

Service
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Service Manual

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3141 785 32700

1.0 TECHNICAL SPECIFICATION

General

| | |
|--------------------------|---------------------------|
| Dimensions (W x H x D): | 260 x 198 x 40 mm |
| Weight: | 1.98kg |
| Power supply: | DC 9-12V 1.8A |
| 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, DivX |
| Disc Diameter | 12cm |

Pixel specification

Zero 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 hour |

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 Separation: | 32dB |
| Left-Right Channel Balance: | 1dB |

Supported disc type

Video Playback Formats:



Audio Playback Formats:



1.0 TECHNICAL SPECIFICATION

Factory Service Mode (FSM)

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 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

Procedure to change region code of your portable DVD player

1. Power on player and open the DVD door
2. Press [SETUP] by remote control.
3. In Set Up Menu, select <Audio> and press [OK]
4. Press [2], [1], [2], [2], [2], [5], [<], [V]
5. Display will show the Region Code
6. Press Number Key button by remote control to select the region code
7. Refer below table for your region code setting

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

Region code "0" can be used for all regions!

8. Press [SETUP] to save and exit your setting
9. Power off and power on again to verify if region code change is done

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**

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.

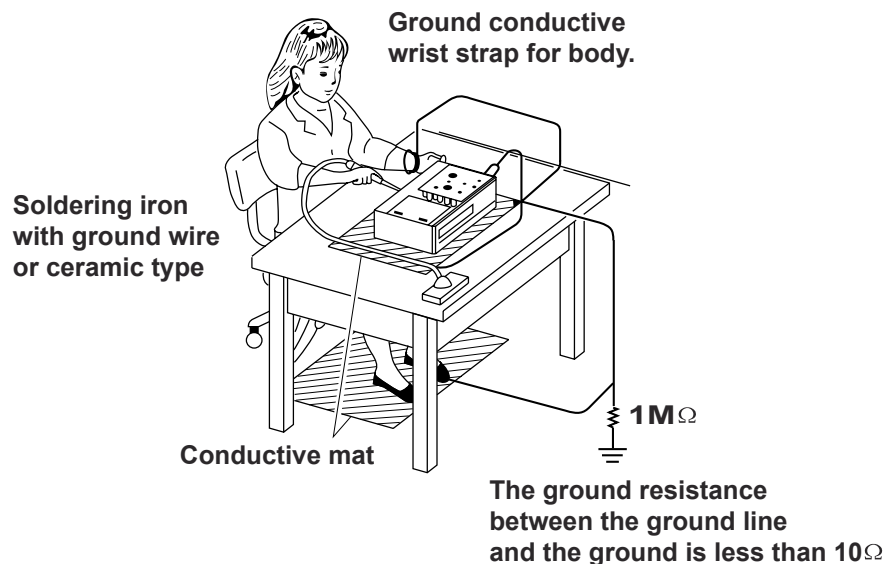
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

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.



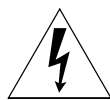
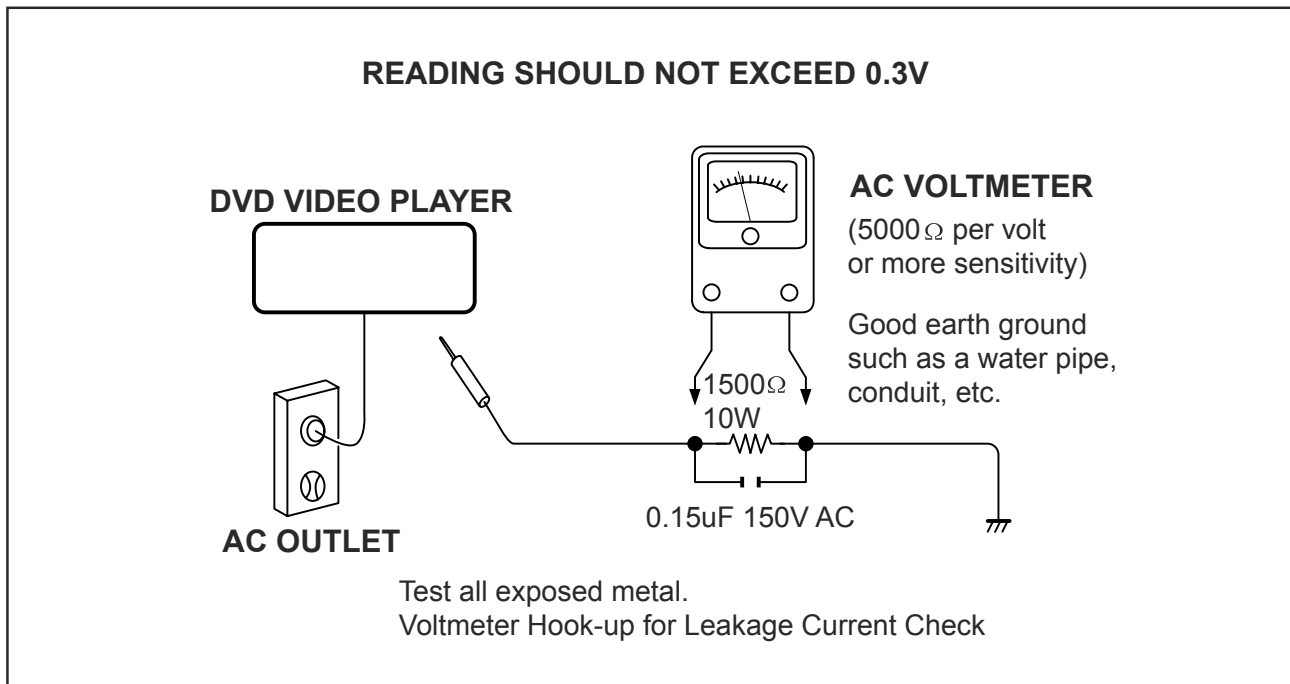
SAFTY NOTICE

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 5000Ω per volt or more sensitivity. Connect a 1500Ω 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 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.



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.

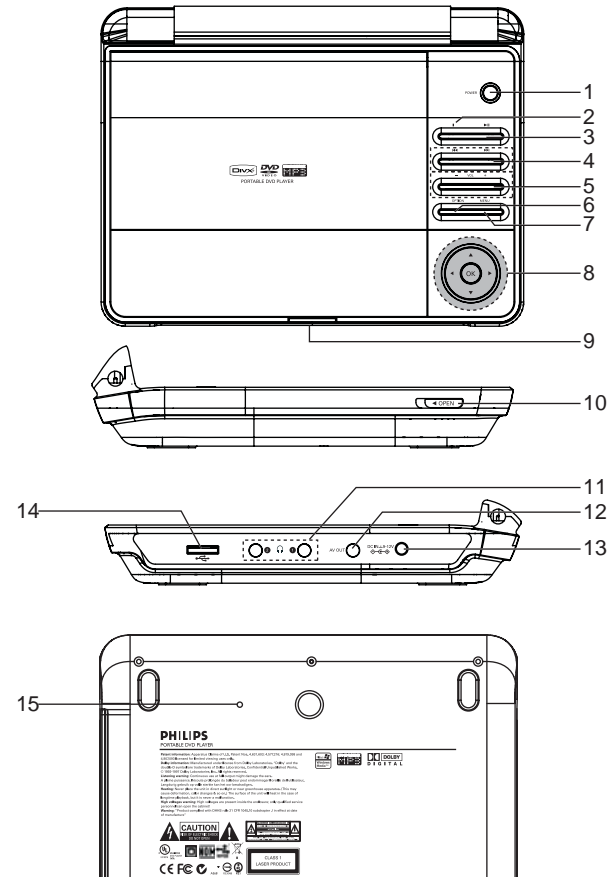
3.0 INSTRUCTIONS FOR USE

- | | |
|--|--|
| <p>① POWER Switch the power on/off.</p> <p>② ■ Press once to stop playback and store the stop position. Press twice to stop playback completely.</p> <p>③ ▶ Start / pause / resume playback.</p> <p>④ ⏮ / ⏭ Skip to previous/next track or fast search backward/forward.</p> <p>⑤ - VOL + Volume control.</p> <p>⑥ OPTION Access additional functions.</p> <p>⑦ MENU Display MENU page.</p> | <p>⑧ ▲, ▼, ◀, ▶ Up / down / left / right cursor.</p> <p>OK Confirm selection.</p> <p>⑨ POWER/IR/CHR Power /remote sensor /charging indicator.</p> <p>⑩ OPEN Open the disc door to insert or remove disc.</p> <p>⑪ 1 2 Headphones jacks.</p> <p>⑫ AVOUT Audio/Video output.</p> <p>⑬ DC IN 9-12V Power supply socket.</p> <p>⑭ USB port Insert USB plug.</p> <p>⑮ RESET Reset the player when it is hanged up.</p> |
|--|--|

CAUTION

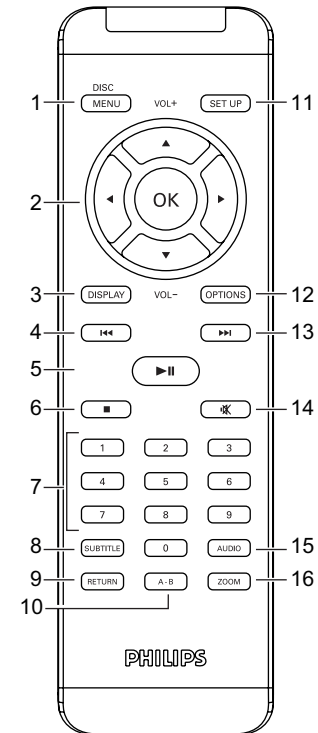
Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.

