operating temp. range:	0 - 50˚C (32 ~ 122˚F)
Laser wavelength:	650nm
Video system:	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 2x16ohm)

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

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

<= 4 (max. 1 bright dots and 3 dark dots)

2.0 SAFTETY 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.

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.

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 enfiler 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 kan 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.

I **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.

GB

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

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 utiliséés les piéces de rechange identiques à celles spécifiées.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand 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."

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

GB **Warning !**

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

S **Varning !**

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

SF **Varoitus !**

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

DK **Advarse !**

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

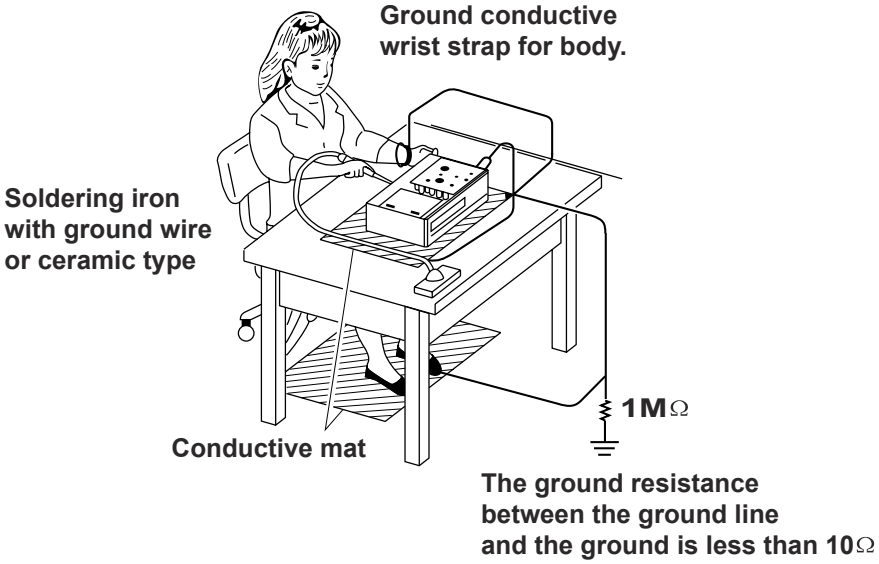
2.1 ESD PROTECTION

- 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 electrocity.
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 form damage by static electricity.
And also, the LSI and IC are same as above.



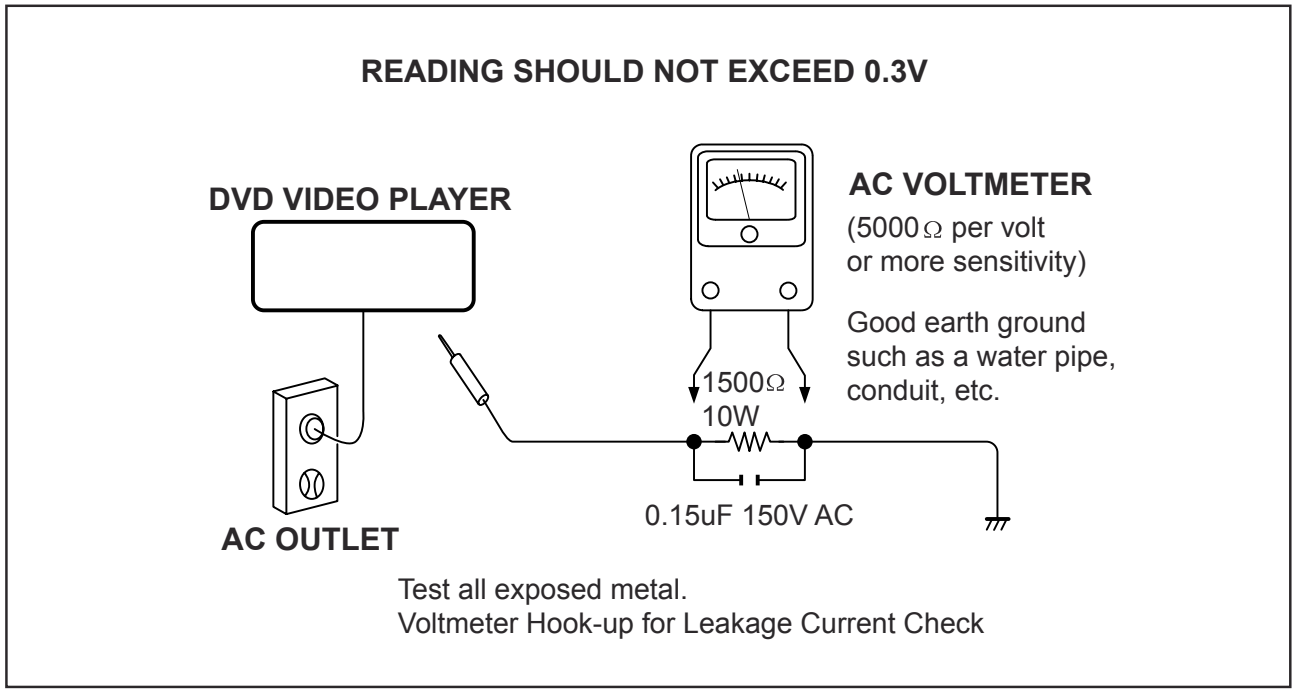
SAFTY NOTICE

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 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor,paralleled by a 0.15uF 150V AC capacitor between a knomn 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 1500Ω 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.



Test all exposed metal.
Voltmeter Hook-up for Leakage Current Check

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.

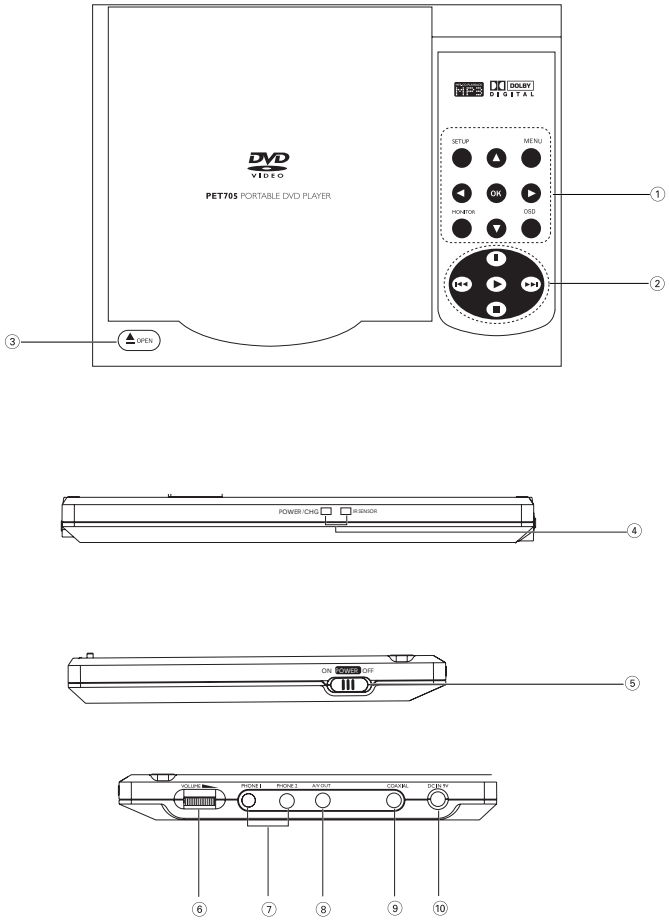
3.0 INSTRUCTIONS FOR USE

1. ▲, ▼, ◀, ▶
   Up / down / left / right cursor
   OK
   Confirms selection
   SETUP
   System setup
   MENU
   Displays MENU page
   MONITOR
   Selection display
   OSD
   On Screen Display on / off
2. ⏸
   Pause playback
   ▶
   Starts / resumes playback
   ■
   Press twice to stop playback
   ⏮ / ⏭
   For previous (⏮) or next (⏭) chapters, tracks or titles
3. ⏏ **OPEN**
   Opens disc door to insert or remove disc
4. **POWER/CHG**
   Power and charging indicator
   IR sensor
   Remote sensor
5. **ON · POWER · OFF**
   Switches the player on / off
6. **VOLUME**
   Volume control
7. **PHONES 1 & 2**
   Headphones jack
8. **A/V OUT**
   Audio/video output jack
9. **COAXIAL**
   Digital Audio output jack
10. **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.

DVD PLAYER LAYOUT



Remote Control

① ◀, ▶, ◀, ▶
Up / down / left / right cursor
OK
Confirms selection

② **VOLUME**
Volume control

③ ⏮ / ⏭
For previous (⏮) or next (⏭) chapters, tracks or titles
⏸
Pause playback
▶
Starts / resumes playback
■
Press twice to stop playback
◀◀ / ▶▶
Search backward (◀◀) or search forward (▶▶)

④ **OSD**
On **S**creen **D**isplay on / off
⏯
Slow motion

⑤ **AUDIO**
Audio langauge 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 play volume
REPEAT
Repeats chapter / title / disc

⑨ **RETURN**
For VCD menu page
ANGLE
Selects DVD camera angle

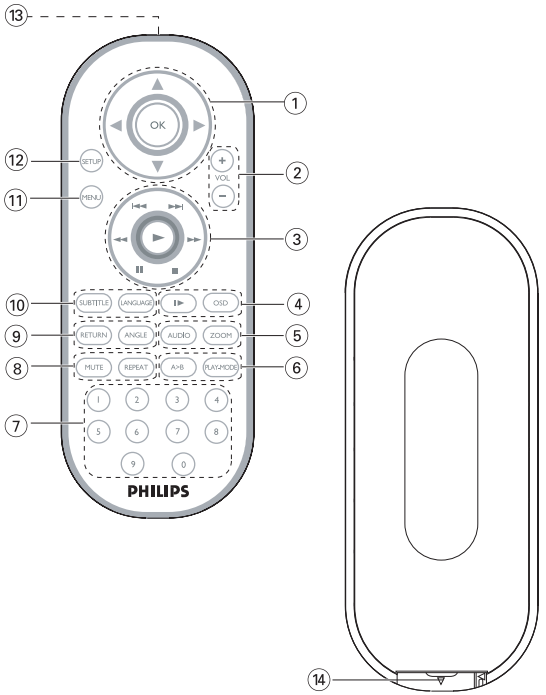
⑩ **SUBTITLE**
Subtitle language selector
LANGUAGE
Language selector

⑪ **MENU**
Displays MENU page

⑫ **SETUP**
Enters SETUP menu

⑬ **INFRA RED PORT**

⑭ **BATTERY COMPARTMENT**



4.0 MECHNICAL INSTRUCTIONS

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

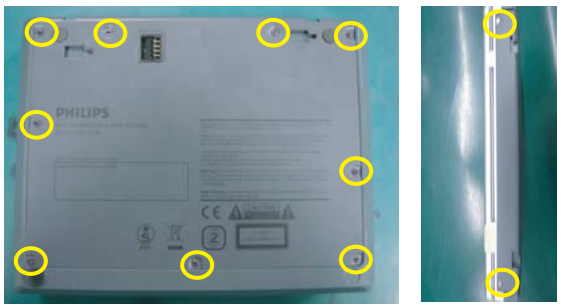


Fig.1

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

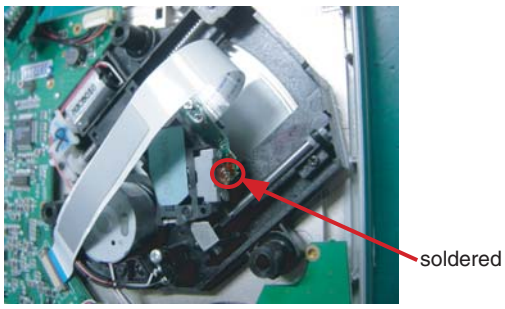


Fig.2

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

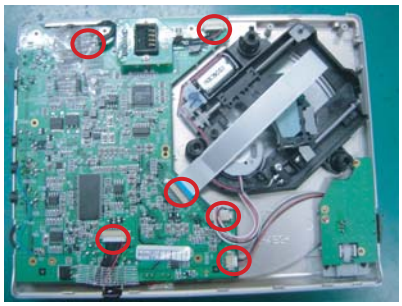


Fig.3

Remove DVD driver and main board

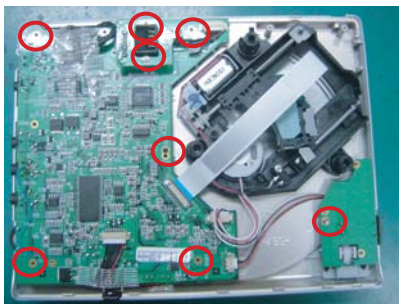


Fig.4

4. Remove key board and other parts as Fig.5

Fig.5

5. Remove top cover as Fig.6

Fig.6

6. Disconnect the speakers and IF board
   Remove IF board shield as Fig.7,8.

Fig.7

Fig.8

7. Remove IF board and HV board and
   LCD TFT as Fig.9

Fig.9

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 PET705 - 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

Substitute solution for phased out Main PCB ASS'Y 994000004198
(General Service Information – BG ES – PI-06/006)

The MAIN PCBA board 994000004198 is no longer support. The substitute solution is to use 994000005107 as replacement.

However different IC were used on these two boards, software upgrade is NECESSARY after replacing 994000004198 by 994000005107 on the PET705.

Please note that the set can be distinguished by the serial number with the change code "LL00xxxxxxxxx" and "LL01xxxxxxxxx". Details refer to below table for different IC, PCBA and software version.

Serial No.	12NC of Main PCBA	IC of Main PCBA	Software version
LL00xxxxxxxxx	9940 000 04198	5100G	051230 13:56 SQPN 4
LL01xxxxxxxxx	9940 000 05107	5110G	060210 13:52 SQPN 4

New IC, PCBA and software version is implemented from SN:010608000001 on wk608.

Procedure on how to upgrade the software of the DVD Portable

1. Download the software from P4S website (refer G/SI# PI-06/006)
2. Unzip the attachment to get the bin file named "**H3SUD**"
3. Burn the bin file onto a CD-ROM and make sure rename the disc name to "**SHINCO**" (Do not allow multi-session when you burn the disc with bin file.)
4. Connect the PET705 with AC-DC power supply (Make sure power supply is always connected during software upgrade process, otherwise it may damage the flash of the set)
5. Power ON the set
6. Insert the disc
7. The display will show "UPGRADE FILE DETECTED" and then press PLAY
8. The display will show LOADING
9. The display will show "UPGRADE FILE DETECTED" again
10. Remove the disc and then check the software version
11. The upgraded set should show the software version to be "060210 13:52 SQPN 4".

5.0 TROUBLESHOOTING & SERVICE TIPS

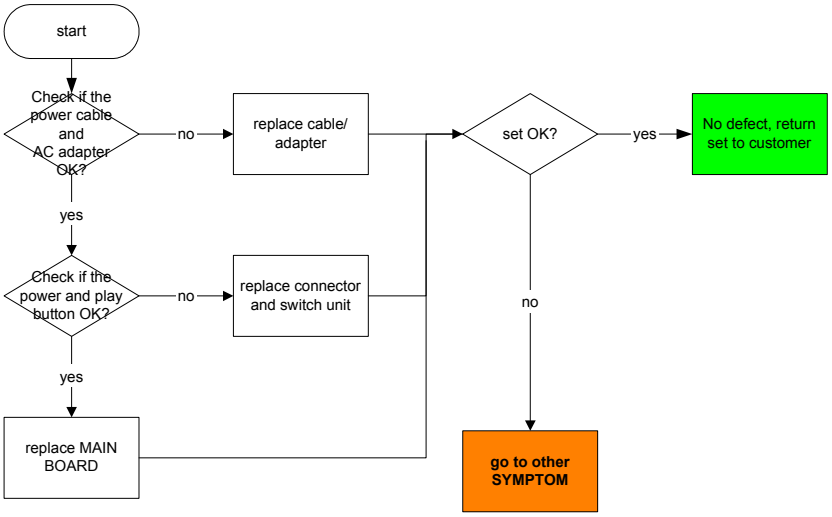
Change of HV PCB ASS'Y 994000004201 and FUNCTION PCB ASS'Y 994000004202
(General Service Information – BG ES – PI-06/032)

The phased out HV and FUNCTION PCBA board. The 12NC is shown as below:
994000004201 PET705 HV PCBA
994000004202 PET705 FUNCTION PCBA

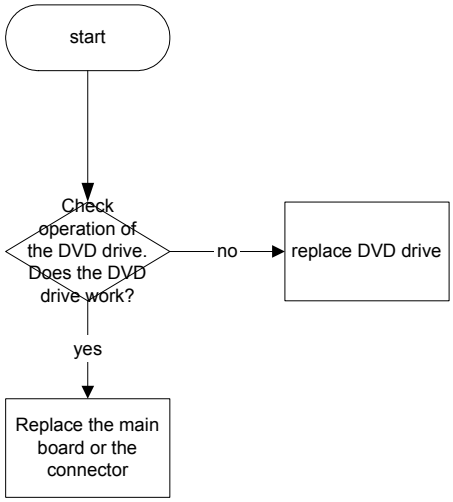
The phased in HV and FUNCTION PCBA board. The 12NC is shown as below:
996500040947 PET705 HV PCBA (NEW)
996500040948 PET705 FUNCTION PCBA (NEW)