MAIN UNIT CONTROL



REMOTE CONTROL

- ① **MENU**
Display **MENU** page.
- ② ▲, ▼, ◀, ▶
Up / down / left / right navigation key.
OK
Confirm selection.
VOL +/-
Volume control.
- ③ **DISPLAY**
Adjust the display value of the system.
- ④ ⏮
Skip to previous chapter, track or title.
- ⑤ ▶⏸
Start / pause / resume playback
- ⑥ ■
Access additional functions.
- ⑦ **0 - 9**
Numeric keypad.
- ⑧ **SUBTITLE**
Subtitle language selector.
- ⑨ **RETURN**
For VCD menu page.
- ⑩ **A - B**
To repeat or loop a sequence in a title.
- ⑪ **SETUP**
Enter **SETUP** menu.
- ⑫ **OPTION**
Access additional functions.
- ⑬ ⏭
Skip to next chapter, track or title.
- ⑭ 🔇
Mute player volume
- ⑮ **AUDIO**
Audio language selector.
- ⑯ **ZOOM**
Enlarge video image.



4.0 MECHANICAL INSTRUCTIONS

1. Open the machine as Fig.1
Remove speaker grill .



Fig.1

2. Remove screws to remove the top cover discreteness as Fig.2.



Fig.2

- 3.Remove screws to remove display frame shade (top) as Fig.3.



Fig.3

4. Broken connections to remove IF board as Fig.4.

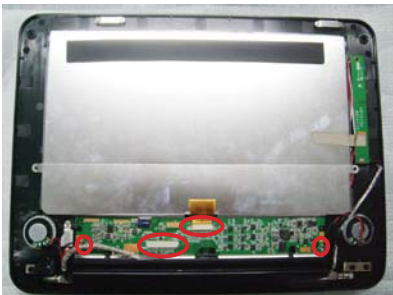


Fig.4

5. Remove screws to remove display frame shade(base) and backlight board as Fig.5.

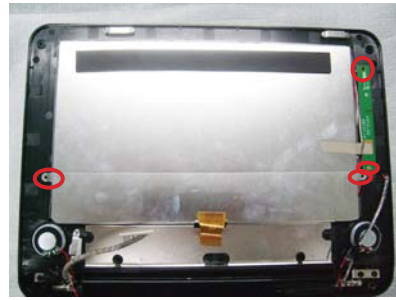


Fig.5

6. Then remove TFT LCD and speakers.



Fig.6

7. Base view as Fig.7.
Remove screws to remove the base cover discreteness.



Fig.7

4.0 MECHNICAL INSTRUCTIONS

8. Remove battery ass'y as Fig.8.

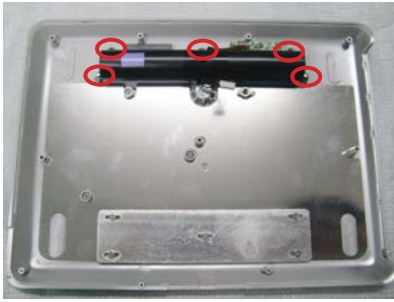


Fig.8

9. Broken connections to remove loading ass'y as Fig.9.



Fig.9

10. Remove main board as Fig.10.

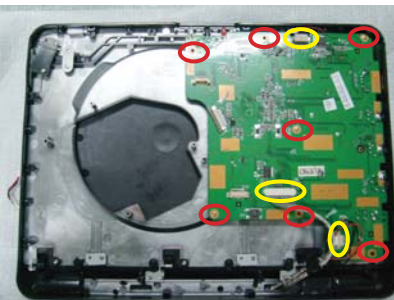


Fig.10

11. Remove screws to remove function board as Fig.11.

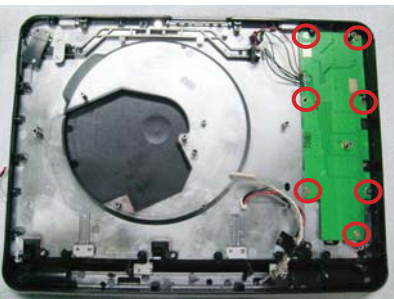


Fig.11

12. Remove screws to remove hinge adorn panel as Fig.12.

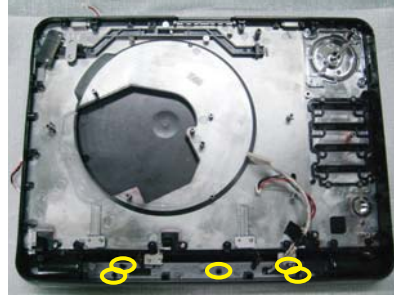


Fig.12

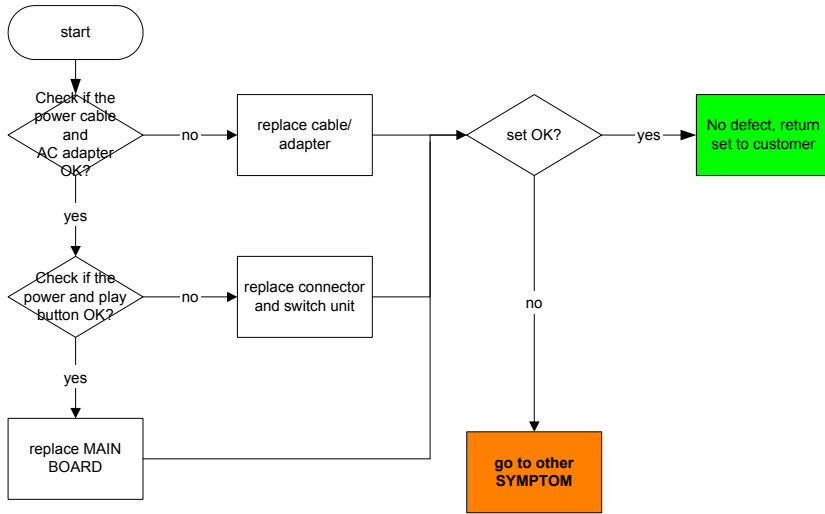
13. Remove screws to remove hinge right and hinge left ,then separate diplay frame discreteness and middle cabinet discreteness.