5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: NO POWER, NO GREEN LED

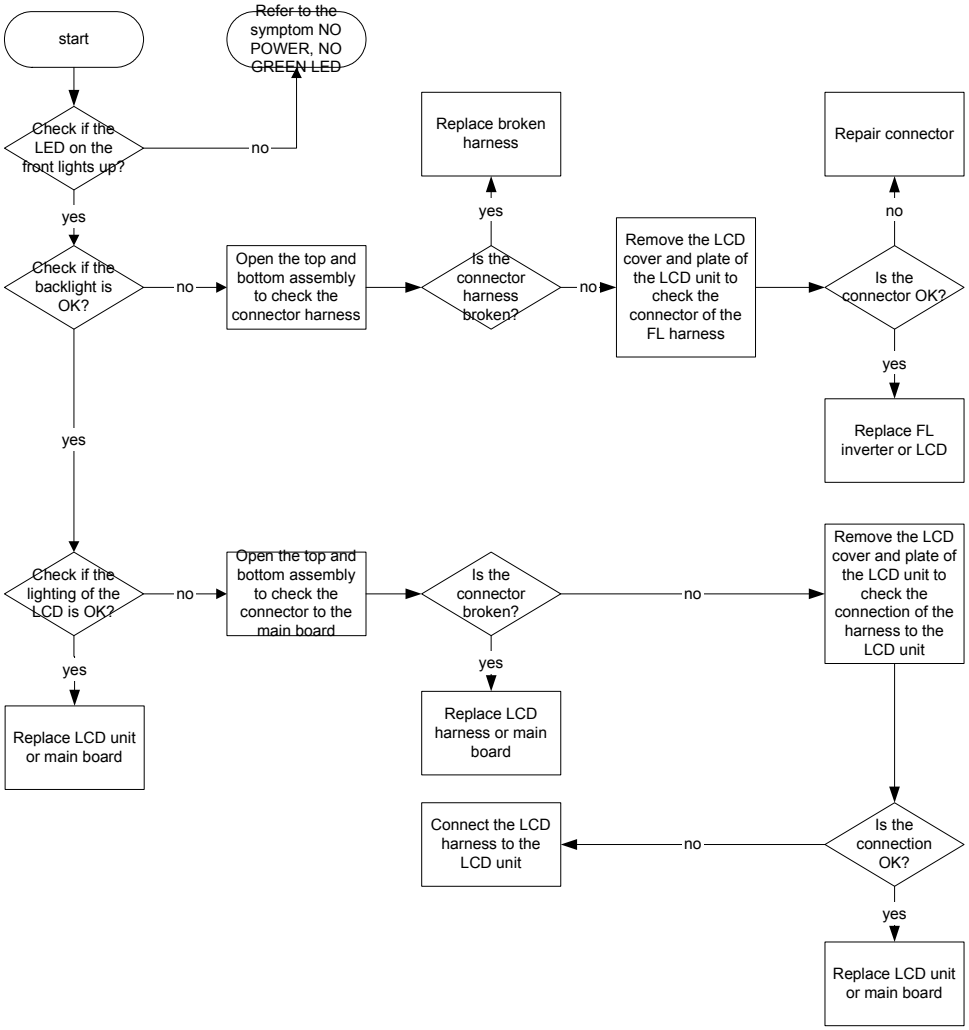


SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL OUTPUT

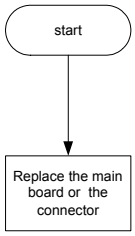


5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: THE INITIAL SCREEN IS NOT DISPLAYED ON THE LCD

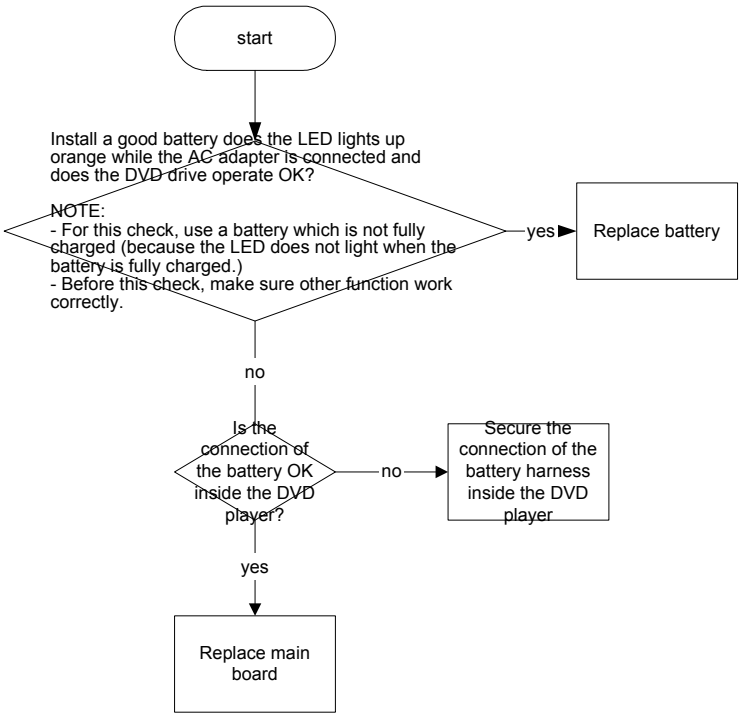


SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL INPUT

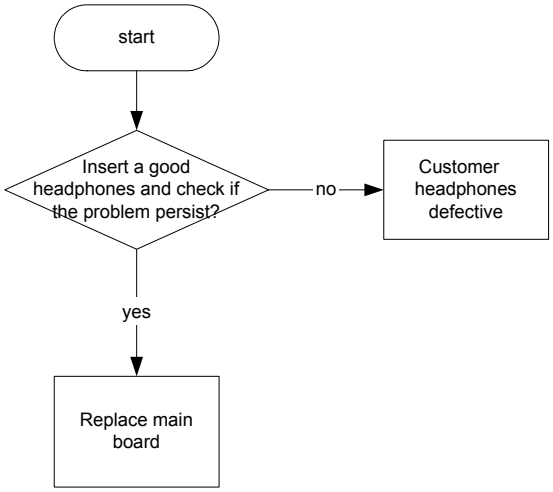


5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: THE DVD DRIVE DOES NOT OPERATE WITH BATTERY

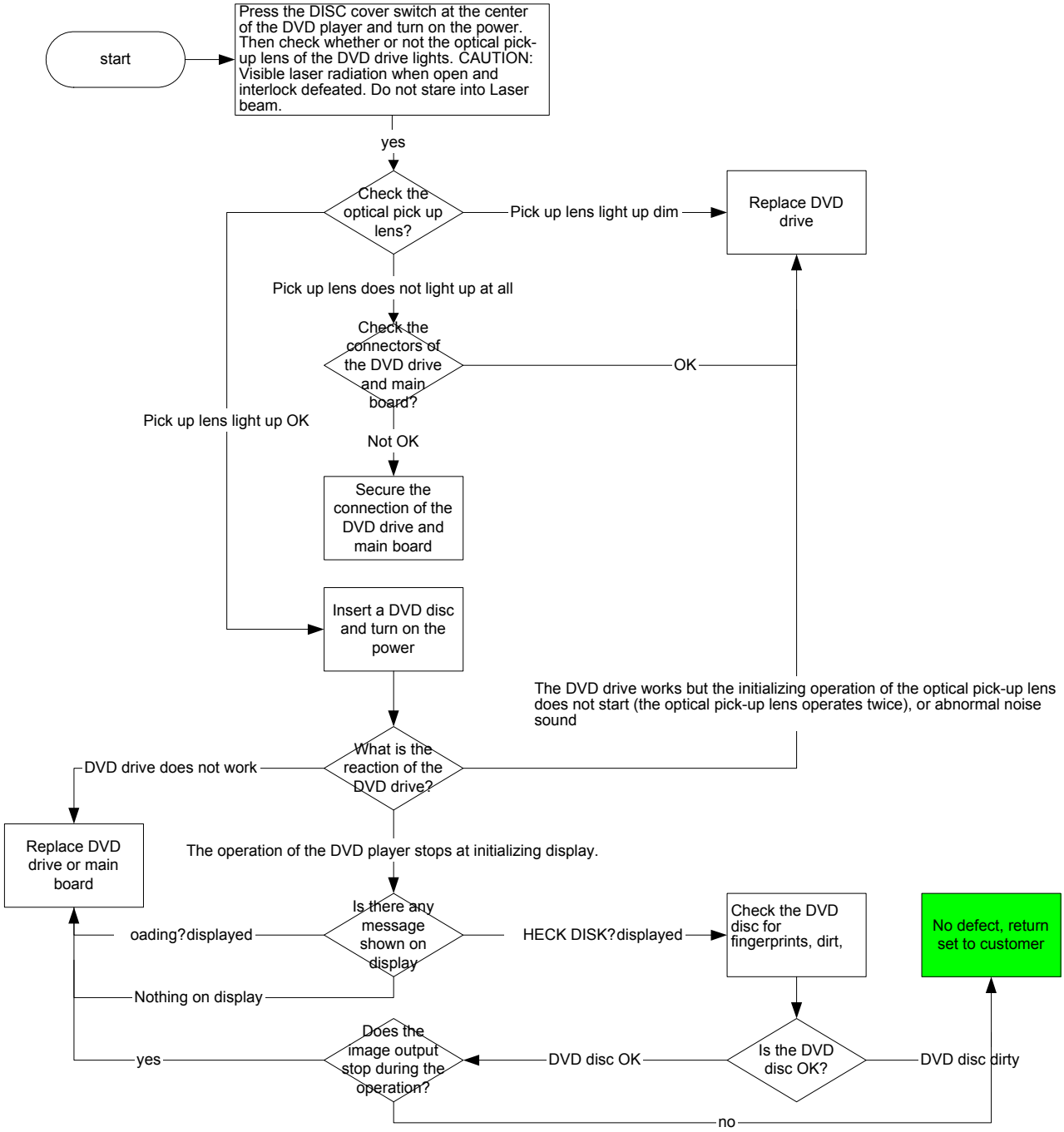


SYMPTOM: NO SOUND COMES FROM THE HEADPHONES