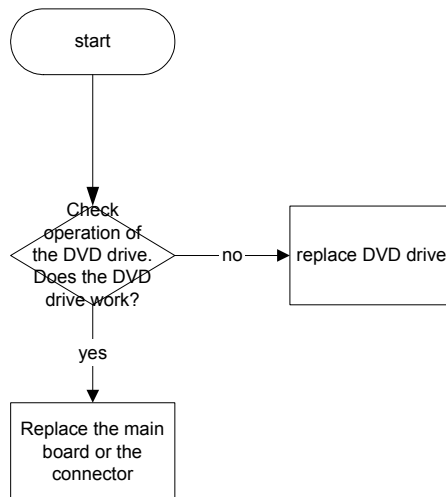
Fig.13

5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: NO POWER, NO GREEN LED

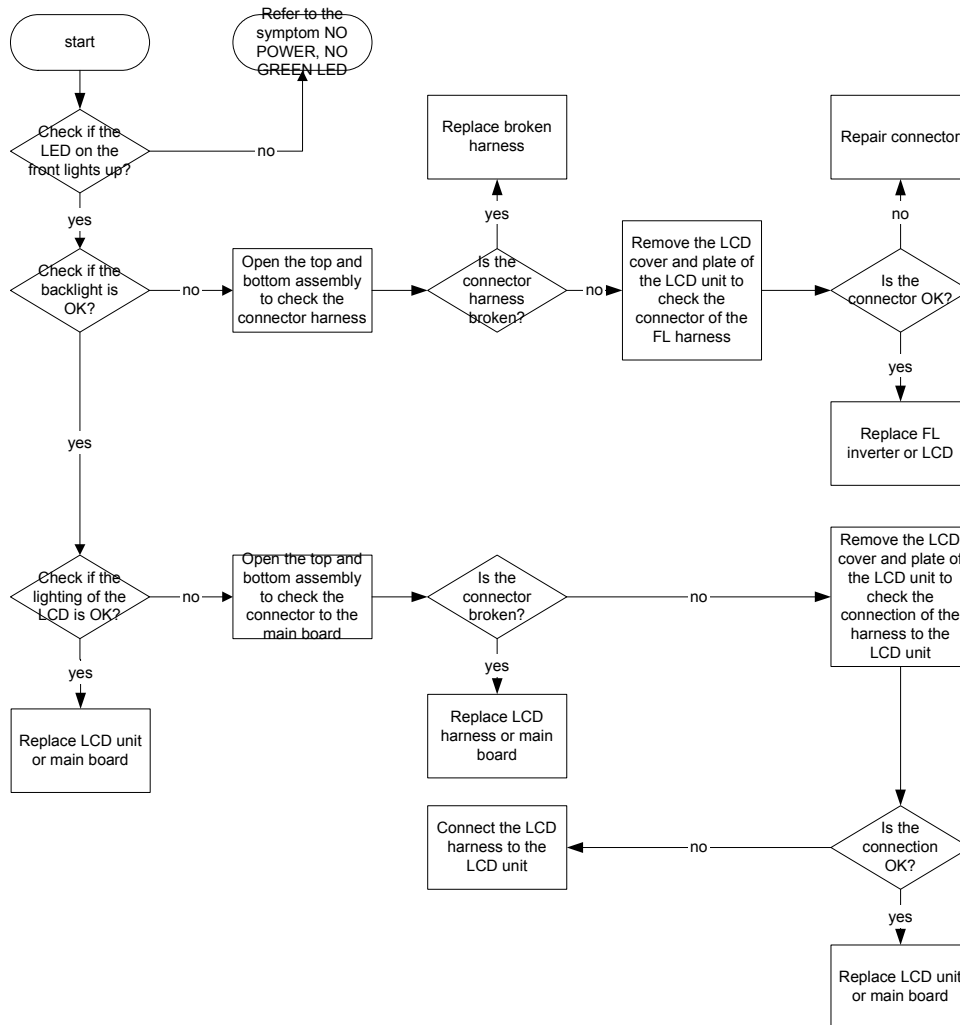


SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL OUTPUT

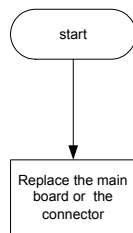


5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: THE INITIAL SCREEN IS NOT DISPLAYED ON THE LCD

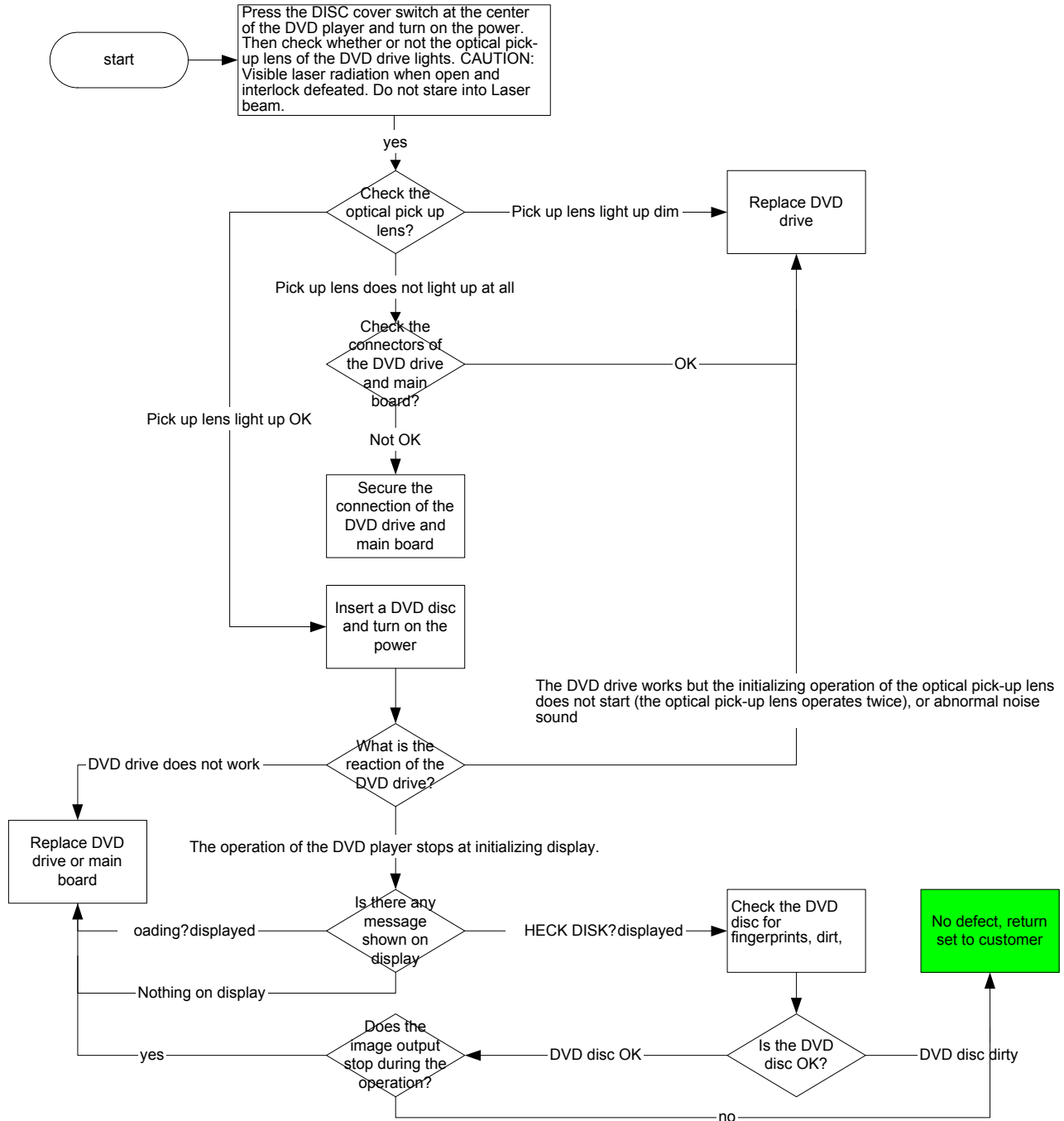


SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL INPUT



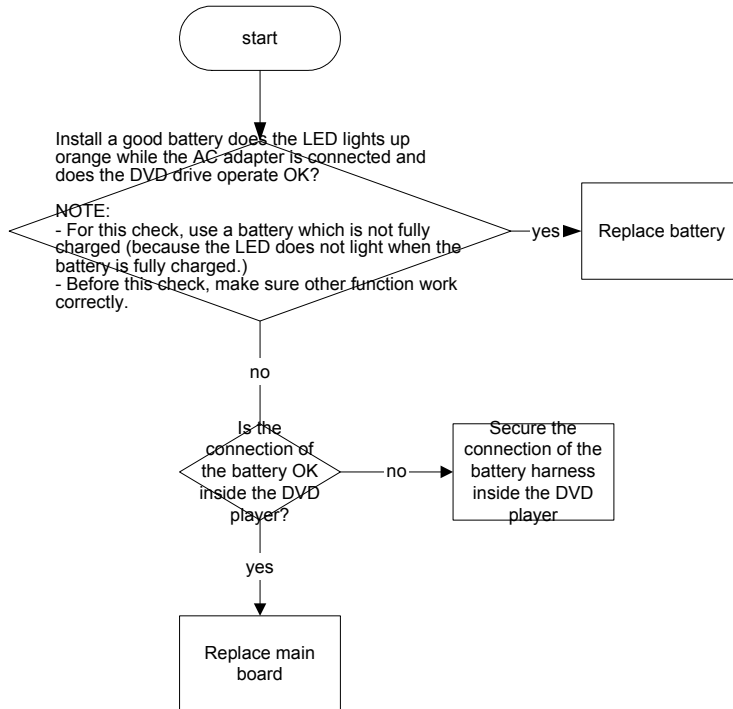
5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: THE DVD DRIVE DOES NOT WORK