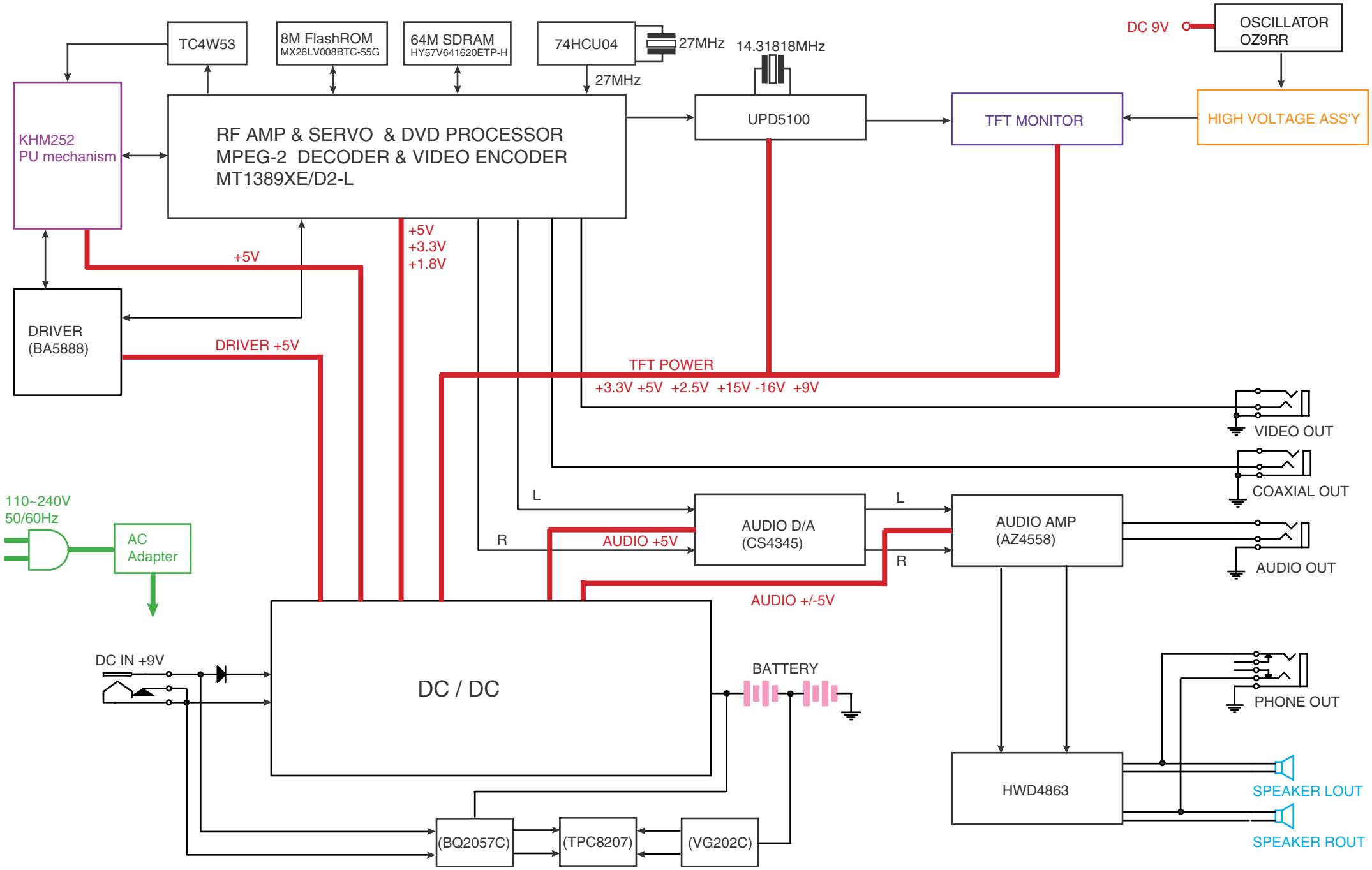


5.0 TROUBLESHOOTING & SERVICE TIPS

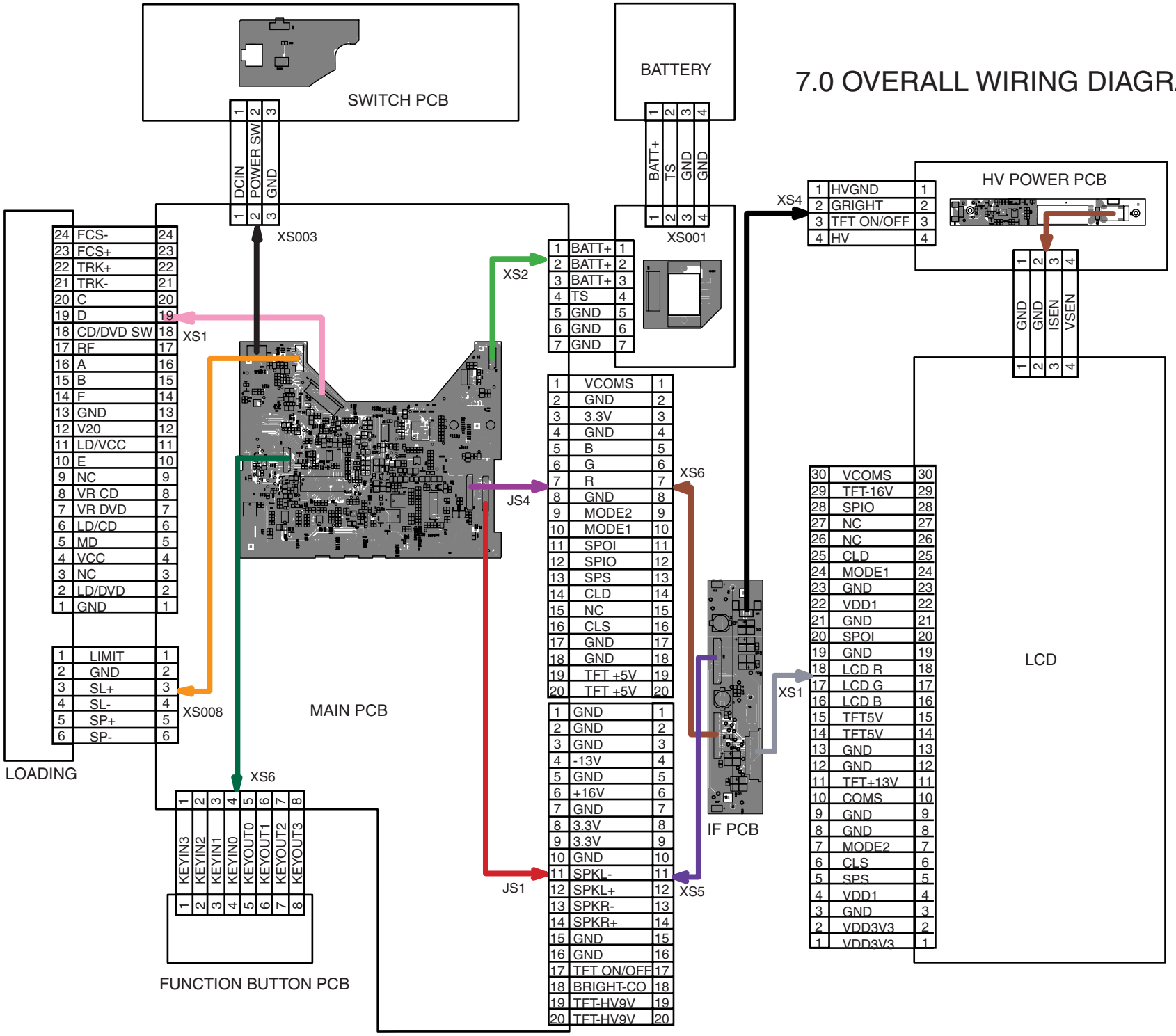
SYMPTOM: THE DVD DRIVE DOES NOT WORK



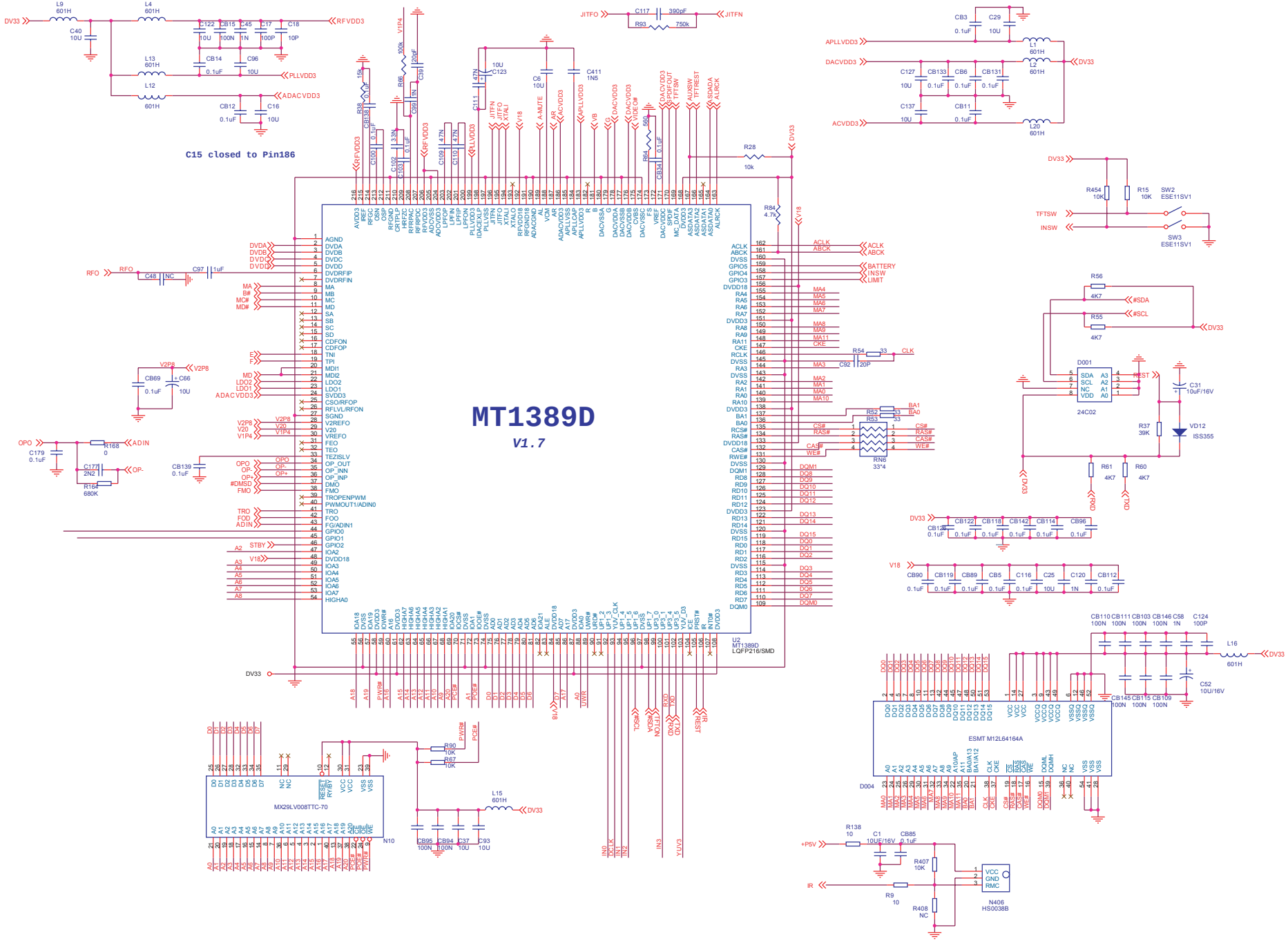
6.0 OVERALL BLOCK DIAGRAM



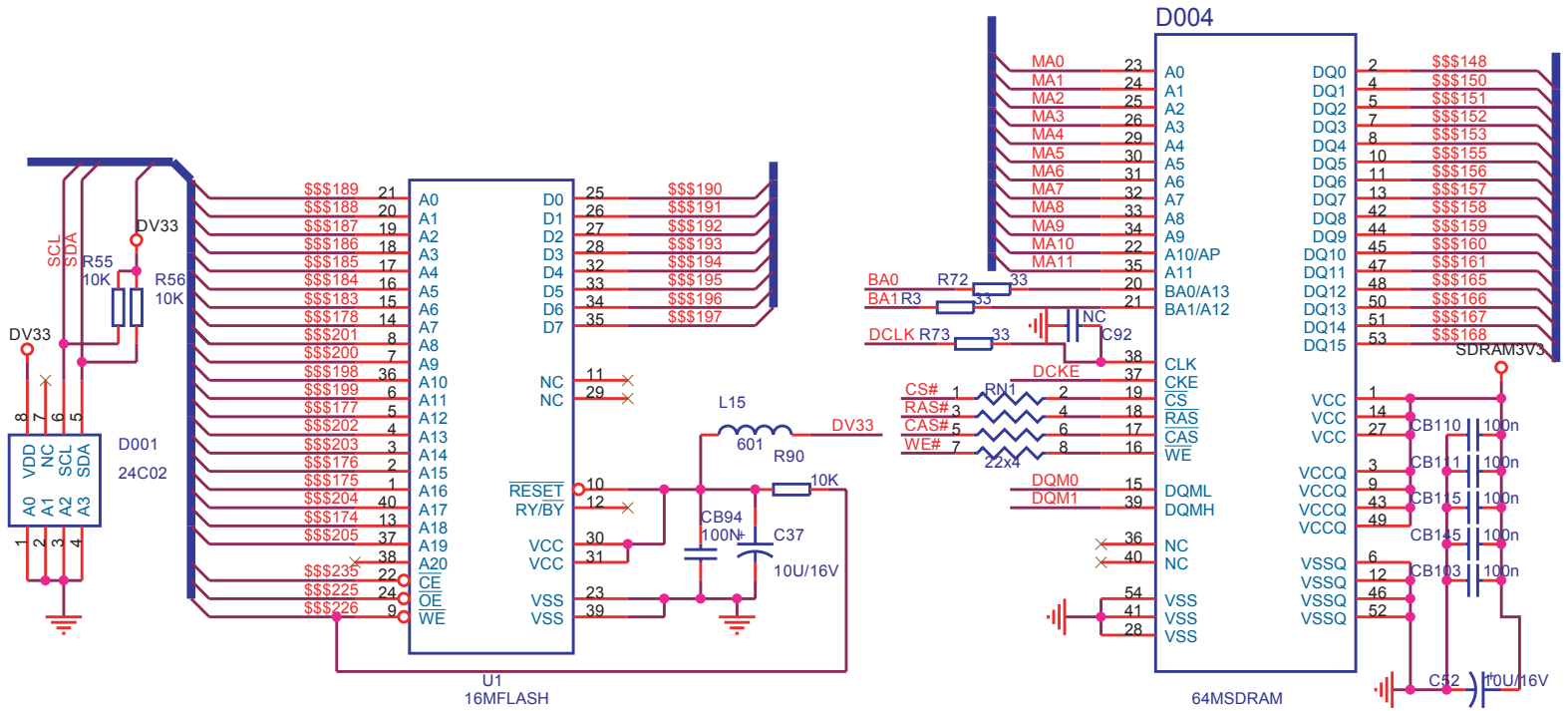
7.0 OVERALL WIRING DIAGRAM



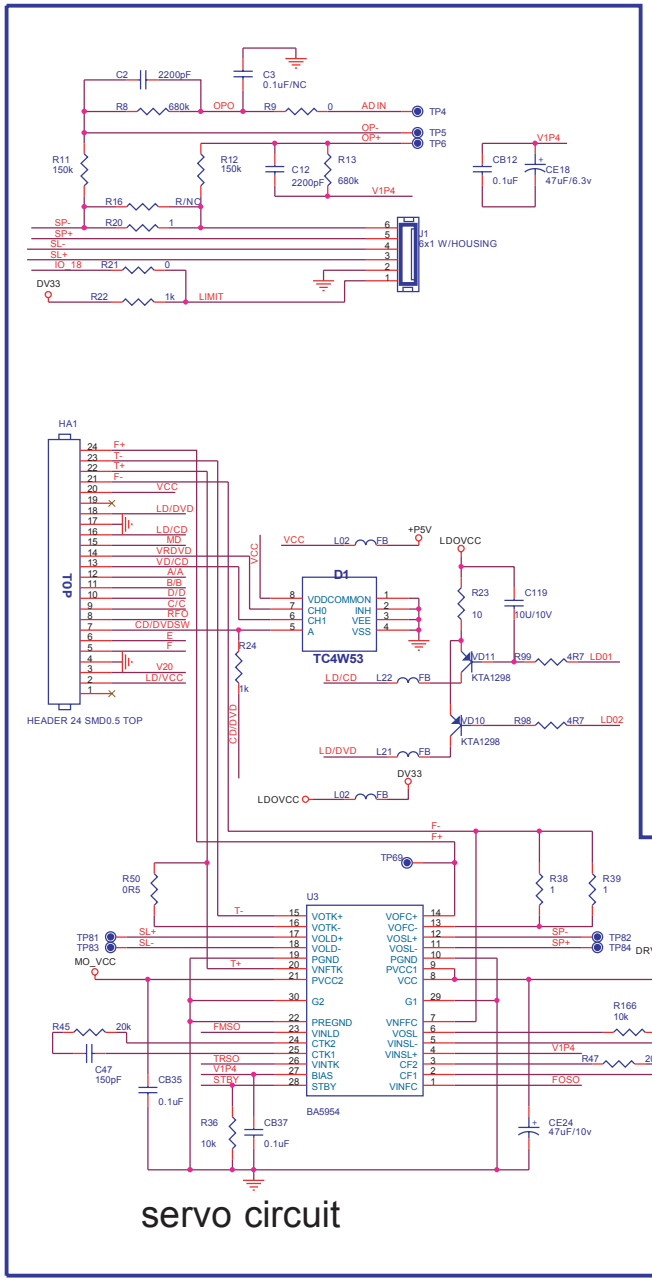