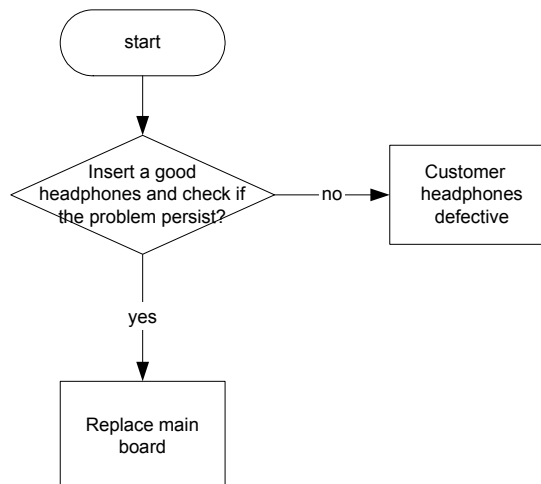


5.0 TROUBLESHOOTING & SERVICE TIPS

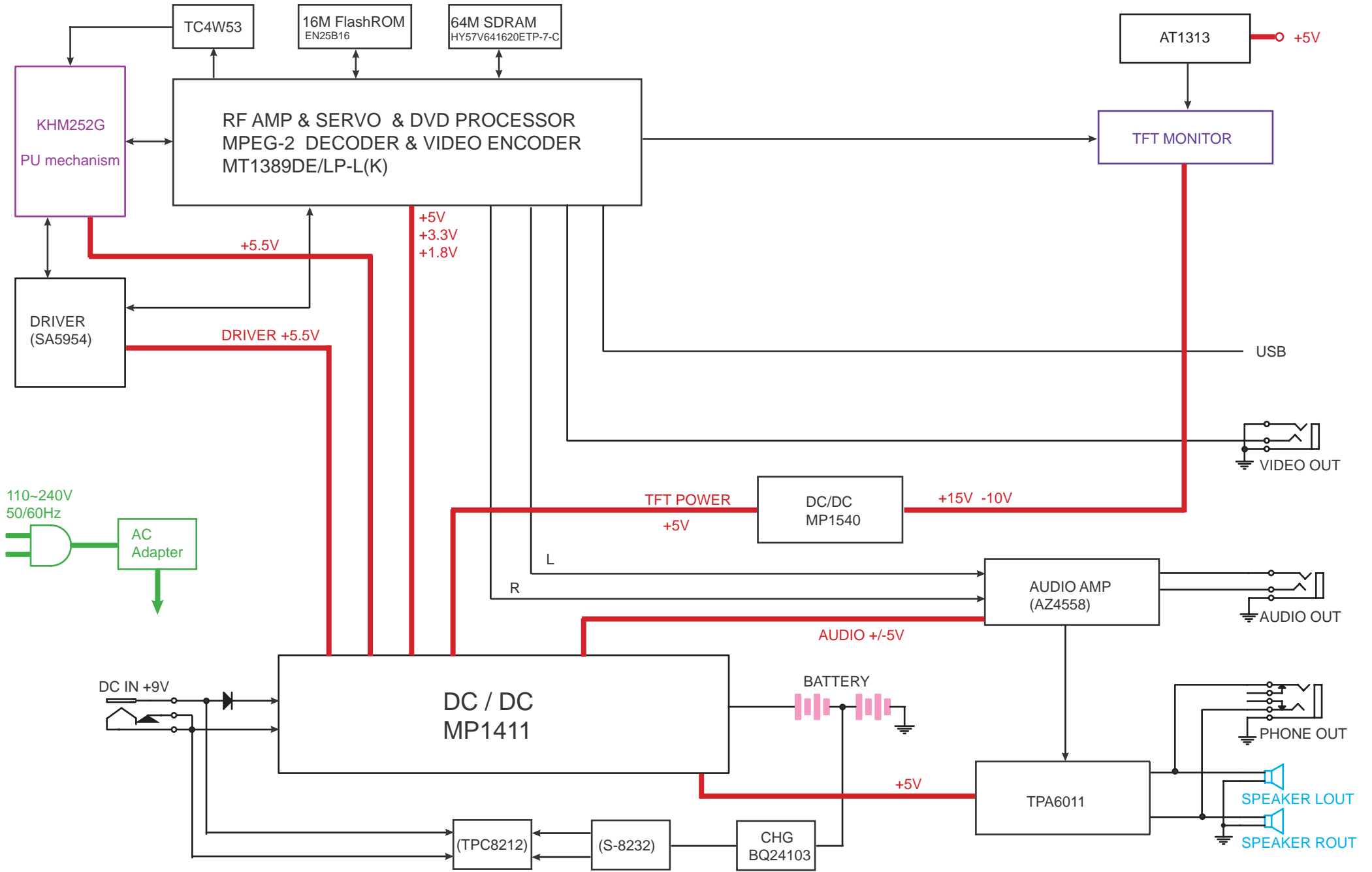
SYMPTOM: THE DVD DRIVE DOES NOT OPERATE WITH BATTERY



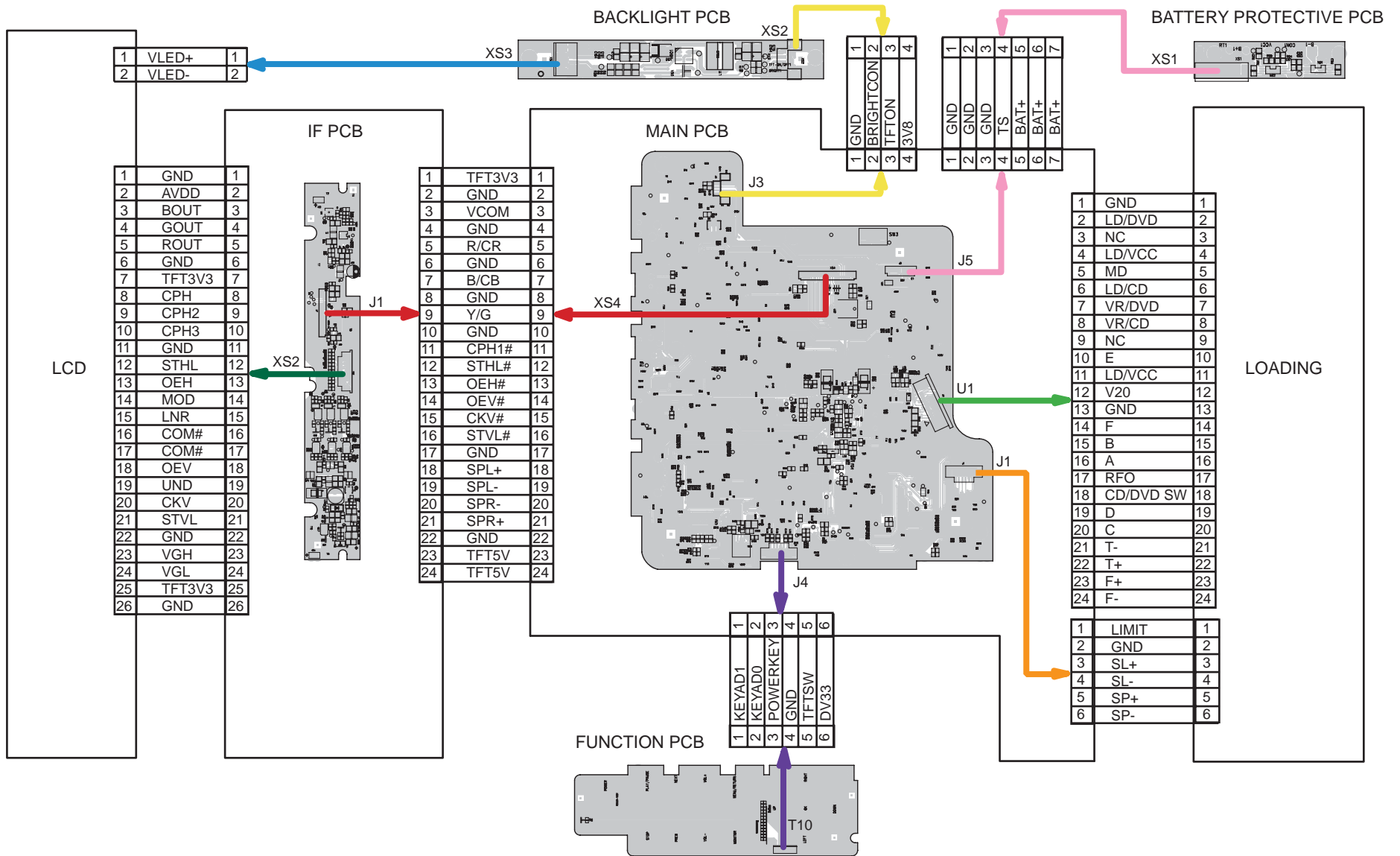
SYMPTOM: NO SOUND COMES FROM THE HEADPHONES



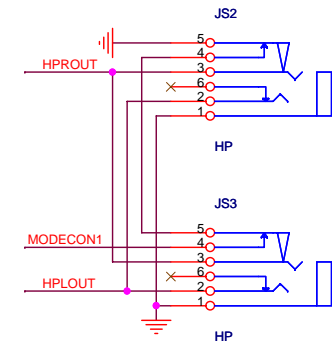
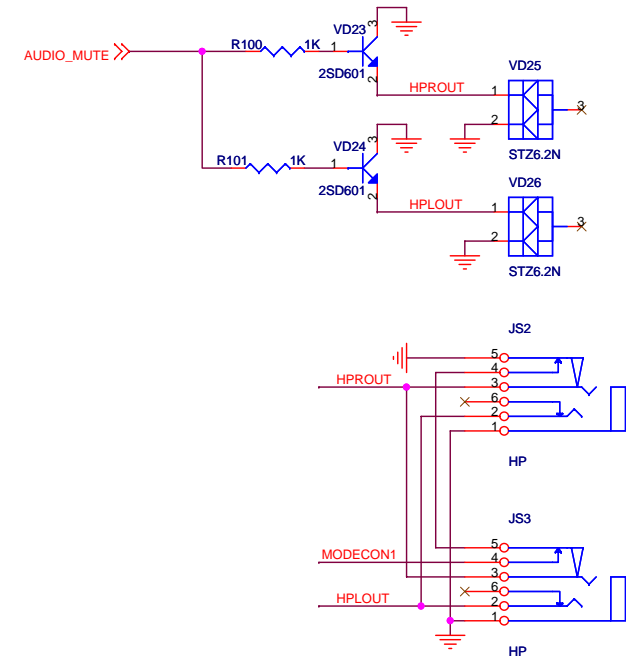
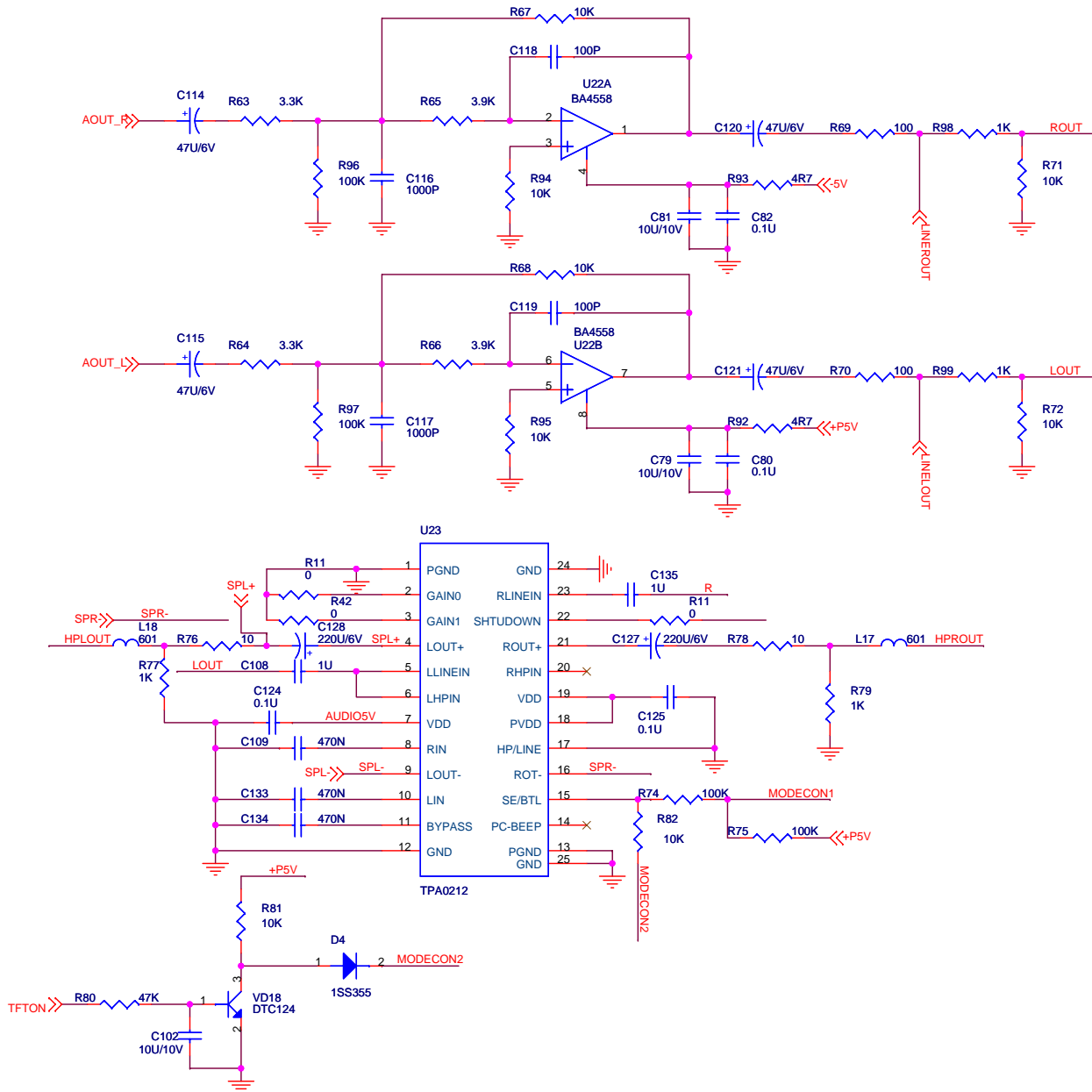
6.0 OVERALL BLOCK DIAGRAM