8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (MPEG)

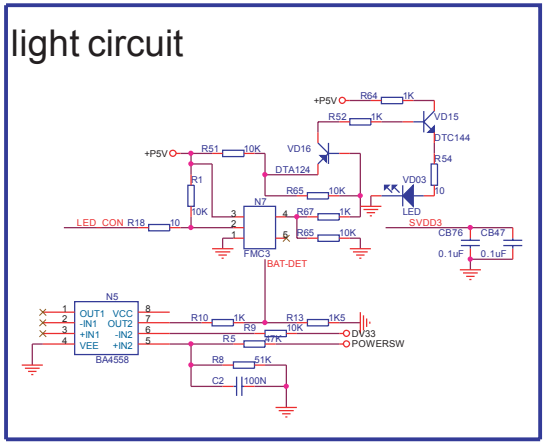


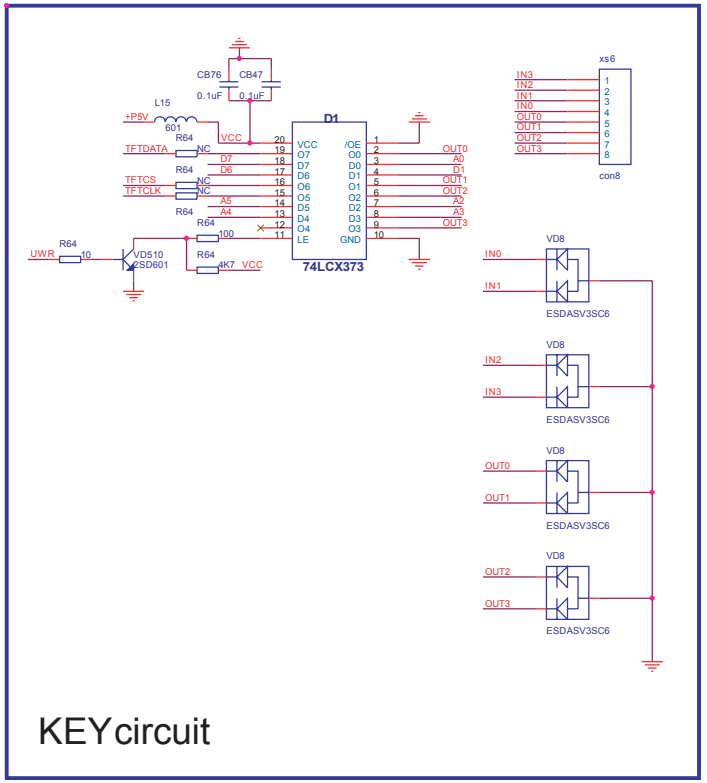
8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (FLASH & SDRAM)



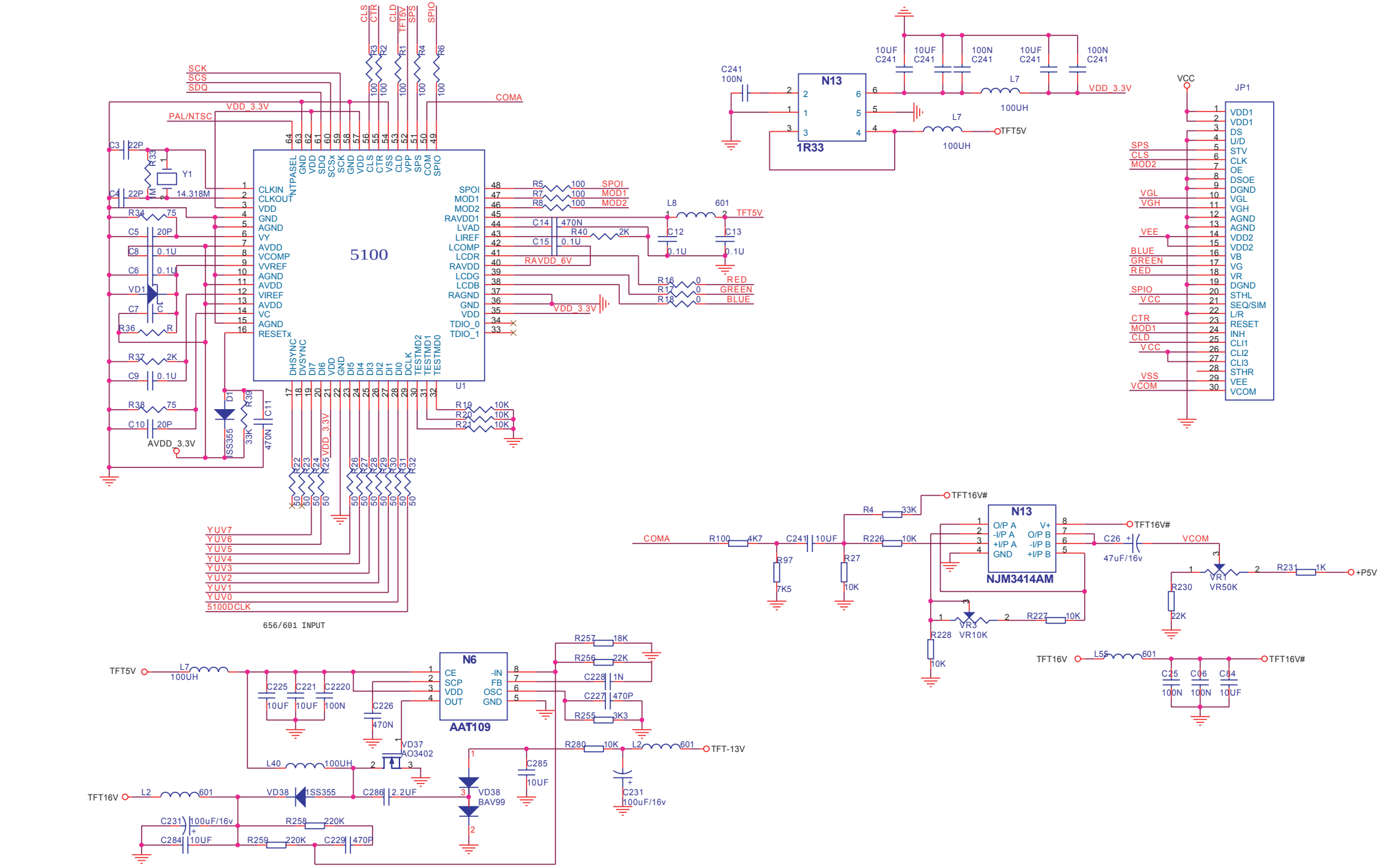
8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (KEY & SERVO & LIGHT)