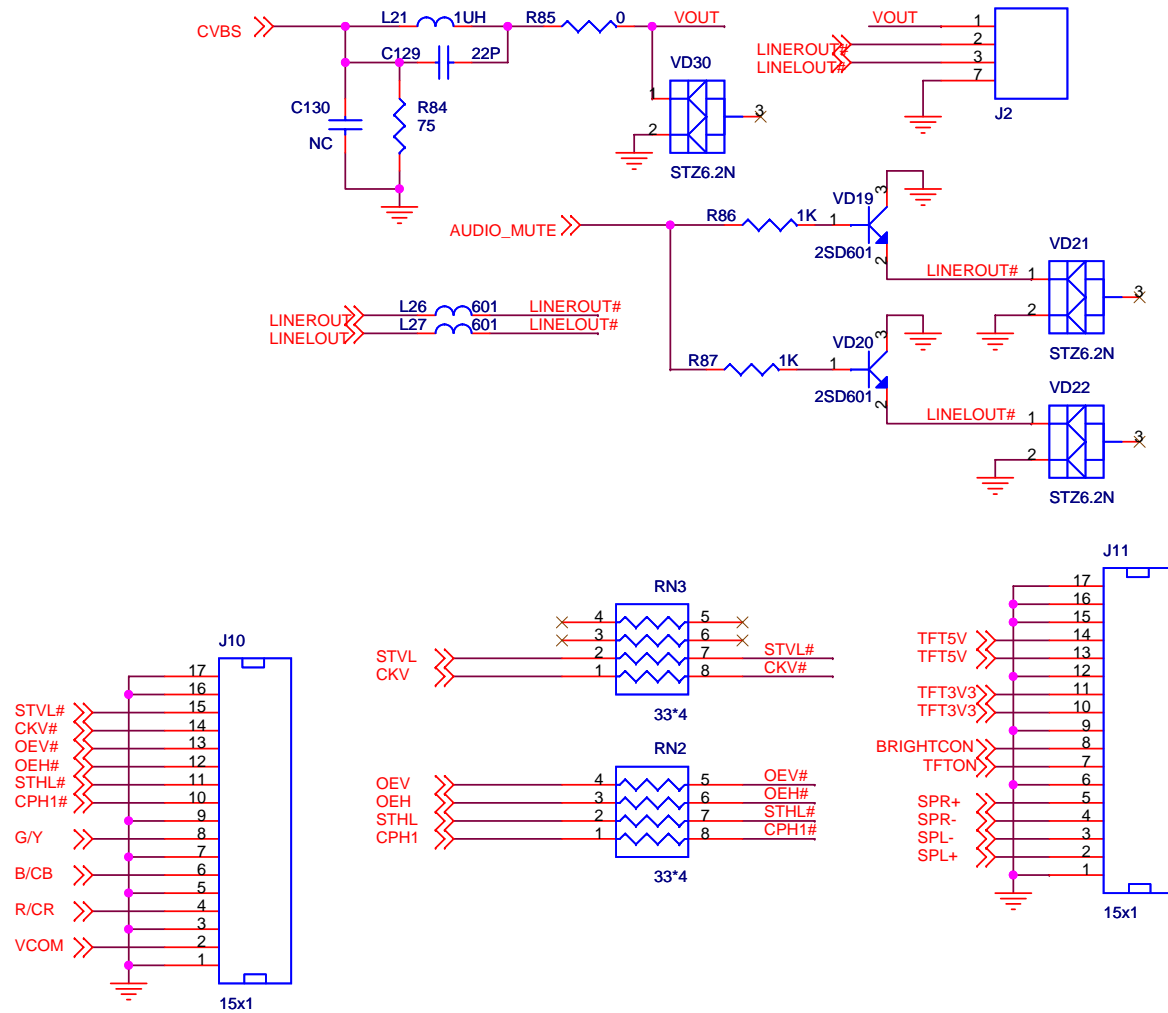
7.0 OVERALL WIRING DIAGRAM



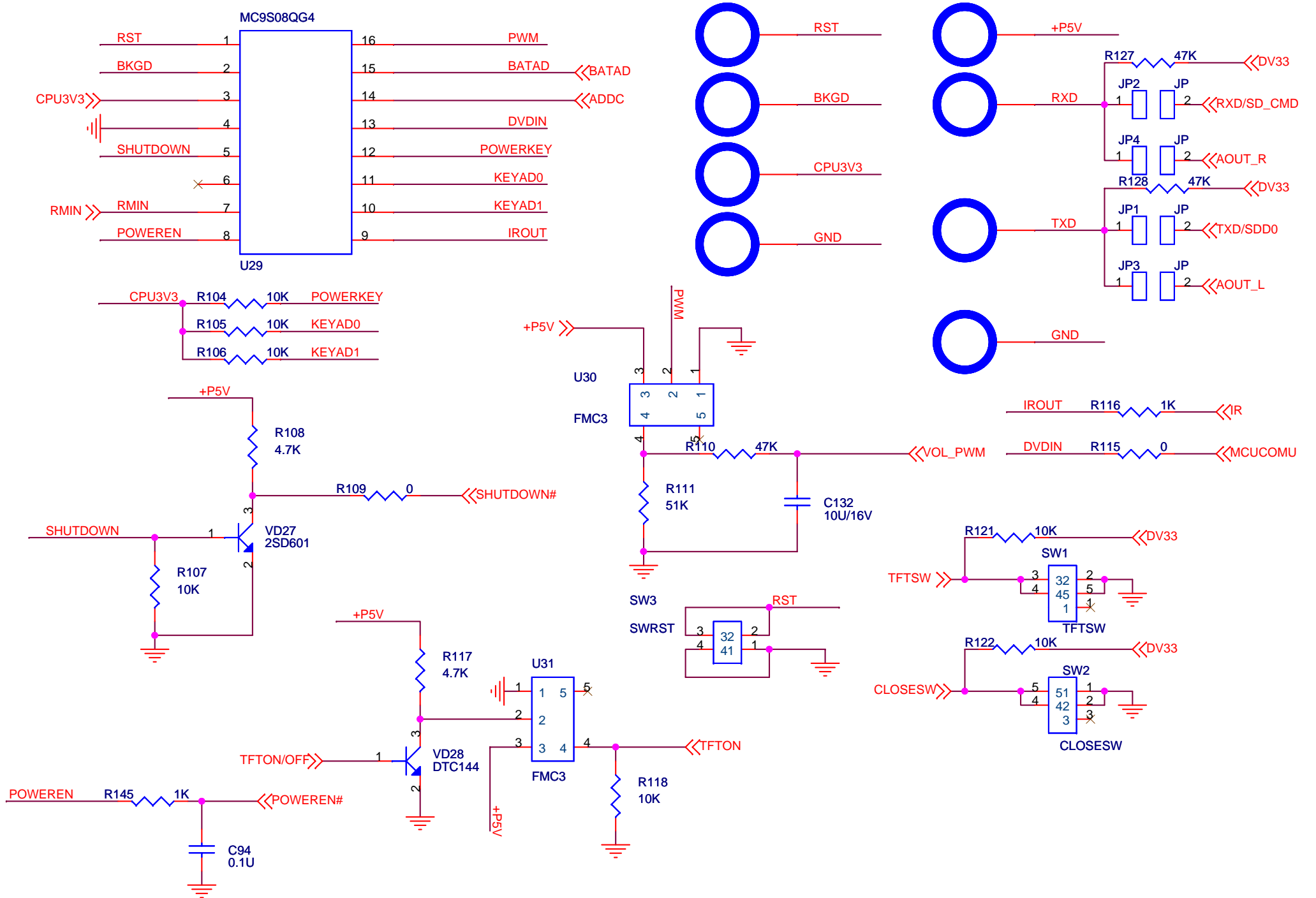
8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (AUDIO)



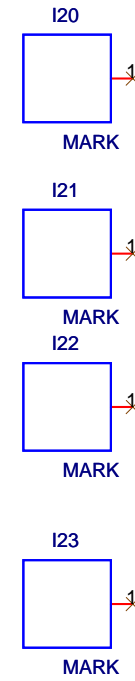
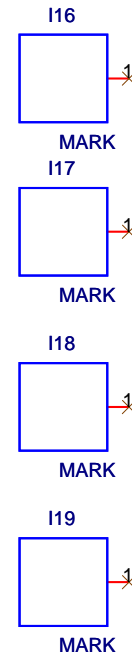
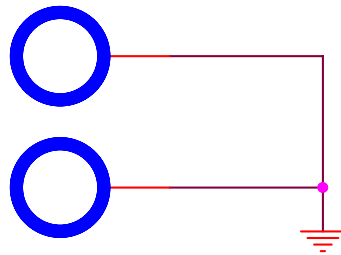
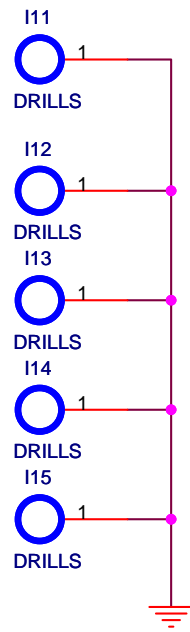
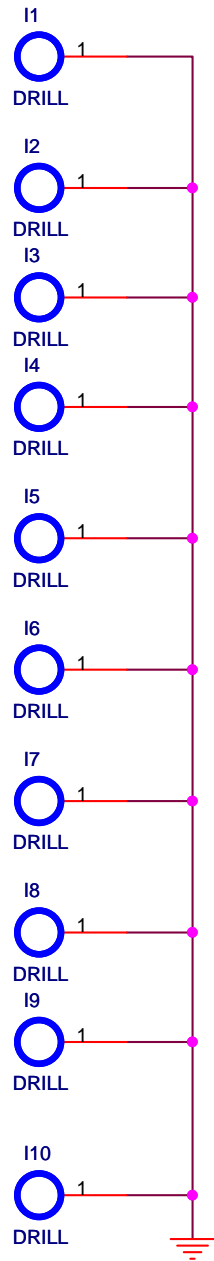
8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (AV INTERFACE)



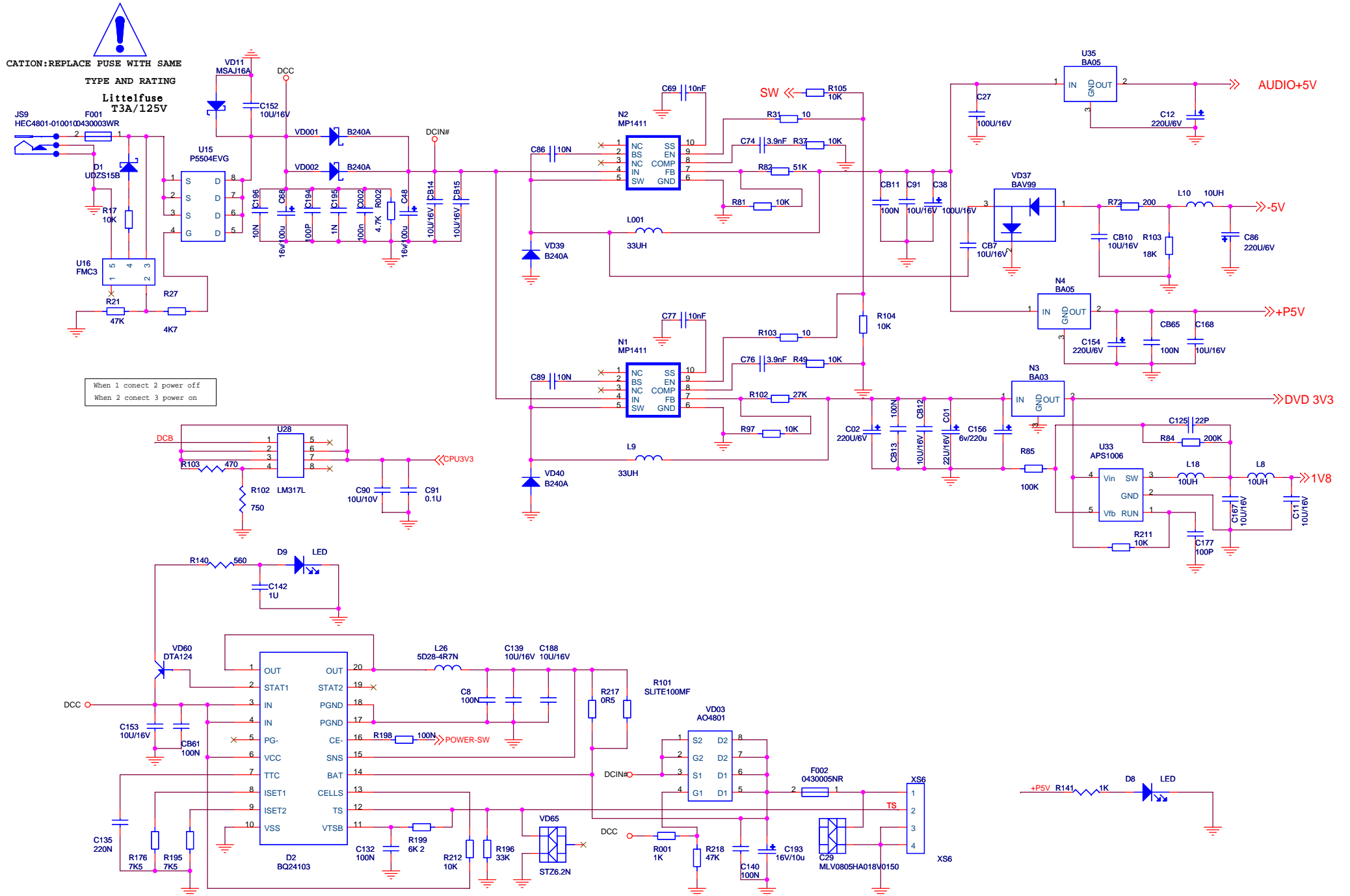
8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (CPU&CONTROL)