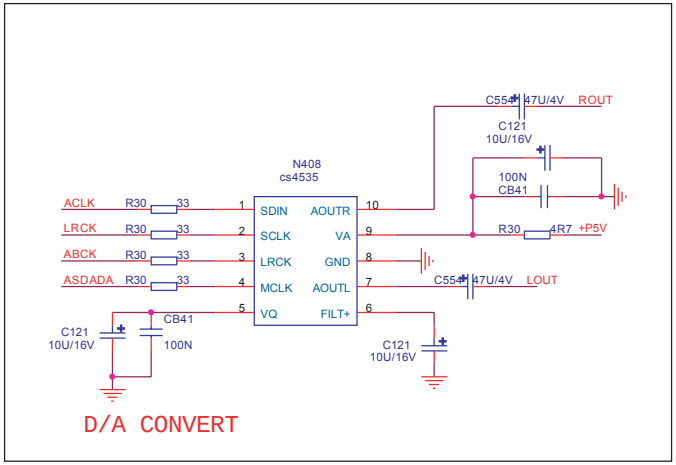


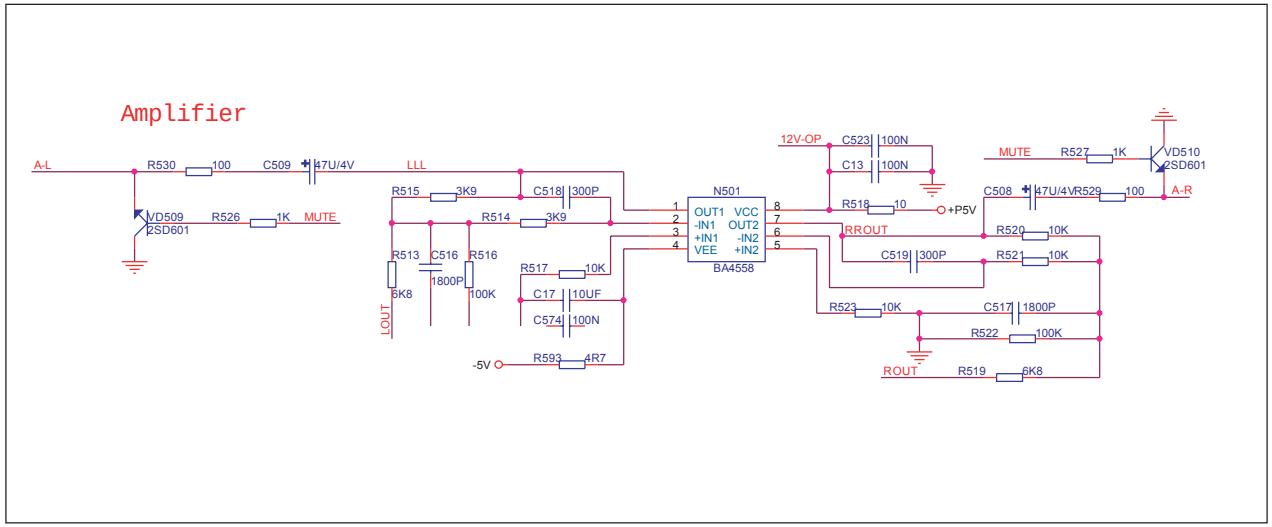


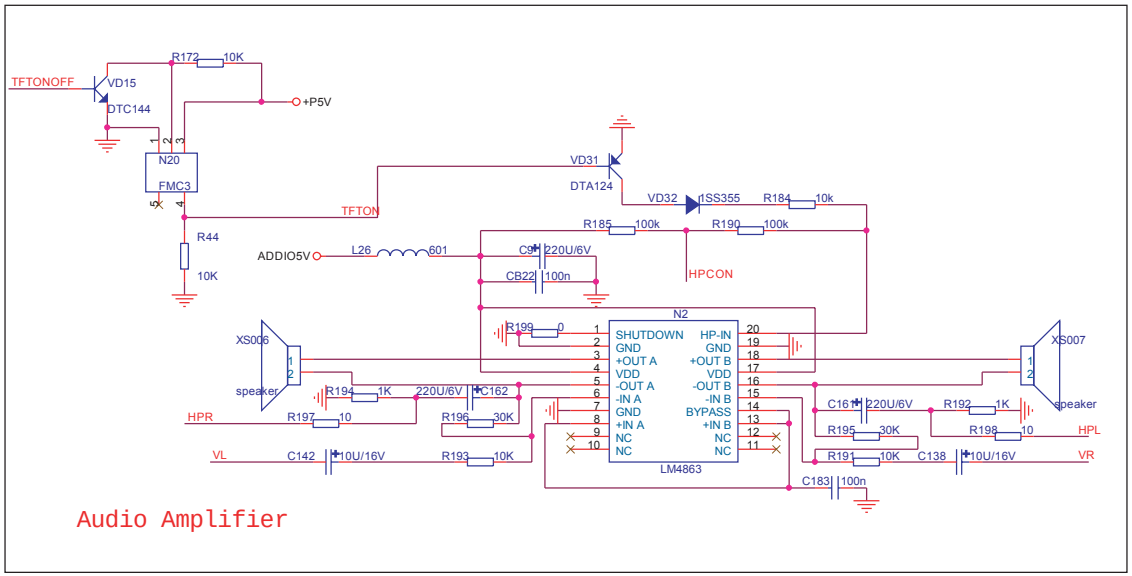
8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (TFT DRIVE)

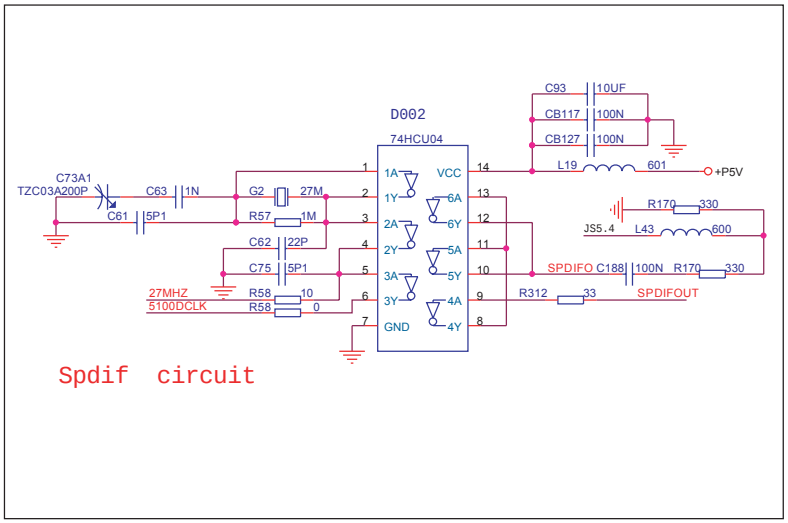


8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (AUDIO)