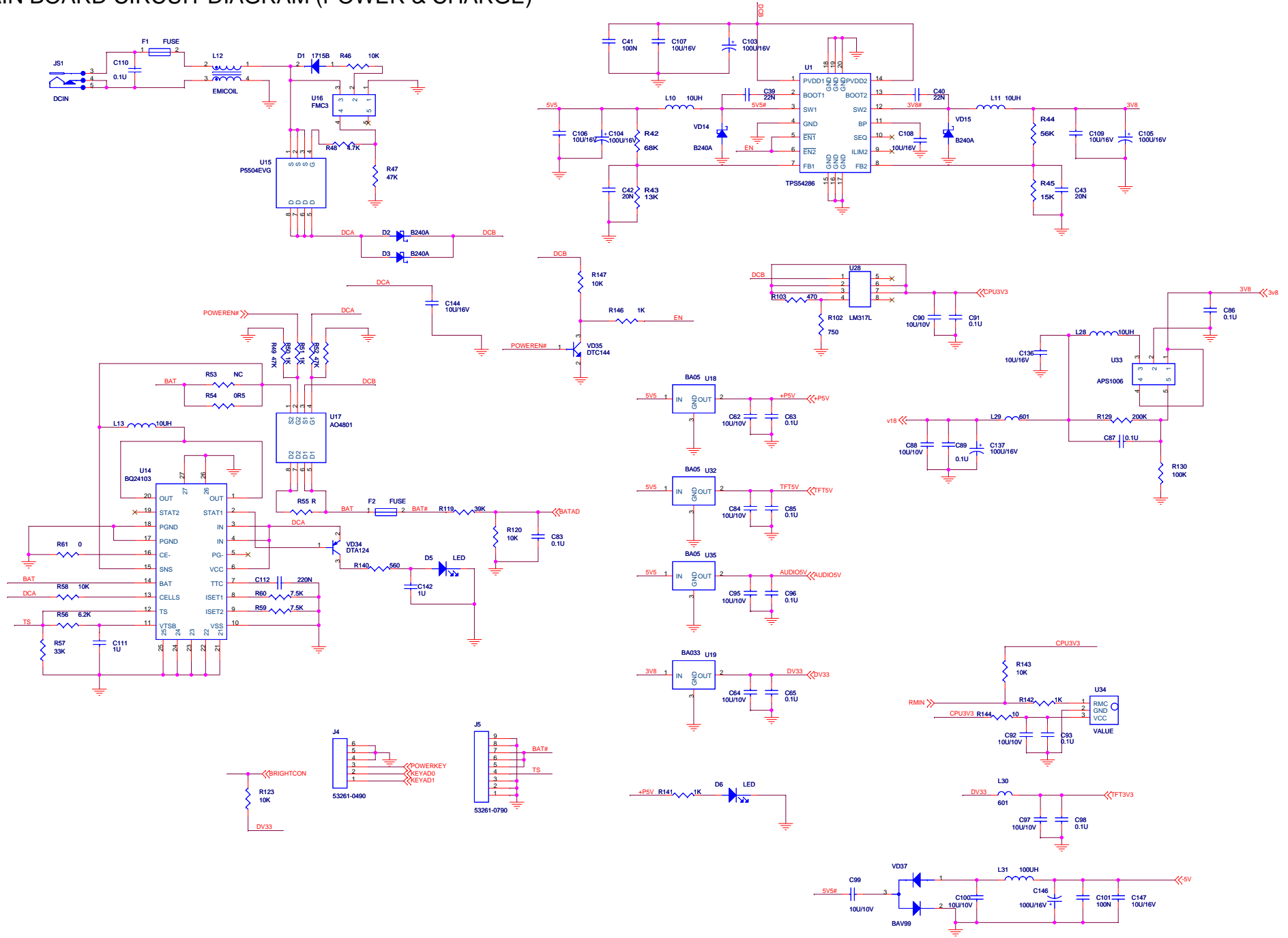
8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (DRILL)



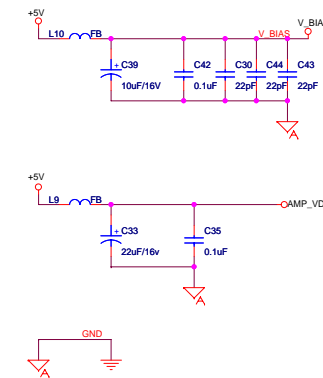
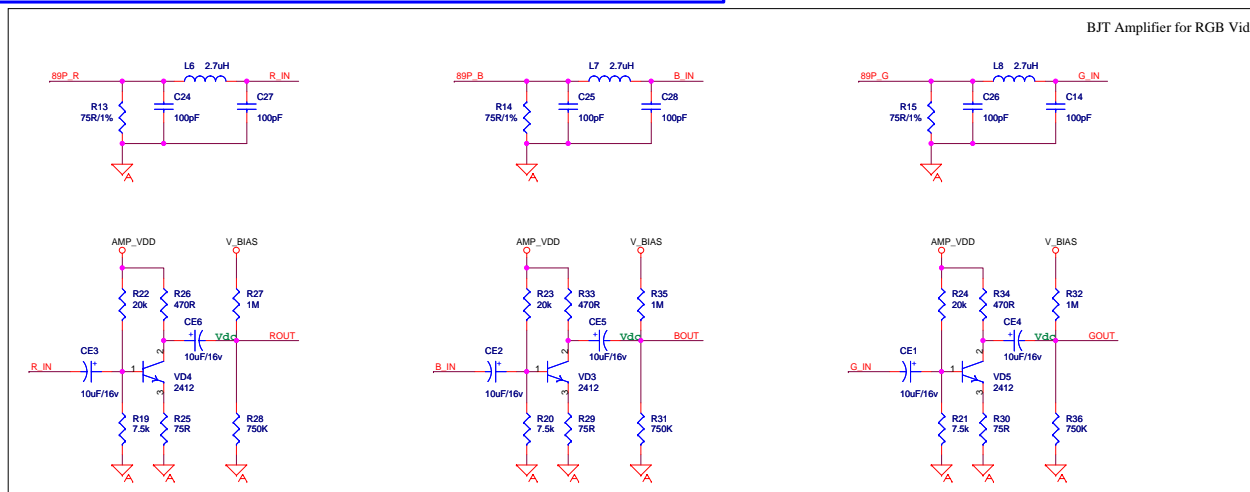
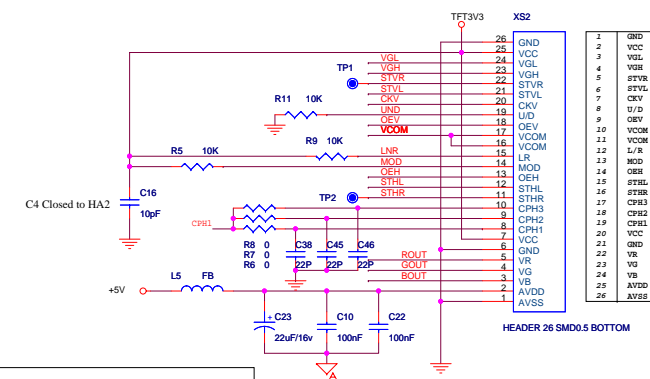
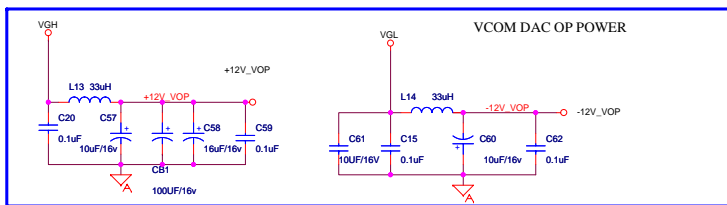
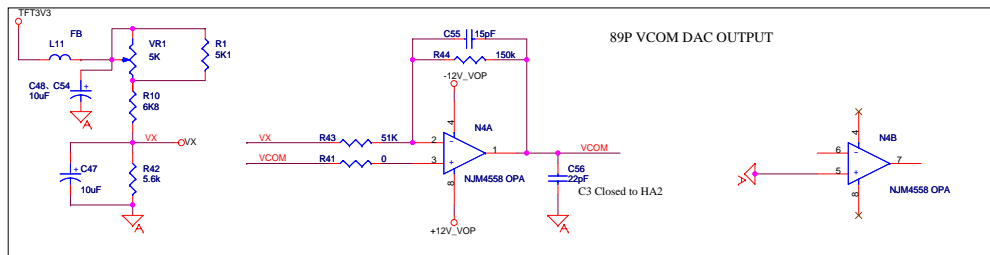
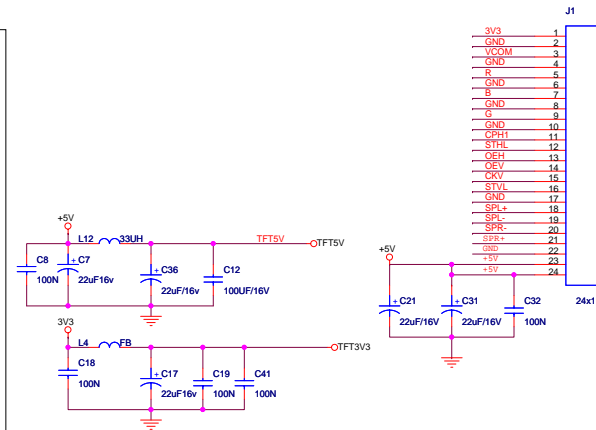
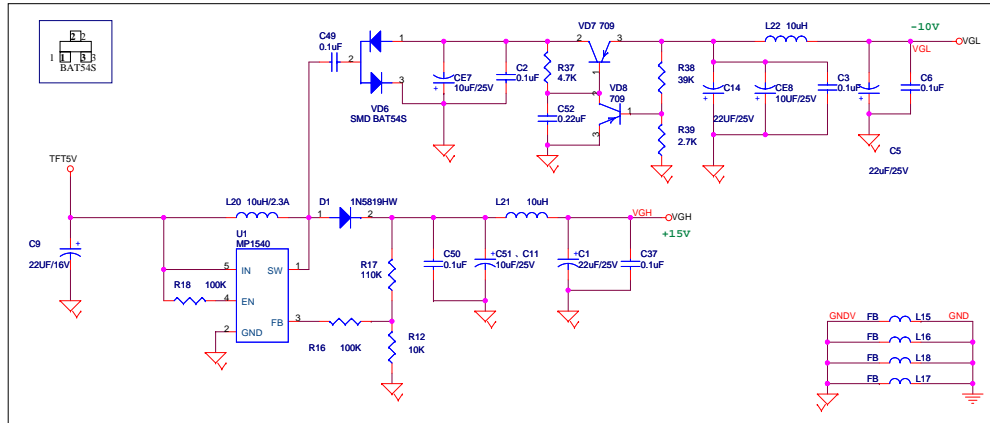
8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (DVD POWER & CHARGE)