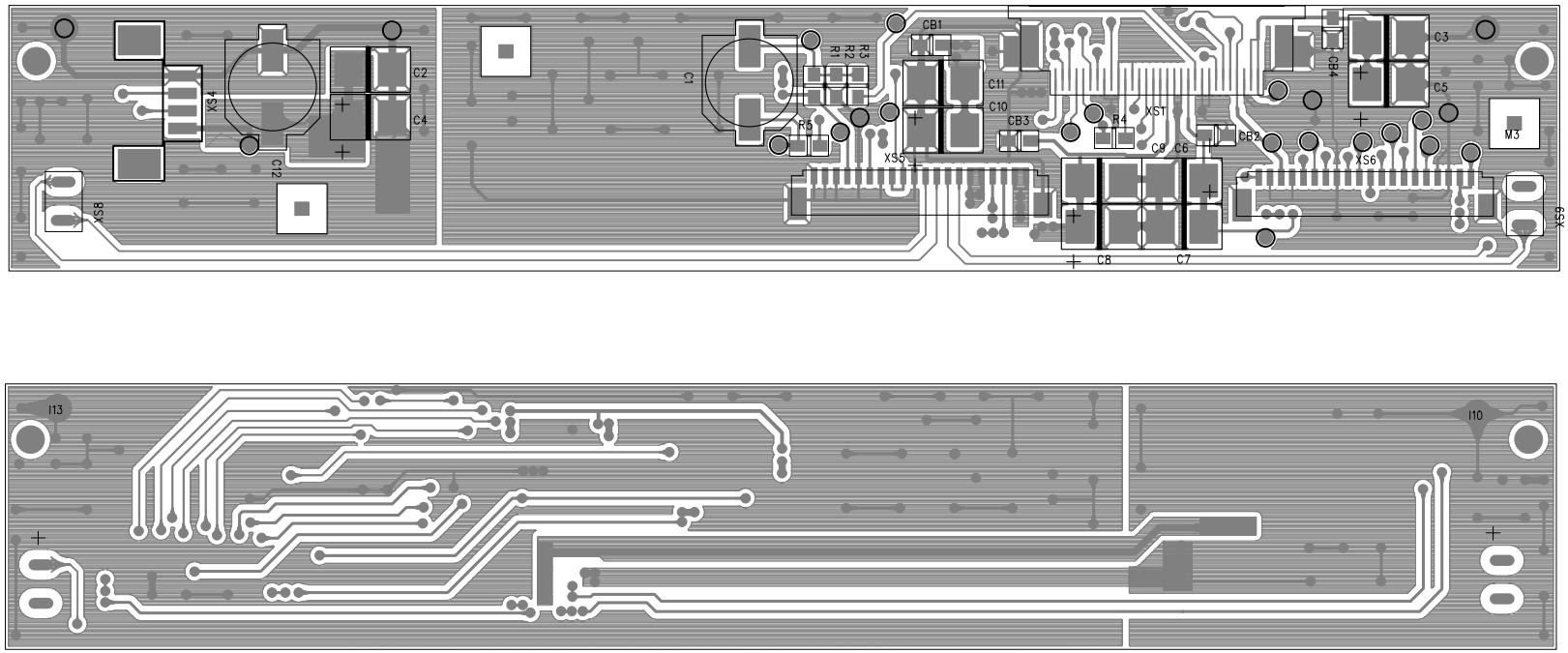






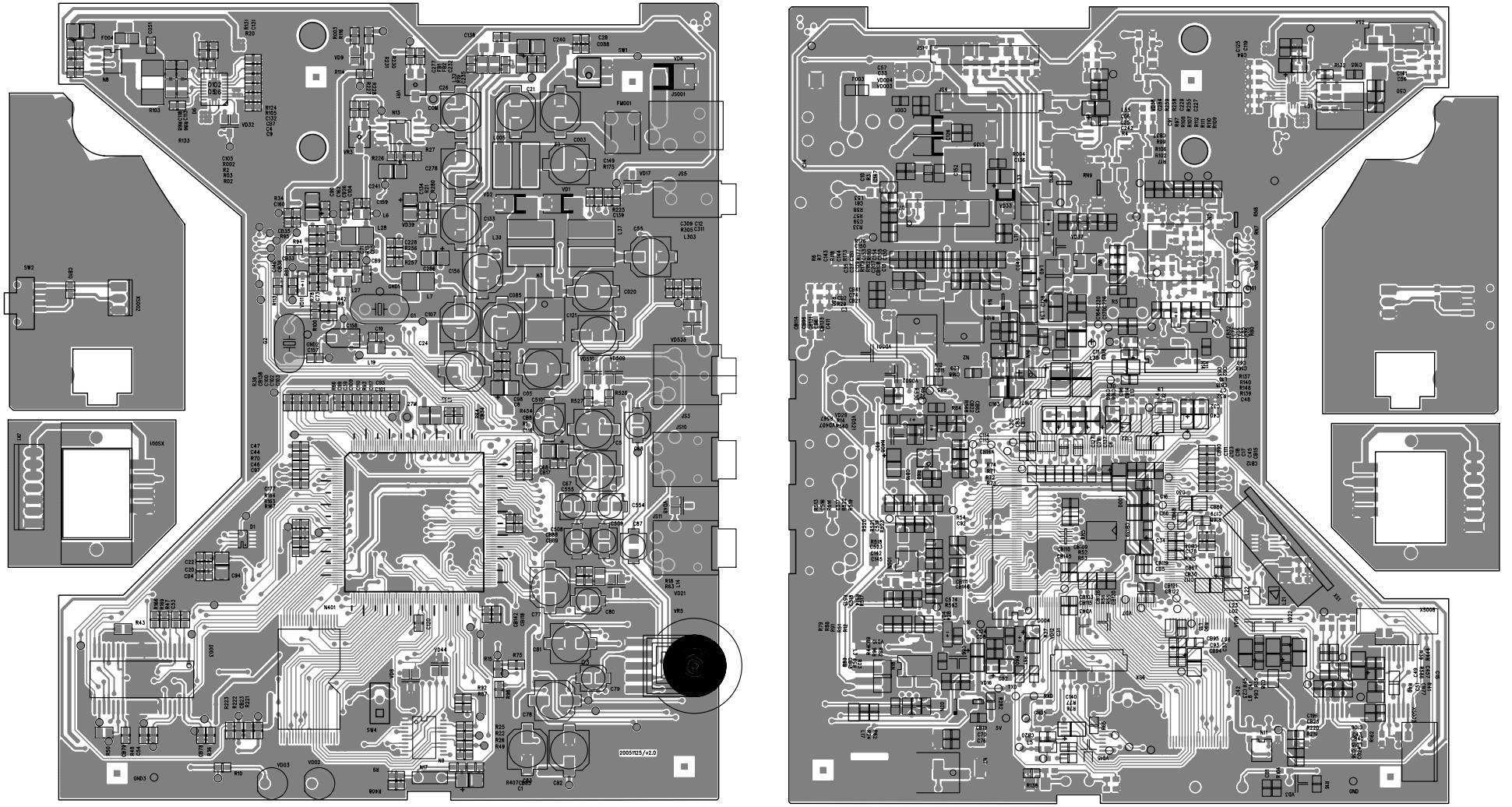


9.0 COMPONENT LAYOUT



PET705 IF BOARD DIAGRAM

9.0 COMPONENT LAYOUT

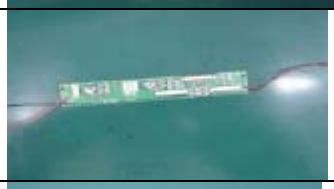


PET705 MAIN BOARD DIAGRAM

10.0 SERVICE PARTS LIST

Model#	Part No.	Description	Photos	Location Code
PET705	994000004197	RB-LI12 LITHIUM BATTERY		BATTERY
PET705	994000003945	RC810 REMOTE CONTROL		RC
PET705	994000001912	AV CABLE		AVCABLE
PET705	994000004204	PET705 HEADPHONE		HEADPHONE
PET705	994000003946	ADPV26A ADAPTOR/00		ACADAPTOR
PET705	994000003948	CAR CIGARTTE ADAPTOR		CARADAPTOR
PET705	994000004212	PET705 TRAVEL BAG		BAG

10.0 SERVICE PARTS LIST

Model#	Part No.	Description	Photos	Location Code
PET705	994000005107	PET705 MAIN PCBA (with 5110G IC)		100
PET705	994000004199	PET705 IF PCBA		110
PET705	996500040947	PET705 HV PCBA		120
PET705	996500040948	PET705 FUNCTION PCBA		130
PET705	994000002241	20 PIN HARNESS (LE105)		142
PET705	994000002242	20 PIN HARNESS (LE140)		144
PET705	994000004203	PET705 TFT LCD		200
PET705	994000004424	DV23 LOADING ASSY		210
PET705	996510001134	FLEX CABLE LINK TO DVD LOADER		215
PET705	996500040949	SPEAKER		220

10.0 SERVICE PARTS LIST

Model#	Part No.	Description	Photos	Location Code
PET705	994000004205	PET705 TOP COVER DISCRETENESS		300
PET705	994000004209	PET705 DISPLAY FRAME		310
PET705	994000004207	PET705 MIDDLE CARINET		320
PET705	994000004208	PET705 BOTTOM CABINET		330
PET705	994000004206	PET705 BASE COVER		331
PET705	994000004211	PET705 KEY PVC		350
PET705	994000004423	OPEN DOOR		360
PET705	994000002338	DOOR SPRING		410
PET705	994000002887	OPEN BUTTON SPRING		430

11.0 REVISION LIST

Version 1.0 (3141 785 30950)

- Initial release PET705/00

Version 1.1 (3141 785 30951)

- Section 5 - Added SW upgrade instruction if replace 994000004198 by 994000005107
- Section 10 - Updated Main PCBA 12NC from 994000004198 (EOL) to 994000005107

Version 1.2 (3141 785 30952)

- Section 5 – Added new HV and FUNCTION PCBA service guideline
- Section 10
    - Phased out old HV PCBA 12NC 994000004201 and FUNCTION PCBA 12NC 994000004202
    - Phased in new HV PCBA 12NC 996500040947 and FUNCTION PCBA 12NC 996500040948
    - Updated speaker 12NC from 994000002157 to 996500040949

Version 1.3 (3141 785 30953)

- Section 10 – Added location code of spare parts

Version 1.4 (3141 785 30954)

- Section 10 – Added 996510001134 FLEX CABLE LINK TO DVD LOADER