8.0 ELECTRICAL DIAGRAM MAIN BOARD CIRCUIT DIAGRAM (POWER & CHARGE)



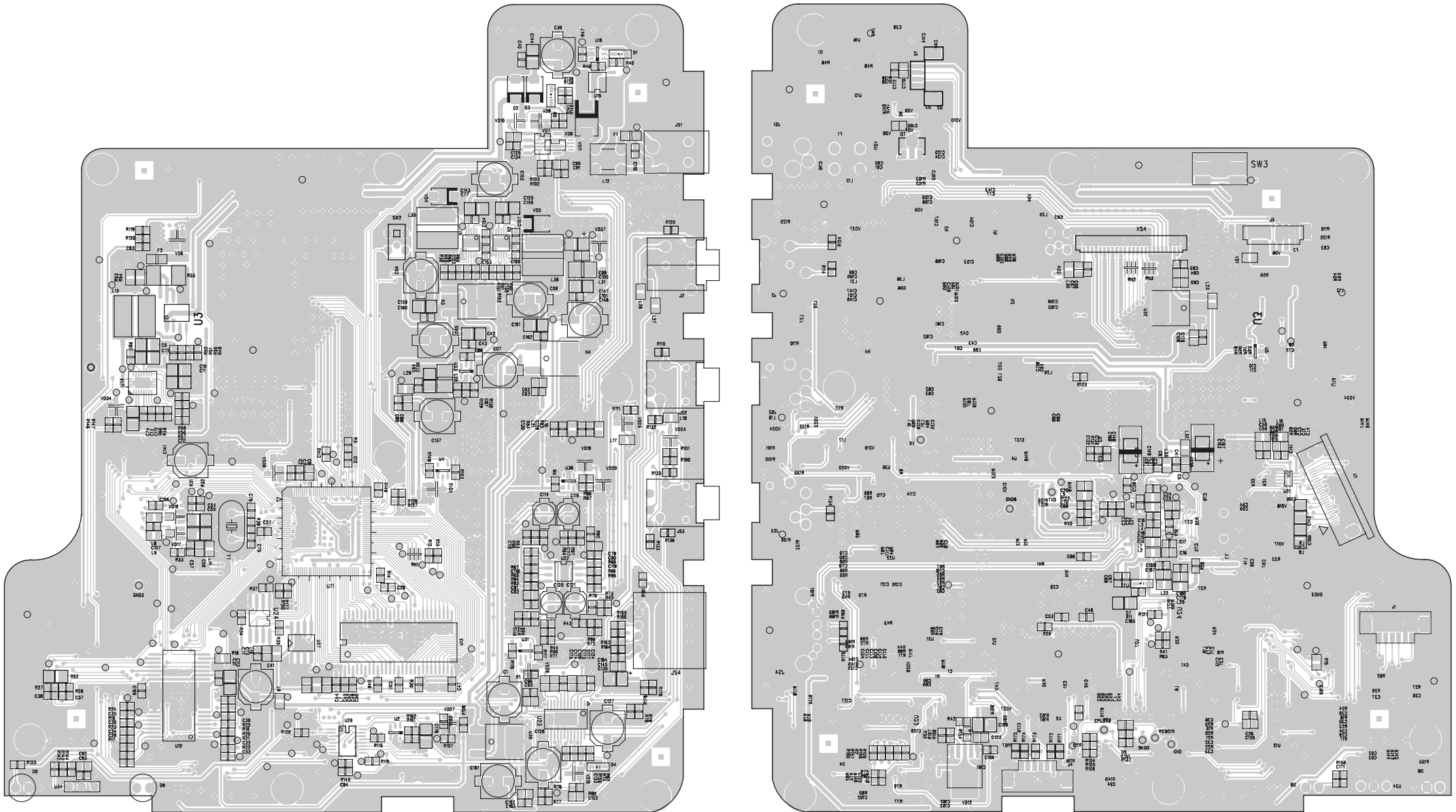
8.0 ELECTRICAL DIAGRAM IF BOARD CIRCUIT DIAGRAM



| | | |
|----|------|----|
| 1 | GND | 26 |
| 2 | VCC | 26 |
| 3 | VGL | 24 |
| 4 | VGH | 24 |
| 5 | STVR | 22 |
| 6 | STVL | 21 |
| 7 | CKV | 20 |
| 8 | U/D | 19 |
| 9 | OEV | 18 |
| 10 | VCOM | 17 |
| 11 | VCOM | 16 |
| 12 | L/R | 15 |
| 13 | MOD | 14 |
| 14 | OEH | 13 |
| 15 | STHR | 12 |
| 16 | STHL | 11 |
| 17 | CPH3 | 10 |
| 18 | CPH2 | 9 |
| 19 | CPH1 | 8 |
| 20 | VCC | 7 |
| 21 | GND | 6 |
| 22 | VR | 5 |
| 23 | VG | 4 |
| 24 | VB | 3 |
| 25 | AVDD | 2 |
| 26 | AVSS | 1 |





9.0 COMPONENT LAYOUT

MAIN BOARD DIAGRAM



10.0 SERVICE PART LIST

Electrical Part List:

| CTN | Service 12NC | Service Description | Photo | Pos. No. |
|------------------------|--------------|---------------------|--|----------|
| PET940/05 PET940/12 | 996510015992 | MAIN PCBA /12 |  | 100 |
| PET940/93 | 996510015952 | MAIN PCBA /93 | | |
| PET940/98 | 996510015951 | MAIN PCBA /98 | | |
| PET940/ALL | 996510015993 | IF PCBA |  | 110 |
| PET940/ALL | 996510015953 | FUNCTION KEY PCBA |  | 120 |
| PET940/ALL | 996510015939 | BATTERY ASSY |  | 130 |

10.0 SERVICE PART LIST

Mechanical Part List:

| CTN | Service 12NC | Service Description | Photo | Pos. No. |
|------------|--------------|--|--|----------|
| PET940/ALL | 996510015940 | TFT PANEL 9" |  | 200 |
| PET940/ALL | 996510010520 | LOADER ASSY |  | 210 |
| PET940/ALL | 996510002948 | SPEAKER |  | 220 |
| PET940/ALL | 996510015941 | FFC 24PIN LE240 (MAIN BOARD TO IF BOARD) |  | 230 |
| PET940/ALL | 996500038677 | FFC 24PIN LE130 (USING ON MAIN BOARD) |  | 240 |
| PET940/ALL | 996510015942 | TOP COVER |  | 300 |
| PET940/ALL | 996510015943 | DISPLAY FRAME |  | 310 |
| PET940/ALL | 996510015944 | MIDDLE CABINET |  | 320 |





10.0 SERVICE PART LIST

Mechanical Part List:

| CTN | Service 12NC | Service Description | Photo | Pos. No. |
|------------|--------------|---------------------|--|----------|
| PET940/ALL | 996510015945 | BASE COVER |  | 330 |
| PET940/ALL | 996510015946 | SPEAKER GRILL |  | 340 |
| PET940/ALL | 996510015947 | LENS |  | 350 |
| PET940/ALL | 996510015948 | HINGE ADORN PANEL |  | 360 |
| PET940/ALL | 996510015949 | HINGE RIGHT |  | 370 |
| PET940/ALL | 996510015950 | HINGE LEFT |  | 380 |

10.0 SERVICE PART LIST

Accessories Part List:

| CTN | Service 12NC | Service Description | Photo | Pos. No. |
|------------------------|--------------|---------------------|--|----------|
| PET940/12 PET940/98 | 996500038689 | AC ADAPTER /12 |  | ACAPT |
| PET940/05 | 996510001289 | AC ADAPTER /05 | | ACAPT |
| PET940/93 | 996500039077 | AC ADAPTER /93 | | ACAPT |
| PET940/ALL | 994000001912 | AV CABLE |  | AVCABLE |
| PET940/ALL | 996510010528 | CAR ADAPTER |  | CARAPT |
| PET940/ALL | 996510001287 | REMOTE CONTROL |  | RC |

11.0 REVISION LIST

Version 1.0 (3141 785 32700)

- Initial release PET940/05, /12, /93, /98